



**FOOTHILL**  
COLLEGE

2017-2018 Course Catalog

# 2017–2018 Academic Calendar

## Summer Quarter 2017

July 3–Sept. 20	Summer Session
July 4	Independence Day observance; campus closed

## Fall Quarter 2017

June 30	Admission Deadline for Overseas International Student Applicant on F-1 Visa (Separate Application Required)*
Sept. 25	Instruction Begins
Nov. 10	Veterans Day observance; campus closed
Nov. 23–24	Thanksgiving observance; campus closed
Dec. 11–15	Final Examinations
Dec. 18–Jan. 7	Winter Recess

## Winter Quarter 2018

Oct. 31	Admission Deadline for Overseas International Student Applicant on F-1 Visa (Separate Application Required)*
Jan. 8	Instruction Begins
Jan. 15	Martin Luther King Jr. Birthday observance; campus closed
Feb. 16	Lincoln's Birthday observance; campus closed
Feb. 19	Washington's Birthday observance; campus closed
March 26–30	Final Examinations
March 31–April 8	Spring Recess

## Spring Quarter 2018

Jan. 30	Admission Deadline for Overseas International Student Applicant on F-1 Visa (Separate Application Required)*
April 9	Instruction Begins
May 28	Memorial Day observance; campus closed
June 25–29	Final Examinations
June 29	Commencement Ceremony; Library Quad



For additional important dates and deadlines, review the college calendar at [foothill.edu](http://foothill.edu)

\*Orientation is required for all new F-1 international students and takes place three to four weeks prior to the start of classes. For details, visit [foothill.edu/international](http://foothill.edu/international).



A public, two-year college of the  
Foothill-De Anza Community College District

### **Main Campus**

12345 El Monte Road  
Los Altos Hills, CA 94022-4599  
650.949.7777  
foothill.edu

### **Sunnyvale Center**

1070 Innovation Way  
Sunnyvale, CA 94089-1200  
foothill.edu/sunnyvale

### **Accreditation**

Foothill College is accredited by the Accrediting Commission for Community and Junior Colleges (ACCJC), Western Association of Schools and Colleges. Foothill College's accreditation was reaffirmed by the ACCJC in January 2012 following the completion of a comprehensive self-study in August 2011 and site evaluation team visit in October 2011. In January 2013, the ACCJC reviewed Foothill College's *Follow-Up Report*, which addressed four recommendations made by the site evaluation team in 2011. In February 2013, the ACCJC wrote to Foothill College and stated that all recommendations had been addressed and any associated deficiencies resolved. Foothill College submitted its *Mid-Term Report* to ACCJC in fall 2014. Learn more at [foothill.edu/president/accreditation.php](http://foothill.edu/president/accreditation.php). Foothill College is also accredited by the American Veterinary Medical Association, American Dental Association Commission on Dental Accreditation, American Medical Association Council on Medical Education, and Commission on Accreditation of Allied Health Education Programs.

To request this publication in alternative media such as Braille or large print, call 650.949.7017.

### **This Catalog Is Your Key to Success**

The information you need to succeed as a Foothill College student is in this catalog. The following pages contain a wealth of information about courses, campus resources, student services, program descriptions, degree requirements, and college policies and procedures.

Use the catalog to:

- Plan your educational program;
- Review Foothill College policies and procedures;
- Learn about course and degree requirements; and
- Find important dates, phone numbers and locations.

Whether you want university-transfer preparation, career-training programs, basic skills improvement or professional development, you'll find that Foothill College is a lively center for outstanding instruction and enriching student activities. Lives change in powerful ways at Foothill College.

At Foothill, we also have fun. From students clubs and social events to intercollegiate athletics and performing arts, Foothill offers you the total college experience.

Our students, faculty and staff come from a variety of backgrounds and life-stories. These traits, combined with our majestic campus, make Foothill a leader in providing students with a comprehensive, high-quality education.

### **Rules & Policies May Change**

The Foothill-De Anza Community College District and Foothill College have made every reasonable effort to determine that information in this catalog is accurate. Changes may result from California legislature statutes or rules and policies adopted by the Foothill-De Anza Community College District Board of Trustees, chancellor or institutional designee. Courses and programs offered, together with other matters contained herein, are subject to change without notice by the administration of the Foothill-De Anza Community College District or Foothill College for reasons related to student enrollment, level of financial support, or for any other reason, at the discretion of the district and college. The district and college further reserve the right to add, amend or repeal any of its rules, regulations, policies and procedures.



*#iamfoothill*

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Welcome to Foothill College – a college with a national reputation for academic excellence and innovation, and a family of talented faculty and staff who cares deeply about your success.

As we celebrate our 60th anniversary this year, Foothill College will officially launch its service leadership initiative and provide opportunities for students to serve communities locally and globally while developing their leadership skills.



“The best way to find yourself is to lose yourself in the service of others.”

– Mahatma Gandhi

One of the stated goals in the college’s Educational Master Plan is to encourage student participation in leadership and activities outside the classroom that engage students with the college and the community. Foothill has a commitment to an institutional learning outcome of “community/global consciousness and responsibility” – that is, Foothill believes in creating an environment whereby students learn social perceptiveness, including empathy, cultural awareness, citizenship, ethics, interpersonal skills, personal integrity, and community service.

Studies show a growing gap between the needs of employers and the skills needed in the workforce, leaving far too many quality jobs unfilled. Employer surveys also found that to be successful, students need to be proficient in leadership and non-technical skills, such as emotional intelligence, teamwork, critical thinking, and communications. Furthermore, students need to have a strong sense of community as they navigate work and life.

With the service leadership initiative, Foothill College is redefining its future role in Silicon Valley in ways that will deepen how we can better serve our students, employers, and communities locally and globally. Whether you are just beginning or continuing your studies, many opportunities for involvement in service leadership await you. We encourage you to take advantage of every aspect of Foothill to enrich both your educational and social life, while serving others around you.

As your college president, I am eager to meet you and help you achieve your aspirations. We are here for you! On behalf of the faculty and staff at Foothill, I wish you every success and enjoyment in the pursuit of your academic goals.

A handwritten signature in black ink, appearing to read 'Thuy'.

Thuy Thi Nguyen, J.D.  
President  
Foothill College



# College Profile

Foothill-De Anza Community College District Mission

Foothill College

Mission, Vision, Values & Purpose

Institutional Learning Outcomes

Accreditation

Our History

Foothill: An Outstanding Community College

Committed to Our Community

We Celebrate Diversity

“The Most Beautiful Community College”

Measures C Campus Improvements

Campus Highlights

Public Events

## Foothill-De Anza Community College District Mission

The mission of the Foothill-De Anza Community College District is student success. We accomplish this by providing access to a dynamic learning environment that fosters excellence, opportunity, equity and innovation in meeting the various educational and career goals of our diverse students and communities. The district provides high-quality undergraduate education at an affordable price for students and reasonable cost to the state and maintains the primary mission of advancing California through education, training, and workforce improvement.

Located in the heart of Silicon Valley, Foothill-De Anza serves the communities of Cupertino, Los Altos, Los Altos Hills, Mountain View, Palo Alto, Stanford, Sunnyvale and portions of San Jose.

## Foothill College Mission, Vision, Values & Purpose

### Our Mission

Believing a well-educated population is essential to sustaining and enhancing a democratic society, Foothill College offers programs and services that empower students to achieve their goals as members of the workforce, as future students, and as global citizens. We work to obtain equity in achievement of student outcomes for all California student populations, and are guided by our core values of honesty, integrity, trust, openness, transparency, forgiveness, and sustainability. Foothill College offers associate degrees and certificates in multiple disciplines, and a baccalaureate degree in dental hygiene.

*Approved by the Planning & Resource Council (PaRC) in April 2017; Approved by Board of Trustees in May 2017*

### Our Vision

Foothill College educates students from diverse backgrounds that represent the demographics of the Bay Area, with particular attention to underserved and underrepresented populations. Foothill students master content and skills which are critical for their future success. They develop and act upon a sense of responsibility to be stewards of the public good.

### Our Values

- Honesty
- Integrity
- Trust
- Openness
- Transparency



- Forgiveness
- Sustainability

### Our Purpose

The college's purpose is to provide access to educational opportunity for all with innovation and distinction.

### Our Institutional Learning Outcomes

An important aspect of upholding institutional integrity is maintaining focus on the Foothill College institution-level learning outcomes (ILOs), also known as the 4-Cs. These are:

- Communication;
- Computation;
- Creative, Critical and Analytical Thinking; and
- Community/Global Consciousness and Responsibility.

Every course at Foothill College addresses at least one of these ILOs. In addition to incorporating and reflecting the synthesis of the cognitive and affective domains of learning, the ILOs provide a framework for the development of breadth and depth in courses and programs, and are the basis of all learning experiences at Foothill College.

Since the Foothill College Academic Senate and Curriculum Committee adopted the ILOs as the general educational student learning outcomes, the college's general education pattern is designed to integrate the 4-Cs across the curriculum. The Foothill College general education (GE) pattern, inclusive of courses in the seven areas of humanities, English, natural sciences, social and behavioral sciences, communication and analytical thinking, United States cultures and communities, and lifelong understanding, supports the college's ILOs.



Completion of the GE pattern provides students with the depth and breadth of knowledge, and the skills and abilities that will enable them to be productive lifelong learners, ethical human beings and effective citizens.

### **Foothill College Offers:**

- Associate in arts, associate in science, associate in arts-transfer and associate in science-transfer degrees, as well as preparation for transfer to another college, university or postsecondary institution
- Career education, training and services
- Basic skills, English for second-language learners (ESLL), leadership skills and student development
- Student support services to promote student success

## **Our History**

The Foothill-De Anza Community College District was formed January 15, 1957, following several months of study by citizens groups and the California Department of Education. The district covers an area of about 105 square miles and includes the Palo Alto Unified School, Mountain View-Los Altos Union High School and Fremont Union High School districts.

On September 15, 1958, the district opened a temporary campus on El Camino Real in Mountain View. The Los Altos Hills main campus of Foothill College was completed and opened to students in September 1961.

In 1967, the district opened its second campus, De Anza College, in Cupertino. The two colleges coordinate programs and services, thereby providing our students with the flexibility to enroll in courses at both campuses.

## **Foothill: An Outstanding Community College**

Founded with the hallmark of educational opportunity for all, Foothill College is recognized internationally as one of the nation's most outstanding community colleges. Students of all ages enroll at Foothill for a single class, one- or two-year degree programs, or to complete general education requirements for transfer to four-year universities. Our academic programs lead to associate in arts, associate in science, associate in arts-transfer and associate in science-transfer degrees. They also meet the freshman and sophomore requirements of University of California, California



State University and private education systems. In addition, we offer many professional and technical programs for students seeking re-training or career advancement.

Foothill serves northern Santa Clara County, educating more than 13,000 day and evening students at the main campus, Sunnyvale Center, online and at many community and industry sites each quarter.

## **Sunnyvale Center**

To further meet the educational needs of Silicon Valley residents and businesses, Foothill College operates a state-of-the-art 46,883 square foot campus in Sunnyvale. Conveniently located within the Moffett Business Park, the Sunnyvale Center is easily accessible via freeways 101 and 237 and near a VTA light rail stop. Students may choose from a wide variety of academic programs that focus on emerging and in-demand fields, including computer science, geospatial technology and emergency medical services. The center houses a full complement of services, including admissions, counseling, and a bookstore. For more information and a full listing of programs and courses, please visit [foothill.edu/sunnyvale](http://foothill.edu/sunnyvale).

## Committed to Our Community

We are committed to community education. At Foothill College, we:

- Offer low-cost, high-quality education;
- Recognize that our students have different, changing educational needs; and
- Strive to create a college community of students, faculty and staff.

Our educational process should help you:

- Develop and recognize human dignity;
- Think for yourself, learn to learn, and practice creative arts and skills; and
- Become a contributing community member.

We meet our commitments by providing:

- Academic programs to help you transfer to a four-year college or university;
- Professional and technical programs to help you develop skills for job entry, re-entry and career upgrading;
- A general-education program to broaden educational and cultural experiences;
- Remedial and developmental education to bring basic skills up to full potential;
- Excellence in all academic programs, student services and community outreach programs;
- Convenient community classrooms;
- Out-of-class activities so you can learn in less formal, more hands-on environments;
- A counseling and matriculation program to help you recognize your capabilities and educational and life goals;
- Health services, psychological services, financial aid, job counseling, placement testing and proctoring services;
- Partnerships with social and educational agencies, business and industry to determine and serve our community's educational needs; and
- Cultural programs, recreational activities, resources and facilities available to the general public.

## We Celebrate Diversity

We value the diversity of students on our campus and continually work to meet the needs of this entire population. Our faculty, staff and administrators believe that teaching a multicultural perspective is just as important as teaching reading, writing and technology in today's world.

### “The Most Beautiful Community College”

The Foothill College campus is located on 122 acres in the rolling foothills of Los Altos Hills. The campus adjoins El Monte Road and Interstate 280, the scenic Junipero Serra Freeway.

The American Institute of Architects has honored Foothill for its outstanding design, and a *San Francisco Chronicle* architecture critic called our campus “the most beautiful community college ever built.” The distinctive Pacific-style architecture harmonizes with the surrounding hillside community, creating a beautiful and informal atmosphere conducive to college study.

### Measure C Campus Improvements

Measures C and E are bond measures to fund renovations to existing college facilities, as well as construct new facilities at Foothill and De Anza Colleges. Voters approved the passage of Measure E in 1999 and the passage of Measure C in 2006. Funding for Measure C projects is generated from general obligation bonds. These funds are not subject to state budget cuts and can only be used for facilities projects. To review Measure C projects at Foothill College, visit [foothill.edu/news/construction.php](http://foothill.edu/news/construction.php).

## Campus Highlights

- All-Weather Track
- Appreciation Hall
- Campus Center
- Computer Centers
- Dental Health Clinic
- Football Stadium
- Foothill College Sunnyvale Center in Moffett Business Park
- Golf Instruction Complex
- Interdisciplinary Electronic Arts (IDEA) Center
- Japanese Cultural Center
- KFJC-FM Radio Station
- Krause Center for Innovation
- Library & Learning Resource Center
- Lohman Theatre
- Lower Campus Complex
- Observatory
- Olympic-Size Swimming Pool
- Physical Sciences & Engineering Center (PSEC)
- STEM Success Center
- Robert C. Smithwick Theatre
- Softball/Soccer Field
- Teaching & Learning Center (TLC)
- Tennis Courts
- Veterans Resource Center
- Veterinary Technology & Environmental Horticulture Complexes
- Wellness Center

## Public Events

Foothill presents a variety of public events throughout the year. These events include plays and musicals, athletic events, plant sales, gallery exhibits, cultural activities and science lectures. For more information, review the college's event calendar at [foothill.edu](http://foothill.edu).

The highly successful Foothill College Celebrity Forum speakers series, created by Dr. Richard Henning, brings high-profile speakers to Flint Center at De Anza College in Cupertino. For more information, call 650.949.7176 or visit [celebrityforum.net](http://celebrityforum.net).

## Facility Rental

Foothill College parking lots, classrooms, conference rooms, physical education facilities, theatres, dining room and Physical Sciences & Engineering Center (PSEC) facilities are available for rent to the public when they are not being used for campus activities. Rental fees include space rental only. Additional fees apply for equipment and labor.

If you are interested in renting a Foothill facility, visit the rental website at [foothill.edu/facilityrentals](http://foothill.edu/facilityrentals). For additional information or to schedule facilities, call:

- Foothill Main Campus, 650.949.7057;
- Robert C. Smithwick Theatre, Lohman Theatre or Appreciation Hall, 650.949.7252; and
- Foothill Sunnyvale Center, 650.949.6953.



## Important Campus Phone Numbers

### Main Campus

Admissions & Records .....	650.949.7325
Bookstore .....	650.949.7305
Counseling Appointments .....	650.949.7423
Disability Resource Center .....	650.949.7017
District Police (non-emergency) .....	650.949.7313
Emergency .....	911
Extended Opportunity Program & Services (EOPS) .....	650.949.7207
Facilities Rental .....	650.949.7057
Financial Aid .....	650.949.7245
Health Services .....	650.949.7243
Honors Institute .....	650.949.7638
Internships .....	408.745.8062
Library .....	650.949.7392
Lost & Found .....	650.949.7313
Marketing & Public Relations .....	650.949.7645
Placement Testing .....	650.949.7743
Prerequisites/Evaluations .....	650.949.7298
Psychological Services .....	650.949.7910
Student Activities Office .....	650.949.7060
Student Affairs Office .....	650.949.7241
Theatre Box Office .....	650.949.7360
Transfer Center .....	650.949.7821
Teaching & Learning Center .....	650.949.7444
Veterans Resource Center .....	650.949.7912

### Sunnyvale Center

Main Office .....	650.949.6950
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# Student Life

- Athletics
- Campus Center
- Campus Clubs
- Campus Radio
- Cheerleading & Dance Squad
- College Hour
- Community Service
- Cultural Enrichment
- Leadership
- Student Activities Office



### Athletics

Foothill is a member of the Coast Conference of the California Community College Athletic Association and NorCal Football Conference. Our men's intercollegiate teams compete in basketball, football, soccer, tennis and swimming. Our women's intercollegiate teams compete in basketball, water polo, soccer, tennis, volleyball, beach volleyball, softball and swimming. For more information, call the Kinesiology & Athletics Division at 650.949.7742.

### Campus Center

To enhance your college experience, Foothill operates a state-of-the-art Campus Center. We invite you to use the center for a meal or quick snack, take a break in the Hearthside Lounge and enjoy the breathtaking vistas from the center's outdoor plaza. You'll also find the following services and programs in the Campus Center:

- Altos Conference Room (Room 2019)
- ASFC Design Center (Room 2017)
- ASFC Smart Shop/OwlCard (Room 2016)
- Associated Students of Foothill College (ASFC) Student Government (Room 2011)
- Bookstore (Room 2301)
- Community Ambassadors & Adult Learners (Room 2150)
- Council Chambers (Room 2018)
- Dean of Student Affairs & Activities (Room 2002)
- Dining Room (Room 2201)
- District Police (Room 2103)
- Health Services (Room 2126)
- Hearthside Lounge (Room 2313)
- Middle College Program (Room 2152)

- Psychological Services & Personal Counseling (Room 2120)
- Student Activities Office (Room 2009)
- Toyon Conference Room (Room 2020)

### Campus Clubs

Campus clubs and organizations cater to a variety of student interests, including academic, athletic, cultural, political, religious, social, special interest and service groups.

We encourage student participation in extracurricular organizations and authorize clubs to develop from sufficient student interest. Club leaders and members may earn leadership/community service units. Each club must have a faculty or staff advisor. For more information, call the Student Activities Office at 650.949.7060.

### Campus Radio

Foothill owns and operates KFJC-FM 89.7, a 250-watt educational radio station. If you are interested in technical operation or administration, and programming of educational and entertainment features, call the Fine Arts & Communication Division Office at 650.949.7262.

### Cheerleading & Dance Squad

Foothill's Cheerleading & Dance Squad promotes college spirit throughout the year and allows participants to earn limited academic credit. Squad members serve as ambassadors of goodwill, school spirit, scholarship and leadership. For more information, email [fhdanceteam@gmail.com](mailto:fhdanceteam@gmail.com).

### College Hour

College Hour spotlights student activities—speakers, workshops, cultural programs, information fairs, Club Day, Health Fair and University Transfer Day, entertainment, music and political forums—Wednesdays from noon to 1 p.m. Most classes are not scheduled during this hour so you can participate. For more information, call the Student Activities Office at 650.949.7060.

### Community Service

Foothill students can volunteer at non-profit community organizations in San Mateo and Santa Clara counties. Learn more about opportunities to benefit youth, seniors, the environment, the homeless and many other worthy causes. To earn college credit, enroll in the SOSC 79 course. For more information, call the student activities director at 650.949.7218.



- Organizational development
- Parliamentary procedure
- Planning
- Policy development and implementation
- Problem solving and conflict resolution
- Speech communication
- Student rights and responsibilities
- Team building
- Time management

You can also apply to be a member of the Community Ambassador Program. Ambassadors help with events, hospitality, campus tours and outreach activities. Practical leadership experience is also available through the Associated Students of Foothill College (ASFC) Campus Council and campus-governance committees. Elections are held during spring quarter. For more information, call the ASFC Office at 650.949.7281.

### Cultural Enrichment

The Student Activities Office works with the Associated Students of Foothill College (ASFC), faculty, staff, academic divisions and community organizations to present lectures, seminars and forums highlighting art, music, drama, politics, athletics and current issues. The Heritage & Health Month series includes Health Month; Native American Heritage Month; Jewish Heritage Month; Black History Month; Women's History Month; Asian Pacific Islander Month; Native American Month; Latino Heritage Month; and Lesbian, Gay, Bisexual & Transgender Heritage Month. These celebrations are just some of the popular events that have earned campus and community recognition. For more information, call the Student Activities Office at 650.949.7060.

### Leadership

Student government provides our student body the opportunity to self-govern and participate with faculty, staff and administration. Leadership and service courses are offered for additional training. You can participate and gain valuable leadership skills and experience in the following areas:

- Administration
- Advocacy
- Budget development
- Communication
- Decision making
- Event coordination
- Governance
- Group dynamics
- Leadership theory and styles
- Marketing

### Student Activities Office

Foothill's Student Activities Office offers programs, services and opportunities to develop and enhance leadership skills, prepare for civic responsibility, explore diverse cultures, and help build a strong sense of college community. The staff also helps students, campus clubs and other organizations plan and coordinate events. For more information, visit Room 2008 or call 650.949.7060.









# Student Services & Programs

Student Services

Support Programs

Admission & Placement Testing Services

Campus Support Centers

Personal Support Services

Special Assistance Services

Special Studies & Programs

## Student Services

### Student Success & Support Program

The Student Success & Support Program (3SP) is a state-mandated agreement between you and Foothill College to help you achieve your educational goals. Our responsibility is to provide:

- an admission process;
- orientation to college programs, services and procedures;
- pre-enrollment placement testing;
- counseling for educational planning and course selection;
- continuous follow up of your progress; and
- referrals to support services.

Your responsibility is to:

- choose an educational major at entrance;
- declare a specific educational objective within a reasonable period of enrollment;
- be diligent about class attendance and completing assigned coursework; and
- strive to complete courses and progress toward an educational goal according to Foothill and California standards.

### Orientation

Orientation allows all students to learn important information about Foothill College. It satisfies one of the five required components to be eligible for priority registration (orientation, assessment, declared major, declared qualifying educational goal and a completed educational plan). There are several ways to complete orientation: the on-campus Student Orientation Assessment and Registration (SOAR) event, GO2 Online Orientation in your MyPortal account, *CNSL 5: Introduction to College* or *SPED 8: Introduction to College & Accommodations*.

Students should enroll in *CNSL 5* as it is taught by a counselor who will help you develop a one-year educational plan to meet your educational goal of earning a certificate or associate degree, or transferring to a four-year university. The class provides valuable information about Foothill College services, programs and academic policies. *CNSL 5* is offered each quarter and during summer session. For more information, visit [foothill.edu/counseling](http://foothill.edu/counseling).



### Counseling Center

Foothill counselors can help you:

- set academic and career goals;
- prepare an education plan with course selections;
- resolve personal concerns that may interfere with your ability to succeed; and
- make appropriate referrals as needed.

Counseling appointment services are available to Foothill College students with current and active campuswide identification numbers (CWID). To schedule an appointment, see [foothill.edu/counseling](http://foothill.edu/counseling), visit Room 8302, or call 650.949.7423.

### Transfer Center

The Transfer Center offers services to help students navigate and understand the transfer process. Services include university-transfer resources, transfer workshops, counseling appointments, and visits with university admissions representatives.

Transfer resources include major-related books, publications, college catalogs, access to EUREKA (transfer-guidance software), and internet access for transfer-related research.

Transfer Center workshops include transfer admission guarantees (TAG), essay writing for college applications, applying to colleges/universities, understanding the associate degree for transfer (ADT) and preparing for transfer to a private/out-of-state university.

Throughout the year, the Transfer Center hosts admissions representatives from the University of California, California State University and numerous

private colleges and universities.

Each quarter, a calendar of workshops, events and university tours is posted on the transfer website. For more information, visit the Transfer Center in Room 8329 or visit [foothill.edu/transfer](http://foothill.edu/transfer). To schedule a transfer-counseling appointment, call 650.949.7821.

### Internships

Internships offer a unique opportunity to gain valuable experience under the mentorship of a professional at a Silicon Valley corporation, nonprofit or public agency. Internships enhance your university-transfer application as well as your professional resume.

Foothill College offers internships for students in majors such as psychology, business, engineering, computer science, graphic arts, physical and biological sciences, office administration, multimedia and many others. Internships can be arranged with Bay Area employers and educational institutions. Proof of U.S. citizenship is required at some internship sites. Internships may be paid or unpaid. Some can be arranged for college credit, depending upon department approval.

To get started, email [internships@foothill.edu](mailto:internships@foothill.edu), call 408.745.8062 or visit [foothill.edu/internships](http://foothill.edu/internships).

## Admission & Assessment

### Student Classifications

To understand Foothill admission and placement testing procedures, you need to know your student classification:

- Continuing Student: You were enrolled at Foothill last quarter (does not apply to Summer Session)
- Former Student: You've attended Foothill, but were not enrolled during the previous quarter (does not apply to Summer Session)
- Freshman: You've completed fewer than 45 units of college credit
- Full-Time Student: You're enrolled in 12 or more units this quarter. Or you're enrolled in six units during Summer Session
- International Student: You have applied and been accepted to the Foothill College International Students Program
- New Student: You've never enrolled at any college
- New Transfer Student: You have attended a college other than Foothill

- Non-Resident Student: You have not met California residency requirements and must pay non-resident tuition
- Sophomore: You've completed 45 or more units of college credit and haven't earned a degree

### Assessment at the Testing & Assessment Center

Your assessment test results determine the starting point of your academic career. An assessment test is required for students to begin the chemistry, math, English and ESLL course sequences. You may enroll in any NCEL course, NCBS 401A, MATH235, ENGL 209, or ESLL 226 and 227 without an assessment test. To make an appointment, review the retest policy or learn about assessment testing for out-of-area, transferring and online students, visit [foothill.edu/assessment](http://foothill.edu/assessment).

Be prepared! Free study guides and practice tests are available online at [foothill.edu/assessment/assessment/testprep.html](http://foothill.edu/assessment/assessment/testprep.html).

It is highly recommended that you submit your high school transcripts to Admissions & Records for placement consideration. If you would like to satisfy your placement testing requirements with AP scores, EAP results, or college level coursework taken at another institution, you may do so by completing the Admissions and Records' prerequisite clearance process or by meeting with a counselor. For more information, visit [foothill.edu/reg/prereqs](http://foothill.edu/reg/prereqs) or schedule a counseling appointment online at [foothill.edu/counseling](http://foothill.edu/counseling).



Foothill College also offers ability-to-benefit placement testing for the student who lacks a high school diploma and is requesting federal financial aid.

For more information on placement testing services, visit [foothill.edu/assessment](http://foothill.edu/assessment). You may also visit us in person in Room 8212, call 650.949.7743 or email [fhtesting@foothill.edu](mailto:fhtesting@foothill.edu).

## Campus Support Centers

### Krause Center for Innovation

Located in Building 4000, the Krause Center for Innovation (KCI) provides open access to a variety of multimedia resources and an open computing lab with Windows and Macintosh workstations. A cyber cafe with informal seating and Wi-Fi access is located on-site. For more information, visit [krauseinnovationcenter.org](http://krauseinnovationcenter.org).

### Library Services

The Hubert H. Semans Library in Building 3500 has more than 90,000 books, periodicals, newspapers and a variety of multimedia resources. You can browse the best-seller reading collection or take a self-paced course to learn how to use a modern library. Our online catalog helps you locate books by subject, title or author. Various computer databases make it easy to find articles in periodicals. You can also access the Internet and search various databases and websites.

For more information, call 650.949.7086 (hours), 650.949.7608 (reference desk) or 650.949.7611 (circulation). Visit the Foothill College online library at [foothill.edu/library](http://foothill.edu/library).

### Science, Technology, Engineering & Math Success Center

The Science, Technology, Engineering & Math (STEM) Success Center offers free support and tutoring in mathematics, physics, chemistry, engineering, computer science, astronomy, biology, accounting and economics. Foothill's faculty staff the center, where one-to-one tutoring is offered in a supportive and stress-free environment. The center also has computers with the latest math, chemistry and physics software applications; plus programming software for computer science students. The center's biology study lab has muscle, skeletal and organ models, as well as a microscope with slides. The Center is located in Room 4213. The Foundations Lab, reserved for algebra, pre-algebra, English 209/110 and chemistry 30A/30B, is located in Room 4201. Both are open Monday through Saturday, most days until 9 p.m. Online help is also available for computer science at [foothill.edu/stemcenter/onlinecs](http://foothill.edu/stemcenter/onlinecs). For more information, call 650.949.7042.



### Foothill Observatory

Operated by the Peninsula Astronomical Society, the Foothill Observatory offers weekly public programs. These programs allow Foothill students and the public to view the day and evening sky with the observatory's large astronomical telescope. The observatory is adjacent to Building 4000. For more information, call 650.949.7334.

### Pass the Torch

Pass the Torch is a one-to-one study program supporting students in the following subjects: English (reading and composition), English for second-language learners (ESLL) composition and mathematics. Study teams consist of a team leader and a team member. The leader, who has earned a successful grade in the subject or has been recommended by his/her instructor, tutors the team member who is currently enrolled in the subject. Teams are matched by their mutually available study times; the pair meets a minimum of two hours each week. Computers and internet access are available for program participants' use. For more information, call 650.949.7687 or visit Building 3600.

### Teaching & Learning Center

The Teaching and Learning Center (TLC), located in Building 3600, offers free reading, writing and grammar tutoring for students in any discipline. Tutoring is available for individual students and small groups on a drop-in basis, and appointments can be scheduled in advance. Workshops are also offered on a variety of topics and can be customized to students' needs. The Media Lab within the TLC contains more than 60 computers for students to use, and there are four group study rooms that are bookable through the website. The TLC is open Mondays through Thursdays, 8 a.m. to 7 p.m., and Fridays from 8 a.m. to 4 p.m. For more information or to schedule an appointment, call 650.949.7444 or visit [foothill.edu/tlc](http://foothill.edu/tlc).

## Personal Support Services

### Health Services

Health Services provides confidential health care services to enrolled students. Services include flu shots during fall quarter, primary care appointments, basic over-the-counter medications, blood pressure checks, one-to-one tobacco-cessation counseling, and nicotine patches and gum. Additional services that are offered include birth control, pregnancy testing, sexually transmitted disease and HIV testing, urinary tract infection treatment, and reproductive health care. Services that are available at cost include physicals, immunizations, lab tests and prescription medications. For more information or to schedule an appointment, visit Room 2126 or call 650.949.7243.

### Housing

Foothill has no dormitory facilities. The college does not supervise, recommend or assume responsibility for any housing facility.

### Psychological Services

Licensed mental health professionals offer short-term (eight sessions), confidential, no-fee personal counseling to enrolled Foothill students. Services include individual, couples, family and group counseling. Services are provided in the Psychological Services Office. For psychological services appointments or information, visit Room 2120 or call 650.949.7910.

## Special Assistance Services

### Disability Resource Center

The Disability Resource Center (DRC), located in Building 5400, provides disability access information, academic support, computer training, counseling, on-campus shuttle and other services.

For on-campus service and disability accommodation information, call 650.949.7017. For accommodations for deaf and hearing-impaired students, e-mail [drc@fhda.edu](mailto:drc@fhda.edu) or call 650.949.7017. The DRC also offers courses and services on campus and in the community for physically, communicatively, learning, developmentally and psychologically disabled adults. Consult the quarterly class schedule online for site and courses under Adaptive Learning. For more information about community-based programs and special classes, call 650.949.7017.

To request this or any Foothill College publication in alternative media such as electronic text, Braille or large print, e-mail [drc@fhda.edu](mailto:drc@fhda.edu) or call 650.949.7017.



Foothill College offers an alternative path for the student with a verified disability who requests academic modifications and does not want to participate in DRC programs. For information, visit the Foothill College ADA/504 coordinator and dean of Student Affairs & Activities in Room 2002 or call 650.949.7389.

### Owl Scholars Program (Early Alert)

The Owl Scholars Program is designed to connect students in certain basic skills courses (English, math and English for Second Language Learners) to student support resources that will help them be successful. Students may be recommended to the Owl Scholars program if, based on class performance, their instructor believes they could benefit from additional assistance. Students referred to the program will meet with a member of the Owl Scholars team to devise a success plan tailored to their needs and receive consistent follow-up throughout the quarter. For more information, visit [foothill.edu/owl scholars](http://foothill.edu/owl scholars).

### EOPS & CARE Programs

Extended Opportunity Program & Services (EOPS) and Cooperative Agencies Resources for Education (CARE) are state-funded programs that serve financially and educationally disadvantaged students. The EOPS and CARE offices are located in the Student Services Center in Room 8202. For a brief description of services provided, see page 29. To learn about eligibility and student responsibility requirements, call 650.949.7207 or visit [foothill.edu/eops](http://foothill.edu/eops).

## Veterans' Assistance & Services

The Foothill College Veterans Resource Center (VRC) and Counseling Division staff assist veterans in planning their educational goals while using their Post-9/11 G.I. Bill, Montgomery G.I. Bill, Veterans Educational Assistance Program or Selected Reserve Educational Assistance Program benefits. The college accepts credit from institutions accredited by one of the six regional accredited associations or follows the recommendations of the American Council on Education. Assistance for dependents who qualify for educational benefits is also available.

According to policies of the United States Veterans Administration, students receiving VA educational benefits (veterans, reservists, dependents) must maintain satisfactory progress. Students receiving VA benefits who fall below a 2.0 grade-point average (GPA) will be placed on academic probation. If unsatisfactory progress continues for two consecutive quarters, the student will have benefits suspended until GPA returns to satisfactory progress of 2.0 GPA or better.

For more information, call the VRC at 650.949.7912 or e-mail [contactvrc@fhda.edu](mailto:contactvrc@fhda.edu).

## Refunds & Grading Options for Students Called to Active Military Service

If you are called to military duty before completing your term of study, you may choose from the following options.

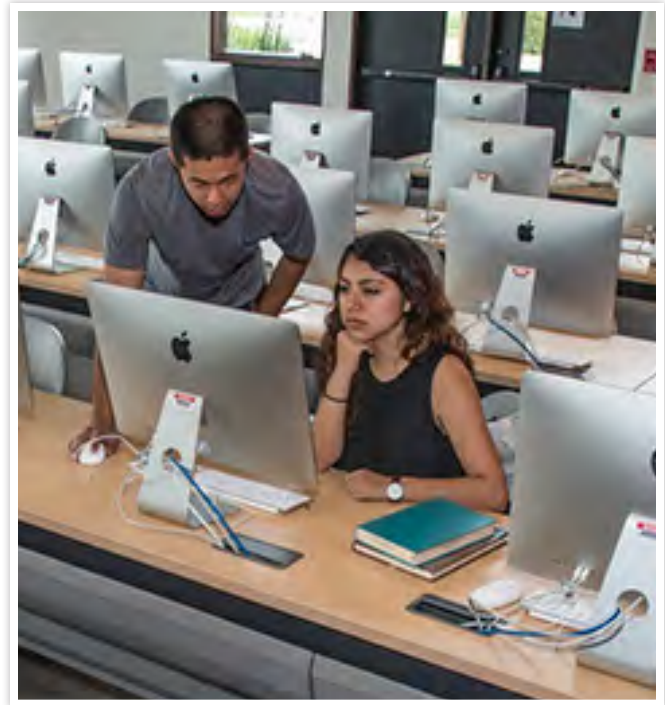
- **Refund:** Petition for an official withdrawal with a full refund of enrollment fees, student fees and non-resident tuition, if applicable. You'll receive a full refund for all books and materials purchased from the college bookstore.
- **Credit:** Petition for an official withdrawal with credit for enrollment fees, student fees and non-resident tuition, if applicable, toward future enrollment. You may later opt to receive a refund.
- **Grade of Incomplete:** Request a grade of Incomplete from the instructor. Regulations require you to complete the course within one year, but you can request an extension in special circumstances.

Forms for these services are available in the Admissions & Records Office in Room 8101.

## Special Studies & Programs

### Foothill Online Learning

Foothill Online Learning features online courses, including lectures, discussion, assignments and tests delivered via the Internet with regular opportunities for electronic interaction with instructors and other



students. To enroll in online classes, you must have access to a computer, the Internet and an e-mail account.

Foothill College may be required to receive state authorization to enroll students who do not reside in California. Many states have either given the college this authorization or do not require authorization. However, some states require significant fees to receive state authorization. Due to the significant and/or recurring fees for state authorization, Foothill College no longer permits a student to enroll if he/she resides in one of the following states: Alabama, Arkansas, Georgia, Maryland, Michigan, Minnesota or Wisconsin.

For more information, visit [foothill.edu/onlinelearning](http://foothill.edu/onlinelearning).

### International Programs

Establishing an international presence is a Foothill College priority. The college has a long history of educating international students since its opening in 1957, and its graduates hail from many diverse corners of the world, from Tonga and Ivory Coast to Kyrgyzstan, Nepal and Latvia.

The International Programs Office caters specifically to international students on F-1 visas. We provide counseling and assistance to more than 1,200 F-1 students from more than 90 different countries. F-1 status is available to foreign citizens who commit to study full time in the United States in programs leading to an associate degree or bachelor's degree at a four-year university through Foothill's transfer pathways. Admission to Foothill is flexible, convenient and

personalized. Applications are accepted three times a year for Fall, Winter and Spring quarters. For admissions requirements and application procedures, access the admissions section at [foothill.edu/international](http://foothill.edu/international). Foothill also hosts international students on other visa types, such as J-1, H-1B, H-4, L-2 or F-2. The college has approximately 1,500 international students on all visa types, earning Foothill a #11 spot in the U.S. on the Institute of International Education's *Open Doors Report* ranking associate degree institutions with the largest and most diverse international student populations. Important: Applicants who do not hold or intend to apply for F-1 status are considered domestic students for application purposes and should apply as non-residents by completing the *Domestic Student Application Form* at [foothill.edu/reg](http://foothill.edu/reg).

The International Programs Office features a team of caring multilingual professionals who ensure that students have an outstanding educational experience at Foothill and in the U.S. Our services include a new student orientation program with comprehensive academic, immigration and cultural counseling; regular immigration advising and seminars by a dedicated advisor regarding regulations that affect F-1 student status from passports, visas, employment, travel and academic issues; Glacier tax-filing assistance program; and medical insurance program.

Additionally, the office creates programs and initiatives that support international students as they adjust to the campus and community, expand their horizons and share their unique heritage and cultural backgrounds. Special activities include monthly coffee hours, tickets to the Celebrity Forum, field trips to Bay Area attractions, Thanksgiving dinner, ice-skating trip and International Student Connection Club. The office also coordinates large-scale programming initiatives aimed at internationalizing the Foothill campus, such as the annual International Education Week and Lunar New Year celebrations.

For information about admissions, e-mail [foothillinternational@fhda.edu](mailto:foothillinternational@fhda.edu). For information about international marketing and activities, e-mail [fhinternational@fhda.edu](mailto:fhinternational@fhda.edu).

### Honors Institute

For more than 50 years, Foothill College has provided an honors program that offers an enriched academic, cultural and social experience to intellectually inquisitive and motivated students. The Honors Institute offers students an academic environment that promotes critical thinking, analytical writing, and research skills with an innovative and challenging curriculum. Opportunities for participation at cultural events,

conferences and unique honors seminars provide students an intellectual community that encourages and supports them in achieving their goals. The Honors Institute offers stimulating academic opportunities to a previously underserved population, prepares talented and ambitious students for the challenges of higher education, and supports successful transfer to either baccalaureate-granting colleges and universities or expanded career opportunities.

A fundamental goal of the program is to promote self-confidence and increase self-esteem in students who need the encouragement to excel, as well as the courage to continue their education and fulfill their goals. Rather than presenting itself as a selective entity, the Honors Institute welcomes all students and especially encourages students remediating through basic skills courses to strive toward participation in the honors program.

The Honors Institute is flexible, allowing honors students to simply take a few honors courses or choose to complete the honors scholar program. To become an honors scholar, students must complete a minimum of 23 honors units (5 honors courses and 2 honors seminars) and maintain a minimum 3.3 cumulative college GPA. Upon completion, students are awarded with the permanent transcript notation of "honors scholar" which increases their chances of transfer admission, provides scholarship opportunities and gives them eligibility to participate in the UCLA Transfer Alliance Program, UC Irvine Honors to Honors Program and other transfer partnerships.



Foothill College is one of a handful of community colleges in Northern California that is approved for the UCLA Transfer Alliance Program (TAP), which offers students preferred admission to the UCLA College of Letters & Science (typically 60-80% admission rate). UC Irvine also offers guaranteed admission for students who complete the honors scholar program and maintain a minimum 3.7 GPA.

Regardless of their transfer plans, all honors students are encouraged to complete the honors scholar program.

Foothill College honors students typically present at the annual Bay Area Community College Honors Research Symposium (held at Stanford University and UC Berkeley). Foothill honors faculty work closely with honors students to mentor students in their research. Here, honors students present their research to hundreds of other honors students and faculty. Other honors program benefits include specialized honors counseling, specialized workshops, free tickets to local lectures with internationally renowned writers, scientists, artists and politicians, transfer admission guarantees (TAGs), and more.

Students who intend to participate in the Honors Institute simply meet the following requirements:

Writing proficiency:

- Complete *ENGL 1A* or the *ENGL 1S* and *1T* series with a grade of a **B** or better; OR
- Be eligible for *ENGL 1AH* Honors English Composition via the Foothill English Assessment Test.

Academic (GPA) requirement:

- Maintain a cumulative college GPA of 3.3 in at least 10 transferable units; or
- Demonstrate a cumulative high school GPA of 3.5.

Students who are not yet eligible for the program based upon the GPA requirements may participate in the Try an Honors Course Program, which offers students who have completed *ENGL 1A* or *ESLL 26* or *ENGL 1S* and *1T* with a grade of **B** or better, an opportunity to enroll in an honors course (pending space availability).

**Note:** Students who are placed in Foothill's *MATH 1A: Calculus* course via Foothill College placement tests are eligible to enroll in *MATH 1AH: Honors Calculus* before fulfilling the writing proficiency requirements. For more information, see [foothill.edu/honors](http://foothill.edu/honors) or call 650.949.7638 or visit Room 1960.

### **Middle College: The High School Alternative**

Foothill Middle College Program coordinators understand that not all students fit the mold of the traditional high school student. This alternative program works with at-risk students to rekindle the enthusiasm for learning.

The program offers a serious learning environment in which students must take control of their own learning, explore individual interests through more diversified course offerings, and complete high school graduation requirements. Middle College is based at the Main Campus in Room 2152. For an application or more information, visit [foothill.edu/middle](http://foothill.edu/middle).

### **Occupational Training Institute**

The Foothill-De Anza Occupational Training Institute (OTI) offers career training for students who are eligible through assistance programs, including CalWORKs (TANF/Welfare to Work), Workforce Innovation & Opportunity Act (WIOA), Trade Adjustment Assistance (TAA) and Computer Technical Support (CompTechS). OTI supports Foothill College's career training programs such as medical, technical, business, horticulture, communications and administrative occupations.

CalWORKs: OTI supports CalWORKs students by assisting with enrollment into career technical education programs, on-campus paid work study and transfer to universities. Students who participate in CalWORKs are eligible for reimbursement of college fees, academic, career and personal counseling/advising, development of an individualized education plan, child care, textbook assistance, and priority registration. OTI also provides referrals to various community services and a free computer.

WIOA/TAA: Depending on the contracting agency's policies and approved funding, students may or may not be approved for payment of college fees, textbooks, supplies, parking fees, or other unanticipated costs. All WIOA/TAA students are eligible for a free computer. If a student is referred to OTI by a contracting agency (e.g., Workforce Board), the agency is responsible for paying OTI's administrative fee of \$693.23 per quarter, subject to change by state and/or district action. If the student is not referred by a contracting agency, he/she is responsible for paying OTI's administrative fees.

CompTechS: An on-campus internship program for students who are interested in careers in information technology, OTI's CompTechS Program features donated and refurbished computers that are then made available to Foothill students. Internships may be available in Silicon Valley companies for qualified applicants.



For more information, visit the OTI Office (Room 5004), call 650.949.7465 or visit [deanza.edu/oti](http://deanza.edu/oti).

### **Reserve Officer Training Corps**

Foothill College participates in Reserve Officer Training Corps (ROTC) programs that are offered at local universities so that students who want to earn ROTC credit while attending Foothill may do so. Students should meet with a Foothill counselor to discuss credit and certification. For more information, call the following ROTC representatives:

- Air Force ROTC  
San Jose State University, 408.554.4034
- Army ROTC  
Santa Clara University, 408.554.4781
- Navy ROTC  
UC Berkeley, 510.643.6345

### **Workforce Development**

Foothill College realizes that its commitment to serve the workforce must extend beyond the classroom curriculum, and degree and certificate programs. The reality of global competition and increasing job complexity means that organizations have a continuing need for their employees to learn new skills and fill in knowledge gaps to ensure high-quality job performance.

Employers find timely and cost-effective solutions outside traditional college credit offerings in working with the Foothill College Workforce Development Office. The office offers employers a variety of customized training solutions—on-site instructor-led classes, web-based training, coaching, on-the-job training, skills acquisition, consultations, needs assessments and other services. Programs range from soft skills workshops to advanced technical training. A quick response to client needs, hands-on training and practical application drive our customized solutions that transform business processes and employee productivity for our training partners. For more information, call 650.949.7797 or visit [foothill.edu/workforce](http://foothill.edu/workforce).

### **Community Education**

The Foothill College Community Education Program offers fee-based courses each quarter for children and adults, as well as working professionals who are interested in career development and personal enrichment. Community members may submit proposals for future community education classes. Community education offerings are ideal for participants who are interested in taking classes without the formality of college units and those who have maxed out repeatability of select classes. Community

education classes do not have repeatability restrictions. In accordance with the Civic Center Act, the college is only designated as a place for community groups when there is no interference with the regular educational program.

For registration instructions or to submit a proposal for a community education class, visit [foothill.edu/communityeducation](http://foothill.edu/communityeducation).





# Financial Planning & College Costs

Student Fees

Instructional Materials Fees

Estimated Annual Cost of Attending Foothill College

Examples of Additional Costs

Refunds & Repayments

Financial Aid

State Aid

Other Aid

Textbooks & Supplies

## Student Fees

All students pay \$31 per unit (fees are subject to change by California legislative action). In addition, the non-resident student tuition fee and the foreign student tuition fee is \$160 per unit, for a total of \$191 per unit.

Foothill charges additional fees for Campus Center use, on-campus parking, lab courses, student-body activities (voluntary), Clipper Card and health services. International F-1 Visa students are required to purchase comprehensive health insurance for \$504 each quarter.

All fees, which are posted online at [foothill.edu](http://foothill.edu), are subject to change. Tuition and fees may be refunded under certain circumstances; the specific refund policy is posted online at [foothill.edu/reg/cashier](http://foothill.edu/reg/cashier). Direct questions about tuition and fees to the Cashier's Office in Building 8100 or call 650.949.7331.

### Instructional Materials Fees

In some courses, there may be an instructional materials fee. These fees, detailed in the online class schedule, reflect the actual cost for materials, meaning that the cost is usually lower than if you were to purchase the same items separately. Unless there's an issue of health or safety, you can either pay the fees to the college or provide your own materials of equal quality. Your instructor will provide a list of required materials.

### Estimated Annual Cost of Attending Foothill College

It's important for you to financially plan your education. The following cost estimates are calculated for a student attending Foothill College full time (enrolled in 15 units) for nine months.

#### 2017–2018 Cost of Attendance for CA Residents

	Reside at Home No Dependents	All Others
Fees	\$1,515*	\$1,515*
Books & Supplies	\$1,854	\$1,854
Room & Board	\$5,247	\$13,293
Transportation	\$1,233	\$1,233
Miscellaneous	\$3,276	\$3,276
Total	\$13,125	\$21,171

*\*Based on institutional average; fees are subject to change by state legislative action.*

### Examples of Additional Costs

For students enrolled in allied health programs (paramedic, dental hygiene, etc.), special fees, lab fees, tooling, and other related costs may be added to the normal cost of attendance. Expenses for dependent care, disability-related costs and campus abroad costs may also be considered with documentation.

### Refunds

The college maintains a refund policy for tuition and fees at the Admissions & Records Office and book purchases at the Bookstore. A community college district shall not refund any enrollment fee paid by a student for program changes made after the first two weeks of instruction for a primary term-length course, or after the 10-percent point of length of the course for a short-term course, unless the program changes are a result of action by the district to cancel or reschedule a course or to drop a student pursuant to Section 58106(g) where the student fails to meet a prerequisite. A student can request a refund for quarter-length class(es) that are dropped by the deadline. In most cases, the deadline is the second Friday of the quarter or the first Friday of Summer Session. However, this date varies by course and term. Exact drop deadline dates for each course are posted in [MyPortal.fhda.edu](http://MyPortal.fhda.edu). The student is responsible for reviewing exact drop dates. The Admissions & Records Office and Bookstore can provide the most current policies for obtaining a refund.

### Repayment

The student who withdraws from the college on or before 60 percent of the quarter is completed, may be required to repay Title IV funds. The funds are repaid to the Cashier's Office and the student will be notified of any debt within 30 days after the college's determination that the student has withdrawn.

### Tuition & Fees for Four-Year Dental Hygiene Program

Quarterly tuition and fees listed below are in effect for the academic year 2017–2018. Tuition and fees are subject to change without notice. For up-to-date information on quarterly fees, visit [foothill.edu/reg/cashier](http://foothill.edu/reg/cashier).

- Upper Division Dental Hygiene Course Fee: \$56 per unit; this quarterly fee is paid by students who enroll in all upper-division dental hygiene courses.
- Enrollment Fee: \$31 per unit; this quarterly fee is paid by all students.
- Instructional Materials Fees: Instructional materials fees may be charged for some courses in accordance with state regulations; for explanation, review paragraph at left.

- Non-Resident Tuition: \$160 per unit; for explanation, review page 26.
- Basic Fee: \$50–\$52; this quarterly fee is paid by all students and includes:
  - Student ID Card Fee: \$10; supports many services, activities, and discounts, such as free dental services, recreation room and movie tickets. For more information, visit [foothill.edu/campuslife/owl.php](http://foothill.edu/campuslife/owl.php).
  - Health Services Fee: \$17; paid by all students and provides health services. Note: Students who depend exclusively upon prayer for healing, and students in approved apprenticeship training programs may request this fee to be waived by submitting the Health Fee Exemption Form, which is posted online at [foothill.edu/reg/forms/health-fee-exemption.pdf](http://foothill.edu/reg/forms/health-fee-exemption.pdf).
  - Student Representation Fee: \$1; provides support for students or student groups to present student viewpoints to government agencies and legislators
  - Campus Center Use Fee: \$20
  - Eco Pass Fee: \$5/\$4/\$3\*; provides students with unlimited rides on VTA buses and light rail for the duration of each quarter in which enrolled. Eco Pass Clipper Card is \$5 for full-time students who are enrolled in 12 or more units; \$4 for part-time students who are enrolled in 6 to 11.5 units; and \$3 for the students who are enrolled in fewer than 6 units. For more information, visit [foothill.edu/ecopass/](http://foothill.edu/ecopass/).

## Financial Aid

### Are You Eligible?

Financial aid eligibility is based on need—the difference between what you and your family can provide and the cost of attendance.

Your financial need is determined by the information you and your family provide through the *Free Application for Federal Student Aid* (FAFSA) or the *California Dream Application* and any Foothill College additional paperwork. Regardless as to whether the application shows unmet need or not, we may be able to help. The total amount offered cannot exceed your documented financial need, and the monies must be used solely to meet cost of attendance at Foothill (refer to chart on page 26).



If you are in default on a loan, or owe an overpayment on a grant or loan, you will not be eligible for financial aid until the situation is satisfactorily resolved. Eligibility requirements are generally established once you've shown, through a completed application, that you:

- have applied for admission
- have enrolled in a financial aid-eligible academic program that requires 24 units or more to complete
- show academic major/goals and units of enrollment that can be applied to an educational plan
- maintain satisfactory academic progress
- demonstrate verifiable financial need. Some exceptions may apply. Consult the Financial Aid Office for details
- have a high school diploma, GED or the equivalent. If you do not have one of these, see the Financial Aid Office
- are a U.S. citizen, permanent resident or other eligible non-citizen (for federal aid)
- have a valid Social Security Number (for federal aid)
- register with Selective Service if required

### **Federal Pell Grant**

Federal Pell Grants are awarded to undergraduates based on financial need. This is free grant aid that ranges up to \$5,920. Maximum and minimum amounts are subject to change by federal legislative action.

### **Federal Supplemental Educational Opportunity Grant (FSEOG)**

This federal program may be an option if you have exceptional financial need and apply early. You must also be eligible for a Pell Grant. The FSEOG Award is up to \$600 per academic year at Foothill College.

### **Federal Work Study (FWS)**

If you have financial need and want to earn a part of your educational expenses through employment, Federal Work Study (FWS) may be an option. You can work up to 19 hours per week. However, you must be enrolled in a minimum of six units to be eligible for FWS. If you receive an FWS award offer, it is your responsibility to schedule an interview with the Financial Aid Office for FWS placement assistance.

### **Federal Direct Subsidized & Unsubsidized Student Loan**

Federal Direct Loans are made by the U.S. Department of Education. As a first-year undergraduate, you may be able to borrow up to \$3,500 subsidized per year. As a second year undergraduate, you may be able to borrow up to \$4,500 subsidized per year. For the dental hygiene bachelor's degree program, you may be able to borrow up to \$5,500 subsidized per year. Additional Unsubsidized Direct Loans may also be available annually. For details, visit the Financial Aid Office (Room 8103).

Federal Direct Loan totals may not exceed \$31,000 for dependent undergraduates and \$57,500 for independent undergraduates (no more than \$23,000 can be subsidized). You begin repayment six months after you graduate or drop below half-time enrollment. During the repayment period, and upon receipt of funds for unsubsidized loans, you will be charged a fixed interest rate that will not exceed 8.5 percent on the unpaid balance and adjusted for new loans each July 1. For the 2016–2017 academic year, the interest rate was 3.76 percent.

## **State Aid**

### **Cal Grants**

To be eligible, in addition to federal aid requirements, a student must:

- be a California resident or classified as AB540, and
- not have a bachelor's or professional degree (except extended Cal Grant A or B awards for a teaching

program or other five-year program), and

- file a completed FAFSA or *California Dream Application* and *Cal Grant GPA Verification Form* by the annual March 2 deadline.

**Cal Grant A:** Covers fees at the UCs, CSUs, and private institutions in California. This award may not be used to pay for community college fees, except in the case of the dental hygiene bachelor's degree program differential fees. Funding for students who are enrolled at community colleges may be held in reserve for up to three years.

**Cal Grant B:** Is for high-potential students from disadvantaged or low-income families who otherwise would not be able to pursue a higher education. California community college awards are up to \$1,670 per year.

**Entitlement Award:** Every graduating high school senior who has a grade-point average of at least 2.0, meets the Cal Grant financial and eligibility requirements and applies by March 2 within one year of graduation is guaranteed this award.

**Competitive Award:** The student who will enroll at a California community college and file a FAFSA, although strongly encouraged to apply by March 2, has a second annual deadline of September 2. Other students who meet the basic Cal Grant eligibility requirements and who have at least a 2.0 grade-point average may compete for this award.

**Cal Grant C:** Helps vocationally oriented students acquire marketable job skills within a short time. At least half-time enrollment for training must be for a minimum of two months and lead to a recognized occupational goal—diploma, associate degree, license qualification or certificate. Funding is available for up to two years, depending on the length of the program, as long as academic progress is acceptable. Awards for California community college students are limited up to \$576 in training-related costs.

### **Full-Time Student Success Grant**

This state award is a supplement for those students awarded a Cal Grant B or C and who are enrolled in full-time units. With each full-time payment of Cal Grant B or C a student is eligible to receive a supplemental payment of \$200 from the Full-Time Student Success Grant. If a student's Cal Grant payment is less than full-time they are not eligible for the award in that term.

### **California Chafee Grant**

This federal program, administered by the California Student Aid Commission, offers college and vocational

school financial aid to youth aging out of a foster care program. For up to \$5,000, the student must demonstrate financial need, meet basic eligibility requirements, complete the FAFSA and the *Chafee Grant Application* available at [csac.ca.gov](http://csac.ca.gov).

### Board of Governors Fee Waiver (BOGW)

While state law requires that students attending California community colleges pay an enrollment fee, the California Community Colleges offer the BOGW. This grant program waives enrollment fees for the academic year.

If you are a California resident or are classified as AB540, you qualify for a BOGW if any one of the following statements applies to your current status:

- You have qualified for financial aid and your calculated unmet need exceeds \$1,103;
- You meet annual CA income standards;
- You or your family are receiving TANF/CalWORKS, Supplemental Security Income (SSI) or General Assistance/General Relief;
- You have received certification from the California Department of Veterans Affairs or the California National Guard Adjutant General that you are eligible for a dependent's fee waiver;
- You meet year-specific income standards;
- You have documentation that you are a recipient or the child of a recipient of the Congressional Medal of Honor;
- You have documentation that you are a surviving dependent of any individual killed in the Sept. 11, 2001 terrorist attack; or
- You have documentation that you are a dependent of a deceased law enforcement/fire suppression personnel killed in the line of duty.

### Applying for BOGW

- You are required to apply for a BOGW each academic year.
- The majority of BOGW recipients obtain eligibility by completing the FAFSA ([.ed.gov](http://.ed.gov)) or *California Dream Application* ([caldreamact.org](http://caldreamact.org)) each academic year.
- Alternatively, some recipients obtain eligibility by completing an online application through Open CCC Apply ([cccapply.org](http://cccapply.org)).
- Only one application is required per year (July 1–June 30).

- You do not have to be enrolled in a specific number of units to be eligible for the BOGW.
- You do have to maintain a good campus academic and progress standing to continue to be eligible for the BOGW.

### Extended Opportunity Program & Services (EOPS)

After applying for federal and state aid, you should visit the EOPS Department in Room 8202.

If you are a BOGW recipient, you may qualify for EOPS services. This state-funded program has been established to encourage the enrollment, retention and graduation/university transfer of students affected by language, social, economic and educational disadvantages who otherwise might not attend college. Full-time enrollment is required. Foothill's EOPS Department offers textbook assistance, counseling, tutoring, campus tours of four-year universities, computer lab, and transfer assistance to facilitate the successful completion of academic, career and/or personal goals. EOPS faculty and staff assist participant-students as they work to achieve their goals.

### Cooperative Agencies Resources for Education (CARE)

An EOPS supplemental program, Cooperative Agencies Resources for Education (CARE) assists EOPS participants who are single, heads of household, and Temporary Aid to Needy Family (TANF) recipients with young children. In addition to EOPS-provided services, CARE students receive additional support and services.

For program entry requirements or more information, call 650.949.7207 or visit [foothill.edu/eops](http://foothill.edu/eops).

## Other Aid

### Emergency Loans

If you face an unexpected educational emergency, Foothill offers short-term loans up to \$400. To qualify, you must be enrolled three-quarters time (9 units), purchase a Foothill College OwlCard and meet satisfactory academic progress requirements. These 30-day loans are interest-free. An overdue loan may be subject to additional late fees, registration holds, and assignment to collection services. Emergency loans are administered through the Financial Aid Office. For information, call 650.949.7245.

### Employment

If you're interested in working to help defray the cost of attending college, consider a part-time, on-campus position. Most of these jobs pay from \$10.50 to \$16.75/hour. Jobs that are not based on financial need are called "district" employment, and you must be

enrolled in a minimum of 12 units to be eligible for these jobs. For information, call 650.949.7245.

### Scholarships

Nearly \$300,000 in campus and local scholarships are awarded annually to Foothill students. Scholarships, which vary in amount, are considered academic gifts and need not be repaid. They're generally based on academic standing, financial need, potential progress in major fields of study, and college or community activities. Scholarships are computed as resources for students receiving financial assistance. A listing of current scholarships is available at [foothill.edu/aid](http://foothill.edu/aid).

### Textbook Assistance

To alleviate the cost of textbooks, students eligible for Extended Opportunity Program & Services (EOPS) will receive a textbook voucher. Amount will be based on state funding. For more information, call the EOPS Office at 650.949.7207.

### Financial Aid Answers

The goal of the Foothill Financial Aid Office is to make college accessible to all students. We feel no one should

be denied an educational experience due to lack of funds. If you have questions or want more information about financial aid options, contact:

Financial Aid Office  
(Room 8103 in Building 8100)  
Foothill College  
12345 El Monte Road  
Los Altos Hills, CA 94022-4599  
650.949.7245  
email: [fhfinancialaidoffice@foothill.edu](mailto:fhfinancialaidoffice@foothill.edu)  
website: [foothill.edu/aid](http://foothill.edu/aid)

### Textbooks & Supplies

You are responsible for purchasing textbooks and supplies, including course syllabi, bibliographies and other printed materials in excess of five pages. Some courses require that you purchase additional supplies. The Foothill Bookstore sells all course texts and other items.

### Textbook Affordability

Foothill College recognizes that textbook affordability directly impacts student access and successful learning. Textbook information, including price and the International Standard Book Number (ISBN) is included on the website for the college's bookstore at [books.foothill.edu](http://books.foothill.edu). Foothill College makes every reasonable effort to determine that the textbook information listed online is accurate. However, textbook editions and ISBNs are subject to change without notice by either the instructor or publisher. The Foothill College Bookstore is not responsible for subsequent textbook changes if the student purchases textbooks from another source.

### Textbook Options

The college offers you several options that can reduce the cost of textbooks, including the following choices. As with any consumer purchase, you are responsible for understanding the vendor's refund/return policies. For more information call 650.949.7283 or email [fhbooks@foothill.edu](mailto:fhbooks@foothill.edu).

- **Purchase Used Textbooks:** The Foothill College Bookstore provides a large selection of used textbooks at up to 25 percent off the new textbook price. Look for used textbooks both online and in store. Review available titles as well as policies and restrictions at [books.foothill.edu](http://books.foothill.edu). Used textbooks may also be available at other retail bookstores;
- **Rent Textbooks:** With a valid OwlCard, you can rent textbooks from the Foothill College Bookstore. Review available rental titles, as well as policies and restrictions at [books.foothill.edu](http://books.foothill.edu);
- **Swap Books:** Buy and sell your used books directly





with other students. Listings for the student-run book exchange are free to review. Review available titles, instructions and policies at [foothill.edu/books](http://foothill.edu/books);

- Use Textbooks Placed on Reserve in the Foothill College Library: Be aware that some books on reserve cannot be checked out. Review more library reserve instructions and policies at [foothill.edu/library](http://foothill.edu/library); and
- Sell Your Books During Book Buyback: The Foothill College Bookstore buys back titles that instructors have requested for the following quarter at up to 50 percent of the new price. Thousands of other titles may be bought back each quarter for wholesale value, up to 40-percent cash back. Buyback operates on a first-come, first-served basis. The quantity being bought back by the Foothill College Bookstore is limited and may be reached at any time. The price paid during buyback is subject to the condition of the book and may change without notice. Review more buyback information, dates and policies at [books.foothill.edu](http://books.foothill.edu).

### **Additional Textbook Resources**

Textbooks and course materials are now eligible for a tax credit under the American Opportunity Tax Credit. To learn more about this option, as well as how to claim the tax credit, review the IRS instructions posted at [textbookaid.org](http://textbookaid.org).





# Programs of Study

Academic Divisions

Foothill College General Education Pattern

Select a Major

Certificate Programs

Types of Degrees Offered at Foothill College

Program Advisory Boards

Professional & Technical Programs Leading  
to a Career Upon Completion

Apprenticeship Programs

Degrees & Certificates Offered at Foothill College

## General Education

Completion of general education coursework is required for students to earn a Foothill College associate degree. For information on the Foothill College General Education pattern, refer to pages 80–81. For information on the Intersegmental General Education Transfer Curriculum (IGETC) pattern, refer to page 82. For information on the CSU General Education Breadth pattern, refer to page 83.

Students are strongly advised to meet early and often with a Foothill counselor to determine which pattern will best meet their goals.

### Select a Major

Selecting a college major is an important step—one that establishes your career goals and determines where you should direct your academic efforts.

Majors within career and transfer programs are described within the following pages. The chart on pages 38–40 summarizes degrees and certificates available as of Summer Session 2017. Consult curriculum sheets located on the website for the most current degree and certificate information. You can also consult with a Foothill counselor to develop a strategy for selecting your college major. To schedule an appointment, call 650.949.7423 or visit [foothill.edu/counseling](http://foothill.edu/counseling).

### Certificate Programs

Foothill offers the following types of certificate programs:

- Certificate of Achievement
- Certificate of Completion (non-credit)
- Other Division Certificates
  - Career Certificate (non-transcriptable)
  - Certificate of Proficiency (non-transcriptable)
  - Certificate of Specialization (non-transcriptable)
  - Skills Certificate (non-transcriptable)

For information about certificates, contact the division office for unit requirements, course sequences and major requirements. Foothill awards these certificates when you satisfactorily complete certain specialized programs requiring fewer than two years of full-time study. Certificate programs comprise (1) a complete curriculum pattern or (2) major and related courses selected from an associate in arts or associate in science degree curriculum at the recommendation of an advisory committee.

## Academic Divisions

Biological & Health Sciences	650.949.7249
Business & Social Sciences	650.949.7322
Counseling & Student Services	650.949.7423
Fine Arts & Communication	650.949.7262
Kinesiology & Athletics	650.949.7222
Language Arts	650.949.7250
Library/Learning Resource Center	650.949.7250
Physical Sciences, Mathematics & Engineering	650.949.7259

Certificate of achievement programs require:

- a minimum GPA of 2.0; and
- fifty percent of the program units must be completed in residence for most certificates.\*†

\*Fifty percent requirement does not apply to the following certificates: Transfer Studies—CSU GE; Transfer Studies—IGETC.

†Students cannot be required to retake a C-ID course in order to meet the fifty percent requirement. For more information, schedule an appointment with a counselor.

In addition, when noted on the curriculum sheet, some certificates may require a minimum English and/or math proficiency. For more information, schedule an appointment with a counselor.

Some Foothill College divisions also offer certificates of completion, proficiency, specialization, career and skills. These certificates will not appear on the student's transcript. General requirements include the prescribed coursework and a GPA of at least 2.0 in these courses. Non-transcriptable certificates are maintained and awarded by individual academic departments, and are not recorded on student transcripts. To apply for the certificate, contact the department chairperson within one academic year after completing the last course for the certificate.

## Types of Degrees Offered at Foothill College

While many students complete an associate degree in preparation for immediate entry into the job market, earning an associate degree may also serve as excellent preparation for transfer to a four-year college or university. By earning an associate degree, you indicate to potential employers, transfer institutions and society that you not only have specialized knowledge in a particular area of study. Rather, degree completion also signals that you have gained critical and analytical thinking ability, written and oral communication skills, and are able to consider issues with ethical and global perspective.

You are strongly advised to meet with a Foothill counselor early to decide which degree best suits your academic needs and for assistance in planning your course of study. Requirements for all Foothill College associate degrees include completion of (1) a minimum of 90 quarter units in a defined set of courses; (2) a minimum of 18 units successfully completed at Foothill College; (3) a grade of C or better in all core and support courses used for the degree; (4) a minimum GPA of 2.0 across all college courses including Foothill courses; (5) a major or area of emphasis of at least 27 units in a curriculum approved by the Foothill College Curriculum Committee; and (6) general education coursework. There are significant differences in the general education requirements depending upon the degree you are pursuing; consequently, you are again urged to meet with a Foothill counselor to determine which general education pattern is most appropriate. The four types of associate degrees offered are:

### Associate in Science Degree (A.S. Degree)

The A.S. degree is awarded to students who complete all of the requirements in a major or area of emphasis in the areas of science, technology, engineering or mathematics. This degree also requires completion of the Foothill College General Education requirements or Intersegmental General Education Transfer Curriculum (IGETC) or CSU GE Breadth. Students who plan to complete this degree and who also intend to transfer to a four-year college or university are advised to meet early and often with a Foothill counselor for assistance in developing an educational plan that satisfies both sets of requirements.

### Associate in Arts Degree (A.A. Degree)

The A.A. degree is awarded to students who complete all of the requirements in a major or area of emphasis in the liberal arts, social sciences and fields other than science, technology, engineering or mathematics. This degree also requires completion of the Foothill

College General Education requirements or IGETC or CSU GE Breadth. Students who plan to complete this degree and who also intend to transfer to a four-year college or university are advised to meet early and often with a Foothill counselor for assistance in developing an educational plan that satisfies both sets of requirements.

## Transfer Associate Degrees

The *Student Transfer Achievement Reform Act* (Senate Bill 1440, now codified in *California Education Code sections 66746–66749*) guarantees admission to a California State University (CSU) campus for any community college student who completes an associate degree for transfer, a newly established variation of the associate degrees traditionally awarded by the California community colleges.

The Associate in Arts for Transfer (A.A.–T) or the Associate in Science for Transfer (A.S.–T) is intended for students who plan to complete a bachelor's degree in a similar major at a CSU campus. Students completing these degrees (A.A.–T or A.S.–T) are guaranteed admission to the CSU system, but not to a particular campus or major. In order to earn an A.A.–T or A.S.–T degree, students must complete a minimum of 90 required quarter units or 60 required semester units of CSU-transferable coursework with a minimum GPA of 2.0. While a minimum GPA of 2.0 is required for admission, some majors may require a higher GPA.



Students transferring to a CSU campus that does not accept the A.A.-T or A.S.-T will be required to complete no more than 90 required quarter units or 60 required semester units after transfer to earn a bachelor's degree (unless the major is a designated high-unit major). This degree may not be the best option for the student who intends to transfer to a particular CSU campus or to a university or college that is not part of the CSU system. The student should consult with a counselor when planning to complete the degree for more information on university admission and transfer requirements.

### **Associate in Science for Transfer Degree (A.S.-T Degree)**

Similar to the A.S. degree, the A.S.-T degree is awarded to students who complete all of the lower-division major preparation requirements for a related major in the areas of science, technology, engineering or mathematics for one or more local CSU campuses. This degree also requires completion of either the *CSU General Education Breadth Requirements* or the *Intersegmental General Education Transfer Curriculum* (IGETC). Students who plan to complete this degree and who intend to transfer to a non-local CSU, UC or other college or university are advised to meet early and often with a Foothill counselor for assistance in developing their educational plan.

For 2017–2018, Foothill offers the following A.S.-T degrees: biology for transfer, business administration for transfer, computer science for transfer, early childhood education for transfer, mathematics for transfer, physics for transfer, and public health science for transfer.

### **Associate in Arts for Transfer Degree (A.A.-T Degree)**

Similar to the A.A. degree, the A.A.-T degree is awarded to students who complete all of the lower-division major preparation requirements for a related major in academic areas such as the liberal arts, social sciences and related fields other than science, technology, engineering or mathematics for one or more local CSU campuses. This degree also requires completion of either the *CSU General Education Breadth Requirements* or the *Intersegmental General Education Transfer Curriculum* (IGETC). Students who plan to complete this degree and who intend to transfer to a non-local CSU, UC or other college or university are advised to meet early and often with a Foothill counselor for assistance in developing their educational plan.

For 2017–2018, Foothill offers the following A.A.-T degrees: anthropology for transfer, art history for transfer, communication studies for transfer, economics for transfer, English for transfer, geography for transfer, global studies for transfer, history for transfer,



kinesiology for transfer, philosophy for transfer, political science for transfer, psychology for transfer, sociology for transfer, Spanish for transfer, studio arts for transfer and theatre arts for transfer.

### **Bachelor in Science Degree (B.S. Degree)**

The Dental Hygiene Program is a Bachelor in Science degree program, under the pilot program (SB 850), authorized by the State Chancellor's Office. The program is highly academic, with an emphasis on evidence based practice and clinical skills to prepare students to assess the medical/dental status of patients, develop a dental hygiene care plan, implement appropriate dental hygiene care, and evaluate outcomes. The Commission on Dental Accreditation accredits the Foothill College Dental Hygiene Program. Graduates are eligible to take the National Dental Hygiene Board Examination and qualify for the State or Regional Registered Dental Hygiene licensure examination.

### **Program Advisory Boards**

At Foothill, we strive to ensure that our career education curriculum meets the needs of business, industry and government. This is why we invite a number of occupational leaders to advise us on:

- new courses and course content;
- facilities and equipment;
- nature and extent of employment needs;
- how to evaluate the appropriateness of contents of existing courses; and

- how to evaluate student performance.

We continually implement the recommendations of more than 30 occupational advisory committees. A campus advisory committee for vocational education also meets periodically to review and make recommendations for career education. For information on specific courses, consult your counselor or review the program's curriculum sheet online at [foothill.edu](http://foothill.edu).

### Professional & Technical Programs Leading to a Career Upon Completion

- Accounting
- Athletic Injury Care
- Business Administration
- Child Development
- Dental Assisting
- Dental Hygiene
- Diagnostic Medical Sonography
- Emergency Medical Technician
- Enterprise Networking
- Environmental Horticulture & Design
- Geographic Information Systems Technology
- Graphic & Interactive Design
- Music Technology
- Nanoscience
- Paramedic
- Personal Trainer
- Pharmacy Technician
- Photography (Applied)
- Radiologic Technology
- Respiratory Therapy
- Theatre Technology
- Veterinary Assisting
- Veterinary Technology

### Apprenticeship Programs

Call the numbers listed for more information about apprenticeship programs.

- Electrician/Residential Electrician  
San Jose, 408.453.1022  
San Francisco, 415.587.2500
- Ironworkers  
Fresno, 559.497.1295
- Plumbing/Pipefitting  
Monterey, 831.633.6091  
San Jose, 408.453.6330
- Refrigeration/Heating & Air Conditioning  
San Jose, 408.453.6330
- Sheet Metal  
Castroville, 831.633.6151  
North Bay, 707.863.0416  
San Jose, 408.263.1712  
San Leandro, 510.483.9035
- Sound & Communication  
Northern California/Bay Area, 510.560.2032

## Degrees & Certificates Offered at Foothill College

Curriculum sheets describing general education and career training courses required for these programs are available in the respective division office and online at [foothill.edu/programs](http://foothill.edu/programs). The quarterly class schedule lists each program alphabetically, courses offered each quarter, division office URLs and contact phone numbers.

Program	Completion Award
Accounting	AA, CA
Certified Public Accountant Examination Preparation	CA
Bookkeeping Specialist	CP
Enrolled Agent Preparation	CP
Financial Accounting	CCC
Payroll Preparation	CP
Tax Accounting	CCC
Tax Specialist	CP
Anthropology	AA, AA-T
Applied Anthropology	CP
Cultural Resource Management	CP
Medical Anthropology	CP
Forensic Anthropology	CP
Apprenticeship	
Air Conditioning & Refrigeration Technology	AS, CA
Field Ironworkers	CA
General Electrician	AS, CA, CCC
Pipe Trades	CA
Plumbing Technology	AS, CA
Sheet Metal	AS, CA, CCC
Sound & Communication	CCC
Steamfitting & Pipefitting Technology	AS, CA
Art	AA, CA
Art History	AA, CA, AA-T
Biological Sciences	AS
Biology	AS-T
Business Administration	AA, AS-T

Program	Completion Award
Business Management	CCC
Entrepreneurship	CCC
Financial Literacy	CCC
Marketing	CCC
Small Business & Digital Marketing	CCC
Chemistry	AS
Child Development	AA
Child Development Teacher	CA
Early Childhood Education	CS, AS-T
Inclusion & Children with Special Needs	CS
Infant Toddler Development	CS
Program Supervision & Mentoring	CA
School-Age Child Care	CS
Communication Studies	AA, CP, CS, AA-T
Computer Science	AS, AS-T
Mobile Applications	CP
Dental Assisting	AS, CA
Dental Hygiene	BS
Diagnostic Medical Sonography	AS, CA
Early Childhood Education	AS-T
Economics	AA, AA-T
Engineering	AS
Biomedical Devices	CP
Rapid Prototyping	CP
English	AA, AA-T
Enterprise Networking	AS
Cisco Academy CCNA	CP



Program	Completion Award
Cisco Academy CCNP	CP
Enterprise Security	CP
Microsoft Windows MCSA	CP
VMWare	CP
Environmental Horticulture & Design	AS, CA
General Studies: Science	AS
General Studies: Social Science	AA
Geographic Information Systems Technology	AS, CA
Geography	AS, AA-T
Global Studies	AA-T
Graphic & Interactive Design	AA, CA
Garment Printing	SC
Graphic Design	SC
Illustration	SC
Web Design & Development	CCC
History	AA, AA-T
Humanities	AA, CA
Instructional Design & Technology	CA
Japanese	AA
Kinesiology	AA-T
Mathematics	AS, AS-T
Music General	AA
Music History & Literature	CA
Music Technology	AA, CA
Audio Post-Production	CP
Electronic Music	CP
Game Audio	CP
Music Business	CP
Pro Tools	CA
Songwriting	CP
Nanoscience	AS, CA
Nanocharacterization	CP
Nanofabrication	CP

Program	Completion Award
Nanostructures	CP
Non-Credit Geriatric Home Aide	CC
Non-Credit Mathematical Foundations	CC
Paramedic	AS, CA
Personal Trainer	CA
Pharmacy Technician	AS, CA
Philosophy	AA, AA-T
Photography	AA, CA
Digital Photography	CA
Photo Criticism	SC
Photographic Laboratory Technician	SC
Traditional Photography	CA
Physical Education	AA
Physics	AS, AS-T
Political Science	AA, AA-T
Popular Culture	CP
Psychology	AA, AA-T
Public Health Science	AS-T
Radiologic Technology	AS
Respiratory Therapy	AS
Sociology	AA, AA-T
Spanish	AA, AA-T
Sports Medicine	AS
Studio Arts	AA-T
Theatre Arts	AA, AA-T
Actor Training	CCC
Theatre Technology	AA, CA, CCC
Theatre Production Organization	CCC
Transfer Studies-CSU GE	CA
Transfer Studies-IGETC	CA
Veterinary Technology	AS
Online Veterinary Assisting	CCC
Women's Studies	AA

See legend on page 40.

## Legend

AA	Complete this program in approximately two years and earn the associate in arts degree. See a counselor and refer to pages 74 for requirements.
AA-T	Complete this program in approximately two years and earn the associate in arts for transfer degree. See a counselor and refer to pages 35–36 for requirements.
AS	Complete this program in approximately two years and earn the associate in science degree. See a counselor and refer to pages 74 for requirements.
AS-T	Complete this program in approximately two years and earn the associate in science for transfer degree. See a counselor and refer to pages 35–36 for requirements.
BS	Complete this program in approximately four years and earn the bachelor in science degree. See division office for requirements.
CA	Complete this program and earn the certificate of achievement. See division office for requirements.
CC	Complete this program and earn the non-transcriptable certificate of completion. See division office for requirements.
CCC	Complete this program and earn the non-transcriptable career certificate. See division office for requirements.
CP	Complete this program and earn the non-transcriptable certificate of proficiency. See division office for requirements.
CS	Complete this program and earn the non-transcriptable certificate of specialization. See division office for requirements.
SC	Complete this program and earn the non-transcriptable skills certificate. See division office for requirements.

*Review official curriculum sheets for career opportunities and course listings. Curriculum sheets are available in the division office and online at [foothill.edu/programs](http://foothill.edu/programs).*



# Academic Policies

Revision of College Policies

Admission & Enrollment Policies

General Program Requirements

Probation & Dismissal

College Credit for Advanced Placement Exams

College & District Policies

Student Conduct & Due Process

Student Grievance Procedures

Formal Grievance Process

Student Right-to-Know Summary Report

Use of Photography

Crime Awareness & Campus Security Summary Report

## Revision of College Policies

Any policy adopted by the college administration shall supersede any ruling on the same subject that appears in this catalog or in other official publications once the revised regulation is posted on a campus bulletin board or included in the online class schedule.

### Academic Freedom

Academic freedom encompasses the freedom to study, teach and express ideas and viewpoints, including unpopular and controversial ones, without censorship, political restraint or retribution. Academic freedom allows for the free exchange of ideas in the conscientious pursuit of truth. This freedom exists in all service areas, including but not limited to teaching, librarianship, counseling, coordinating and all faculty-student interactions. Academic freedom is the bedrock principle of all institutions of learning and must be extended to all faculty regardless of their status as full time, part time or probationary.

Faculty members have the principal right and responsibility to determine the content, pedagogy, methods of instruction, selection, planning and presentation of course materials, and the fair and equitable methods of assessment in their assignment in accordance with the approved curriculum and course outline and the educational mission of the Foothill-De Anza Community College District, and in accordance with state laws and regulations. These rights and responsibilities include, but are not limited to, the faculty member's choice of textbooks and other course materials, assignments and assessment methods, teaching practices, grading and evaluation of student work, and teaching methods and practices.

Source: Foothill-De Anza Community College District Board Policy 4190 (fhda.edu). Approved April 20, 1960; amended Nov. 18, 1996; approved by Foothill College Academic Senate June 1, 2009; approved by De Anza College Academic Senate June 8, 2009; approved by Foothill-De Anza Community College District Board of Trustees Jan. 5, 2010.

For more information on Foothill-De Anza policies, visit [fhda.edu/\\_about-us/\\_board](http://fhda.edu/_about-us/_board).

## Admission & Enrollment Policies

### Academic Prerequisites, Credit & Placement

Many courses require that you complete prerequisites in order to enroll. These prerequisites are listed under each course description in this catalog and the online class schedule.

All courses listed with a prerequisite have a registration block. To clear a prerequisite, download the *Prerequisite Clearance Form* at [foothill.edu/reg/forms.html](http://foothill.edu/reg/forms.html). Submit the completed form and required documentation either by fax, mail, email or in person to the Admissions Office. Allow approximately three to five business days for processing.

If you submit written or performance evidence showing you have sufficient competence in the area of study due to previous training or experience, you may be able to enroll in a course without completing the listed prerequisites. You can only do this, however, if the division dean provides authorization.

The college has the authority to drop you from any course if you have not met the necessary prerequisites. For refund policies, visit the Admissions & Records Office in Room 8101.

### Admission Guidelines

An admissions application is required for students new to Foothill College as well as students who are not in a continuing status due to skipping fall, winter or spring quarter. Foothill has an open-door admission policy for all high school graduates and non-graduates who are 18 years of age or older. Students currently enrolled in high school (freshman, sophomore, junior or senior) may enroll in up to 10 units per fall, winter and spring quarters, as well as a maximum of six units during summer session with high school transcripts, and written parental and school permission. Permission forms are available in the & Records Office (Room 8101) and at [foothill.edu](http://foothill.edu).

Special admission procedures such as additional testing, application forms and counseling sessions are required for admission to a number of career programs. Some of these programs begin only in the fall quarter. You must complete all special admission requirements by the preceding spring quarter. Programs in this category include dental assisting, dental hygiene, primary care associate, diagnostic medical sonography (ultrasound), radiologic technology, respiratory therapy and veterinary technology.

### Prerequisites, Corequisites & Advisories

Prerequisites, corequisites and advisories are intended to guide the student into courses in which he/she will have the greatest chance for academic success.

- Prerequisite means a condition of enrollment that a student is required to meet in order to demonstrate current readiness for enrollment in a course or educational program.
- Corequisite means a condition of enrollment

consisting of a course that a student is required to simultaneously take in order to enroll in a course or educational program.

- Advisory of recommended preparation means a condition of enrollment that a student is advised, but not required, to meet before or in conjunction with enrollment in a course or educational program.

### Clearing Prerequisites

The student may clear a prerequisite or corequisite by providing any of the following:

- Proof of coursework taken at another regionally accredited U.S. college or institution,
- AP test score of 3 or higher,
- Proof of coursework taken at a college outside the U.S. (send to division dean) must provide foreign transcript evaluation service report and detailed course information, or
- Other/Challenge: if you do not meet any of the above, a prerequisite clearance requires dean or director approval.

To challenge a prerequisite or corequisite, complete the *Prerequisite Clearance Form*, available online at [foothill.edu/reg/prereqs.html](http://foothill.edu/reg/prereqs.html). Complete the form and attach the required documentation as stated on the form. Fax, mail, e-mail or drop off the complete form and documentation to the Admissions & Records Office prior to the first day of the quarter. Allow three to five business days for the form to be processed before attempting to register. You will only be notified by email if the petition is denied.

Admissions & Records (Bldg. 8101)  
Foothill College  
12345 El Monte Road, Los Altos Hills, CA 94022-4599  
650.949.7245  
fax: 650.949.7048  
email: [prereqclearfh@fhda.edu](mailto:prereqclearfh@fhda.edu)

### Open Course Policy

It is the policy of the Foothill-De Anza Community College District that, unless specifically exempted by statute or regulation, every course, course section or class reported for state aid, wherever offered and maintained by the district, shall be fully open to enrollment and participation by any person who has been admitted to the college and who meets such prerequisites as may be established pursuant to regulations contained in California Code of Regulations Title 5 commencing with Section 55000.

### Exceptions to Admissions & Registration Policies

To request an exception to a published policy, you must file an exception petition. Forms are available in the

Admissions & Records Office in Room 8101 and online at [foothill.edu](http://foothill.edu).

## General Program Requirements

All beginning freshmen are strongly encouraged to enroll in the *CNSL 5: Introduction to College* course, or demonstrate proof that they have completed an equivalent course. If you are eligible for *ENGL 1A*, you should complete this course by the end of the third quarter of enrollment; you may take a communication course first. If you are eligible for *ENGL 110* or *209*, you should complete these courses during the first or second quarter. You may receive up to 10 quarter units of credit for each score of 5, 4 or 3 on College Entrance Board Advanced Placement Tests. Your Foothill transcript will show units but will not indicate grades. The Evaluation Office, located in the Admissions & Records Office, Room 8101, provides information that explains how advanced placement scores are marked on transcripts and the equivalencies for the University of California and California State University systems.

Foothill College will accept a score of 60 or better on the college algebra CLEP examination as equivalent to *MATH 105*. The college is currently reviewing additional CLEP examinations to determine if they, too, may be used for course credit for other Foothill College courses.

If you want to transfer credit from an armed services school or other special institution, you may apply through a counselor. It's possible these credits will be accepted toward the associate in arts or associate in science degree once you have successfully completed a minimum of 15 units at Foothill.

### General Registration Information

If you are a new or former student, you must submit the *Application for Admission* by the quarterly deadline posted at [foothill.edu](http://foothill.edu). We encourage you to complete the application, complete the placement testing process and submit necessary transcripts as early as possible.

Students planning to transfer to Foothill are advised to submit transcripts from high schools and colleges previously attended.

If you plan to receive veterans benefits, apply for financial aid or earn a degree or certificate, you must submit official transcripts. Request previous institutions to send your transcripts directly to the Foothill College Admissions & Records Office, 12345 El Monte Road, Los Altos Hills, CA, 94022-4599.

International students on F-1 visas must follow specific

admissions requirements. For more information, review [foothill.edu/international](http://foothill.edu/international).

To register for Foothill College classes, follow the online registration instructions published in the online class schedule and on the college website at [foothill.edu](http://foothill.edu). The class schedule for the current academic term is posted online. Online information is subject to change. We encourage you to review the website frequently. For more information, call the Admissions & Records Office at 650.949.7325.

### **Residency Requirements**

Foothill College generally serves the communities of Palo Alto, Mountain View, Los Altos and Los Altos Hills, and our sister school, De Anza College, generally serves the cities of Cupertino and Sunnyvale. Both colleges, however, accept students from outside these cities.

If you are an out-of-state student, you may be considered a non-resident for tuition purposes until you have satisfied current California tuition residency requirements. This rule also applies to visa-holding, non-citizens eligible to establish residency. Not all visa types are eligible to be considered a resident for tuition purposes, please check with Admissions & Records for detailed information. Non-resident tuition fees are required of all students in this category.

### **Unit Limitation**

An average class load is 15 units per quarter. The maximum number of allowable units per quarter without a counselor's approval is 21.5 units. If you intend to enroll in more than 21.5 units, you must obtain a counselor's approval and submit a petition to the Academic Council (no exceptions). The maximum number of allowable units for Summer Session is 15 units. To complete the petition process, schedule a consultation with a Foothill counselor by calling 650.949.7423.

## **Probation & Dismissal**

In accordance with California Code of Regulations, Title 5, the following probation and dismissal policy has been established. The purpose of this policy is to support students in identifying barriers to academic success, employing strategies for improvement, and helping them make progress toward their educational objectives. There are five levels of probation: basic, moderate, severe, pre-dismissal, and dismissal. The college shall make a reasonable effort to notify students who have been placed on academic and/or progress probation with clear instructions on how to clear their probation status. Students on dismissal status are notified via e-mail and certified mail of their status. For

more information, call or visit the Counseling Center at 650.949.7423, Room 8302 or [foothill.edu/counseling](http://foothill.edu/counseling).

### **Placement on Probation**

- **Academic Probation:** A student who has attempted at least 18 quarter units as shown by the official academic record shall be placed on academic probation if the student has earned a grade-point average below 2.0 in all units which were taken at the college.
- **Progress Probation:** A student who has enrolled in a total of at least 18 quarter units as shown by the official academic record shall be placed on progress probation when the percentage of all units in which a student has enrolled and for which entries of **W**, **I**, **NP** and **NC** are recorded reaches or exceeds 50 percent.

### **Removal from Probation**

- A student on academic probation for a grade-point deficiency shall be removed from probation when the student's cumulative grade point average is 2.0 or higher.
- A student on progress probation because of an excess of units for which entries of **W**, **I**, **NP** and **NC** recorded shall be removed from probation when the percentage of units in this category drops below 50 percent.

### **Probation at Foothill & De Anza Colleges**

The Foothill College probation/dismissal reporting system might not accurately reflect the correct academic probation status for students who have enrolled at both Foothill and De Anza colleges. Students who are enrolled within the current quarter at both colleges or have an academic history with both colleges should contact the Counseling Center at Foothill College for assistance regarding their probation/dismissal status at Foothill.

If at any time students attend both Foothill College and De Anza College in the Foothill-De Anza Community College District, it is the students' responsibility to keep track of their grades to ensure that they remain in good standing at each college. Although students may be in good standing at De Anza College, if at Foothill College they fall below the minimum required level of academic performance, the above probation and dismissal procedure will apply to them at Foothill College.

### **Standards for Dismissal**

- A student who is on academic probation shall be subject to dismissal if the student earned a cumulative grade-point average of less than 2.0 in all units attempted in each of the five consecutive quarters which were graded on the basis of the grading system.

- A student who has been placed on progress probation shall be subject to dismissal if the percentage of units in which the student has been enrolled for which entries of **W**, **I**, **NP** and **NC** are recorded in at least five consecutive quarters, excluding summers, reaches or exceeds 50 percent.

Scholastic dismissal will be noted permanently on a student's transcript. Students dismissed from the college may not enroll in any courses for one regular quarter (excluding summer). The maximum number of times a student may be dismissed from Foothill College is three. A third dismissal will result in permanent expulsion from the college.

### Re-Admission After Disqualification

A student who has been dismissed due to failure to make academic achievement and/or progress may be considered for re-admission on a conditional basis. The student must file an *Admission After Disqualification Petition* with a counselor. After the Academic Council reviews the petition, the student will be notified via e-mail of the decision, and their next steps.

### Registration and Attendance

If you have academic complaints, including treatment in a course or program, you should seek to resolve the problem by speaking with these people, in this order:

- Course instructor;
- Division dean (make an appointment through the division administrative assistant);
- Vice president, Student Services; Room 8104; 650.949.7524 or vice president, Instruction; Room 1915, 650.949.7200.

### Academic Regulations

The Academic Council is responsible for academic regulation evaluation, enforcement, interpretation and exceptions. You can obtain petitions in the Admissions Office (Room 8101), Counseling Center (Room 8302) or visit [foothill.edu/reg/forms.html](http://foothill.edu/reg/forms.html).

### Academic Renewal

The Academic Renewal process permits students the opportunity to petition to have substandard academic work completed at Foothill College disregarded from their cumulative grade point average when such work does not reflect their current demonstrated ability (section 55046 of the California Code of Regulations). Upon approval of the petition the Academic Council may disregard up to three consecutive quarters, plus a summer session, for a maximum of 45 quarter units, of work completed at Foothill College.

- Once a degree has been awarded at either Foothill or De Anza College, courses taken prior to the awarding

of the degree cannot be excluded via Academic Renewal.

- Academic Renewal actions are irreversible once granted.
- Academic Renewal at Foothill College does not guarantee that other colleges will accept this action.

Approval of Academic Renewal requests is subject to the following conditions:

1. Two years must have elapsed since the last quarter to be disregarded was completed.
2. Since the last quarter, the student must have completed at least:
  - 15 units with a 3.0 GPA, or
  - 30 units with a 2.5 GPA, or
  - 45 units with a 2.0 GPA

Work completed at other accredited institutions may be considered by the Academic Council, official transcripts must be on file in Admissions and Records.

3. The college will disregard courses selected by the student per the Academic Renewal request, with respect to unit requirements and GPA provided they fall under the guidelines governing Academic Renewal.
4. A student may petition only once for academic renewal.
5. The student transcript shall be annotated in such a manner that all work remains legible, ensuring a true and complete academic history.

Students must consult with a counselor before petitioning for Academic Renewal. After obtaining the counselor's signature, the completed Petition for Academic Renewal form is submitted to the Admissions and Records Office. See Board Policy 4240 Academic Renewal.

### Add/Drop Dates

The deadline to add and drop classes may vary per course. Generally, the deadline to add or drop a course without a **W**-mark is prior to 20 percent of class meetings or prior to the end of the second week of instruction for a 12-week course. To determine the exact drop date for your course, consult [MyPortal.fhda.edu](http://MyPortal.fhda.edu). You are responsible for initiating the official add/drop process and for notifying both the instructor and Admissions & Records Office (Room 8101). Do not rely on an instructor to add you to a course or to drop you if you stop attending. To ensure that you are properly

registered or dropped from a class and do not receive a substandard grade, you are responsible for dropping the class by the appropriate deadline. Verify your current enrollment status by accessing your MyPortal.fhda.edu account.

The maximum number of withdrawals (W-marks) from the same course is three, which are counted toward the overall enrollment limit of three. If you have questions or concerns about W-marks, schedule a meeting with a Foothill counselor at 650.949.7423 or foothill.edu/counseling. You cannot drop after the eighth week for a 12-week course. You may receive no more than two W-marks in any one course. For summer session class drop dates, consult the current class schedule or online college calendar at foothill.edu.

## Courses & Grades

### Academic Integrity at Foothill College

Academic integrity means honesty and responsibility in scholarship. Unless collaboration is explicitly authorized, all academic work should result from an individual's own efforts. Intellectual contributions from others must be consistently and responsibly acknowledged. Students accused of violating Foothill's academic integrity policy will face judicial action, up to the possibility of suspension from the college. For more information about Foothill's academic integrity policy, visit foothill.edu/handbook or stop by the Dean of Students office in Room 2002.

### Attendance

Regular and punctual attendance is an integral part of the learning process. As a Foothill student, you are expected to attend all scheduled classes in which you are enrolled. An instructor has the authority to drop a student who violates written attendance policies. Instructors are not obligated to hold seats for students who are enrolled but do not attend the first class meeting.

### Audit Request Procedures

A number of Foothill classes are available for audit. To be eligible, you must have already taken and completed the class at Foothill the number of times permitted, and received a grade of C or better. Audit requests must have the signature of the instructor before you submit the request to the Admissions & Records Office. Auditors are admitted on a space-available basis.

### Cancellation of Classes

Classes may be canceled when enrollments are lower than planned. Foothill College has the authority to change or cancel courses and programs as circumstances require.

### Class Preparation/Progress

After prior notification, an instructor may drop a student who demonstrates insufficient preparation/prerequisites.

### Class Size & Frequency

Minimum class-size guidelines apply to all lecture, lecture/lab and laboratory classes at Foothill. While a minimum class size is generally required, special circumstances may necessitate continuing a class that does not meet these guidelines.

Exceptions are based on program needs such as second-quarter, third-quarter or second-year sequential courses; courses required for an identified major or career; combined courses meeting at the same hour with the same instructor; and one-of-a-kind offerings needed for graduation or transfer. Exceptions may also be based on the following:

- Limited classroom or laboratory facilities; or
- Statutory and state regulations mandating class size, independent study, and special projects.
- Other circumstances that warrant exception are made by the Finance & Administrative Services Office.

### Transfer Credit from Another Institution

Foothill College accepts credit for lower-division coursework previously completed at a college accredited by one of the six regional accrediting associations in the U.S. Students must have official transcripts sent to the Foothill College Admissions & Records Office. To be official, transcripts must be sent from college to college or hand-delivered in a sealed, unopened college envelope.

- Foreign Colleges: Students who want to use coursework completed at foreign institution must have their transcripts evaluated by a foreign evaluation service. Students should meet with their counselors to petition to use any of this coursework toward an associate degree. Coursework from a foreign institution cannot be used for certification to a four-year institution. Students should contact the school to which they want to transfer to determine if any credit will be awarded from the foreign institution.
- Non-Regionally Accredited Colleges: Students may petition for individual courses taken at a non-regionally accredited college to be accepted for major requirements. The credit is non-transferable toward a bachelor's degree and is only applicable towards Foothill College programs. Students must have official transcripts sent to the Foothill College Admissions & Records Office. To be official,



transcripts must be sent from college to college or hand-delivered in a sealed, unopened college envelope.

### Final Examinations

Foothill gives final examinations in all courses. Final examinations will not normally be given in advance of the scheduled time. At Foothill, we strive to minimize student activities during the week before final exams. However, classes and instruction continue as usual. During this period, instructors may assign coursework or have students complete part of the final examination.

### Grading Scale

Grade definitions are as follows:

Evaluative Symbols	Grade Points
A+*	Excellent 4.0; see note below
A	Excellent 4.0
A-	Excellent 3.7
B+	Good 3.3
B	Good 3.0
B-	Good 2.7
C+	Satisfactory 2.3
C	Satisfactory 2.0
C-**	See note below
D+	Passing, less than satisfactory 1.3
D	Passing, less than satisfactory 1.0
D-	Passing, less than satisfactory 0.7
F	Failing 0.0
P	Pass (at least satisfactory; units awarded not counted in GPA).
NP	No Pass (less than satisfactory, or failing; units not counted in GPA). Not attaining course objectives.

\*In the plus/minus grading system, the A+ grade is calculated the same as the A grade.

\*\*In the plus/minus grading system, the C- grade is not permitted under Title 5 law.

P and NP are assigned to those courses in which student achievement is evaluated on a pass/no pass basis rather than a letter grade (A, B, C, etc.). Pass/No Pass courses are so designated in the announcement of courses section of the catalog.

### Course Grading Categories

Foothill offers course grades in these five categories:

- Courses in which all students are graded on a 4.0 scale of A, B, C, D, F.
- Courses in which all students are graded on a **Pass/No Pass (P/NP)** basis.
- If you enroll in a class with a **Pass/No Pass** option

instead of a letter grade must submit a **Pass/No Pass Card** signed by the student within the first four weeks of the quarter. The form must be submitted to the Admissions Office. You may choose to apply to the associate degree no more than 16 units of P-graded courses from this category. Students transferring to a four-year school should consult with a counselor. Courses in your major must be taken for a letter grade.

- No grades are recorded for non-credit courses with course numbers ranging from 400–499.
- In calculating the student's degree-applicable grade-point average, grades earned in non-degree-applicable courses shall not be included. Courses that are non-degree-applicable are noted in the class schedule and Course Catalog.

### Incomplete

For a justifiable, approved reason (serious illness, emergency, etc.), you may ask your instructor for more time to complete coursework. After the end of the eighth week and before the end of the quarter, you must request that the instructor assign a grade of Incomplete (I). The instructor files an Incomplete Contract that explains the reason and precisely outlines the work due, procedure required, and due date for you to complete the work. You should sign and keep a copy of the contract.

The college does not assign an **incomplete** because a student is slow or negligent in submitting required work. If you meet the course requirements within one calendar year, the I grade may be changed; otherwise it may be listed as **F**.

### Withdraw from College

To withdraw from college after the eighth week, you must consult with a counselor and petition the dean of Enrollment Services to obtain an approved dismissal. This is for your protection, since you may receive an **F** in all classes after the eighth week if you do not follow these guidelines. The petition must have the instructor's approval signature for each class.

### Transcripts

The Admissions & Records Office forwards transcripts at your request. Transcripts to educational institutions will be sent directly to those institutions. Transcripts given directly to you may be classified as unofficial. Transcript costs and procedures for requesting transcripts are published at foothill.edu.

Foothill reserves the right to withhold official transcripts from students under certain circumstances, such as defaulting on a loan, outstanding balance due on an account or until all obligations to the college are cleared.

## Transcript/Grade Changes

Section 76224 of the *California State Education Code* states, “The determination of the student’s grade by the instructor shall be final in the absence of mistake, fraud, bad faith or incompetency.” By law, instructors are the only people who can change grades.

If you believe corrections should be made within the above restriction, you should first talk to your instructor. Corrections must be initiated within two years after the grade was earned. If an error has been made, and a correction is necessary prior to the two-year period, you may request a review of the records at the Admissions & Records Office.

Grades received prior to 1983 may not be changed. Exceptions to this policy include a bona fide error in grading, and a course in which an unsatisfactory grade was given is repeated for a satisfactory grade.

## Petition to Replace Substandard Grade for Foothill College GPA Calculation

When a substandard grade (D+, D, D-, F, NC or NP) was recorded at Foothill, an equivalent course may subsequently be completed at another accredited college or university. The student’s academic transcript shall then be annotated to reflect exclusion of the previously recorded coursework with the substandard grade for purposes of grade-point calculation and for all considerations associated with the awarding of certificates and degrees. Replacement with a grade of **Pass/No Pass** is not permitted, as it does not improve the student’s grade-point average (GPA). It is important to note that all grades remain on the academic transcript, and that some transfer institutions may require recalculation of the GPA to include both the substandard grade and the subsequent grade.

When submitting this petition, the student must attach:

- a copy of his/her transcript, and
- either the course outline of record or the course catalog description to confirm course equivalency. (It is strongly recommended that the student consult with the appropriate Foothill division dean to confirm equivalency with discipline faculty before repeating the course.)
- Be aware that official (sealed) transcripts from other regionally accredited institution must be submitted to Foothill College Records Office before submitting this petition.

The complete petition form must include student’s identification number (SID), name, date, Foothill College course identifier, the date that the Foothill course was completed and initial grade, equivalent course identifier,

date repeated and grade earned upon repetition, as well as the valid signatures of the student, discipline faculty member and division dean.

## High School Credits at Foothill

All credit courses taken at Foothill count as college credit, whether or not they count toward high school requirements. Although Foothill College cannot grant a high school diploma, many local high schools recommend that students who are age 19 or older complete high school requirements by taking college courses. If you choose to earn a high school diploma this way, you should obtain a statement from your high school principal or counselor indicating:

- The subjects necessary to complete graduation requirements, and the number of quarter credits in each;
- Suggestions for Foothill courses to satisfy these requirements;
- The total number of quarter credits required, including electives; and
- Acceptance of credit for courses taken at Foothill.

When you complete the college courses, request that Foothill College send a college transcript to your high school. The diploma will be issued in accordance with your school’s procedures.

## Off-Campus Trips & Activities

Some programs require off-campus field trips and activities. Transportation is usually the responsibility of the individual student or a travel agency. The district is not liable for occurrences when participants are not under a faculty or staff member’s direct, scheduled supervision.

## Open-Entry/Open-Exit Classes

Foothill offers several open-entry/open-exit courses, allowing you to work at your own pace. You may generally enroll in these courses at any time, through the end of the seventh week of the quarter. Many of these courses are offered in off-campus centers, fine arts and language arts laboratories and STEM Center. Lists of courses with unusual start times are available in these facilities and in the class schedule.

Independent/flexible study classes are not open-entry/open-exit classes. You must enroll in these classes by the end of the second week of instruction.

## Scholastic Honors

Foothill commends students who earn the associate degree, complete a minimum of 24 Foothill units and meet the following criteria by awarding:

- Highest Honors: 4.0 GPA in all Foothill College coursework.
- High Honors: at least 3.5 GPA in all Foothill College coursework.
- Honors: at least 3.3 GPA in all Foothill College coursework.

Additional scholastic honors are awarded to eligible students on the following basis:

- Dean's List: Awarded on a quarterly basis to full-time students completing 12 or more Foothill units in one quarter with at least a 3.5 GPA; and part-time students completing a minimum of 12 cumulative units at Foothill College with an overall and quarter Foothill GPA of at least 3.5.
- President's Medal: Awarded at the annual commencement ceremony to first-time degree recipients with a 4.0 GPA in all college coursework, including 60 resident units at Foothill College. To qualify for this award students must petition for graduation by June 1.

### Course Repetition

Unless exceptions are specifically indicated in course descriptions in this catalog, you cannot repeat a course that you completed with a grade of **C** or better. State law allows you to repeat a class no more than twice to remove a substandard grade (**D**, **F**, **NP** or **W**). There is no limit on the number of times you may enroll in courses designed to meet a legally mandated training requirement as a condition of continued paid or volunteer employment.

If you successfully repeat and pass a course at Foothill College in which a substandard grade had previously been recorded, the substandard grade(s) will be excluded for the purposes of calculating GPA and for all considerations associated with the awarding of certificates and degrees. It is important to note that all grade notations (including withdrawals) remain on your academic transcript, and that some transfer institutions may require recalculation of the GPA to include both the substandard grade and the subsequent grade. You may petition to replace a substandard grade earned at Foothill College with a passing grade subsequently earned at another accredited college or university. See "Petition to Replace Substandard Grade for Foothill College GPA Calculation" on page 45.

### Active Participation Course Limitation (Course Families)

Pursuant to the California Community College Board of Governors, a student may not have more than six enrollments in any active participatory courses that

are related in content. This limitation also applies to the student who receives a substandard grade (**D**, **F**, **NP** or **NC**) or withdrew from a course with a **W**-mark for one or more of the enrollments (CCR § 55000).

Active participatory courses included in this restriction are courses in physical education, visual arts and performing arts offered within the Foothill-De Anza Community College District. Foothill College and De Anza College have created course families within the district to address this limitation. These families include courses from Foothill and De Anza that contain related or similar content, and therefore, can only be taken in any combination for no more than six enrollments.

Prior to Fall 2013, the student was able to repeat active participatory courses. However, as of Fall 2013, all active participatory courses are non-repeatable and can only be taken one time subject to the limitation set forth in Title 5 [CCR §55040(c)].

This limitation does not contain a grandfather clause. Therefore, if the student has reached the maximum times of enrollment within a family, then he/she cannot enroll in any course within the family again within the Foothill-De Anza Community College District.

Additionally, if the student enrolls in a Foothill course that is equivalent to a De Anza course, within a course family, he/she may not take the De Anza course at any time and vice versa. For example: *ART 4B* at Foothill is equivalent to *ARTS 4B* at De Anza. If you have completed or plan to enroll in *ART 4B* at Foothill, then you cannot have completed or plan to enroll in *ARTS 4B* at De Anza.

### Credit by Examination (Challenge)

As an enrolled Foothill student, you may be able to obtain credit by examination in subject matters or fields for which you are especially qualified through training or experience, but for which you have not already received college course credit or advanced placement credit.

The *Petition for Credit by Examination Form* is available online at [foothill.edu/reg/forms.php](http://foothill.edu/reg/forms.php). You may also obtain petitions from the division office of the course that you want to challenge during the first week of the quarter. The chart on pages 48–51 identifies those courses for which credit by examination is currently available. You may not challenge other courses. Prior to submitting a *Petition for Credit by Examination*, you are required to obtain approval from either the appropriate academic division dean or course instructor to verify your eligibility.

Examinations will normally be completed by the end of the second week. Units earned through credit by

examination will be identified on your transcript. No course may be challenged during a term after which the class has met for two weeks. Credit by examination is not available during the summer term. If you have previously failed a course, you are not eligible to petition for credit by examination in that course. Units of credit received through this procedure may not apply toward the minimum of 18 resident units required at Foothill College for the associate degree. A maximum of 30 units may be earned via credit by examination in the Foothill-De Anza Community College District. Units earned through credit by exam are not considered for financial aid, scholarship or veteran services eligibility and payments.

There are special limitations for challenging foreign language courses, courses that depend on laboratory or activity experiences, or sequential courses. You may not challenge a course at a lower level than one you have successfully completed in the same department. The examination may include written, oral or skill tests, or a combination of all three. This examination will determine whether you have demonstrated essentially the same knowledge and skills as students who successfully complete the traditional course. To obtain credit by examination, you are required to be enrolled in the course. The instructor will inform you about the requirements for successful completion. The examination grade will be entered as the course grade on your permanent record.

Although the University of California and California State University systems accept, within certain limitations, appropriate credits obtained by examination, Foothill College cannot guarantee that other institutions will do so. If you are pursuing credit by examination, you are encouraged to discuss the transfer and graduation implications with a counselor. The following courses are available for credit by examination: *GEOG 12, 58, 101A, 101B, 101C and 101D.*

### **Student Access to Education Records**

The *Family Education Rights & Privacy Act*, also called FERPA (*Section 438, Public Law 93380*), requires educational institutions to provide student access to official education records directly related to the student. The act also says you have the right to challenge such records on the grounds that they are inaccurate, misleading or otherwise inappropriate.

Your written consent is required before the college will release personal information from your records to other than a specified list of persons and agencies. These rights extend to present and former Foothill students.

- Education records generally include documents related to admissions, enrollment in classes, grades

and related academic information. These records are filed in the Admissions & Records Office.

- The dean of Student Services is the college's designated records officer.
- Personal education records will be made available for inspection and review during normal business hours to currently and formerly enrolled students, within 45 days following completion and filing of a written request with the records officer.
- The college may release certain types of directory information unless you notify the records officer that certain or all information cannot be released without personal consent. Directory information may include (1) student name and city of residence, (2) date and place of birth, (3) participation in recognized activities and sports, (4) dates of attendance, (5) degrees and awards received, and (6) the most recent previous educational agency or institution attended, and (7) height and weight of members of athletic teams, which may be released only by the appropriate athletic staff member or athletic director. Objection to the release of this information must be made in writing to the Admissions & Records Office prior to the first day of instruction of any quarter or Summer Session.

## Awarding College Credit for Advanced Placement (AP) Tests\*

Unless otherwise noted, students may earn credit for AP Tests with a score of 3, 4, or 5. AP credit can toward satisfaction of IGETC, CSU GE and A.A./A.S. general education (GE) and/or major requirements as outlined below. **Students planning to transfer should check with the receiving institution regarding AP credit policies.**

Students must submit official College Board AP exam results to the Evaluations Office in order for credit to be awarded or certified.

Note: Course credit and units granted at Foothill College may differ from course credit and units granted by a transfer institution. Student who plan to transfer to four-year college or university should see a counselor for specific details regarding how AP credit will be applied to their major.

### College Credit for Advanced Placement (AP) Exams

AP Exam	Foothill AA/AS Credit (GE and/or course)	Minimum Units Awarded	CSU GE	CSU - Units Earned Toward Transfer	IGETC	UC - Units Earned Toward Transfer
Art History	Satisfies AA/AS Humanities Requirement Course credit ART 2A	4.5 quarter/ 3 semester units	Area C1 or C2 4.5 quarter/ 3 semester units	9 quarter/6 semester units	Area 3A or 3B 4 quarter/3 semester units	8 quarter/5.3 semester units
Art (Studio-2D Design)	No AA/AS GE credit awarded	4.5 quarter/ 3 semester units (elective)	N/A	4.5 quarter/3 semester units	N/A	8 quarter/5.3 semester units
Art (Studio-3D Design)	No AA/AS GE credit awarded	4.5 quarter/ 3 semester units (elective)	N/A	4.5 quarter/3 semester units	N/A	8 quarter/5.3 semester units
Art (Studio-Drawing)	No AA/AS GE credit awarded	4.5 quarter/ 3 semester units (elective)	N/A	4.5 quarter/3 semester units	N/A	8 quarter/5.3 semester units
Biology	Satisfies AA/AS Natural Sciences Requirement	6 quarter/ 4 semester units	Area B2 and B3 6 quarter/4 semester units	9 quarter/6 semester units	Area 5B and 5C 4 quarter/3 semester units	8 quarter/5.3 semester units
Calculus AB	Satisfies AA/AS Communication & Analytical Thinking Requirement Course credit MATH 1A	4.5 quarter/ 3 semester units	Area B4 4.5 quarter/3 semester units	4.5 quarter/3 semester units*	Area 2A 4 quarter/3 semester units	4 quarter/2.7 semester units **Maximum credit 8 quarter/5.3 semester units for both AP MATH AB and BC exams

\* AP policies are under review. For the most current information, visit [foothill.edu](http://foothill.edu).

AP Exam	Foothill AA/AS Credit (GE and/or course)	Minimum Units Awarded	CSU GE	CSU - Units Earned Toward Transfer	IGETC	UC - Units Earned Toward Transfer
Calculus BC	Satisfies AA/AS Communication & Analytical Thinking Requirement <u>Course Credit</u> MATH 1A & 1B	4.5 quarter/ 3 semester units	Area B4 4.5 quarter/3 semester units	9 quarter/6 semester units*	Area 2A 3 semester units	8 quarter/5.3 semester units **Maximum credit 8 quarter/5.3 semester units for both AP MATH AB and BC
Calculus BC/ AB Subscore	Satisfies AA/AS Communication & Analytical Thinking Requirement	4.5 quarter/ 3 semester units	Area B4 4.5 quarter/3 semester units	4.5 quarter/3 semester units *Only one MATH exam may be used toward transfer	Area 2A 3 semester units	4 quarter/2/7 semester units **Maximum credit 8 quarter/5.3 semester units for both
Chemistry	Satisfies AA/AS Natural Sciences Requirement Course Credit Score of 3-CHEM 25 Score of 4 or 5-CHEM 1A	6 quarter/ 4 semester units	Areas B1 and B3 6 quarter/4 semester units	9 quarter/6 semester units	Area 5A and 5C 4 quarter/3 semester units	8 quarter/5.3 semester units
Chinese Language & Culture	Satisfies AA/AS Humanities Requirement	4.5 quarter/ 3 semester units	Area C2 4.5 quarter/3 semester units	9 quarter/6 semester units	9 quarter/6 semester units	8 quarter/5.3 semester units
Computer Science A	No AA/AS GE credit awarded	4.5 quarter/ 3 semester units (elective)	N/A	4.5 quarter/3 semester units**	N/A	2 quarter/1.3 semester units*** ***Maximum 4 quarter/2.7 semester units for both AP Computer Science A and AB4
Computer Science AB4	No AA/AS GE credit awarded	4.5 quarter/ 3 semester units (elective)	N/A	9 quarter/6 semester units** **Maximum one exam toward transfer	N/A	4 quarter/2.7 semester units*** ***Maximum 4 quarter/2.7 semester units for both AP Computer Science A and AB4

AP Exam	Foothill AA/AS Credit (GE and/or course)	Minimum Units Awarded	CSU GE	CSU - Units Earned Toward Transfer	IGETC	UC - Units Earned Toward Transfer
Economics: Macro-economics	Satisfies AA/AS Social & Behavioral Sciences Requirement	4.5 quarter/ 3 semester units	Area D2 4.5 quarter/3 semester units	4.5 quarter/3 semester units	Area 4B 4 quarter/3 semester units	4 quarter/2.7 semester units
Economics: Micro-economics	Satisfies AA/AS Social & Behavioral Sciences Requirement	4.5 quarter/ 3 semester units	Area D2 4.5 quarter/3 semester units	4.5 quarter/3 semester units	Area 4B 4 quarter/3 semester units	4 quarter/2.7 semester units
English: Language & Composition	Satisfies AA/AS English Requirement <u>Course Credit</u> English 1A	4.5 quarter/ 3 semester units	Area A2 4.5 quarter/3 semester units	9 quarter/6 semester units	Area 1A 4 quarter/3 semester units	8 quarter/5.3 semester units*
English: Literature & Composition	Satisfies either AA/AS English or Humanities Requirement	4.5 quarter/ 3 semester units	Area A2 and C2 9 quarter/6 semester units	9 quarter/6 semester units	Area 1A or 3B 4 quarter/3 semester units	8 quarter units/5.3 semester units* *8 quarter/5.3 semester units maximum for both English exams
Environmental Science	Satisfies AA/AS Natural Sciences Requirement <u>Course credit</u> BIOL 9	6 quarter/ 4 semester units	Area B2 and B3 (if taken prior to Fall 2009) or Area B1 and B3 (regardless of when taken) 6 quarter/4 semester units	6 quarter/4 semester units	Area 5A and 5C 4 quarter/3 semester units	4 quarter/2.7 semester units
French Language and Culture	Satisfies AA/AS Humanities Requirement	4.5 quarter/ 3 semester units	Area C2 4.5 quarter/3 semester units	9 quarter/6 semester units	Area 3B and 6A 4 quarter/3 semester units	8 quarter/5.3 semester units
German Language and Culture	Satisfies AA/AS Humanities Requirement	4.5 quarter/ 3 semester units	Area C2 4.5 quarter/3 semester units	9 quarter/6 semester units	Area 3B and 6A 4 quarter/3 semester units	8 quarter/5.3 semester units
Government & Politics: Comparative	Satisfies AA/AS Social & Behavioral Sciences Requirement	4.5 quarter/ 3 semester	Area D8 4.5 quarter/3 semester units	4.5 quarter/3 semester units	Area 4H 4 quarter/3 semester units	4 quarter/2.7 semester units
Government & Politics: U.S.	Satisfies AA/AS Social & Behavioral Sciences Requirement	4.5 quarter/ 3 semester units	Area D8 and US 2* 4.5 quarter/3 semester units	4.5 quarter/3 semester units	Area 4H 4 quarter/3 semester units	4 quarter/2.7 semester units

AP Exam	Foothill AA/AS Credit (GE and/or course)	Minimum Units Awarded	CSU GE	CSU - Units Earned Toward Transfer	IGETC	UC - Units Earned Toward Transfer
History: European	<i>Satisfies either AA/AS Social &amp; Behavioral Science OR Humanities Requirement</i> <u>Course credit:</u> HIST 4A	4.5 quarter/ 3 semester units	Area C2 or D6 4.5 quarter/3 semester units	9 quarter/6 semester units	Area 3B or 4F 4 quarter/3 semester units	8 quarter/5.3 semester units
History: U.S.	<i>Satisfies either AA/AS Social &amp; Behavioral Science OR Humanities Requirement</i> <u>Course credit:</u> HIST 17A	4.5 quarter/ 3 semester units	Area C2 or D6 and US 1* 4.5 quarter/3 semester units	9 quarter/6 semester units	Area 3B or 4F 4 quarter/3 semester units	8 quarter/5.3 semester units
History: World	Satisfies either AA/AS Social & Behavioral Science OR Humanities Requirement	4.5 quarter/ 3 semester units	Area C2 or D6 4.5 quarter/3 semester units	9 quarter/6 semester units	Area 3B or 4F 4 quarter/3 semester units	8 quarter/5.3 semester units
Human Geography	Satisfies AA/AS Social & Behavioral Sciences Requirement	4.5 quarter/ 3 semester units	Area D5 4.5 quarter/3 semester units	4.5 quarter/3 semester units	Area 4E 4 quarter/3 semester units	4 quarter/2.7 semester units
Italian Language & Culture	Satisfies AA/AS Humanities Requirement	4.5 quarter/ 3 semester units	Area C2 4.5 quarter/3 semester units	9 quarter/6 semester units	Area 3B and 6A 4 quarter/3 semester units	8 quarter/5.3 semester units
Japanese Language & Culture	Satisfies AA/AS Humanities Requirement	4.5 quarter/ 3 semester units	Area C2 4.5 quarter/3 semester units	9 quarter/6 semester units	Area 3B and 6A 4 quarter/3 semester units	8 quarter/5.3 semester units
Latin	Satisfies AA/AS Humanities Requirement	4.5 quarter/ 3 semester units	Area C2 4.5 quarter/3 semester units	9 quarter/6 semester units	Area 3B and 6A 4 quarter/3 semester units	4 quarter/2.7 semester units
Music	Satisfies AA/AS Humanities Requirement Course Credit MUS 3A	4.5 quarter/ 3 semester units	Area C1 (if taken prior to Fall 2009) 4.5 quarter/3 semester units NO GE CREDIT AFTER 2009	9 quarter/6 semester units	N/A	8 quarter/5.3 semester units
Physics 1	Satisfies AA/AS Natural Science Requirement	6 quarter/ 3 semester units	B1 and B3 6 quarter/4 semester units	6 quarter/4 semester units	Area 5A and 5C 4 quarter/3 semester units	8 quarter/5.3 semester units



AP Exam	Foothill AA/AS Credit (GE and/or course)	Minimum Units Awarded	CSU GE	CSU - Units Earned Toward Transfer	IGETC	UC - Units Earned Toward Transfer
Physics 2	Satisfies AA/AS Natural Sciences Requirement	6 quarter/ 3 semester units	B1 and B3 6 quarter/4 semester units*	6 quarter/4 semester units*	Area 5A and 5C 4 quarter/3 semester units	8 quarter/5.3 semester units**
Physics C: Mechanics	Satisfies AA/AS Natural Sciences Requirement Course Credit Score of 3: PHYS 2A Score of 4 or 5: PHYS 4A	6 quarter/ 3 semester units	Area B1 and B3 6 quarter/4 semester units*	6 quarter/4 semester units*	Area 5A and 5C 4 quarter/3 semester units	4 quarter/2.7 semester units**
Physics C - Electricity/Magnetism	Satisfies AA/AS Natural Sciences Requirement Course Credit Score of 3: PHYS 2B Score of 4 or 5: PHYS 4B	6 quarter/ 3 semester units	Area B1 and B3 6 quarter/4 semester units*	6 quarter/4 semester units* *Maximum 4 semester units toward GE and 6 semester units toward transfer for all PHYSICS	Area 5A and 5C 4 quarter/3 semester units	4 quarter/2.7 semester units** **Maximum 8 quarter/5.3 semester units for all Physics exams
Psychology	Satisfies AA/AS Social & Behavioral Sciences Requirement <u>Course credit:</u> PSYC 1	4.5 quarter/ 3 semester units	Area D9 4.5 quarter/3 semester units	4.5 quarter/3 semester units	Area 4I 4 quarter/3 semester units	4 quarter/2.7 semester units
AP Seminar	No GE credit or units	N/A	N/A	4.5 quarter/3 semester units	N/A	No credit awarded
Spanish Language and Culture	Satisfies AA/AS Humanities Requirement	4.5 quarter/ 3 semester units	Area C2 4.5 quarter/3 semester units	9 quarter/6 semester units	Area 3B and 6A 4 quarter/3 semester units	8 quarter/5.3 semester units
Spanish Literature and Culture	Satisfies AA/AS Humanities Requirement	4.5 quarter/ 3 semester units	Area C2 4.5 quarter/3 semester units	9 quarter/6 semester units	Area 3B and 6A 3 semester units	8 quarter/5.3 semester units
Statistics	Satisfies AA/AS Communication & Analytical Thinking Requirement <u>Course Credit</u> MATH 10	4.5 quarter/ 3 semester units	Area B4 4.5 quarter/3 semester units	4.5 quarter/3 semester units	Area 2 4 quarter/3 semester units	4 quarter/2.7 semester units

**AA:** Students may not receive credit for both an AP exam and the equivalent course. A student who receives AP credit and then takes the equivalent Foothill course will have the unit credit for such duplication deducted prior to being awarded the A.A./A.S. degree. Credit by Advanced Placement exam is noted and listed first on a student's transcript, with units assigned and no grade given.

**CSU GE:** The Advanced Placement examinations may be incorporated into the certification of CSU General Education-Breadth requirements by any certifying institution. All CSU campuses will accept the minimum units shown and apply them toward fulfillment of the designated General Education-Breadth area if the examination is included as part of a full or subject-area certification. Please note that individual CSU campuses may choose to grant more units than those specified toward completion of General Education-Breadth requirements.

**IGETC:** AP exams must be used in area indicated regardless of where the certifying CCC's discipline is located.

### International Baccalaureate Exam Policy

A student may earn credit for successful completion of International Baccalaureate (IB) higher-level subject exams with scores of 5, 6 or 7. IB credit can be used to meet IGETC, CSU GE and Foothill College A.A. or A.S. general education (GE) and/or major requirements as specified in the tables below. The student is responsible for formally requesting that the international baccalaureate organization send exam results to the Foothill College Evaluations Office (12345 El Monte Road, Los Altos Hills, CA 94022-4599 USA). Course units and credits granted at Foothill College may differ from course credit and units granted by a transfer institution.

*In addition, a score of 5, 6 or 7 on a higher-level IB exam will result in credit for the following Foothill courses:*

Chemistry HL	CHEM 25 or CHEM 30A	4
Physics HL	PHYS 6	4

### General Education IB Exam Score Equivalency List

IB Subject Area	Foothill College General Education Area	Minimum Quarter Units
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*To earn credit for Foothill GE, the student must earn a score of 5, 6 or 7 on a higher-level IB exam:*

Anthropology HL	Social/Behavioral Sciences	4
History (any region) HL	Social/Behavioral Sciences	4
Geography HL	Social/Behavioral Sciences	4
Language A1 (any language) HL	Humanities	4
Language A2 (any language) HL	Humanities	4
Mathematics HL	Communication & Analytical Thinking	4
Theatre HL	Humanities	4

*In addition to a score of 5, 6 or 7 on the higher-level IB exam, the student must have completed the IB diploma program to earn Foothill GE credit in these areas:*

Biology HL	Natural Science	4
Chemistry HL	Natural Science	4

## College & District Policies

### Academic Honor Code

As a student at Foothill College, you join a community of scholars who are committed to excellence in the teaching and learning process.

We expect that students will pursue their studies with integrity and honesty and all students should know that incidents of academic dishonesty are taken very seriously.

### What Is Academic Dishonesty?

The two most common kinds of academic dishonesty are cheating and plagiarism.

- Cheating is the act of obtaining or attempting to obtain credit for academic work through the use of dishonest, deceptive or fraudulent means.
- Plagiarism is representing the work of someone else as your own and submitting it for any purpose.

It is your responsibility to know what constitutes academic dishonesty. Interpretations of academic dishonesty may differ among individuals and groups. However, as a student at Foothill, you are expected to refrain from the behavior outlined herein. If you are unclear about a specific situation, speak to your instructor.

The following list exemplifies some of the activities defined as academic dishonesty:

### Cheating

- Copying, in part or in whole, from someone else's test;
- Submitting work presented previously in another course, if contrary to the rules of either course;

- Altering or interfering with grading;
- Using or consulting, during an examination, any sources, consulting others, use of electronic equipment, including cell phones and PDAs, or use of materials not authorized by the instructor; or
- Committing other acts that defraud or misrepresent.

### Plagiarism

- Incorporating the ideas, words, sentences, paragraphs or parts of another person's writings, without giving appropriate credit, and representing the product as your own;
- Representing another's artistic or scholarly works such as musical compositions, computer programs, photographs, paintings, drawings or sculptures as your own;
- Submitting a paper purchased from a research or term paper service, including the internet; or
- Undocumented web source usage.

### Other Specific Examples of Academic Dishonesty

- Purposely allowing another student to copy from your paper during a test;
- Giving your homework, term paper or other academic work to another student to plagiarize;
- Having another person submit any work in your name;
- Lying to an instructor or college official to improve your grade;
- Altering a graded work after it has been returned, then submitting the work for re-grading;
- Stealing tests;
- Forging signatures on drop/add cards or other college documents; or
- Collaboration without permission of instructor.

### Consequences of Academic Dishonesty

Academic and/or administrative sanctions may be applied when students are found responsible for violating our academic integrity process.

#### Academic consequences may include:

- Receive a failing grade on the test, paper or exam;
- Have your course grade lowered;
- Receive a grade of F in the course;

#### Administrative consequences may include:

- Written warning;
- Disciplinary probation;
- Suspension; or
- Expulsion

The Student Affairs & Activities Office maintains a record of students who have engaged in academic dishonesty. This information is used to identify and discipline students reported for academic dishonesty more than once. A copy of the *Foothill College Student Conduct, Discipline & Due Process Procedure* is printed in the handbook for each of these groups, and copies are available in the Student Affairs & Activities Office in Room 2002.

#### Americans With Disabilities Act (ADA)

The Foothill-De Anza Community College District Board of Trustees upholds that, for persons with disabilities, improving the access to educational and employment opportunities must be a priority. The board directs the Foothill College administration to take the necessary actions to implement the requirements of the *Americans with Disabilities Act (ADA)* and *Section 504 of the Rehabilitation Act*.

The Foothill-De Anza Community College District shall not discriminate against a qualified individual with a disability because of the disability with regard to employment or with regard to the provision of district programs, services and activities.

A person who is otherwise qualified may request accommodation related to his/her disability, provided that accommodation does not impose an undue hardship on the district.

To receive a copy of Foothill College disability access information and procedures for requesting accommodations, call Foothill College Disability Resource Center (DRC) at 650.949.7017 or email [drc@fhda.edu](mailto:drc@fhda.edu). Disability access information is also available in the DRC (Room 5400).

To appeal a DRC accommodation decision, schedule a meeting with the Dean of Student Affairs & Activities, who is the institution's designated ADA/504 coordinator, by visiting Room 2002 or by calling 650.949.7241. If you experience any difficulties with accommodations or receiving accommodations, email [drc@fhda.edu](mailto:drc@fhda.edu) or call 650.949.7241. For more DRC information, visit [foothill.edu/drc](http://foothill.edu/drc).

### **Nondiscrimination Policy**

Foothill does not discriminate against any person in the provision of any program or service based on age, ancestry, color, gender, gender identity, marital status, medical condition, mental disability, national origin, physical disability, race, religious creed, sexual orientation or veteran status.

Complaints of discrimination filed by an employee of the district against another employee or student, or a student against an employee of the district shall be referred and handled pursuant to the district *Administrative Procedures: Resolve Complaints-Harassment & Discrimination (AP 4640)*. Such complaints should be directed to Foothill's Dean of Student Affairs & Activities, located in Room 2002; or call 650.949.7241 to schedule an appointment. Complaints of discrimination filed by a student against another student, or student against the criteria of a program, shall also be referred and handled pursuant to the district *Administrative Procedures: Resolve Complaints-Harassment & Discrimination (AP 4640)*. Such complaints should be directed to Foothill's dean of Student Affairs & Activities, located in Room 2002; or call 650.949.7241 to schedule an appointment.

To report discrimination on the basis of disability, schedule a meeting with Student Affairs & Activities Dean, the institution's ADA/504 coordinator, by visiting Room 2002 or calling 650.949.7241.

### **Limited English Skills Policy**

Prospective students are advised that a lack of English language skills will not be a barrier to admission to, or participation in vocational education programs at Foothill College as long as other, if any, program admission standards are met.

This notice is a requirement of the *Guidelines for Eliminating Discrimination & Denial of Services on the Basis of Race, Color, National Origin, Sex & Handicap (Federal Register; Vol. 44, No 56)*.

### **Reglamento sobre Limitaciones en el Idioma Inglés**

Se les aconseja a posibles estudiantes que la carencia del idioma Inglés no será una barrera para la admisión, o participación en programas de educación vocacional en Foothill College, siempre y cuando todos los otros, si existieran, criterios de admisión del programa sean completados.

Esta nota es un requisito de la *Guía para la Eliminación de la Discriminación y Rechazo de Servicios en Base a la Raza, Color, Nacionalidad de Origen, Sexo e Impedimento (Registro Federal; Vol. 44, No. 56)*.

### **Reglamento de la No-Descripción**

Foothill College no discrimina en contra de ninguna persona en la prohibición de algún programa o servicio basado en la raza, color, nacionalidad u origen étnico, edad, sexo, religión, orientación sexual, estado civil, o impedimento físico o mental.

### **Sexual Harassment Protection Policy**

Members of a college community—students, faculty, staff and visitors—must be able to study and work in an atmosphere of mutual respect and trust. It is the policy of the Foothill-De Anza Community College District to provide an educational, employment and business environment free of unwelcome sexual advances, requests for sexual favors, and other verbal or physical conduct or communications constituting sexual harassment, as defined and otherwise prohibited by federal and state law.

Sexual harassment may include, but is not limited to:

- Conduct of a sexual nature that is explicitly or implicitly made a term or condition of an individual's employment or education;
- A decision based on the submission to or rejection of a sexual advance; or
- Verbal or physical conduct of a sexual nature that interferes with an individual's performance or creates an intimidating work or educational environment.

Immediate action shall be taken against individuals determined to be in violation of this policy. Any individual who believes that he or she has been a victim of sexual harassment may file a complaint within one year of the date on which the complainant knew or should have known of the facts of the sexual harassment incident.

Complaints of sexual harassment filed by a student against another student, or student against the criteria of a program, shall be referred and handled pursuant to the district's Procedures to Resolve Student Complaints of Sexual Harassment & Discrimination. Such complaints should be directed to the Dean of Student Affairs & Activities in Room 2002, 650.949.7241, or contact the Title IX coordinator, Lauren Balducci, vice president of Student Services, at 650.949.7823.

Complaints of sexual harassment filed by a student against another student, or student against the criteria of a program, shall be referred and handled pursuant to the district's *Procedures to Resolve Student Complaints of Sexual Harassment & Discrimination*. Such complaints should be directed to Student Affairs & Activities Dean

in Room 2002 or call 650.949.7241 or contact the Title IX coordinator at 650.949.7823.

### **Title IX Procedural Requirements**

Title IX is a comprehensive federal law that prohibits discrimination on the basis of sex in any federally funded education program or activity. In addition to traditional educational institutions, Title IX also applies to any education or training program operated by a recipient of federal financial assistance. Many of these education programs became subject to Title IX regulations in 2000. Foothill College has responsibilities to ensure that students and employees comply with the nondiscrimination mandate of Title IX and its procedural requirements. Foothill College has established a method for receiving and resolving sex-based discrimination complaints. At Foothill College, Lauren Balducci, the associate vice president of Student Services is the institution's designated Title IX coordinator. For information, call 650.949.7823 or visit Room 8104.

### **Mutual Respect Policy**

Foothill College takes all steps necessary to provide a positive educational and employment environment that encourages equal educational opportunities. The college actively seeks to educate staff and students on the deleterious effects of expressions of hatred or contempt based on age, ancestry, color, gender, gender identity, marital status, medical condition, mental disability, national origin, physical disability, race, religious creed, sexual orientation or veteran status; and promotes equality and mutual respect among all groups and individuals. Standards of conduct for students and the applicable sanctions for violating the standards of student conduct are contained in the *Academic Policies* section in the *Course Catalog* and online at [foothill.edu](http://foothill.edu).

Decisions regarding discipline of employees will be made in accordance with applicable legal and contractual provisions and procedures, and may range from reprimand to dismissal.

### **Drug-Free Campus Policy**

The unlawful manufacturing, distribution, dispensing, possession or use of any illicit drug or alcohol by students on district property or at district activities or events is prohibited.

The use of drugs and alcohol may pose significant health risks. The Psychological Services and Health Services offices at Foothill College offer additional information on the risks associated with the use of drugs and alcohol. You can also receive referral information for drug or alcohol counseling, treatment and rehabilitation programs. For more information, call 650.949.7910.

Employees and students may be suspended or expelled for the unlawful possession, use or distribution of illicit

drugs or alcohol. Appropriate disciplinary action may also include requiring the completion of a rehabilitation program. The standards of conduct for students and the applicable sanctions for violating the standards are published in *Administrative Procedures* 5510 and 5520.

### **No-Smoking Areas & Enforcement**

In order to provide a safe learning and working environment for students and employees, smoking is prohibited in all indoor and outdoor campus locations, with the exception of designated smoking areas as defined by each campus. Smoking is prohibited in district vehicles. "No Smoking" placards are conspicuously posted on campus. In addition, designated smoking areas are clearly marked. No tobacco-related advertising or marketing shall be permitted at FHDA or in publications produced by FHDA. The sale of tobacco products on campus is prohibited. This policy relies on the consideration and cooperation of smokers and nonsmokers. It is the responsibility of all employees, students and visitors to observe and follow the guidelines. This policy shall be communicated and published in the colleges' catalogs, handbooks, websites and other appropriate locations. Smoking violations shall be subject to issuance of citations by the District Police Department as provided for by state law. See *Administrative Procedures* 3217, 5510, 5520 at [fhda.edu/\\_about-us/\\_board/](http://fhda.edu/_about-us/_board/).

*Government Code, 7596-7598; Health & Safety Code, 118875-118915; Labor Code, 6404.5; FHDA, Approved 1/8/96; CAC, Approved 2/24/12; FHDA Amended 8/16/99, 12/2/02, 6/20/05, 7/12/10, 3/12/12.*

Enforcement: Smoking violations shall be subject to issuance of citations by the FHDA District Police Department as provided for by state law. An appeal process will ensure the due process of any person cited in accordance with district policy. *California Government Code Sections, 7597-7598; Health & Safety Code Sections, 118875-118915; Labor Code, 6404.5; FHDA, Approved 4/13/12.*

### **Parking Citations & Traffic Violations**

Parking tickets and traffic violations issued at Foothill College by district police are legal citations that cannot be canceled by the college administration. To make a payment or contest a parking citation, write to Citation Services Center, P.O. Box 63246, Irvine, CA 63246, call 888.443.4501 or visit [publicaccesszone.com](http://publicaccesszone.com). To make a payment or contest a citation for a traffic violation, write to the Palo Alto Superior Court, 270 Grant Avenue, Palo Alto, CA 94306-1911; or call 650.462.3800.

### **Police Conduct**

Direct concerns about an individual officer first to the officer and then to the on-duty police supervisor, located in Room 2103 or call 650.949.7313.

## Complaints & Grievance Process

Foothill College has an established procedure for grievances and complaints in order to provide a means for resolving alleged unfair or improper action by any member of the academic community. Procedures and forms are available on campus in the Student Affairs & Activities Office, located in Room 2002. A copy of the *Foothill-De Anza Community College District (FHDA) Board Policy & Administrative Procedures* is available for review from the FHDA District Human Resources Office as well as online at [fhda.edu/\\_about-us/\\_board/](http://fhda.edu/_about-us/_board/). For more information, visit the Student Affairs & Activities Office or call 650.949.7241.

## Student Conduct & Due Process

### I. Overview

In developing responsible student conduct, disciplinary proceedings play a role substantially secondary to example, counseling, guidance and admonition. At the same time, educational institutions have a duty and the corollary disciplinary powers to protect their educational purpose through the settings of standards of scholarship and conduct for the students who attend them and through the regulation of the use of institutional facilities. The purpose of these procedures is to provide a prompt and equitable means to address violations of the *Student Code of Conduct*, as set forth in *FHDA Administrative Procedures (AP) 5510 and 5520*, which guarantees the student or students involved the due process rights entitled to them by state and federal constitutional protections. These procedures will be used in a fair and equitable manner, and not for purposes of retaliation. They are not intended to substitute for criminal or civil proceeds that may be initiated by other agencies.

Foothill and De Anza colleges consider the following principles essential to their educational missions and community life:

- Mutual respect between students, faculty and staff;
- Pursuit of studies with honesty and integrity;
- Respect for college and personal property; and
- Compliance with all rules and regulations.
- These standards are intended to promote responsible student conduct and fair play.

### II. Definitions

- College: Foothill College and its respective programs.

- District: The Foothill-De Anza (FHDA) Community College District.
- Instructor: Any academic employee of the district in whose class a student subject to discipline is enrolled, or counselor who is providing or has provided services to the student, or other academic employee who has responsibility for the student's educational program.
- President: The college president or a designated representative of the college president.
- Student: Any person currently enrolled as a student at any college or in any program offered by the district.
- Student Discipline Officer: The official designated by the college to be responsible for reviewing and processing student discipline matters.

### III. Student Code of Conduct & Grounds for Disciplinary Action

Students shall be subject to college discipline as outlined in *AP 5520* for any of the following misconduct that occurs at any time on campus or at any off-campus facility, including Internet-based courses or college-approved or college-sponsored functions:

1. Academic dishonesty, such as cheating, plagiarism (including plagiarism included in student publications), or knowingly furnishing false information to the colleges, or district;
2. Unauthorized preparation, giving, selling, transfer, distribution or publication, for any commercial purpose, of any contemporaneous recording of an academic presentation in a classroom or equivalent site of instruction, including but not limited to handwritten or typewritten class notes, except as permitted by any district policy or administrative procedure;
3. Dishonesty, forgery, alteration or misuse of college or district documents, records or identification;
4. Obstruction or disruption of teaching, research, administration, disciplinary procedures, or other college or district activities, including its public service functions, or of other authorized activities;
5. Physical or verbal abuse of any person or conduct which threatens or endangers the health or safety of any such person;
6. Committing or attempting to commit robbery or extortion;
7. Causing or attempting to cause damage to college or

- district property or to private property on campus;
8. Stealing or attempting to steal college or district property or private property on campus, or knowingly receiving stolen college or district property or private property on campus;
  9. Willful misconduct that results in injury or death to a student or to college or district personnel or which results in cutting, defacing, or other injury to any real or personal property owned by the college or district or on the campus;
  10. Unauthorized entry to or use of college or district facilities;
  11. Violation of college or district policies or of campus regulations, including those concerning registration of student organizations, use of college or district facilities, or the time, place and manner of public expression;
  12. Unlawful possession, use, sale, offer to sell, or furnishing or being under the influence of, any controlled substance as listed in *California Health & Safety Code Section 11053 et seq.*, an alcoholic beverage, or an intoxicant of any kind; or unlawful possession of, or offering, arranging or negotiating the sale of any drug paraphernalia, as defined in *California Health & Safety Code Section 11014.5*;
  13. Use, possession, or sale of any firearm, knife, explosive, or other object that could be classified as a weapon (unless the student has specific authorization from a college or district official);
  14. Disruptive behavior, willful disobedience, habitual profanity or vulgarity, or the open and persistent defiance of authority, or persistent abuse of college or district personnel;
  15. Gambling on college or district property;
  16. Hazing or any act that injures, degrades, or disgraces or tends to injure, degrade, or disgrace any fellow student or other persons;
  17. Disorderly conduct or lewd, indecent or obscene behavior, conduct or expression on district-owned or district-controlled property, or at district-sponsored or district-supervised functions;
  18. Willful or persistent smoking in any area where smoking has been prohibited by law or by regulation of the college or district;
  19. Theft or abuse of computer time, including but not limited to:
    - unauthorized entry into a file, to use, read or change the contents or for any other purpose;
    - unauthorized transfer of a file;
    - unauthorized use of another person's identification and password;
    - use of computing facilities to interfere with the work of another student, faculty member or college official;
    - use of computing facilities to send obscene or abusive messages, or to defame or intentionally harm other persons;
    - use of computing facilities to interfere with normal operation of the college computing system;
    - use of computing facilities for student's personal benefit;
  20. Committing sexual harassment as defined by law or as set forth in *Board Policy (BP) 4640*;
  21. Engaging in harassing or discriminatory behavior based on race, gender, religion, age, national origin, disability, or any other status protected by law;
  22. Engaging in expression which is obscene, libelous or slanderous, or which so incites students as to create a clear and present danger of the commission of unlawful acts on college or district premises, or the violation of lawful college or district regulations, or the substantial disruption of the orderly operation of the college or district;
  23. Persistent, serious misconduct where other means of correction have failed to bring about proper conduct.

#### IV. Types of Disciplinary Action

The following are the usual types of discipline the college imposes for violations of its rule or California laws. The following topics are listed in alphabetical order.

- Admonition: An administrative, verbal warning to the student to cease and desist from conduct determined to violate the *Student Code of Conduct*.
- Day: Day(s) during which the district is in session and regular classes are held, excluding Saturdays and Sundays.
- Disciplinary Probation: Exclusion from participation in privileges or extracurricular activities set forth in the notice of disciplinary probation for a specified period of time.
- Expulsion: Exclusion of the student by action of the

FHDA Community College District Board of Trustees from all colleges in the district for one or more terms, or permanently.

- Removal from Class: Exclusion of the student by an instructor for the day of the removal and the next class meeting.
- Restitution: Financial liability for damage to or misappropriation of property. Restitution may take the form of appropriate service to repair or otherwise compensate for damages.
- Summary Suspension: Any student who has willfully disrupted the orderly operation of the campus may be promptly suspended pending a hearing, where such immediate suspension is required in order to protect lives or property and to ensure the maintenance of order, provided, however, that a reasonable opportunity must be afforded the suspended person for hearing within 10 days. In all other cases, where disciplinary action is to be taken in response to willful disruption of the orderly operation of the campus, discipline shall be imposed only after a prompt hearing by a campus body resulting in a finding that the student willfully disrupted the orderly operation of the campus.
- Suspension: Exclusion of the student for good cause from one or more classes for a period of up to 10 days of instruction, or the remainder of the school term, or from all classes and activities for one or more terms. The suspended student is prohibited from being enrolled in any other college in the district for the period of suspension.
- Withdrawal of Consent to Remain on Campus: Withdrawal of consent by the student discipline officer for any person to remain on campus in accordance with *California Penal Code Section 626.4* where the student discipline officer has reasonable cause to believe that such person has willfully disrupted the orderly operation of the campus.
- Written Warning: Written notice to the student that continuation or repetition of specific conduct found wrongful within a period of time stated in the warning, may be cause for more severe disciplinary action. Written reprimands may become part of a student's permanent record at the college.

## V. Discipline & Due Process Procedures at Foothill College

Except in cases where immediate discipline pending a hearing is authorized, the following procedures will apply before disciplinary action is taken to suspend or expel a student. The student discipline officer will determine if there are sufficient grounds to warrant discipline. If the student discipline officer determines

sufficient grounds exist to warrant discipline, the student will be provided with written notice of that determination. The written notice will include the following:

- The specific section of the *Student Code of Conduct* that the student is charged with violating;
- A short statement of the facts supporting the accusation; and
- The nature of the discipline that is being considered.

The following topics are listed in chronological order.

- Time Limits: The notice must be provided to the student within 10 days of the date on which the conduct took place; in the case of continuous, repeated or ongoing conduct, the notice must be provided within 10 days of the date on which conduct occurred which led to the decision to take disciplinary action.
- Pre-Hearing Meeting: If the student chooses to meet with the student discipline officer, the meeting must occur no sooner than 10 days after the notice is provided. At the meeting, the student must again be told the facts leading to the accusation, and must be given an opportunity to respond verbally or in writing to the accusation.
- Schedule of Hearing: The formal hearing shall be scheduled within 10 days after the pre-hearing meeting with the student discipline officer.
- Campus Disciplinary Hearing Board: This board shall be comprised of members of the faculty and administration. The student discipline officer and the president of the Academic Senate shall each, at the beginning of the academic year, establish a list of persons who will serve on student disciplinary hearing panels. The student discipline officer shall appoint the hearing panel from the names on these lists. The administrator on the hearing panel shall serve as chair. However, no administrator or faculty member who has any personal involvement in the matter to be decided, who is a necessary witness, or who could not otherwise act in a neutral manner shall serve on a hearing panel.
- Conduct of the Hearing: The members of the hearing panel shall be provided with a copy of the accusation against the student and any written response provided by the student before the hearing begins. The student discipline officer shall present the facts supporting the accusation. The student discipline officer and the student may call witnesses and introduce oral and written testimony relevant to the issues of the matter. Formal rules of



evidence shall not apply. Any relevant evidence shall be admitted. Unless the hearing panel determines to proceed otherwise, the student discipline officer and the student shall each be permitted to make an opening statement. Thereafter, the student discipline officer shall make the first presentation, followed by the student. The student discipline officer may present rebuttal evidence after the student completes his or her evidence. The burden shall be on the student discipline officer to prove by substantial evidence that the facts alleged are true. The student may represent him or herself, and may also have the right to be represented by a person of his or her choice. An attorney shall not represent the student unless, in the judgment of the hearing panel, complex legal issues are involved. If the student wishes to be represented by an attorney, a request must be presented not less than five days prior to the date of the hearing. If the student is permitted to be represented by an attorney, the student discipline officer may request legal assistance. The hearing panel may also request legal assistance; any legal advisor provided to the panel may sit with it in an advisory capacity to provide legal counsel but shall not be a member of the panel nor vote with it. Hearings shall be closed and confidential unless the student requests that it be open to the public. Any such request must be made no less than five days prior to the date of the hearing. In a closed hearing, witnesses shall not be present when not testifying, unless all parties and the panel agree to the contrary. The district shall record the hearing either by tape recording or stenographic recording, and shall be the only recording made. No witness who refuses to be recorded may be permitted to give testimony. In the event the recording is by tape recording, the hearing panel chair shall, at the beginning of the hearing, ask people present to identify themselves by name, and thereafter shall ask witnesses to identify themselves by name. Tape recordings shall remain in the custody of the district at all times, unless released to a professional transcribing service. The student may request a copy of the tape recording. All testimony shall be taken under oath; the hearing panel chair shall administer the oath. Written statements of witnesses under penalty of perjury shall not be used unless the witness is unavailable to testify. A witness who refuses to be tape-recorded is considered unavailable. Within 10 days following the close of the hearing, the hearing panel shall prepare and forward to the student discipline officer a written recommendation. The recommendation shall include specific factual findings regarding the accusation, and shall include specific conclusions regarding whether any specific section of the standards of student conduct were violated. The decision shall also include a specific recommendation regarding the disciplinary action to be imposed, if any. The

decision shall be based only on the record of the hearing, and not on matter outside of that record. The record consists of the original accusation, the written response, if any, of the student, and the oral and written evidence produced at the hearing. The student discipline officer will forward the recommendation to the president.

- **Immediate Summary Suspension:** The president may order immediate interim suspension pending a hearing of a student where he/she concludes that immediate suspension is required to protect lives or property and to ensure the maintenance of order, provided that a reasonable opportunity is afforded the suspended person for a hearing within 10 days. This procedure complies with *Education Code Section 66017*.
- **Removal from Class:** Any instructor may order a student removed from his/her class for the day of the removal and the next class meeting. The instructor shall immediately report the removal to the student discipline officer. The student discipline officer shall arrange for a conference between the student and the instructor regarding the removal. If the instructor or the student requests, the student discipline officer shall attend the conference. The student shall not be returned to the class during the period of the removal without the concurrence of the instructor. Nothing herein will prevent the student discipline officer from recommending further disciplinary procedures in accordance with these procedures based on the facts that led to the removal. This procedure complies with *Education Code Section 76032*.
- **Withdrawal of Consent to Remain on Campus:** Also review *Penal Code Section 626.4*. The student discipline officer may notify any person for whom there is a reasonable belief that the person has willfully disrupted the orderly operation of the campus and that consent to remain on campus has been withdrawn. If the person is on campus at the time, he/she must promptly leave or be escorted off campus. If the student discipline officer withdraws consent, a written report must be promptly made to the college president and the district police. The person from whom consent has been withdrawn may submit a written request for a hearing on the withdrawal within the period of the withdrawal. The request shall be granted not later than 10 days from the date of receipt of the request. The hearing will be conducted in accordance with the provisions of this procedure relating to interim suspensions. In no case shall consent be withdrawn for longer than 10 days from the date upon which consent was initially withdrawn. Any person as to whom consent to remain on campus has been withdrawn who

knowingly re-enters the campus during the period in which consent has been withdrawn, except to come for a meeting or hearing, is subject to arrest.

- **President's Decision for Suspension:** Within 10 days following receipt of the hearing panel's recommended decision, the college president shall render a written decision. The college president may accept, modify or reject the findings, decisions and recommendations of the hearing panel. If the president modifies or rejects the hearing panel's decision, the college president shall review the record of the hearing, and shall prepare a new written decision that contains specific factual findings and conclusions. Written notice of the college president's decision shall be provided to the student. The notice will include the right of the student to request an appeal of the decision within 30 days of receipt of the decision. The college president will review the appeal and any additional information provided by the student, and render a decision on the appeal. The decision of the college president shall be final. The college president shall notify the district chancellor of the decision to suspend a student.
- **President's Decision for Expulsion:** Within 10 days following receipt of the hearing panel's recommended decision, the college president shall render a written recommended decision to the FHDA board of trustees. The college president may accept, modify or reject the findings, decisions and recommendations of the hearing panel. If the college president modifies or rejects the hearing panel's decision, the college president shall review the record of the hearing, and shall prepare a new written decision that contains specific factual findings and conclusions. The college president's recommendation shall be forwarded to the FHDA board of trustees.
- **Board of Trustees' Decision:** Once received, the college president's recommendation will be placed on the agenda of the next regularly scheduled district board meeting. The district board of trustees shall determine whether to expel a student for cause following hearing before the board. The board shall consider an expulsion recommendation in closed session, unless the student has requested that the matter be considered in a public meeting in accordance with these procedures (*Education Code Section 72122*). The student shall be notified in writing, by registered or certified mail or by personal service, at least three days prior to the meeting, of the date, time and place of the board's meeting. The student may, within 48 hours after receipt of the notice, request that the hearing be held as a public meeting. Even if a student has requested that the

board consider an expulsion recommendation in a public meeting, the board will hold any discussion that might be in conflict with the right to privacy of any student other than the student requesting the public meeting in closed session. The board may accept, modify or reject the findings, decisions and recommendations of the college president and/or the hearing panel. If the board modifies or rejects the decision, the board shall review the record of the hearing, and shall prepare a new written decision that contains specific factual findings and conclusions. The decision of the board shall be final. The final action of the board on the expulsion shall be taken at a public meeting, and the result of the action shall be a public record of the district.

#### **For More Information**

The Foothill College Judicial Affairs Office manages liability issues that arise on the Foothill College campus. The dean of Student Affairs & Activities is the Foothill College grievance officer who oversees discipline and due process. To schedule an appointment, get answers to your questions, obtain reference material or discuss an issue, call 650.949.7241.

Various policies and college groups work to assure students' due process. Such groups and policies include:

- **ASFC Student Rights Advocate:** For more information, e-mail or call the Associated Students of Foothill College president at [asfcpresident@foothill.edu](mailto:asfcpresident@foothill.edu) or 650.949.7062.
- **Obtaining Copies of Policies:** All board and administrative policies are available for review during business hours in the Foothill-De Anza Community College District Chancellor's Office located on the Foothill College campus. These policies are also available online at [fhda.edu](http://fhda.edu).
- In addition, reference resources are available online at [foothill.edu/services/studentright.php](http://foothill.edu/services/studentright.php) under Student's Right to Know and in print in the *Foothill College Student Grievance Procedures* brochure that is available at the Student Affairs & Activities Office (Room 2002). For more information, call 650.949.7241.

#### **For Further Reference**

- *Foothill-De Anza Community College District Board of Trustees Administrative Procedure 5510—Student Code of Conduct*;
- *Foothill-De Anza Community College District Board of Trustees Administrative Procedure —Student Due Process & Discipline*;
- *Foothill-De Anza Community College District Board*

of *Trustees Administrative Procedure 5530—Student Grievances*;

- *Foothill-De Anza Community College District Board of Trustees Policy and Administrative Procedure 5500—Student Rights & Responsibilities*; and
- 14th Amendment of the *U.S. Constitution* as interpreted by *Tinker v. Des Moines Independent School District*, U. S. Supreme Court, 1969, 21 LIED 2d 731.

## Student Grievance Procedures

So that you are fully aware of student rights and responsibilities, you should also review the *Foothill College Student Conduct & Due Process Booklet*. The administrative and board policies referred to in this section are also available online at [fhda.edu](http://fhda.edu). Printed versions of both booklets are available in the Student Affairs & Activities Office in Room 2002 and the Foothill-De Anza Community College District Chancellor's Office located on the Foothill College campus.

### Purpose

The purpose of this procedure is to provide a prompt and equitable means of resolving student grievances. This procedure is for student grievances only. Faculty and staff with complaints regarding students should refer to *Administrative Procedure 5510: Student Code of Conduct* and *Administrative Procedure 5520: Student Due Process & Discipline*. The student grievance procedures shall be available to any student who reasonably believes a college decision or action has adversely affected his or her status, rights or privileges as a student. The procedures shall include grievances regarding:

- Course grades, to the extent permitted by *Education Code Section 76224(a)*, which provides: "When grades are given for any course of instruction taught in a community college district, the grade given to each student shall be the grade determined by the instructor of the course and the determination of the student's grade by the instructor, in the absence of mistake, fraud, bad faith, or incompetence, shall be final."
- Act or threat of intimidation or harassment. These procedures do not apply to sexual harassment or illegal discrimination. Sexual harassment or complaints on the basis of race, color, national or ethnic origin, age, gender, sexual orientation, marital status, or physical or mental disability should be directed to the dean of Student Affairs & Activities at Foothill College, the dean of Student Development & EOPS at De Anza College or the Foothill-De Anza

Community College District Human Resources Office.

- Act or threat of physical aggression.
- Arbitrary action or imposition of sanctions without proper regard to academic due process specified in the college procedures, unrelated to disciplinary actions.
- The exercise of rights of free expression protected by state and federal constitutions and *Education Code Section 76120*.

This procedure does not apply to:

- Student disciplinary actions, which are covered under separate board policies and administrative procedures. (See *Administrative Procedure 5520: Student Due Process & Discipline*.)
- Police citations (i.e. "tickets"). Complaints about citations must be directed to the Santa Clara County Superior Court Parking Violations Office in the same way as any traffic violation.
- Sexual harassment. Complaints of sexual harassment should be directed to the dean of Student Affairs & Activities at Foothill College or the dean of Student Development & EOPS at De Anza College.
- Illegal discrimination. Complaints of discrimination on the basis of race, color, national or ethnic origin, age, gender, sexual orientation, marital status, or physical or mental disability filed against an employee of the district should be directed to the dean of Student Affairs & Activities at Foothill College or the dean of Student Development & EOPS at De Anza College.
- Residence determination. Student should contact the associate registrar at Foothill College or the director of Admissions & Records at De Anza College.
- Dismissal from college for academic reasons. Student should consult a Foothill counselor. If there are extenuating circumstances, the student may appeal the dismissal to the Academic Council after consulting a Foothill counselor.

### Definitions

- **Grievant:** A student alleging that a college decision or action has adversely affected his or her status, rights or privileges as a student, or alleges that another student has violated the student's rights.
- **Party:** The student, or any persons claimed to have been responsible for the student's alleged grievance, together with their representatives. "Party" shall not include the grievance hearing committee or the

college grievance officer.

- **President:** The college president or a designated representative of the college president.
- **Student:** A currently enrolled student, a person who has filed an *Application for Admission* to the college, or a former student. A grievance by an applicant shall be limited to a complaint regarding denial of admission.
- **Respondent:** Any person claimed by a grievant to be responsible for the alleged grievance.
- **Work Day:** A work day shall mean days during which the district is in session and regular classes are held, excluding Saturdays and Sundays. All time deadlines shall be measured by work day, unless otherwise specified as calendar days.

### **Informal Resolution of Grievances**

Each student who has a grievance shall make a reasonable effort to resolve the matter on an informal basis prior to requesting a grievance hearing, and shall attempt to solve the problem with the person with whom the student has the grievance, that person's immediate supervisor, or the vice president who oversees that division.

1. The college president has appointed an employee who shall assist students in seeking resolution by informal means. This person shall be called the grievance officer.
2. Informal meetings and discussion between persons directly involved in a grievance are essential at the outset of a dispute and should be encouraged at all stages. An equitable solution should be sought before persons directly involved in the case have stated official or public positions that might tend to polarize the dispute and render a solution more difficult. At no time shall any of the persons directly or indirectly involved in the case use the fact of such informal discussion, the fact that a grievance has been filed, or the character of the informal discussion for the purpose of strengthening the case for or against persons directly involved in the dispute or for any purpose other than the settlement of the grievance.
3. Any student who believes he or she has a grievance shall file a *Statement of Grievance Form* with the grievance officer within 30 calendar days of the incident on which the grievance is based, or 30 calendar days after the student could have reasonably discovered the basis for the grievance, whichever is later. The *Statement of Grievance Form* must be filed within the above time frame whether or not the student has already initiated efforts

at informal resolution, if the student wishes the grievance to become official. Within two work days following receipt of the *Statement of Grievance Form*, the grievance officer shall advise the student of his or her rights and responsibilities under these procedures, and assist the student, if necessary, in the final preparation of the *Statement of Grievance Form*.

- If at the end of 10 work days following the student's first meeting with the grievance officer, there is no informal resolution of the complaint which is satisfactory to the student, the student shall have the right to request a grievance hearing.

### **Steps in the Informal Process Involving College Employees**

- The student shall confer with the faculty member, administrator or classified staff person directly involved in the facts giving rise to the grievance.
- If unresolved after Step 1, the student shall confer with the faculty member's division dean, or the supervisor of the administrator or classified staff person.
- If unresolved after Step 2, the student shall confer with the vice president of that dean's or supervisor's division.
- Within the 30-calendar-day time limit as previously outlined, if the student does not feel that the matter can be resolved after completing Steps 1, 2 and 3, an official *Statement of Grievance Form* may be filed with the grievance officer. The grievance officer will advise the student of his/her rights and assist the student, if necessary, in the final preparation of the *Statement of Grievance Form*.
- If after 10 work days from the first meeting with the grievance officer there is no informal resolution, the student may request a grievance hearing.
- If the complaint involves a grievance against another student, grievant shall confer directly with the grievance officer, who will advise the grievant of his/her rights and assist the grievant in preparing the *Statement of Grievance Form*.

## **Formal Grievance Process**

### **Grievance Hearing Committee**

- The college president or his/her designee shall at the beginning of each quarter, including any summer session, establish a standing panel of members of the

college community, including faculty members and administrators, from which one or more grievance hearing committees may be appointed. The panel will be established with the advice and assistance of the Academic Senate, who shall submit names to the president or his/her designee for inclusion on the panel. A grievance hearing committee shall include three members from the panel described above. The administrator on the hearing panel shall serve as chair.

- No person shall serve as a member of a grievance hearing committee if that person has been personally involved in any matter giving rise to the grievance, has made any statement on the matters at issue, or could otherwise not act in a neutral manner.
- The grievance officer shall sit with the grievance hearing committee but shall not serve as a member nor vote. The grievance officer shall coordinate all scheduling of hearings, shall serve to assist all parties and the hearing committee to facilitate a full, fair and efficient resolution of the grievance, and shall avoid an adversary role.

### Request for Grievance Hearing

Any request for a grievance hearing shall be filed on a *Request for a Grievance Hearing Form* in writing within 30 calendar days after discovery of the grievable action and after completing steps 1–3 of the informal process previously outlined.

- Within 10 work days following receipt of the *Request for Grievance Hearing Form*, the grievance officer shall convene a grievance hearing committee as described above, and the grievance hearing committee shall meet in private and without the parties present to determine on the basis of the *Statement of Grievance* whether it presents sufficient grounds for a hearing.
- The determination that the *Statement of Grievance* presents sufficient grounds for a hearing shall be made if the following are found to be true:
  - The statement contains facts, which, if true, would constitute a grievance under these procedures;
  - The grievant is a student as defined in these procedures, which include applicants and former students;
  - The grievant is personally and directly affected by the alleged grievance;
  - The grievance was filed in a timely manner; and
  - The grievance is not clearly frivolous, clearly without foundation, or clearly filed for purposes of harassment.

- If the grievance does not meet each of the requirements, the hearing committee chair shall notify the student in writing of the rejection of the *Request for a Grievance Hearing*, together with the specific reasons for the rejection and the procedures for appeal. This notice will be provided within seven work days of the date the decision is made by the grievance hearing committee.
- If the *Request for Grievance Hearing* satisfies each of the requirements, the college grievance officer shall schedule a grievance hearing. The hearing will begin within 30 calendar days following the decision to grant a grievance hearing. All parties to the grievance shall be given not less than 10 work days notice of the date, time and place of the hearing.

### Hearing Procedure

The grievance hearing committee chair is responsible for ensuring that administrative procedures are followed and for maintaining decorum at the hearing.

- The members of the grievance hearing committee shall be provided with a copy of the grievance and any written response provided by the respondent before the hearing begins.
- Each party to the grievance may call witnesses and introduce oral and written testimony relevant to the issues of the matter.
- Formal rules of evidence shall not apply. Any relevant evidence shall be admitted.
- Unless the grievance hearing committee determines to proceed otherwise, each party to the grievance shall be permitted to make an opening statement. Thereafter, the grievant or grievants shall make the first presentation, followed by the respondent or respondents. The grievant(s) may present rebuttal evidence after the respondent(s)' evidence. The burden shall be on the grievant or grievants to prove by substantial evidence that the facts alleged are true and that a grievance has been established as specified above.
- Each party to the grievance may represent himself or herself, and may also have the right to be represented by a person of his or her choice; except that a party shall not be represented by an attorney unless, in the judgment of the grievance hearing committee, complex legal issues are involved. If a party wishes to be represented by an attorney, a request must be presented not less than 10 work days prior to the date of the hearing. If one party is permitted to be represented by an attorney, any other party shall have the right to be represented by an attorney. The hearing committee may also request

legal assistance; any legal advisor provided to the hearing committee may sit with it in an advisory capacity to provide legal counsel but shall not be a member of the panel nor vote with it.

- Hearings shall be closed and confidential unless all parties request that it be open to the public. Any such request must be made no less than five work days prior to the date of the hearing. In a closed hearing, witnesses shall not be present at the hearing when not testifying, unless all parties and the committee agree to the contrary.
- The hearing shall be recorded by the grievance officer either by tape recording or stenographic recording, and shall be the only recording made. No witness who refuses to be recorded may be permitted to give testimony. In the event the recording is by tape recording, the grievance hearing committee chair shall, at the beginning of the hearing, ask each person present to identify themselves by name, and thereafter shall ask witnesses to identify themselves by name. The tape recording shall remain in the custody of the district, either at the college or the district office, at all times, unless released to a professional transcribing service. Any party may request a copy of the tape recording.
- All testimony shall be taken under oath; the oath shall be administered by the grievance hearing committee chair. Written statements of witnesses under penalty of perjury shall not be used unless the witness is unavailable to testify. A witness who refuses to be tape-recorded shall be considered to be unavailable.
- The grievance hearing committee shall prepare and send a decision to the grievance officer. The decision will be forwarded by the grievance officer to the grievant within 14 work days. The decision shall include specific factual findings regarding the grievance, and shall include specific conclusions regarding whether a grievance has been established as defined. The decision shall also include a specific recommendation regarding the relief to be afforded the grievant, if any. The decision shall be based only on the record of the hearing, and not on matter outside of that record. The record consists of the original grievance, any written response, and the oral and written evidence produced at the hearing.

### **Appeal & President's Decision**

A student prejudiced by a decision of the grievance hearing committee shall be entitled to appeal that decision to the college president. The appeal shall be made in writing to the college president within 30 calendar days of receipt of the grievance hearing committee's decision. The college president shall review

the appeal and the grievance hearing committee's findings and conclusions, and will render a decision. Within seven work days following the receipt of the request for appeal, the college president shall prepare and send a decision to the grievant. The decision of the college president shall be final.

### **Time Limits**

Any times specified in these procedures may be shortened or lengthened if there is mutual concurrence by all parties.

### **Illegal Distribution of Copyrighted Materials**

Foothill College students are prohibited from using the Foothill-De Anza (FHDA) Community College District information network to illegally download or share music, video and all other copyrighted intellectual property. Foothill College supports the Higher Education Opportunity Act and Digital Millennium Copyright Act, including efforts to eliminate the illegal distribution of copyrighted material. Under the law, college administrators may be obligated to provide copyright holders with information about users of the FHDA information network who have violated the law.

Be aware that illegal forms of downloading and file sharing, as well as the unauthorized distribution of copyrighted materials are violations of the law and may subject you to academic sanctions from the college as well as criminal and civil penalties, including a lawsuit against you by the Recording Industry Association of America (RIAA). Learn more at [riaa.com/resources-learning-for-students-education](http://riaa.com/resources-learning-for-students-education).

In addition to being illegal, file sharing drains the FHDA network's bandwidth, which slows computer connections for students and employees who are using the network for legitimate academic purposes and ultimately costs the college money.

The college has developed policies and consequences to ensure that students respect music and other forms of intellectual property as well as conduct responsible use of the Internet. Review these policies at [foothill.edu/services/studentright.php#misuse](http://foothill.edu/services/studentright.php#misuse).

There are numerous ways to download music online legally. To protect their intellectual property, companies have licensed hundreds of digital partners that offer a range of legal downloading options, including download and subscription services, legitimate peer-to-peer services, video-on-demand and podcasts. For a list of sources that offer legal downloading sites, visit [whymusicmatters.com](http://whymusicmatters.com).

### **Summary of Civil & Criminal Penalties for Violation of Federal Copyright Laws**

Copyright infringement is the act of exercising, without

permission or legal authority, one or more of the exclusive rights granted to the copyright owner under the Copyright Act. These rights include the right to reproduce or distribute a copyrighted work. In the file-sharing context, downloading and/or uploading substantial parts of a copyrighted work without authority constitutes an infringement. For details, review U.S. Code Title 17; Section 106.

Civil and criminal penalties are applicable for copyright infringement. In general, anyone found liable for civil copyright infringement may be ordered to pay either actual damages or statutory damages affixed at not less than \$750 and not more than \$30,000 per work infringed. For willful infringement, a court may award up to \$150,000 per work infringed. A court can also assess related costs and attorneys' fees. Willful copyright infringement can also result in criminal penalties, including imprisonment of up to five years and fines of up to \$250,000 per offense. For details, review U.S. Code Title 17; Sections 504–505.

For more information, review the U.S. Copyright Office website at [copyright.gov](http://copyright.gov), especially the FAQ at [copyright.gov/help/faq](http://copyright.gov/help/faq).

#### **Misuse of Computer Information & Resources Policy**

This administrative procedure implements *FHDA Board Policy 3250: Computer and Network Use - Rights and Responsibilities*.

Abuse of computing, networking or information resources contained in or part of the district network may result in the loss of computing privileges. Additionally, abuse can be prosecuted under applicable statutes. Users may be held accountable for their conduct under any applicable district or college policies, procedures, or collective bargaining agreements. Complaints alleging abuse of the district network will be directed to those responsible for taking appropriate disciplinary action. Illegal reproduction of material protected by U.S. Copyright Law is subject to civil damages and criminal penalties, including fines and imprisonment.

Examples of behaviors constituting abuse which violate *District Board Policy 3250* include, but are not limited to, the following activities:

#### **System Abuse**

- Using a computer account that one is not authorized to use.
- Obtaining a password for a computer account that one is not authorized to have.
- Using the district network to gain unauthorized access to any computer systems.
- Knowingly performing an act which will interfere with the normal operation of computers, terminals, peripherals or networks.
- Knowingly running or installing on any computer system or network, or giving to another user, a program intended to damage or to place excessive load on a computer system or network. This includes but is not limited to programs known as computer viruses, Trojan horses and worms.
- Knowingly or carelessly allowing someone else to use your account who engages in any misuse in violation of *District Board Policy 3250*.
- Forging e-mail messages.
- Attempting to circumvent data-protection schemes or uncover or exploit security loopholes.
- Masking the identity of an account or machine.
- Deliberately wasting computing resources.
- Downloading, displaying, uploading or transmitting obscenity or pornography, as legally defined.
- Attempting without district authorization to monitor or tamper with another user's electronic communications, or changing, or deleting another user's files or software without the explicit agreement of the owner, or any activity which is illegal under California computer crime laws.
- Personal use which is excessive or interferes with the user's or others' performance of job duties, or otherwise burdens the intended use of the district network.
- Illegal downloading and/or distribution of copyright-protected materials, including but not limited to music and videos.

#### **Harassment**

- Using the telephone, e-mail or voice mail to harass or threaten others.
- Knowingly downloading, displaying or transmitting by use of the district network, communications, pictures, drawings or depictions that contain ethnic slurs, racial epithets, or anything that may be construed as harassment or disparagement of others based on their race, national origin, gender, sexual orientation, age, disability, or religious or political belief.
- Knowingly downloading, displaying or transmitting by use of the district network sexually explicit images, messages, pictures, or cartoons when done to harass or for the purposes of harassment.

- Knowingly downloading, displaying or transmitting by use of the district network sexually harassing images or text in a public computer facility, or location that can potentially be in view of other individuals.
- Posting on electronic bulletin boards material that violates existing laws or the colleges' codes of conduct.
- Using the district network to publish false or defamatory information about another person.

### Commercial Use

Using the district network or computing resource owned or controlled by the district for any commercial activity without written authorization from the district. "Commercial activity" means for financial remuneration or designed to lead to financial remuneration.

### Copyright

- Violating terms of applicable software licensing agreements or copyright laws.
- Publishing copyrighted material without the consent of the owner on district websites in violation of copyright laws.

### Exceptions

Activities by technical staff, as authorized by appropriate district or college officials, to take action for security, enforcement, technical support, troubleshooting or performance testing purposes will not be considered abuse of the network.

Although personal use is not an intended use, the district recognizes that the network will be used for incidental personal activities and will take no disciplinary action provided that such use is within reason and provided that such usage is ordinarily on an employee's own time; is occasional; and does not interfere with or burden the district's operation. Likewise, the district will not purposefully monitor or punish reasonable use of the network for union business-related communication between employees and their unions. Administrative Procedure 3250. Approved 11/17/97; Reviewed by FHDA Board 8/16/99, 7/7/03; revised 10/28/05, 2/6/09.

### Use of Photography

Foothill College, a public California community college, reserves the right to use photographs, videos, motion pictures, and electronic images of students and visitors, age 18 and older, taken on college property and at college-sponsored events for marketing and promotional purposes.

Occasionally, the college will conduct media production activities for marketing purposes. The results of

## Student Right-to-Know Summary Report

In compliance with the federal government, Foothill College provides the following summary of first-time, full-time, degree-seeking students entering Foothill College in fall quarter 2012 (the most recent reporting period for which data are available from the California Community Colleges Chancellor's Office)<sup>1</sup>:

<b>Students completing A.A./A.S./Certificate:</b>	<b>62.23%</b>
<b>Students who transferred out:<sup>2</sup></b>	<b>10.47%</b>
<b>Total completers/transfers:<sup>3</sup></b>	<b>72.70%</b>

<sup>1</sup> The cohort is made up of students entering college for the first time in the fall term, who in the fall term declared a goal of transfer, associate degree or certificate and completed one or more college-level credit courses in the fall term.

<sup>2</sup> The term "transferred out" is defined as the student who transferred to a University of California campus, or California State University campus, or another California community college campus.

<sup>3</sup> Completers are students who within a degree-year period completed the requirements for an associate degree, certificate, or transferred out of the college, or were prepared to transfer which is defined as successfully completing 84 or more transferable units and achieving a grade-point average equal to or greater than 2.0 (out of a possible 4.0).

For more information, visit [cccco.edu](http://cccco.edu).

such photography and recording may be broadcast throughout the world. If you do not want to be identified, photographed or recorded, avoid areas where camera technicians and photographers are working.

Objection to the use of an individual's photograph may be made in writing to the Marketing Office, Room 1944.



## Crime Awareness & Campus Security Summary Report

In compliance with Section 201 Public Law 101-542 as amended by Public Law 102-26, Foothill College provides the following 2015 Crime Awareness & Campus Security Act Summary Report (the most recent reporting period for which data are available from the Foothill-De Anza Community College District Police Department):

### Foothill College (Los Altos Hills, CA)

Criminal Offenses	On Campus			Public Property			Non-Campus Property		
	2013	2014	2015	2013	2014	2015	2013	2014	2015
Criminal Homicide	0	0	0	0	0	0	0	0	0
Sexual Offenses Forcible	0	0	0	0	0	0	0	0	0
Sexual Offenses Non-Forcible	0	0	0	0	0	0	0	0	0
Robbery	1	0	1	0	0	0	0	0	0
Burglary	2	3	1	0	0	0	0	0	0
Aggravated Assault	0	0	0	0	0	0	0	0	0
Motor Vehicle Theft	0	0	1	0	0	0	0	0	0
Arson	0	0	2	0	0	0	0	0	0
Hate Crimes	0	0	0	0	0	0	0	0	0
Dating Violence	0	0	0	0	0	0	0	0	0
Domestic Violence	0	0	0	0	0	0	0	0	0
Stalking	0	0	1	0	0	0	0	0	0

Special Category Arrests	On Campus			Public Property			Non-Campus Property		
	2013	2014	2015	2013	2014	2015	2013	2014	2015
Liquor Laws	0	0	1	0	0	0	0	0	0
Drug Violations	1	4	6	0	0	0	0	0	0
Weapons Violations	0	1	1	0	0	0	0	0	0

### Middlefield Campus (Palo Alto, CA)

Criminal Offenses	On Campus			Public Property			Non-Campus Property		
	2013	2014	2015	2013	2014	2015	2013	2014	2015
Criminal Homicide	0	0	0	0	0	0	0	0	0
Sexual Offenses Forcible	0	0	0	0	0	0	0	0	0
Sexual Offenses Non-Forcible	0	0	0	0	0	0	0	0	0
Robbery	0	0	0	0	0	0	0	0	0
Burglary	0	0	0	0	0	0	0	1	0
Aggravated Assault	0	0	0	0	0	0	0	0	0
Motor Vehicle Theft	0	0	0	0	0	0	0	0	0
Arson	0	0	0	0	0	0	0	0	0
Hate Crimes	0	0	0	0	0	0	0	0	0
Dating Violence	0	0	0	0	0	0	0	0	0
Domestic Violence	0	0	0	0	0	0	0	0	0
Stalking	0	0	0	0	0	0	0	0	0

Special Category Arrests	On Campus			Public Property			Non-Campus Property		
	2013	2014	2015	2013	2014	2015	2013	2014	2015
Liquor Laws	0	0	0	0	0	0	0	0	0
Drug Violations	0	0	0	0	0	0	0	1	0
Weapons Violations	0	0	0	0	0	0	0	0	0





# Requirements

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## Associate in Arts & Associate in Science Degree Graduation Requirements

Requirements for the associate in arts (A.A.) and associate in science (A.S.) degrees include completion of all the following:

- A minimum of 90 units in a defined set of courses;
- A minimum of 18 units successfully completed at Foothill College;
- A grade of C or better in all core and support courses used for the degree;
- A minimum GPA of 2.0 across all college courses including Foothill courses;
- A major or area of emphasis of at least 27 units in a curriculum approved by the Foothill College Curriculum Committee;
- The general education requirements are listed on pages 80–81. If you plan to transfer to a four-year college or university, you should also review the specific requirements of those institutions;
- English Proficiency: ENGL 1A or 1AH or 1S and 1T or ESLL 26;
- Math Proficiency: MATH 17 or 105 or 108; and
- The student may apply only one English or ESLL course below transferable freshman composition toward the associate degree.

Note that completion of the IGETC or CSU GE Breadth pattern may also be used to satisfy the general education requirements for the Foothill A.A./A.S. degree. Because there are significant differences between the three patterns, you are strongly advised to meet early and often with a counselor to determine which pattern will best meet your goals.

### General Education Reciprocity

The Foothill-De Anza Community College District has entered into a mutual General Education (GE) Reciprocity Agreement with other community colleges to accept the general education courses of these colleges “as completed.” In addition to Foothill, participating institutions include Chabot, De Anza, Evergreen Valley, Gavilan, Las Positas, Mission, Ohlone, San Jose City and West Valley colleges.

The reciprocity agreement allows students who obtain a certification of completion of associate degree GE requirements at one of the participating colleges to transfer both the GE coursework and graduation proficiencies to any of the other participating colleges. Additional GE coursework will not be required if the

official certification is presented. Students will still be required to complete all courses or prerequisites needed for a major. The agreement also means that the other participating colleges will accept the Foothill GE pattern when presented with official certification.

In addition to the General Education Reciprocity Agreement, Foothill College will exempt students who have already earned an associate degree from another California community college or who submit general education certification from another California community college (other than the nine colleges previously identified) from having to complete any additional general education or additional English/mathematics proficiency coursework to earn the Foothill A.A./A.S. Local general education requirements may also be met by completion of the IGETC or CSU General Education Breadth Requirements. For more information, schedule an appointment with a counselor.

Students seeking an official general education certification for use by a reciprocity institution are encouraged to review their records with a counselor prior to submitting the General Education Certification Request. Students who have completed courses at other colleges and universities must have official transcripts on file prior to submitting the request. Requests for A.A./A.S. general education certification may be submitted to the Evaluations Office in Room 8101.

### Petition for Graduation

Upon completion of required coursework, you may request to receive an associate degree (A.A./A.A.-T/ A.S./A.S.-T) from Foothill College. You must complete a 30-minute appointment with a Foothill counselor in order to verify applicable requirements and complete the graduation petition. Please note that any applicable coursework from other schools, in the form of official transcripts, must be on file at Foothill College at the time of completing the graduation petition. The petition must be filed the quarter during which the degree will be completed, by the applicable deadline for that quarter. For deadline information, visit [foothill.edu/counseling/petition](http://foothill.edu/counseling/petition). Foothill confers degrees every quarter, and the annual commencement ceremony is presented in June. For more information, schedule a consultation with a counselor by visiting [foothill.edu/counseling](http://foothill.edu/counseling).

### Catalog Rights/Requirements for Graduation

The Course Catalog serves as an agreement between the student and the college to identify courses that the student must complete in order to qualify for a degree or certificate. The student has the right to select the course requirements for a degree or certificate from any catalog as long as continuous enrollment has been maintained.

Allied health programs reserve the right to change catalog rights by modifying program requirements based upon state and federal accreditation standards.

### Continuous Enrollment

Continuous enrollment is important in deciding which catalog a student may select to determine degree or certificate requirements. A continuously enrolled student is defined as one who attended Foothill or De Anza colleges at least two quarters each academic year, excluding summer session. A single **W**-mark in a term qualifies as an attended term.

### Currency of Major/Certificate Requirements

In certain Foothill College programs, currency of course content is essential. The Foothill College Curriculum Committee reserves the right to determine an acceptable level of currency of any course in any major or certificate. This means that a course may only be used toward fulfilling a certificate or degree for a prescribed number of years. Students should check certificate and major requirements for courses that are noted as having currency levels.

### Online Degrees

The Foothill Online Learning Program offers online educational opportunities and services comparable to those available to on-site students. The program offers students a variety of online learning courses that meet the same high academic standards as traditional classes.

The program also offers several associate degree programs entirely online, including accounting, anthropology, art history, economics, general studies/ social science, graphic and interactive design, history, humanities, music general, music technology, psychology, sociology and women's studies, as well as general education requirements. These degrees are fully transferable. A few courses, such as communication, English and math, may require occasional meetings or proctored exams.

Foothill College may be required to receive state authorization to enroll students who do not reside in California. Many states have either given the college this authorization or do not require authorization. However, some states require significant fees to receive state authorization. Due to the significant and/or recurring fees for state authorization, Foothill College no longer permits a student to enroll if he/she resides in any of the following states: Alabama, Arkansas, Georgia, Maryland, Michigan, Minnesota or Wisconsin. For more information, visit [foothill.edu/onlinelearning](http://foothill.edu/onlinelearning).

### Discontinued Degrees

A discontinued degree is one that was once offered by Foothill College but which is no longer offered. To be considered for an associate degree in a discontinued

program, the student who has maintained continuous enrollment may file to graduate from Foothill College within seven years of the time that a program is discontinued.

### Non-Transcriptable Certificates

Per Title 5 regulations, certificates of achievement are noted on the student's transcript. However, certificates of career, completion, proficiency, specialization, and skills are not reflected on the student's transcript.

### Course Numbering System

Most Foothill courses are baccalaureate in level and can be transferred to four-year institutions. For complete course numbering guidelines, refer to page 128.

### Certification of General Education for Transfer

Foothill College will certify completion of up to 58 units of the 72-unit general education requirement for graduation from the CSU (page 83). IGETC Certification for CSU or UC requires full certification of Areas 1 through 5 (page 82). You may request certification by completing the official certification form or transcript request form available from the Admissions & Records Office in Room 8101 or Evaluations Office in Room 8301.

We encourage all students to consult with a counselor each quarter for new course requirements, and for help in selecting courses.

## Four-Year Institution Requirements

### Articulation Agreements

Articulation is the process of negotiating and approving Foothill courses with other institutions. Foothill has course-to-course and major-preparation articulation agreements with every UC and most CSU campuses, as well as many four-year colleges and universities. This information is available to you through your counselor or via the internet. To review online information, visit these websites:

- [foothill.edu](http://foothill.edu)
- [assist.org](http://assist.org)
- Website of the specific college of interest

### Assist Web Page

As the official statewide repository for articulation information, Assist ([assist.org](http://assist.org)) is the primary site for students to find specific Foothill College courses that fulfill general education and/or major preparation requirements at UC and CSU campuses. Listings of course equivalencies assist students in selecting appropriate courses to prepare for transfer. Information about exploring majors, selection criteria

for impacted and selective programs/majors, transfer credit limitations and important links to UC and CSU websites are also available at assist.org. Although Assist is an excellent tool, it is recommended that students apply Assist information to their education plan in conjunction with a Foothill counselor.

### **Transfer Admission Guarantees**

If you complete a Transfer Admission Guarantee (TAG), you'll receive first consideration for admission to selected colleges and universities. You must complete agreed-upon general education courses, as well as major courses, with a specified minimum grade-point average. Consult with a counselor to develop a TAG. The TAG must be prepared before transfer. The TAG ensures acceptance and smooth transfer to the chosen college or university. The Transfer Center, Room 8329, has additional information regarding deadlines for TAGs. The following institutions offer Transfer Admission Guarantees for Foothill students:

- American University, Paris
- Arizona State University
- California State University System\*
- Cogswell College
- Cornell University\*\*
- Golden Gate University
- Menlo College
- Notre Dame de Namur University
- Palo Alto University
- UC Davis
- UC Irvine
- UC Merced
- UC Riverside
- UC Santa Barbara
- UC Santa Cruz
- University of the Pacific

*\*Applies to associate degrees for transfer.*

*\*\*Applies to School of Civil & Environmental Engineering.*

Verify current TAG availability in the Transfer Center. Additional transfer agreements are available through the Foothill Honors Institute, including the Transfer Alliance Program with the UCLA. To verify current honors agreements, visit the Honors Institute (Room 1961).

### **Course Identification Numbering System**

The Course Identification Numbering System (C-ID) is a statewide numbering system independent from the course numbers assigned by local California community colleges. C-ID approval signals that participating California colleges and universities have determined that courses offered by other California community colleges are comparable in content and scope to courses offered on their own campuses, regardless of

their unique titles or local course number. Students should always review assist.org to confirm how each college's course will be accepted at a particular four-year college or university for transfer credit.

The C-ID numbering system is useful for the student who is attending more than one community college and is applied to many of the transferable courses the student will need as preparation for transfer. Because these course requirements may change or be modified and qualified for or deleted from the C-ID database, the student should always check with a counselor to determine how C-ID-designated courses fit into his/her educational plans for transfer.

The student may consult the Assist database at assist.org for specific information on C-ID course designations. For assistance interpreting or explaining this information, schedule an appointment with a counselor.

### **University of California (UC) Breadth General Education Requirements**

The UC has campuses at Berkeley, Davis, Irvine, Los Angeles, Merced, Riverside, San Diego, San Francisco, Santa Barbara and Santa Cruz.

UC campuses have uniform basic eligibility requirements. Each campus is distinct, however, and not all majors are offered at every campus. Each school and college at a specific UC campus has outlined major requirements that prepare you for the academic discipline.

Foothill's counselors and Transfer Center staff can advise you regarding the courses acceptable for credit at UC campuses, as well as those that meet the breadth requirements for specific UC colleges and schools. You can also review this information at assist.org. The Foothill College website at foothill.edu includes the Transfer Course Agreement Listing for all Foothill courses that are transferable to all UC campuses. You should explore all undergraduate colleges, schools and majors to determine which campuses will best satisfy your educational needs. We encourage you to discuss the advantages of each major and campus with a counselor.

### **Preparation for Transfer to Four-Year Colleges & Universities**

Each year, hundreds of Foothill College students transfer to four-year colleges or universities after completing lower-division major preparatory and general education requirements. The secret of our students' success is that they understand which courses are required for the following three transfer elements:

- Minimum admission eligibility/requirements;
- Requirements in preparation for the identified major; and
- Completion of general education/breadth requirements.
- Depending upon the transfer institution, the requirements may differ.

Counselors are an excellent resource for transfer information. Understanding the minimum requirements ensures that students can transfer in a timely manner to earn their bachelor's degree without delay.

These requirements are subject to change annually; therefore, the student should meet with a counselor every year. Many of the courses offered at Foothill College are similar to courses offered in the lower division, or first two years, at four-year colleges and universities. Because there is a wide variation between requirements at different universities, it is recommended that you decide on your major and transfer institution as soon as possible. In addition to offering counselors to help you with this decision, Foothill College offers counseling (CNSL) and Career Life Planning (CRLP) courses to help you explore and evaluate options.

### **Transfer to the California State University (CSU)**

For students interested in transfer to one of the 23 campuses of the CSU, admission eligibility is based on transferable units completed. You are considered a transfer student if you complete college units after the summer following graduation from high school. Admission offices at the 23 CSU campuses use a common set of factors to make admission decisions for both classes of transfer students. All campuses have higher standards for out-of-state students and international students. Some campuses have higher standards for particular majors. Finally, some campuses have higher standards for all applicants. Some campuses give preference in admission to students who reside or have completed an identified number of units at institutions in their local area. For detailed information, visit [calstate.edu/sas/publications](http://calstate.edu/sas/publications).

### **Associate Degrees for Transfer to the CSU System**

The Student Transfer Achievement Reform Act (Senate Bill 1440, now codified in California Education Code sections 66746-66749) guarantees admission to a California State University (CSU) campus for any community college student who completes an associate degree for transfer, which is a newly established variation of the associate degree traditionally awarded by the California Community Colleges. The associate in arts for transfer (A.A.-T.) and associate in science for

transfer (A.S.-T.) degrees are intended for students who plan to complete a bachelor's degree in a similar major at a CSU campus. Students completing the A.A.-T. or A.S.-T. degree program are guaranteed admission to the CSU system, but not to a particular campus or major. In order to earn an A.A.-T. or A.S.-T. degree, students must complete a minimum of 90 required quarter units of CSU-transferable coursework with a minimum GPA of 2.0. Students transferring to a CSU campus in a major that accepts the A.A.-T. or A.S.-T. degree will be required to complete no more than 60 semester/90 quarter units after transfer to earn the bachelor's degree (unless the major is a designated to be a high-unit major). Note: The A.A.-T. or A.S.-T. degree may not be the best option for students who intend to transfer to a particular CSU campus or to university or college that is not part of the CSU system. Students who plan to complete the A.A.-T. or A.S.-T. degree are strongly encouraged to meet early and often with a counselor for more information on university admission and transfer requirements. Consult a counselor for more information.

### **Lower-Division Transfer Admission**

Many CSU campuses do not accept lower-division transfers. Be sure to check with the campus if you are considering transfer as a lower-division student. Students who have completed fewer than 60 transferable semester units (90 quarter units) are considered lower-division transfer students. You are eligible for admissions consideration as a lower-division transfer if you:

- Have a college grade-point average of 2.0 or better in all transferable college units completed;
- Are in good standing at the last college or university attended; i.e., you are eligible to re-enroll;
- Meet the admission requirements for a first-time freshman or have successfully completed the necessary courses to make up the deficiencies you had in high school if you did not complete the 15-unit pattern of college preparatory subjects; and
- Meet the eligibility index required of a freshman.

### **Upper-Division Transfer Admission**

Students who have completed 60 or more transferable semester units (90 quarter units) are considered upper-division transfer students. You are eligible for admission if you:

- Have an overall college grade-point average of 2.0 or better (2.4 for California nonresidents) in all transferable college units attempted;
- Are in good standing at the last college or university

attended; i.e., you are eligible to re-enroll; and

- Prior to transfer, you complete at least 30 semester units (45 quarter units) of general education coursework with a grade of **C** or better. The 30 (45) units must include all of the general education requirements in English composition, oral communication, critical thinking and at least one course of 3 semester units (4 quarter units) in college-level mathematics.

### Major Requirements

Students are encouraged to complete as many lower-division major preparatory requirements as possible prior to transfer. Many majors, especially in highly selective programs, have supplemental requirements that must be met prior to transfer. Consult with a counselor for additional information. These requirements may also be viewed at [assist.org](http://assist.org). Some oversubscribed programs may require supplemental courses or information for admission.

### Transfer to the University of California (UC)

The UC campuses at Berkeley, Davis, Irvine, Los Angeles, Merced, Riverside, San Diego, Santa Barbara and Santa Cruz all share the same minimum admission requirements; however, each campus is unique. The academic programs offered, the size of the student body and the location are just a few of the factors that contribute to the individual character of each campus. Entrance requirements may vary as well. Although some campuses are able to admit all eligible transfer applicants, others can accommodate only a limited number of transfer students. Academic preparation and grade-point average (GPA) are used by the competitive campuses and programs in the selection process. Criteria vary from year to year and from campus to campus according to the number and qualifications of applicants to each campus and program. For more information about campuses, consult the university general catalogs available online or in the Foothill College Transfer Center (Room 8329). Complete information on the UC may be found at [universityofcalifornia.edu/admissions](http://universityofcalifornia.edu/admissions).

The UC will award graduation credit for up to 105 lower-division quarter units of transferable coursework from a community college. Courses in excess of 105 quarter units will receive subject credit and may be used to satisfy university subject requirements. There is no limit, however, on the number of units used to determine a student's GPA, so all UC-transferable units will apply.

### Minimum Admission Requirements for Transfer Applicants Who Are California Residents

The UC considers you a transfer applicant if you enrolled in a regular session at a college or university after high school, not including summer session. (You can't disregard your college record and apply as a freshman.) There are three ways to meet the university's minimum admission requirements for transfer students. The path you use depends on the degree to which you satisfied UC's minimum eligibility requirements for freshmen at the time you graduated from high school.

- If you were eligible for admission to the university when you graduated from high school—meaning you satisfied the subject, scholarship and examination requirements, or were identified by the university during your senior year in high school as eligible in the local context—you are eligible to transfer if you have a 2.0 GPA in your transferable college coursework.
- If you met the scholarship requirements in high school but did not satisfy the 15-course subject requirement, you must take transferable college courses in the missing subjects, earn a grade of **C** or better in each required course, and maintain a 2.0 GPA in all transferable coursework to be eligible for transfer.
- If you were not eligible for admission to the university when you graduated from high school because you did not meet the scholarship requirement, you must:
  1. Complete 90 quarter units/60 semester units of transferable college credit with at least a 2.4 GPA (2.8 for nonresidents). No more than 21 quarter/14 semester units may be taken as Pass/No Pass, and
  2. Complete the following seven transferable college courses, earning a grade of **C** or better in each course:
    - Two courses in English composition;
    - One course in mathematical concepts and quantitative reasoning;
    - Four courses chosen from at least two of these subject areas: arts and humanities, social and behavioral sciences, and physical and biological sciences; and
    - Each course must be worth at least 4–5 quarter/3 semester units.



For a list of UC-transferable courses and those that specifically meet the seven-course pattern described above, visit [assist.org](http://assist.org).

Eligibility for transfer does not guarantee admission. To present a competitive application, students are encouraged to exceed minimum requirements.

### **Nonresidents**

The minimum admission requirements for nonresidents are very similar to those for residents. If you are not a California resident, consult with the admissions office at the university campus(es) that you're interested in for specific admission requirements. In all cases, however, nonresidents must have a grade-point average of 2.8 or higher in all transferable college coursework.

Be aware that many campuses use criteria that exceed these minimum requirements to select students for admission. For nonresident admission information, you are advised to consult frequently with a counselor and/or read university catalog and university websites or contact the admissions office at the appropriate university.

### **Priority Application Filing Period**

Students are encouraged to apply during the following application periods:

Application Accepted for	CSU	UC
Fall	10/1 – 11/30	11/1 – 11/30
Winter	6/1 – 6/30	7/1 – 7/31
Spring	8/1 – 8/31	10/1 – 10/31
Summer	2/1 – 2/28	N/A

While all campuses accept students for fall admission, many do not accept for spring or winter. Consult a counselor for details about a specific campus.

# 2017–2018 Foothill College General Education & Graduation Requirements

The Foothill College general education (GE) pattern is designed to ensure that the student meets the four institutional/general education student learning outcomes:

**1. Communication:** Demonstrate analytical reading and writing skills, including evaluation, synthesis and research; deliver focused and coherent presentations; and demonstrate active, discerning listening and speaking skills in lectures and discussions.

**2. Computation:** Demonstrate complex problem-solving skills, technology skills, computer proficiency and decision analysis through synthesis and evaluation; apply mathematical concepts and reasoning; and analyze and use numerical data.

**3. Creative, Critical & Analytical Thinking:** Demonstrate judgment, decision-making skills and intellectual curiosity; demonstrate problem-solving skills through analysis, synthesis and evaluation; develop creativity and aesthetic awareness; conduct research methodology; and identify and respond to a variety of learning styles and strategies.

**4. Community/Global Consciousness & Responsibility:** Demonstrate social perceptiveness, including citizenship, community service, cultural awareness, empathy, ethics, interpersonal skills, personal integrity, respect, self-esteem and sensitivity; and exhibit interest in and pursuit of lifelong learning.

Completion of the Foothill College general education pattern requires that students successfully earn a minimum of 30 units from the courses listed on pages 80-81 with at least one course in humanities, English, natural sciences (with laboratory), social and behavioral sciences, communication and analytical thinking, United States cultures and communities, and two courses in lifelong learning from two different academic departments. Courses may only be used in one area.

## I. HUMANITIES

ART 1, 2A, 2AH, 2B, 2BH, 2C, 2E, 2F, 2J, 4A, 5A, 5B, 20B, 36, 45B; CRWR 6, 39A, 41A; DANC 10; ENGL 5, 7, 12, 14, 16, 17, 18A, 22, 24, 31, 34C, 40, 41, 45A, 45AH, 45B, 45BH, 47A, 47B; GID 1; HUMN 1, 2, 3, 3H, 4, 4H, 5, 6, 7, 9; JAPN 14A, 14B; MDIA 1, 2A, 2B, 2C, 11, 11H, 13; MUS 1, 2A, 2B, 2C, 2D, 2F, 7, 7D, 7E, 7F, 8, 8H, 11D, 11E, 11F; PHIL 2, 4, 11, 12, 20A, 20B, 20C, 24, 25; PHOT 5, 8, 8H, 10, 10H, 11, 11H; SPAN 4, 5, 6, 13A, 13B, 14A, 14B; THTR 1, 2A, 2B, 2F, 8, 12A, 26.

## II. ENGLISH

ENGL 1A, 1AH, 1S & 1T; ESL 26.

## III. NATURAL SCIENCES (WITH LABORATORY)

ANTH 1 w/1L, 1H w/1HL; ASTR 10A w/10L, 10B w/10L, 10BH w/10L; BIOL 9 w/9L, 10, 13, 14, 15, 41; CHEM 1A, 1AH, 9, 20, 25, 30A; ENGR 39; GEOG 1; HORT 10; PHYS 2A, 4A.

## IV. SOCIAL & BEHAVIORAL SCIENCES

ANTH 2A, 2AH, 2B, 3, 5, 8, 12, 14, 15, 20, 22; BUSI 22, 22H, 53; CHLD 1, 2; ECON 1A, 1B, 9, 9H, 25; GEOG 2, 5, 10; HIST 4A, 4B, 4C, 4CH, 8, 9, 9H, 10, 16, 16H, 17A, 17B, 17C, 18, 20; KINS 2; POLI 1, 3, 3H, 9, 9H, 15, 15H; PSYC 1, 1H, 4, 10, 14, 21, 22, 25, 30, 33, 40, 49; SOC 1, 1H, 10, 11, 15, 19, 20, 23, 28, 30, 40; SPED 2; WMN 5, 21.

## V. COMMUNICATION & ANALYTICAL THINKING

COMM 1A, 1AH, 1B, 1BH, 2, 3, 4, 54A, 55, 60; C S 1A, 1AH, 1B, 1C, 2A, 2AH, 2B, 2C, 3A, 18; ENGL 1B, 1BH, 50C; GEOG 11; GIST 11; MATH 1A, 1AH, 1B, 1C, 10, 11, 12, 17, 22, 44, 48A, 48B, 48C; MDIA 3; PHIL 1, 7, 30; PSYC 7; SOC 7.

## VI. UNITED STATES CULTURES & COMMUNITIES

CHLD 51A; COMM 10, 12; ENGL 7, 12, 40, 45A, 45AH, 45B, 45BH; HIST 10; MDIA 12; MUS 8, 8H; PHOT 8, 8H; PSYC 22; SOC 8, 23; SPAN 10A; SPED 1; THTR 8; WMN 5.

It is imperative to note that the Foothill College general education pattern is only appropriate for students pursuing the Foothill College associate in arts or associate in science degree. However, it is not appropriate for students pursuing an A.A.-T or A.S.-T degree. Students planning to earn an A.A.-T or A.S.-T must complete either the IGETC or CSU GE Breadth general education pattern. Note that completion of the IGETC or CSU GE Breadth pattern may also be used to satisfy the general education requirements for the Foothill A.A./A.S. degree.

**Because there are significant differences between the three patterns, the student is strongly advised to meet with a counselor to determine which pattern will best meet the student's goals.**

## VII. LIFELONG LEARNING

The student must successfully complete a total of four units or more in lifelong learning from two different academic departments. For the purpose of this area, ATHL, DANC, PHDA and PHED will be considered one academic department.

ATHL 4, 4A, 4B, 4C, 4E, 4F, 11, 11A, 11B, 11C, 11E, 11F, 12, 12A, 12B, 12C, 12E, 12F, 21, 21A, 21B, 21C, 21E, 21F, 22, 22A, 22B, 22C, 22E, 22F, 31, 31A, 31B, 31C, 31E, 31F, 32, 32A, 32B, 32C, 32E, 32F, 33, 33A, 33B, 33C, 33E, 33F, 41, 41A, 41B, 41C, 41D, 42, 42A, 42B, 42C, 42E, 42F, 44, 44A, 44B, 44C, 44E, 44F, 45, 45A, 45B, 45C, 45E, 45F; BIOL 8, 9, 12; CNSL 1, 52, 72, 90; COMM 2, 10, 12, 55, 60; CRLP 7, 55; DANC 1A, 1B, 1C, 2A, 2B, 3A, 3B, 4A, 4B, 4C, 5, 6, 7, 8, 13A, 13B, 14, 18A, 18B; HLTH 20, 21; KINS 4; LIBR 10, 10H; PHDA 16, 17, 18, 19, 20, 21A, 21B, 22, 23, 24, 25; PHED 10A, 10B, 10C, 11A, 11B, 11C, 13, 13A, 13B, 13C, 14, 15A, 15B, 15C, 18, 18B, 18C, 19B, 19C, 19D, 20A, 20B, 20C, 21, 21A, 21B, 21C, 21D, 21E, 22, 22A, 22B, 22C, 22E, 23A, 23B, 24, 24A, 24B, 24C, 24D, 25A, 25B, 26, 26A, 26C, 26D, 26E, 26F, 27, 27A, 27B, 27C, 31A, 31B, 31C, 31D, 32C, 33, 33A, 33B, 36A, 36B, 36C, 37, 37A, 37B, 38A, 38B, 38C, 38D, 38E, 40, 40A, 40B, 40C, 41, 41A, 41B, 41C, 42, 45, 45A, 45C, 46, 46A, 46B, 47B, 47C, 49A, 49B; PSYC 49; SOC 19, 40; SPED 1.

Minimum proficiency: ENGL 1A or 1AH or 1S and 1T or ESLL 26; MATH 17 or 105 or 108\* completed with a letter grade of **C** or better.

*\*Intermediate algebra or equivalent means MATH 105 or mathematics placement test score indicating eligibility for a mathematics course beyond the level of MATH 105, or completion of a higher-level course with a grade of **C** or better, or completion of a bachelor's degree or higher from an accredited U.S. college or university.*

Effective Summer Session 2017

This information was correct when the catalog was published; however, it is expected that additional courses were added to the list in June 2017. Please see a counselor or check [assist.org](http://assist.org) for the latest list of approved courses.

## 2017–2018 Intersegmental General Education Transfer Curriculum (IGETC)

IGETC is a pattern of Foothill College courses that fulfills lower-division general education requirements for transfer to California State University (CSU) and University of California (UC). IGETC is an alternative to the CSU and local UC General Education Breadth Requirements. Many private universities also recognize IGETC for fulfillment of general education requirements. IGETC is a good option for the student who intends to transfer but is undecided about a major and/or unsure about attending CSU or UC. Some majors require extensive lower-division preparation, therefore, IGETC may not be the best choice for general education. Some universities do not accept IGETC. Always consult a counselor when developing an educational plan.

Course requirements for all areas of IGETC must be completed with a grade of C or better and certified by Foothill College for university credit. Submit a request for IGETC certification at the Counseling Center or Admissions Office. For updated information, consult your counselor or visit [assist.org](http://assist.org). Completion of IGETC requirements also qualifies students for a Foothill College Certificate of Achievement in Transfer Studies.

### AREA 1—ENGLISH COMMUNICATION

**CSU:** Three courses required, one from Group A, B and C.

**UC:** Two courses required, one each Group A and B.

**Group A:** English Composition, one course: five quarter units ENGL 1A or 1AH or 1S and 1T (both 1S and 1T must be completed to satisfy this requirement.)

**Group B:** Critical Thinking–English Composition, one course: five quarter units ENGL 1B, 1BH, 1C, 1CH, PHIL 1

**Group C:** Oral Communication (CSU requirement only) one course: five quarter units COMM 1A, 1AH, 1B, 1BH, 2, 3, 4

### AREA 2—MATHEMATICAL CONCEPTS & QUANTITATIVE REASONING

One course: four to five quarter units C S 18; MATH 1A, 1AH, 1B, 1C, 1D, 2A, 2B, 10, 11, 12, 17, 22, 44, 48C; PSYC 7; SOC 7.

### AREA 3—ARTS & HUMANITIES

At least three courses, with at least one course from Arts and one course from Humanities: nine semester units; 12–15 quarter units.

**Arts:** ART 1, 2A, 2AH, 2B, 2BH, 2D, 2E, 2F, 2G, 2J, 3; DANC 10; MDIA 1, 2A, 2B, 2C, 3, 6; MUS 1, 2A, 2B, 2C, 2D, 2F, 3A, 3B, 3C, 7, 7D, 7E, 7F, 8, 8H, 9A, 9B, 10, 11A, 11B, 11C; PHIL 11; PHOT 5, 8, 8H, 10, 10H, 11, 11D, 11E, 11H; THTR 1, 2A, 2B, 2F, 8, 12A, 26.

**Humanities:** ENGL 5, 7, 8, 11, 11H, 12, 14, 16, 17, 18A, 22, 24, 31, 40, 41, 43A, 43B, 45A, 45B, 47A, 47B; HIST 4A, 4B, 4C, 4CH; HUMN 1, 2, 3, 3H, 4, 4H, 5, 6, 7; JAPN 4, 5, 6, 25A, 25B, 33, 35; MDIA 11, 12; PHIL 2, 4, 8, 20A, 20B, 20C, 24, 25; SPAN 4, 5, 6, 10A, 25A, 25B; THTR 2A, 2B.

### AREA 4—SOCIAL & BEHAVIORAL SCIENCES

(CSU transfers see note re: U.S. History & American Ideals)

At least three courses from at least two disciplines or an interdisciplinary sequence: 12–15 quarter units.

ANTH 2A, 2AH, 2B, 3, 4, 5, 6, 8, 12, 14, 15, 20, 22; ART 2E; CHLD 1, 2; COMM 10, 12; ECON 1A, 1B, 9, 9H, 18, 25; GEOG 2, 5, 9, 10; HIST 4A, 4B, 4C, 4CH, 8, 9, 9H, 10, 16,

16H, 17A, 17B, 17C, 18, 20; HLTH 20; KINS 2, 10; MDIA 9; PHOT 8, 8H; MUS 11F; POLI 1, 2, 2H, 3, 3H, 9, 9H, 15, 15H; PSYC 1, 4, 10, 14, 21, 22, 25, 30, 33, 40, 49, 55; SOC 1, 1H, 8, 10, 11, 14, 15, 20, 21, 23, 28, 30, 40; SOSC 20; SPED 1, 2; WMN 5, 11, 15, 21.

### AREA 5—PHYSICAL & BIOLOGICAL SCIENCES

At least two courses, one Physical Science course and one Biological Science course; at least one must include a laboratory. Laboratory courses are indicated with an asterisk (\*): 9–12 quarter units

**Physical Sciences:** ASTR 10A, 10B, 10BH, 10L\*; CHEM 1A\*, 1B\*, 1C\*, 9\*, 12A\*, 12B\*, 12C\*, 20\*, 25\*, 30A\*, 30B\*; GEOG 1\*; PHYS 2A\*, 2B\*, 2C\*, 4A\*, 4B\*, 4C\*, 4D\*, 6, 12, 27.

**Biological Sciences:** ANTH 1, 1L\* 1HL\*; BIOL 1A\*, 1B\*, 1C\*, 1D, 9, 9L\*, 10\*, 12, 13\*, 14\*, 15\*, 23\*, 40A\*, 40B\*, 40C\*, 41\*, 45; HORT 10\*.

### AREA 6—LANGUAGE OTHER THAN ENGLISH

(UC Requirement Only) Proficiency equivalent to two years of high school study in the same language. Transcripts must be on file with Foothill College. JAPN 2, 3, 4, 5, 6; SPAN 2, 3, 4, 5, 6, 10A.

### CSU Graduation Requirement in U.S. History, Constitution & American Ideals

This CSU requirement is not a part of IGETC. CSU transfer students completing IGETC must complete this requirement prior to graduation from CSU. Courses used to fulfill IGETC may be double-counted toward this requirement.

In order to complete this requirement prior to transfer, students must complete one course from Group One and one course from Group Two:  
Group One: POLI 1  
Group Two: HIST 17A, 17B or 17C

For updated information, visit [assist.org](http://assist.org). Effective Fall Quarter 2016

This information was correct when the catalog was published; however, it is expected that additional courses were added to the list in June 2017. Please see a counselor or check [assist.org](http://assist.org) for the latest list of approved courses.

## 2017–2018 California State University General Education Breadth Requirements

Foothill College will certify completion of up to 58 quarter units of the 70-unit general education requirement for graduation from the CSU for the student who meets the following course patterns. A minimum of 45 units in GE, including all of Area A and B-4 (Math) must be completed prior to transfer. Courses may not be counted in more than one area. For updated information, consult your counselor or visit [assist.org](http://assist.org). Completion of the CSU GE requirements also qualifies students for a Foothill College Certificate of Achievement in Transfer Studies.

### AREA A—ENGLISH LANGUAGE & CRITICAL THINKING

12–15 quarter units are required for admission and must be completed with a grade of C or better.

**A-1 Oral Communication:** (select one course) COMM 1A, 1AH, 1B, 1BH, 2, 3 or 4

**A-2 Written Communication:** ENGL 1A, 1AH, 1B, 1BH, 1S and 1T (both courses must be combined for credit) or ESLL 26

**A-3 Critical Thinking:** (select one course) PHIL 1, 7, 30; ENGL 1B, 1BH, 1C, 1CH

### AREA B—SCIENTIFIC INQUIRY & QUANTITATIVE REASONING

12–15 quarter units. Choose one course from B-1, B-2 and B-4. One course must include a laboratory. Laboratory courses are indicated with an asterisk (\*).

**B-1 Physical Science:** ASTR 10A, 10B, 10BH, 10L\*; CHEM 1A\*, 1B\*, 1C\*, 12A, \*9\*, 12B\*, 12C\*, 20\*, 25\*, 30A\*, 30B\*; GEOG 1\*; PHYS 2A\*, 2B\*, 2C\*, 4A\*, 4B\*, 4C\*, 4D\*, 6, 12, 27.

**B-2 Life Science (Biological):** ANTH 1, 1L\*, 1H, 1HL\*; BIOL 1A\*, 1B\*, 1C\*, 1D, 9, 9L\*, 10\*, 12, 13\*, 14\*, 15\*, 17, 23, 40A\*, 40B\*, 40C\*, 41\*, 45; HORT 10\*.

**B-4 Mathematics/Quantitative Reasoning:** Course must be completed with grade of C or better; required for admission to CSU. C S 18; MATH 1A, 1AH, 1B, 1C, 1D, 2A, 2B, 10, 11, 12, 17, 22, 42, 44, 48A, 48B, 48C; PSYC 7; SOC 7. (Note: MATH 17 is approved through Summer 2019)

### AREA C—ARTS & HUMANITIES

Complete 12–15 quarter units, including a minimum of one course from Area C-1 and one course from Area C-2. Note: If you did not complete ENGL 1B for Area A-3, you must complete ENGL 1B as one of the Area C courses.

**C-1 Arts (Art, Dance, Music, Theatre):** ART 1, 2A, 2AH, 2B, 2BH, 2C, 2E, 2F, 2G, 2J, 3, 4A, 6; DANC 10; MDIA 6; MUS 1, 2A, 2B, 2C, 2D, 3A, 3B, 3C, 7, 7D, 7E, 7F, 8, 8H, 9A, 9B, 10, 11A, 11B, 11C, 11D, 11E; PHIL 11; PHOT 1, 5, 8, 8H, 10, 10H, 11, 11H; THTR 1, 2A, 2B, 2F, 8, 12A, 20A, 26; VART 1, 2C, 3.

**C-2 Humanities (Literature, Philosophy, Foreign Languages):** COMM 12; CRWR 6, 39A, 39B, 41A, 41B; ENGL 1B, 1BH, 5, 7, 8, 11, 11H, 12, 14, 16, 17, 22, 24, 31, 40, 41, 43A, 43B, 45A, 45B, 47A, 47B; HIST 4A, 4B, 4C, 4CH; HUMN 1, 2, 3, 3H, 4, 4H, 5, 6, 7; JAPN 1, 2, 3, 4, 5, 6, 25A, 25B, 33, 35; MDIA 2A, 11, 12; PHIL 2, 4, 8, 12, 20A, 20B, 20C, 24, 25; SPAN 1, 2, 3, 4, 5, 6, 10A, 25A, 25B; THTR 2A, 2B; VART 2A, 2B.

### AREA D—SOCIAL SCIENCES

Students are required to complete 12–15 quarter units from at least two different disciplines in Areas D1–D0 below.

Note: CSU requires students to complete a two-course American Institutions (AI) requirement that can be satisfied by completing:

1. POLI 1 and
2. HIST 17A, 17B or 17C.

CSU-bound students are encouraged to complete the AI course requirement while fulfilling their Area D coursework.

**D-1 Anthropology & Archaeology:** ANTH 2A, 2AH, 2B, 3, 4, 5, 6, 8, 8L, 8LX, 8LY, 12, 14, 15, 20, 22, 52.

**D-2 Economics:** ECON 1A, 1B, 9, 9H, 18, 25; GEOG 5; POLI 9, 9H

**D-3 Ethnic Studies:** (Some CSU campuses may require additional courses after you transfer to meet this requirement.) ANTH 2B, 4, 6, 20; CHLD 51A; COMM 12; ENGL 12, 31; HIST 10; MUS 8, 8H; PHIL 24, 25; PHOT 8, 8H; PSYC 21, 22; SOC 21, 23; SOSC 20; WMN 21

**D-4 Gender Studies:** ART 2E; COMM 10; ENGL 22; KINS 10; PSYC 21; SOC 21, 28; WMN 5, 11, 21.

**D-5 Geography:** GEOG 2, 5, 9, 10

**D-6 History:** HIST 4A, 4B, 4C, 4CH, 8, 9, 9H, 10, 16, 16H, 17A, 17B, 17C, 18, 20

**D-7 Interdisciplinary Social or Behavioral Science:** CHLD 1, 2, 51A; COMM 60; HIST 18; HLTH 20; KINS 2, 10; MUS 11F; SOC 8; SOSC 20; SPED 1, 2.

**D-8 Political Science, Government & Legal Institutions:** ECON 9, 9H; POLI 1, 2, 2H, 3, 3H, 9, 9H, 15, 15H; SPED 64

**D-9 Psychology:** CHLD 50A; PSYC 1, 4, 10, 14, 21, 22, 25, 30, 33, 39, 40, 49; SOC 10, 30; SPED 1; WMN 21

**D-0 Sociology & Criminology:** PSYC 10, 21, 30; SOC 1, 1H, 8, 10, 11, 14, 15, 20, 23, 28, 30, 40, 57; WMN 21

### AREA E—LIFELONG UNDERSTANDING & SELF-DEVELOPMENT

A minimum of four quarter units from the following: BIOL 8; CNSL 52, 72; COMM 60; CRLP 70; HLTH 21, 60; KINS 4, 9; PSYC 50; SOC 19, 40; SPED 1, 2; physical education activity courses from ATHL, PHDA and PHED (maximum allowed: 2 units) includes DANC 1A, 1B, 1C, 2A, 2B, 3A, 3B, 4A, 4B, 4C, 5, 6, 7, 8, 9, 11A, 11B, 11C, 12A, 12B, 12C, 13A, 13B, 14, 15, 16, 17, 18A, 18B.

## Major & Certificate Requirements\*

As this catalog goes to press, Foothill College offers 23 state-approved A.A.-T. and A.S.-T. degrees, including anthropology, art history, biology, business administration, communication studies, computer science, early childhood education, economics, English, geography, global studies, history, kinesiology, mathematics, philosophy, physics, political science, psychology, public health science, sociology, Spanish, studio arts and theatre arts. Foothill is developing more A.A.-T. and A.S.-T. degrees, which will become active during this catalog rights cycle. For more information, consult a Foothill counselor and review the Foothill College website.

### ACCOUNTING

#### Program Type(s): Associate in Arts Degree, Certificate of Achievement, Certificate of Proficiency, Career Certificate

May be transferrable to a four-year university.

Units required for major: 53, certificate: 9-53

#### PROGRAM LEARNING OUTCOMES

- Students will be able to explain accounting terminology, concepts, principles, and frameworks.
- Students will be able to perform accounting-related calculations and demonstrate the ability to use methods and/or procedures to solve accounting problems.

#### ASSOCIATE DEGREE REQUIREMENTS \*

##### Core Courses: (43 units)

ACTG 1A Financial Accounting I (5 units)  
ACTG 1B Financial Accounting II (5 units)  
or ACTG 1BH Honors Financial Accounting II (5 units)  
ACTG 1C Managerial Accounting (5 units)  
or ACTG 1CH Honors Managerial Accounting (5 units)  
ACTG 64A Computerized Accounting Practice Using QuickBooks (4 units)  
ACTG 64B Computerized Accounting Practice Using Excel (4 units)  
ACTG 67 Tax Accounting (5 units)  
BUSI 18 Business Law I (5 units)  
BUSI 22 Principles of Business (5 units)  
or BUSI 22H Honors Principles of Business (5 units)  
ECON 1A Principles of Macroeconomics (5 units)  
or ECON 1B Principles of Microeconomics (5 units)

##### Support Courses: (10 units)

ACTG 51A Intermediate Accounting I (5 units)  
ACTG 51B Intermediate Accounting II (5 units)  
ACTG 51C Intermediate Accounting III (5 units)  
ACTG 52 Advanced Accounting (5 units)  
ACTG 53 Financial Statement Analysis (5 units)  
ACTG 58 Auditing (5 units)  
ACTG 59 Fraud Examination (5 units)  
ACTG 60 Accounting for Small Business (5 units)  
ACTG 65 Payroll & Business Tax Accounting (4 units)  
ACTG 66 Cost Accounting (5 units)  
ACTG 68A Advanced Tax Accounting I (5 units)  
ACTG 68B Advanced Tax Accounting II (5 units)  
ACTG 68C Advanced Tax Accounting III (3 units)  
ACTG 70R Independent Study in Accounting (1 unit)  
ACTG 71R Independent Study in Accounting (2 units)  
ACTG 72R Independent Study in Accounting (3 units)  
ACTG 73R Independent Study in Accounting (4 units)  
ACTG 75 Accounting for Government & Not-for-Profit (5 units)  
ACTG 76 Ethics in Accounting (5 units)  
BUSI 11 Introduction to Information Systems (5 units)  
BUSI 19 Business Law II (4 units)

##### Certificate of Achievement in Accounting (53 units)

The certificate of achievement is awarded upon completion of the core and support courses. General education courses are not required.

##### Certificate of Achievement in CPA Examination Preparation (40 units)

ACTG 1A Financial Accounting I (5 units)

ACTG 1B Financial Accounting II (5 units)  
ACTG 51A Intermediate Accounting I (5 units)  
ACTG 51B Intermediate Accounting II (5 units)  
ACTG 51C Intermediate Accounting III (5 units)  
ACTG 52 Advanced Accounting (5 units)  
or ACTG 53 Financial Statement Analysis (5 units)  
ACTG 58 Auditing (5 units)  
ACTG 75 Accounting for Government & Not-for-Profit (5 units)

##### Tax Accounting Career Certificate (27 units)

###### [Non-Transcriptable]

ACTG 1B Financial Accounting II (5 units)  
ACTG 64A Computerized Accounting Practice Using QuickBooks (4 units)  
ACTG 67 Tax Accounting (5 units)  
ACTG 68A Advanced Tax Accounting I (5 units)  
ACTG 68B Advanced Tax Accounting II (5 units)  
ACTG 68C Advanced Tax Accounting III (3 units)

Note: Non-transcriptable certificates are maintained and awarded by the Accounting Department (not the college) and not recorded in student transcripts. To apply for certificate, contact the department's Chair within one academic year from completing the last course.

##### Financial Accounting Career Certificate (25 units)

###### [Non-Transcriptable]

ACTG 1A Financial Accounting I (5 units)  
ACTG 1B Financial Accounting II (5 units)  
ACTG 51A Intermediate Accounting I (5 units)  
ACTG 51B Intermediate Accounting II (5 units)  
ACTG 51C Intermediate Accounting III (5 units)

Note: Non-transcriptable certificates are maintained and awarded by the Accounting Department (not the college) and not recorded in student transcripts. To apply for certificate, contact the department's Chair within one academic year from completing the last course.

##### Enrolled Agent Preparation Certificate of Proficiency (18 units)

###### [Non-Transcriptable]

ACTG 67 Tax Accounting (5 units)  
ACTG 68A Advanced Tax Accounting I (5 units)  
ACTG 68B Advanced Tax Accounting II (5 units)  
ACTG 68C Advanced Tax Accounting III (3 units)

Note: Non-transcriptable certificates are maintained and awarded by the Accounting Department (not the college) and not recorded in student transcripts. To apply for certificate, contact the department's Chair within one academic year from completing the last course.

##### Bookkeeping Specialist Certificate of Proficiency (17 units)

###### [Non-Transcriptable]

ACTG 60 Accounting for Small Business (5 units)  
or ACTG 1A Financial Accounting I (5 units)  
ACTG 64A Computerized Accounting Practice Using QuickBooks (4 units)  
ACTG 64B Computerized Accounting Practice Using Excel (4 units)  
ACTG 65 Payroll & Business Tax Accounting (4 units)

Note: Non-transcriptable certificates are maintained and awarded by the Accounting Department (not the college) and not recorded in student transcripts. To apply for certificate, contact the department's Chair within one academic year from completing the last course.

**Tax Specialist Certificate of Proficiency (13 units)**

**[Non-Transcriptable]**

- ACTG 65 Payroll & Business Tax Accounting (4 units)
- ACTG 67 Tax Accounting (5 units)
- ACTG 68A Advanced Tax Accounting I (4 units)

Note: Non-transcriptable certificates are maintained and awarded by the Accounting Department (not the college) and not recorded in student transcripts. To apply for certificate, contact the department's Chair within one academic year from completing the last course.

**Payroll Preparation Certificate of Proficiency (9 units)**

**[Non-Transcriptable]**

- ACTG 60 Accounting for Small Business (5 units)
- or ACTG 1A Financial Accounting I (5 units)
- ACTG 65 Payroll & Business Tax Accounting (4 units)

Note: Non-transcriptable certificates are maintained and awarded by the Accounting Department (not the college) and not recorded in student transcripts. To apply for certificate, contact the department's Chair within one academic year from completing the last course.

**ANTHROPOLOGY**

**Program Type(s): Associate in Arts Degree, Certificate of Proficiency**

Units required for major: 36, certificate: 14-20

**PROGRAM LEARNING OUTCOMES**

- Students will be able to understand and apply cultural relativism; they will be able to convey an understanding of multiple cultural perspectives.
- Students will demonstrate a core knowledge base in anthropology appreciating and reflecting on human diversity in the past and present.
- Students will integrate their knowledge and understanding of anthropological concepts and methods to creatively and ethically solve real-world human problems at the local, regional, and global scales.
- Students will be able to articulate key concepts and events in the process of human evolution and demonstrate knowledge, skills and abilities toward that end.
- Students will be able to critically assess the important role that the past plays on the present, and conversely, the important role that the present has on the past from both local, regional, national and worldwide perspectives.

**ASSOCIATE DEGREE REQUIREMENTS \***

**Core Courses: (12 units)**

- ANTH 1 Introduction to Physical Anthropology (4 units)
- or ANTH 1H Honors Introduction to Physical Anthropology (4 units)
- ANTH 2A Cultural Anthropology (4 units)
- or ANTH 2AH Honors Cultural Anthropology (4 units)
- ANTH 8 Introduction to Archaeology (4 units)

**Support Courses: (24 units)**

- Select 12 units from the following:
- ANTH 1L Physical Anthropology Laboratory (1 unit)
- or ANTH 1HL Honors Physical Anthropology Laboratory (1 unit)
- ANTH 2B Patterns of Culture (4 units)
- ANTH 3 World Prehistory: The Rise & Fall of Early Civilizations (4 units)
- ANTH 4 First Peoples of North America (4 units)
- ANTH 5 Magic, Science & Religion (4 units)
- ANTH 6 Peoples of Africa (4 units)
- ANTH 12 Applied Anthropology (4 units)
- ANTH 13 Introduction to Forensic Anthropology (4 units)
- ANTH 13L Forensic Anthropology Laboratory (1 unit)
- ANTH 14 Linguistic Anthropology (4 units)
- ANTH 15 Medical Anthropology: Methods & Practice (4 units)
- ANTH 16L Basic Archaeology Laboratory (1 unit)
- or ANTH 17L Intermediate Archaeology Laboratory (2 units)
- ANTH 20 Native Peoples of California (4 units)
- ANTH 22 The Aztec, Maya, Inca & Their Predecessors: Civilizations of the Americas (4 units)
- GEOG 1 Physical Geography (5 units)
- or GEOG 2 Human Geography (4 units)

- PSYC 7 Statistics for the Behavioral Sciences (5 units)
- or SOC 7 Statistics for the Behavioral Sciences (5 units)
- PSYC 10 Research Methods & Designs (5 units)
- or SOC 10 Research Methods & Designs (5 units)

And 12 units<sup>[1]</sup> from the following:

- ANTH 51 Archaeology Survey (2 units)
- ANTH 52 Archaeological Field Methods (4 units)
- ANTH 55 Applied Cultural Anthropology Field Methods (1 unit)
- ANTH 56 Applied Physical Anthropology Field Methods (1 unit)
- ANTH 57 Applied Archaeology Field Methods (1 unit)
- ANTH 67A Cultures of the World: Ecuador (4 units)
- ANTH 67B Cultures of the World: Belize (4 units)
- ANTH 67C Cultures of the World: British Isles (4 units)
- ANTH 67E Cultures of the World: Mediterranean (4 units)
- ANTH 70R Independent Study in Anthropology (1 unit)
- ANTH 71R Independent Study in Anthropology (2 units)
- ANTH 72R Independent Study in Anthropology (3 units)
- ANTH 73R Independent Study in Anthropology (4 units)
- BIOL 1C Evolution, Systematics & Ecology (6 units)
- BIOL 10 General Biology: Basic Principles (5 units)
- HIST 4A History of Western Civilization to 800 CE (4 units)
- HIST 8 History of Latin America (4 units)
- HIST 9 History of Contemporary Europe (4 units)
- or HIST 9H Honors History of Contemporary Europe (4 units)
- HIST 18 Introduction to Middle Eastern Civilization (4 units)
- HUMN 1 Cultures, Civilizations & Ideas: The Ancient World (4 units)
- SOC 30 Social Psychology (4 units)
- or PSYC 30 Social Psychology (4 units)
- SOC 40 Aspects of Marriage & Family (4 units)
- SOSC 20 Cross-Cultural Perspectives for a Multicultural Society (4 units)
- WMN 5 Introduction to Women's Studies (4 units)

<sup>[1]</sup> Students may also use courses listed in the first section of support courses to fulfill the requirement for the second section of support courses.

**Cultural Resource Management Certificate of Proficiency (19-20 units)**

**[Non-Transcriptable]**

There are no English or mathematics proficiency requirements for this certificate.

- ANTH 4 First Peoples of North America (4 units)
- ANTH 8 Introduction to Archaeology (4 units)
- ANTH 51 Archaeology Survey (2 units)
- ANTH 52 Archaeological Field Methods (4 units)

And ONE course from the following:

- ANTH 16L Basic Archaeology Laboratory (1 unit)
- ANTH 17L Intermediate Archaeology Laboratory (2 units)

And 4 units from the following:

- ANTH 3 World Prehistory: The Rise & Fall of Early Civilizations (4 units)
- ANTH 12 Applied Anthropology (4 units)
- ANTH 20 Native Peoples of California (4 units)
- ANTH 22 The Aztec, Maya, Inca & Their Predecessors: Civilizations of the Americas (4 units)

**Medical Anthropology Certificate of Proficiency (16-17 units)**

**[Non-Transcriptable]**

There are no English or mathematics proficiency requirements for this certificate.

- ANTH 1 Introduction to Physical Anthropology (4 units)
- or ANTH 1H Honors Introduction to Physical Anthropology (4 units)
- ANTH 2A Cultural Anthropology (4 units)
- or ANTH 2AH Honors Cultural Anthropology (4 units)
- ANTH 15 Medical Anthropology: Methods & Practice (4 units)

And ONE course from the following:

- ANTH 5 Magic, Science & Religion (4 units)
- ANTH 12 Applied Anthropology (4 units)
- ANTH 14 Linguistic Anthropology (4 units)
- COMM 12 Intercultural Communication (5 units)

### **Applied Anthropology Certificate of Proficiency (17 units) [Non-Transcriptable]**

There are no English or mathematics proficiency requirements for this certificate.

ANTH 1 Introduction to Physical Anthropology (4 units)  
or ANTH 1H Honors Introduction to Physical Anthropology (4 units)  
ANTH 2A Cultural Anthropology (4 units)  
or ANTH 2AH Honors Cultural Anthropology (4 units)  
ANTH 12 Applied Anthropology (4 units)

And ONE course from the following:

ANTH 55 Applied Cultural Anthropology Field Methods (1 unit)  
ANTH 56 Applied Physical Anthropology Field Methods (1 unit)  
ANTH 57 Applied Archaeology Field Methods (1 unit)

And 4 units from the following:

ANTH 13 Introduction to Forensic Anthropology (4 units)  
ANTH 14 Linguistic Anthropology (4 units)  
ANTH 15 Medical Anthropology: Methods & Practice (4 units)

### **Forensic Anthropology Certificate of Proficiency (14 units) [Non-Transcriptable]**

There are no English or mathematics proficiency requirements for this certificate.

ANTH 1 Introduction to Physical Anthropology (4 units)  
or ANTH 1H Honors Introduction to Physical Anthropology (4 units)  
ANTH 1L Physical Anthropology Laboratory (1 unit)  
or ANTH 1HL Honors Physical Anthropology Laboratory (1 unit)  
ANTH 13 Introduction to Forensic Anthropology (4 units)  
ANTH 13L Forensic Anthropology Laboratory (1 unit)  
ANTH 15 Medical Anthropology: Methods & Practice (4 units)

## **ASSOCIATE DEGREE FOR TRANSFER-ANTHROPOLOGY**

### **Program Type(s): Associate in Arts for Transfer**

Units required for major: 90

#### **PROGRAM LEARNING OUTCOMES**

- Students will be able to apply an understanding of cross-cultural realities both past and present.
- Students will know how to critically analyze and interpret anthropological data.
- Students will apply anthropological principles for solving human problems on the local, regional and world scales.

#### **ASSOCIATE DEGREE REQUIREMENTS \***

##### **Core Courses: (12 units)**

ANTH 2A Cultural Anthropology (4 units)  
or ANTH 2AH Honors Cultural Anthropology (4 units)  
ANTH 1 Introduction to Physical Anthropology (4 units)  
or ANTH 1H Honors Introduction to Physical Anthropology (4 units)  
ANTH 8 Introduction to Archaeology (4 units)

##### **Support Courses: (15-16 units)**

Complete 5 units from List A:

List A:

ANTH 1L Physical Anthropology Laboratory (1 unit)  
or ANTH 1HL Honors Physical Anthropology Laboratory (1 unit)  
ANTH 14 Linguistic Anthropology (4 units)  
BIOL 9 Environmental Biology (4 units)  
BIOL 10 General Biology: Basic Principles (5 units)  
BIOL 15 California Ecology/Natural History (5 units)  
MATH 10 Elementary Statistics (5 units)  
or PSYC 7 Statistics for the Behavioral Sciences (5 units)  
or SOC 7 Statistics for the Behavioral Sciences (5 units)

And complete ONE course from List B:

List B:

Any course not used in List A (minimum of 4 units), or any of the following:  
GEOG 12 Introduction to Geospatial Technology (4 units)  
PSYC 10 Research Methods & Designs (5 units)  
or SOC 10 Research Methods & Designs (5 units)

And complete 6 units from List C:

List C:

Any course not used in List A or List B, or any of the following:  
ANTH 2B Patterns of Culture (4 units)  
ANTH 3 World Prehistory: The Rise & Fall of Early Civilizations (4 units)  
ANTH 4 First Peoples of North America (4 units)  
ANTH 5 Magic, Science & Religion (4 units)  
ANTH 6 Peoples of Africa (4 units)  
ANTH 12 Applied Anthropology (4 units)  
ANTH 13 Introduction to Forensic Anthropology (4 units)  
ANTH 13L Forensic Anthropology Laboratory (1 unit)  
ANTH 15 Medical Anthropology: Methods & Practice (4 units)  
ANTH 16L Basic Archaeology Laboratory (1 unit)  
ANTH 17L Intermediate Archaeology Laboratory (2 units)  
ANTH 20 Native Peoples of California (4 units)  
ANTH 22 The Aztec, Maya, Inca & Their Predecessors: Civilizations of the Americas (4 units)  
ANTH 51 Archaeology Survey (2 units)  
ANTH 52 Archaeological Field Methods (4 units)  
ANTH 55 Applied Cultural Anthropology Field Methods (1 unit)  
ANTH 56 Applied Physical Anthropology Field Methods (1 unit)  
ANTH 57 Applied Archaeology Field Methods (1 unit)  
ANTH 70R Independent Study in Anthropology (1 unit)  
COMM 12 Intercultural Communication (5 units)  
GEOG 2 Human Geography (4 units)  
MUS 2D World Music: Roots to Contemporary Global Fusion (5 units)  
PHIL 24 Comparative World Religions: East (4 units)  
or PHIL 25 Comparative World Religions: West (4 units)  
SOC 1 Introduction to Sociology (5 units)  
or SOC 1H Honors Introduction to Sociology (5 units)  
SOC 23 Race & Ethnic Relations (4 units)

## **APPRENTICESHIP - AIR CONDITIONING & REFRIGERATION TECHNOLOGY**

### **Program Type(s): Associate in Science Degree, Certificate of Achievement**

Units required for major: 45.5, certificate: 45.5

#### **PROGRAM LEARNING OUTCOMES**

- In compliance with applicable standards and codes, students will demonstrate ability to install and remove refrigeration, heating, air conditioning, and ventilation systems, including the appropriate electrical/electronic control systems.
- In compliance with applicable standards and codes, students will demonstrate ability to maintain, repair, extend, and/or alter refrigeration, heating, air conditioning, and ventilation systems, including electronic control systems.

#### **ASSOCIATE DEGREE REQUIREMENTS \***

##### **Core Courses: (45.5 units)**

APPT 129 Special Topics (2.5 units)  
APPT 130 Review & Turnout (2.5 units)  
APPT 151 RF 101 Basic Refrigeration Service Skills (4.5 units)  
APPT 152 RF 102 Basic Electricity & Refrigeration (4.5 units)  
APPT 153 RF 201 Mechanical Systems (4.5 units)  
APPT 154 RF 202 Electric Controls Fundamentals (4.5 units)  
APPT 155 RF 301 Advanced Electric Controls (4.5 units)  
APPT 156 RF 302 HVAC Pneumatic & Electronic Control Systems (4.5 units)



APPT 157 RF 401 Industrial Refrigeration & Air-Conditioning Service (4.5 units)  
APPT 158 RF 402 Advanced Refrigeration & Chillers (4.5 units)  
APPT 159 RF 501 Start, Test & Balance; HVAC Systems (4.5 units)

### **Certificate of Achievement in Air Conditioning & Refrigeration Technology (45.5 units)**

The certificate of achievement is awarded upon completion of the core courses. General education courses are not required.

Currently offered at: San Jose.

## **APPRENTICESHIP - FIELD IRONWORKERS**

### **Program Type(s): Certificate of Achievement**

Units required for certificate: 35

### **PROGRAM LEARNING OUTCOMES**

Students gain expertise and hands-on experience as they work on unloading materials, erecting buildings, and connecting fabricated iron beams to form project skeletons. Individuals work primarily on industrial, commercial and large residential buildings. Students learn to build towers, bridges, stadiums, and pre-fabricated metal buildings, including erecting pre-cast beams, columns and panels. These specialized skills are acquired through on-the-job training and classroom instruction and lead to employment in the construction industry. After four years of classroom and work experience, students can become a journeyman in the ironworking industry.

### **Certificate of Achievement in Field Ironworking (35 units)**

APIW 100 Introduction to Ironworking (3 units)  
APIW 101 Mixed Base (2 units)  
APIW 102 Reinforcing Iron I (2 units)  
APIW 103 Rigging I (2 units)  
APIW 104 Ironworker History & Trade Science (2 units)  
APIW 105 Welding I (2 units)  
APIW 106 Structural I (2 units)  
APIW 107 Welding II (2 units)  
APIW 109 Post-Tensioning I (2 units)  
APIW 110 Architectural I (2 units)  
APIW 111 Architectural II (2 units)  
APIW 112 Lead Hazard Training (2 units)  
APIW 113 Small Structure Erection (2 units)  
APIW 114 Welding III (2 units)  
APIW 115 Cranes (2 units)  
APIW 116 Foreman Training (2 units)  
APIW 117 General Safety/OSHA 30/COMET (2 units)

Currently offered at: Fresno.

## **APPRENTICESHIP - GENERAL ELECTRICIAN**

### **Program Type(s): Associate in Science Degree, Certificate of Achievement, Career Certificate**

Units required for major: 40-46, certificate: 18-46

### **PROGRAM LEARNING OUTCOMES**

Students gain hands-on experience as they work on electrical systems and component wiring to include: power distribution systems, electrical panels, wiring, conduit, piping, test equipment, transformers, motors, grounding, over-current protection, security, solar and home automation systems. These specialized skills are acquired through on-the-job training and classroom instruction and lead to employment in the construction and service industry. After five years of classroom and work experience, students who pass the state license exam are recognized as journeymen in the electrical trades industry.

### **ASSOCIATE DEGREE REQUIREMENTS \***

#### **Core Courses: (40-46 units)**

APEL 120 Orientation to the Electrical Trade (4 units)

or APEL 120A Orientation to the Electrical Trade, CPR & First Aid (5 units)  
APEL 121 Electron Theory; Basic Blueprint Reading; DC Theory; National Electrical Code Introduction (4 units)  
or APEL 121A Electron Theory; AC & DC Electrical Theory; National Electrical Code Introduction; Parallel & Combination Circuits (5 units)  
APEL 122 Codeology; Test Equipment; Pipe Bending; Blueprints (4 units)  
or APEL 122A Codeology; NEC Code; Test Equipment; Pipe Bending; Blueprints (5 units)  
APEL 123 AC Theory; Transformers; Intermediate National Electrical Code (4 units)  
or APEL 123A Grounding & Bonding, Overcurrent Protection, Code & Practices, Blueprints, Codeology Skills (5 units)  
APEL 124 DC/AC Theory Review; Electronics; Industrial Blueprints (4 units)  
or APEL 124A DC/AC Theory Review; Electronics; Industrial Blueprints; Transformers, Grounding; Electrical Systems (5 units)  
APEL 125 NEC Grounding; Overcurrent Protection; Transformer Connections (4 units)  
or APEL 125A Fire Alarm Systems, Emergency Communication Systems, Public Emergency Systems (5 units)  
APEL 126 Motors; Motor Control; Lighting Protection (4 units)  
APEL 127 Digital Electronics; Motor Speed Control; Advanced National Electrical Code (4 units)  
APEL 128 Programmable Logic Controllers; Low-Voltage Systems & High-Voltage Systems (4 units)  
APEL 129 National Electrical Code Review (4 units)

### **Certificate of Achievement in Inside Wireman (40-46 units)**

The certificate of achievement is awarded upon completion of the core courses. General education courses are not required.

Currently offered at: San Francisco and San Jose.

### **Residential Electrician Career Certificate (18 units)**

#### **[Non-Transcriptable]**

APEL 112 Residential Electrical Air Conditioning & Refrigeration; Telephone Systems (3 units)  
APEL 113 Residential Electrical Systems: Basic Security, Solar Power, Home Automation & Life Safety (3 units)  
APEL 135 Residential Electrical Orientation; Safety & Code Introduction (3 units)  
APEL 136 Residential Electrical D/C Theory; Blueprint Reading (3 units)  
APEL 137 Residential Electrical A/C Theory & Circuitry (3 units)  
APEL 138 Residential Wiring Layout & Installation (3 units)

Currently offered at: San Jose.

## **APPRENTICESHIP - PIPE TRADES**

### **Program Type(s): Certificate of Achievement**

Units required for certificate: 24-42.5

### **PROGRAM LEARNING OUTCOMES**

Students gain expertise and hands-on experience as they work on plumbing systems to include: drain waste and vent systems, systems for various industrial fluids, public or private water systems and gas piping systems. These specialized skills are acquired through on-the-job training and classroom instruction and lead to employment in the construction and service industry. After five years of classroom and work experience, students are recognized as journeymen within the pipe trades industry.

### **Certificate of Achievement in Plumbing/Pipefitting/Pipe Trades Apprenticeship (42.5 units)**

APPT 161 Safety/OSHA/Tools/Heritage/Service (4 units)  
APPT 162 Mathematics/Science for the Plumbing Trade (4.5 units)  
APPT 163 Code/Water Supply Systems (4 units)  
APPT 164 Drawing I for the Plumbing Trade (4.5 units)  
APPT 165 Drawing II for the Plumbing Trade (4 units)  
APPT 166 Welding/Oxy-Acetylene Training (4.5 units)  
APPT 167 Steam Systems/Rigging/Pipe Fitting & Service (4 units)  
APPT 168 Medical Gas/Hydronics/Signal Person (4.5 units)  
APPT 169 Advanced Drawing/Layout for the Plumbing Trades/UA Foreman Training (4 units)

APPT 170 Code II/Junior Mechanics Review & Exam (4.5 units)

Currently offered at: San Mateo.

#### **Certificate of Achievement in Residential Plumbing (24 units)**

APPT 121 Introduction to Residential Plumbing, Safety & Tools (2.5 units)  
APPT 122 Residential Drainage Systems (2.5 units)  
APPT 123 Residential Gas & Water Installations (2.5 units)  
APPT 124 Mathematics for Residential Plumbing (2.5 units)  
APPT 125 Residential Blueprint Reading (4.5 units)  
APPT 126 Residential Piping Layout & Installation; Residential Fixtures (4.5 units)  
APPT 127 Residential Plumbing Code (2.5 units)  
APPT 128 Residential Gas Installations; Service Work (2.5 units)

Currently offered at: San Jose.

### **APPRENTICESHIP - PLUMBING TECHNOLOGY**

**Program Type(s): Associate in Science Degree, Certificate of Achievement**

Units required for major: 47.5, certificate: 47.5

#### **PROGRAM LEARNING OUTCOMES**

- In compliance with applicable standards and codes, students will demonstrate ability to install and remove plumbing systems such as drain waste and ventilation systems, systems for various industrial fluids, public or private water systems and gas piping systems.
- In compliance with applicable standards and codes, students will demonstrate ability to maintain, extend, and/or alter plumbing systems, including drain waste and ventilation systems, systems for various industrial fluids, public or private water systems and gas piping systems.

#### **ASSOCIATE DEGREE REQUIREMENTS \***

##### **Core Courses: (47.5 units)**

APPT 129 Special Topics (2.5 units)  
APPT 130 Review & Turnout (2.5 units)  
APPT 131 P-101 Basic Plumbing Skills (4.5 units)  
APPT 132 P-102 Applied & Related Theory (4.5 units)  
APPT 133 P-201 Beginning Drawing & Design (4.5 units)  
APPT 134A P-202A Rigging; Layout (2.5 units)  
APPT 134B Industrial Safety (2.5 units)  
APPT 135A P-301A Plumbing Fixtures (2.5 units)  
APPT 135B P-301B Plumbing Codes (2.5 units)  
APPT 136 P-302 Advanced Trade Math for Plumbers (4.5 units)  
APPT 137A P-401A Water Systems (2.5 units)  
APPT 137B P-401B Applied Welding (2.5 units)  
APPT 138 P-402 Advanced Drawing & Blueprint Reading (4.5 units)  
APPT 139A Industrial Installations (2.5 units)  
APPT 139B Medical Gas Installations (2.5 units)

##### **Certificate of Achievement in Plumbing Technology (47.5 units)**

The certificate of achievement is awarded upon completion of the core courses. General education courses are not required.

Currently offered at: San Jose.

### **APPRENTICESHIP - SHEET METAL**

**Program Type(s): Associate in Science Degree, Certificate of Achievement, Career Certificate**

Units required for major: 58.5-61, certificate: 6-55.5

#### **PROGRAM LEARNING OUTCOMES**

Students are prepared with the skills and expertise to detail, fabricate and install a variety of sheet metal products in compliance with applicable standards and codes. These highly demanded skills are acquired through on-the-job training and lead to employment in the construction industry. After five years of classroom and work experience students are recognized as journeypersons within the sheet metal industry.

#### **ASSOCIATE DEGREE REQUIREMENTS \***

##### **Core Courses: (55.5 units)**

APSM 101 SMQ-1 Trade Introduction (3 units)  
APSM 102 SMQ-2 Certified Safety & Beginning Trade Math (3 units)  
APSM 103 SMQ-3 Sheet Metal Tools & Shop (1.5 units)  
APSM 104 SMQ-4 Soldering & Common Seams (2 units)  
APSM 105 SMQ-5 Drafting Introduction & Views (2.5 units)  
APSM 106 SMQ-6 Beginning Duct Fittings (1.5 units)  
APSM 107 SMQ-7 Parallel Line Fittings (1.5 units)  
APSM 108 SMQ-8 Triangulation Fittings (1.5 units)  
APSM 109 SMQ-9 Radial Line Lay Out & Ogee Offsets (1.5 units)  
APSM 110 SMQ-10 Basics of Architectural Sheet Metal (2 units)  
APSM 111 SMQ-11 Architectural Sheet Metal (1.5 units)  
APSM 112 SMQ-12 Field Installation (2 units)  
APSM 113 SMQ-13 Welding 1: Process & Safety Overview (1.5 units)  
APSM 114 SMQ-14 Welding 2: GMAW (1.5 units)  
APSM 116 SMQ-16 Plans & Specifications (3 units)  
APSM 117 SMQ-17 Submittals & Shop Drawings (2.5 units)  
APSM 118 SMQ-18 Industrial & Stainless Steel Introduction (1.5 units)  
APSM 119 SMQ-19 HVAC Air Systems & Duct Design (3 units)  
APSM 120 SMQ-20 Measuring & Sketching (1.5 units)  
APSM 121 SMQ-21 Fabrication & Shortcuts (1 unit)  
APSM 122 SMQ-22 Codes & Standards (3 units)  
APSM 123 SMQ-23 Residential Sheet Metal (2 units)  
APSM 124 SMQ-24 Metal Roofing (2 units)  
APSM 125 SMQ-25 Detailing (3 units)  
APSM 126 SMQ-26 Foreman Training (2.5 units)  
APSM 127 SMQ-27 Basic AutoCAD (1.5 units)  
APSM 128 SMQ-28 HVAC Energy Conservation & Environmental Technology (2.5 units)

##### **Support Courses: (3-5.5 units)**

Select THREE courses from the following:

APSM 130 SMQ-30 Advanced Welding (1.5 units)  
APSM 131 SMQ-31 CAD Detailing (Beginning CAD Duct) (1 unit)  
APSM 132 SMQ-32 Intermediate CAD Detailing Third Party (1 unit)  
APSM 133 SMQ-33 Advanced Architectural (1.5 units)  
APSM 134 SMQ-34 Advanced Layout Fabrication (1 unit)  
APSM 135 SMQ-35 Project Management, Takeoffs & Estimates (2 units)  
APSM 136 SMQ-36 Service Basics (2 units)  
APSM 137 SMQ-37 Final HVAC Project (1 unit)  
APSM 138 SMQ-38 Final Architectural, Industrial & Ornamental Project (1 unit)

##### **Certificate of Achievement in Sheet Metal Building Trades (55.5 units)**

The certificate of achievement is awarded upon completion of the core courses. General education courses are not required.

Currently offered at: Bay Area.

##### **Sheet Metal Decking & Siding Career Certificate (18 units)**

###### **[Non-Transcriptable]**

APRT 155A Safety & Tools for Sheet Metal Siding & Decking Apprentices (4.5 units)  
APRT 155B Blueprint Reading for Sheet Metal Siding & Decking Apprentices (4.5 units)  
APRT 156A Welding for Sheet Metal Siding & Decking Apprentices (4.5 units)  
APRT 156B Measuring, Drawing & Lifting Devices for Sheet Metal Siding & Decking Apprentices (4.5 units)

Currently offered at: Bay Area.

##### **Sheet Metal Air Conditioning Service Technician Career Certificate (10 units)**

###### **[Non-Transcriptable]**

APRT 140A Electrical Basics for Residential HVAC Service I (2.5 units)  
APRT 140B Refrigeration Basics for Residential HVAC Service (2.5 units)  
APRT 141A Components of Residential HVAC Service (2.5 units)  
APRT 141B Troubleshooting Diagnosis & Repair for Residential HVAC Service (2.5 units)

Currently offered at: Bay Area.

**Sheet Metal Ship Yard Specialist Career Certificate (7.5 units)**

**[Non-Transcriptable]**

- APRT 144A Introduction to Marine Sheet Metal Training for Apprentices I (2.5 units)
- APRT 144B Introduction to Marine Sheet Metal Training for Apprentices II (2.5 units)
- APRT 151A Intermediate Marine Sheet Metal Training for Apprentices I (2.5 units)

Currently offered at: Bay Area.

**Sheet Metal Air Conditioning Specialist Career Certificate (6 units)**

**[Non-Transcriptable]**

- APPR 188A Orientation; Safety & Beginning Residential Sheet Metal Installation (Specialist 1A) (1.5 units)
- APPR 188B Residential Components Identification & Installation (Specialist 1B) (1.5 units)
- APPR 189A Residential Systems; Duct & HVAC Systems (Specialist 2A) (1.5 units)
- APPR 189B Plans & Architectural Applications for Residential Sheet Metal (Specialist 2B) (1.5 units)

Currently offered at: Bay Area.

**APPRENTICESHIP - SOUND & COMMUNICATION**

**Program Type(s): Career Certificate**

Units required for certificate: 21

**PROGRAM LEARNING OUTCOMES**

Students gain expertise and hands-on experience as they work on sound and communication systems to include voice systems, data systems, video systems, fire alarm systems, home alarm systems, data networking systems, cabling and automation systems. These specialized skills are acquired through on-the-job training and classroom instruction and lead to employment in the construction and service industry. After three years of classroom and work experience students are recognized as journeypersons in the sound and communication trade for the electrical industry.

**Sound & Communication Installer Career Certificate (21 units)**

**[Non-Transcriptable]**

- APSC 111 Job Information, Safety, Test Instruments, Structured Cabling, Fiber Optics (3.5 units)
- APSC 112 Codes & Practices, Connectors & Raceways, Blueprint Reading, DC Theory (3.5 units)
- APSC 121 AC Theory, Security, Access Control (3.5 units)
- APSC 122 Fire Alarm Systems & Grounding, Telephony & Paging Systems (3.5 units)
- APSC 131 VDV Prep, Networking, Nurse Call, Computer Literacy (3.5 units)
- APSC 132 CCTV Systems, Audio Visual (3.5 units)

Currently offered at: Northern California.

**APPRENTICESHIP - STEAMFITTING & PIPEFITTING TECHNOLOGY**

**Program Type(s): Associate in Science Degree, Certificate of Achievement**

Units required for major: 47, certificate: 47

**PROGRAM LEARNING OUTCOMES**

• In compliance with applicable standards and codes, students will demonstrate ability to install and remove piping and equipment for complex heating and air conditioning applications and special industrial piping systems, such as those used in semiconductor, biotechnology, and power generation facilities.

• In compliance with applicable standards and codes, students will demonstrate ability to maintain, extend, and/or alter piping and equipment for heating and air conditioning, and for special industrial piping systems, such as those used in semiconductor, biotechnology, and power generation facilities.

**ASSOCIATE DEGREE REQUIREMENTS \***

**Core Courses: (47 units)**

- APPT 129 Special Topics (2.5 units)
- APPT 130 Review & Turnout (2.5 units)
- APPT 134B Industrial Safety (2.5 units)
- APPT 139A Industrial Installations (2.5 units)
- APPT 139B Medical Gas Installations (2.5 units)
- APPT 141 SF 101 Basic Steamfitting Skills (4.5 units)
- APPT 142 SF 102 Related Math, Drawing & Rigging (4.5 units)
- APPT 143 SF 201 Steamfitter Cutting & Welding (4.5 units)
- APPT 144A SF 202A Science; Electricity & Air Conditioning (2.5 units)
- APPT 145 SF 301 Advanced Trade Math for Steamfitters (4.5 units)
- APPT 146 SF 302 Steam Technology (4.5 units)
- APPT 147A SF 401A Hydronic Systems (2.5 units)
- APPT 147B SF 401B Industrial Rigging (2.5 units)
- APPT 148 SF 402 Advanced Drawing & Blueprint Reading (4.5 units)

**Certificate of Achievement in Steamfitting & Pipefitting Technology (47 units)**

The certificate of achievement is awarded upon completion of the core courses. General education courses are not required.

Currently offered at: San Jose.

**ART**

**Program Type(s): Associate in Arts Degree, Certificate of Achievement**

May be transferrable to a four-year university.  
Units required for major: 54, certificate: 54

**PROGRAM LEARNING OUTCOMES**

• Students will be able to create two- and three-dimensional artwork and designs using appropriate tools, materials, methods and techniques.  
• Students will be able to analyze and critically evaluate two- and three-dimensional creative projects using the current principles and language of art and design.

**ASSOCIATE DEGREE REQUIREMENTS \***

**Core Courses: (38 units)**

- ART 2A History of Art: History of Western Art from Prehistory through Early Christianity (4.5 units)
- or ART 2AH Honors History of Art: History of Western Art from Prehistory through Early Christianity (4.5 units)
- ART 2B History of Western Art from the Middle Ages to the Renaissance (4.5 units)
- or ART 2BH Honors History of Western Art from the Middle Ages to the Renaissance (4.5 units)
- ART 2C History of Western Art From the Baroque to Modernism (4.5 units)
- ART 3 History of Modern Art from Post-Impressionism to the Present (4.5 units)
- ART 4A Fundamentals in Drawing (4 units)
- ART 5A 2-D Foundations (4 units)
- ART 5B 3-D Foundations (4 units)
- or ART 45A Beginning Ceramics Handbuilding (4 units)
- ART 20A Color I (4 units)
- ART 20B Color II (4 units)

**Support Courses: (16 units)**

Select ONE option from the following:

- Option 1: Studio Arts (Two-Dimensional) Transfer Portfolio
- Select TWO courses from the following:
- ART 4B Intermediate Drawing (4 units)

ART 4C Representational Drawing (4 units)  
 ART 4D Figure Drawing I (4 units)  
 ART 19A Oil Painting I (4 units)  
 ART 19B Acrylic Painting I (4 units)  
 ART 40 Introduction to Printmaking (4 units)  
 or GID 38 Introduction to Printmaking (4 units)  
 ART 47A Watercolor I (4 units)  
 And TWO courses from the following:  
 ART 4E Heads & Hands Drawing (4 units)  
 ART 4I Figure Drawing II (4 units)  
 ART 19C Oil Painting II (4 units)  
 ART 39 Screenprinting (4 units)  
 or GID 46 Screenprinting (4 units)  
 ART 47B Watercolor II (4 units)  
 ART 72<sup>[2]</sup> Studio Art Portfolio Preparation (4 units)  
 or GID 61<sup>[2]</sup> Portfolio (4 units)  
 or PHOT 57A<sup>[2]</sup> Photographic Portfolio Development (4 units)

Option 2: Ceramics Transfer Portfolio  
 Select TWO courses from the following:  
 ART 5B<sup>[3]</sup> 3-D Foundations (4 units)  
 or ART 45A<sup>[3]</sup> Beginning Ceramics Handbuilding (4 units)  
 ART 45B Beginning Ceramics Potter's Wheel (4 units)  
 And TWO courses from the following:  
 ART 44 Ceramic Sculpture (4 units)  
 ART 45C Advanced Ceramics (4 units)  
 ART 45F Low-Temperature Ceramic Firing & Glazing Techniques (4 units)  
 ART 46B Potter's Wheel II (4 units)  
 ART 72<sup>[2]</sup> Studio Art Portfolio Preparation (4 units)  
 or GID 61<sup>[2]</sup> Portfolio (4 units)  
 or PHOT 57A<sup>[2]</sup> Photographic Portfolio Development (4 units)

Option 3: Illustration Transfer Portfolio  
 Select TWO courses from the following:  
 ART 4B Intermediate Drawing (4 units)  
 ART 4C Representational Drawing (4 units)  
 ART 4D Figure Drawing I (4 units)  
 ART 4E Heads & Hands Drawing (4 units)  
 And TWO courses from the following:  
 ART 4I Figure Drawing II (4 units)  
 ART 6 Collage & Composition (4 units)  
 ART 15A Digital Painting I (4 units)  
 ART 15B Digital Painting II (4 units)  
 ART 19A Oil Painting I (4 units)  
 ART 19B Acrylic Painting I (4 units)  
 ART 47A Watercolor I (4 units)  
 GID 43 Illustration & Digital Imaging (4 units)  
 ART 72<sup>[2]</sup> Studio Art Portfolio Preparation (4 units)  
 or GID 61<sup>[2]</sup> Portfolio (4 units)  
 or PHOT 57A<sup>[2]</sup> Photographic Portfolio Development (4 units)

Option 4: Industrial Design Transfer Portfolio  
 Select TWO courses from the following:  
 ART 4C Representational Drawing (4 units)  
 ART 74 Industrial Design Visualization I (4 units)  
 ART 74A Industrial Design Visualization II (4 units)  
 And TWO courses from the following:  
 ART 5C Sculpture (4 units)  
 ART 71A Industrial Design Foundations I (4 units)  
 ART 71B Industrial Design Foundations II (4 units)  
 ART 72<sup>[2]</sup> Studio Art Portfolio Preparation (4 units)  
 or GID 61<sup>[2]</sup> Portfolio (4 units)  
 or PHOT 57A<sup>[2]</sup> Photographic Portfolio Development (4 units)

<sup>[2]</sup> It is recommended that this portfolio course be taken at the end of the program as this is an exit portfolio course.

<sup>[3]</sup> May be completed only once for credit to satisfy either the core or support course requirement.

#### Certificate of Achievement in Art (54 units)

The certificate of achievement is awarded upon completion of the core and support courses. General education courses are not required.

## ART HISTORY

### Program Type(s): Associate in Arts Degree, Certificate of Achievement

Units required for major: 48, certificate: 48

#### PROGRAM LEARNING OUTCOMES

- Students will be able to collect and assess primary and secondary source information and successfully analyze and comment on that information in the form of a reasoned 8-10 page term paper, complete with a full bibliography (works cited page), utilizing the MLA format.
- Students will be able to demonstrate in written form a strong awareness of the political, social, religious, and technological factors that influence cultures and change in those cultures.

#### ASSOCIATE DEGREE REQUIREMENTS \*

##### Core Courses: (36 units)

ART 1<sup>[4]</sup> Introduction to Art (4.5 units)  
 ART 2A History of Art: History of Western Art from Prehistory through Early Christianity (4.5 units)  
 or ART 2AH Honors History of Art: History of Western Art from Prehistory through Early Christianity (4.5 units)  
 ART 2B History of Western Art from the Middle Ages to the Renaissance (4.5 units)  
 or ART 2BH Honors History of Western Art from the Middle Ages to the Renaissance (4.5 units)  
 ART 2C History of Western Art from the Baroque to Modernism (4.5 units)  
 ART 2E A History of Women in Art (4.5 units)  
 ART 2F Introduction to Asian Art (4.5 units)  
 ART 2J American Art (4.5 units)  
 ART 3 History of Modern Art from Post-Impressionism to the Present (4.5 units)

<sup>[4]</sup> Recommended before taking Art History courses if no previous experience in art.

##### Support Courses: (12 units)

ANTH 2A Cultural Anthropology (4 units)  
 or ANTH 2AH Honors Cultural Anthropology (4 units)  
 ART 4A Fundamentals in Drawing (4 units)  
 or ART 5B 3-D Foundations (4 units)  
 HIST 4A History of Western Civilization to 800 CE (4 units)  
 HIST 4B History of Western Civilization: 700-1800 (4 units)  
 HIST 4C History of Western Civilization 1789-Present (4 units)  
 or HIST 4CH Honors History of Western Civilization 1789-Present (4 units)  
 PHIL 24 Comparative World Religions: East (4 units)  
 or PHIL 25 Comparative World Religions: West (4 units)  
 PHIL 30 Introduction to Critical Thinking (4 units)  
 PHOT 10 History of Photography (4 units)  
 or PHOT 10H Honors History of Photography (4 units)

##### Certificate of Achievement in Art History (48 units)

The certificate of achievement is awarded upon completion of the core and support courses. General education courses are not required.

## ASSOCIATE DEGREE FOR TRANSFER-ART HISTORY

### Program Type(s): Associate in Arts for Transfer

Units required for major: 90

#### PROGRAM LEARNING OUTCOMES

- Students will be able to collect and assess primary and secondary source information and successfully analyze and comment on that information.
- Students will be able to demonstrate in written form a strong awareness of the political, social, religious and technological factors that influence cultures and change in those cultures.

## ASSOCIATE DEGREE REQUIREMENTS \*

### Core Courses: (17.5 units)

ART 2A History of Art: History of Western Art from Prehistory through Early Christianity (4.5 units)  
or ART 2AH Honors History of Art: History of Western Art from Prehistory through Early Christianity (4.5 units)  
ART 2B History of Western Art from the Middle Ages to the Renaissance (4.5 units)  
or ART 2BH Honors History of Western Art from the Middle Ages to the Renaissance (4.5 units)  
ART 2C History of Western Art from the Baroque to Modernism (4.5 units)  
ART 4A Fundamentals in Drawing (4 units)

### Support Courses: (12.5-17.5 units)

Select ONE course each from List A, List B and List C:

#### List A:

ART 2F Introduction to Asian Art (4.5 units)

#### List B:

ART 4B Intermediate Drawing (4 units)  
ART 4D Figure Drawing I (4 units)  
and <sup>[5]</sup> ART 4E Heads & Hands Drawing (4 units)  
ART 5A 2-D Foundations (4 units)  
ART 5B 3-D Foundations (4 units)  
ART 19A Oil Painting I (4 units)  
ART 19B Acrylic Painting I (4 units)  
ART 44 Ceramic Sculpture (4 units)  
ART 45A Beginning Ceramics Handbuilding (4 units)  
GID 41 Digital Art & Graphics (4 units)  
or ART 14D Digital Art & Graphics (4 units)  
PHOT 1 Black & White Photography I (4 units)  
or PHOT 5 Introduction to Photography (4 units)  
PHOT 4A Photoshop for Photographers I (4 units)

<sup>[5]</sup> Both courses must be completed to fulfill the requirement.

#### List C:

Any course not used in List A or List B, or any of the following:  
ANTH 2A Cultural Anthropology (4 units)  
or ANTH 2AH Honors Cultural Anthropology (4 units)  
ART 1 Introduction to Art (4.5 units)  
ART 2E A History of Women in Art (4.5 units)  
ART 2J American Art (4.5 units)  
ART 3 History of Modern Art from Post-Impressionism to the Present (4.5 units)  
HIST 4A History of Western Civilization to 800 CE (4 units)  
HIST 4B History of Western Civilization: 700-1800 (4 units)  
HIST 4C History of Western Civilization 1789-Present (4 units)  
or HIST 4CH Honors History of Western Civilization 1789-Present (4 units)  
HUMN 1 Cultures, Civilizations & Ideas: The Ancient World (4 units)  
HUMN 2 Cultures, Civilizations & Ideas: Of Empires & Conflict (4 units)  
JAPN 4 Intermediate Japanese I (5 units)  
PHIL 11 Introduction to the Philosophy of Art & Aesthetics (4 units)  
PHIL 24 Comparative World Religions: East (4 units)  
PHIL 25 Comparative World Religions: West (4 units)  
PHOT 8 Photography of Multicultural America (4 units)  
or PHOT 8H Honors Photography of Multicultural America (4 units)  
PHOT 10 History of Photography (4 units)  
or PHOT 10H Honors History of Photography (4 units)  
SPAN 4 Intermediate Spanish I (5 units)  
THTR 26 Introduction to Fashion History & Costume Design (4 units)

## BIOLOGICAL SCIENCES

### Program Type(s): Associate in Science Degree

Units required for major: 48-54

### PROGRAM LEARNING OUTCOMES

- The biology majors sequence prepares students to use the scientific method to formulate questions, design experiments to test hypotheses, interpret experimental results to draw conclusions, communicate results both orally and in writing, and critically evaluate the use of the scientific method from published sources.
- The biology majors sequence prepares students to apply evolutionary theory at the molecular, cellular, organismal and population levels to explain the unity and diversity of living things.

## ASSOCIATE DEGREE REQUIREMENTS \*

### Core Courses: (48-54 units)

BIOL 1A Principles of Cell Biology (6 units)  
BIOL 1B Form & Function in Plants & Animals (6 units)  
BIOL 1C Evolution, Systematics & Ecology (6 units)  
CHEM 1A General Chemistry (5 units)  
or CHEM 1AH Honors General Chemistry (5 units)  
CHEM 1B General Chemistry (5 units)  
or CHEM 1BH Honors General Chemistry (5 units)  
CHEM 1C General Chemistry & Qualitative Analysis (5 units)

And select ONE option from the following:

Option #1: Organic Chemistry  
CHEM 12A Organic Chemistry (4 units)  
and CHEM 12AL Organic Chemistry Laboratory (2 units) or CHEM 13AH Honors Organic Chemistry Laboratory (3 units)  
CHEM 12B Organic Chemistry (4 units)  
and CHEM 12BL Organic Chemistry Laboratory (2 units) or CHEM 13BH Honors Organic Chemistry Laboratory (3 units)  
CHEM 12C Organic Chemistry (4 units)  
and CHEM 12CL Organic Chemistry Laboratory (2 units) or CHEM 13CH Honors Organic Chemistry Laboratory (3 units)

Option #2: Physics

PHYS 2A General Physics (5 units)  
PHYS 2B General Physics (5 units)  
PHYS 2C General Physics (5 units)  
or  
PHYS 4A General Physics (Calculus) (6 units)  
PHYS 4B General Physics (Calculus) (6 units)  
PHYS 4C General Physics (Calculus) (6 units)

## ASSOCIATE DEGREE FOR TRANSFER-BIOLOGY

### Program Type(s): Associate in Science for Transfer

Units required for major: 90

### PROGRAM LEARNING OUTCOMES

- Students will be able to use the scientific process to formulate questions, design experiments to test hypotheses, interpret experimental results to draw conclusions, communicate results both orally and in writing, and critically evaluate the use of the scientific method from published sources.
- Students will be able to apply evolutionary theory at the molecular, cellular, organismal and population levels to explain the unity and diversity of living things.

## ASSOCIATE DEGREE REQUIREMENTS \*

### Core Courses: (18 units)

BIOL 1A Principles of Cell Biology (6 units)  
BIOL 1B Form & Function in Plants & Animals (6 units)  
BIOL 1C Evolution, Systematics & Ecology (6 units)

### Support Courses: (37-40 units)

CHEM 1A General Chemistry (5 units)  
or CHEM 1AH Honors General Chemistry (5 units)

CHEM 1B General Chemistry (5 units)  
or CHEM 1BH Honors General Chemistry (5 units)  
CHEM 1C General Chemistry & Qualitative Analysis (5 units)  
MATH 1A Calculus (5 units)  
or MATH 1AH Honors Calculus I (5 units)  
MATH 1B Calculus (5 units)

And complete ONE of the two sections below:

Section #1:

PHYS 2A General Physics (5 units)  
and PHYS 2B General Physics (5 units)  
and PHYS 2C General Physics (5 units)

Section #2:

PHYS 4A General Physics (Calculus) (6 units)  
and PHYS 4B General Physics (Calculus) (6 units)

## BUSINESS ADMINISTRATION

**Program Type(s): Associate in Arts Degree, Career Certificate**

Units required for major: 45, certificate: 11-24

### PROGRAM LEARNING OUTCOMES

- Students will demonstrate appropriate use of business terms and concepts across a standard breadth of business functions (R&D, Mfg, Sales, Mktg, Ops, IT, Acctg, Finance, etc.).
- Students will demonstrate appropriate use of analytical frameworks, methods, and skills in response to business questions, cases, and projects.

### ASSOCIATE DEGREE REQUIREMENTS \*

#### Core Courses: (33 units)

ACTG 1A Financial Accounting I (5 units)  
BUSI 11 Introduction to Information Systems (5 units)  
BUSI 18 Business Law I (5 units)  
BUSI 22 Principles of Business (5 units)  
or BUSI 22H Honors Principles of Business (5 units)  
BUSI 59 Principles of Marketing (4 units)  
BUSI 60 Fundamentals of Finance (5 units)  
BUSI 90A Principles of Management (4 units)  
or BUSI 95 Entrepreneurship-The Business Plan (4 units)

#### Support Courses: (12 units)

Select 12 units:

##### Accounting & Finance Courses

ACTG 1B Financial Accounting II (5 units)  
or ACTG 1BH Honors Financial Accounting II (5 units)  
ACTG 1C Managerial Accounting (5 units)  
or ACTG 1CH Honors Managerial Accounting (5 units)  
BUSI 61 Investment Fundamentals (3 units)

##### Marketing & Technology Courses

BUSI 53A Business Communications & Technologies (5 units)  
BUSI 57 Principles of Advertising (4 units)  
BUSI 59A Web Marketing (5 units)  
BUSI 59B E-Business (5 units)  
BUSI 62 Principles of Salesmanship (3 units)  
BUSI 91L Introduction to Business Information Processing (4 units)

##### Business Law & Ethics Courses

ACTG 76 Ethics in Accounting (5 units)  
BUSI 19 Business Law II (4 units)  
BUSI 70 Business & Professional Ethics (4 units)

##### Management Courses

ACTG 1C Managerial Accounting (5 units)  
or ACTG 1CH Honors Managerial Accounting (5 units)  
BUSI 87 Human Resources Management (5 units)  
BUSI 90A<sup>[6]</sup> Principles of Management (4 units)  
BUSI 95<sup>[6]</sup> Entrepreneurship-The Business Plan (4 units)  
BUSI 96 Entrepreneurship-Starting & Managing a Small Business (3 units)  
ECON 1A Principles of Macroeconomics (5 units)

##### Other Applicable Courses

BUSI 53 Survey of International Business (4 units)  
BUSI 54H Honors Institute Seminar in Business (1 unit)  
BUSI 70R Independent Study in Business (1 unit)  
BUSI 71R Independent Study in Business (2 units)  
BUSI 72R Independent Study in Business (3 units)  
BUSI 73R Independent Study in Business (4 units)  
ECON 1B Principles of Microeconomics (5 units)  
GIST 11 Introduction to Mapping & Spatial Reasoning (4 units)  
or GEOG 11 Introduction to Mapping & Spatial Reasoning (4 units)

<sup>[6]</sup> May be completed only once for credit to satisfy either the core or support course requirement.

### Business Management Career Certificate (22-24 units)

#### [Non-Transcriptable]

BUSI 90A Principles of Management (4 units)  
or BUSI 95 Entrepreneurship-The Business Plan (4 units)

And TWO courses from the following:

BUSI 18 Business Law I (5 units)  
BUSI 53 Survey of International Business (4 units)  
BUSI 70 Business & Professional Ethics (4 units)  
BUSI 87 Human Resources Management (5 units)

And TWO courses from the following:

ACTG 1C Managerial Accounting (5 units)  
or ACTG 1CH Honors Managerial Accounting (5 units)  
BUSI 53A Business Communications & Technologies (5 units)  
BUSI 59A Web Marketing (5 units)  
BUSI 60 Fundamentals of Finance (5 units)

Note: Non-transcriptable certificates are maintained and awarded by the Business Department (not the college) and not recorded in student transcripts. To apply for certificate, contact the department's Chair within one academic year from completing the last course.

### Small Business & Digital Marketing Career Certificate (17-19 units)

#### [Non-Transcriptable]

BUSI 11 Introduction to Information Systems (5 units)  
BUSI 59A Web Marketing (5 units)

And TWO courses from the following:

BUSI 59B E-Business (5 units)  
BUSI 95 Entrepreneurship-The Business Plan (4 units)  
BUSI 96 Entrepreneurship-Starting & Managing a Small Business (3 units)

Note: Non-transcriptable certificates are maintained and awarded by the Business Department (not the college) and not recorded in student transcripts. To apply for certificate, contact the department's Chair within one academic year from completing the last course.

### Financial Literacy Career Certificate (18 units)

#### [Non-Transcriptable]

BUSI 60 Fundamentals of Finance (5 units)  
BUSI 61 Investment Fundamentals (3 units)

And TWO courses from the following:

ACTG 1A Financial Accounting I (5 units)  
ACTG 67 Tax Accounting (5 units)  
BUSI 53A Business Communications & Technologies (5 units)

Note: Non-transcriptable certificates are maintained and awarded by the Business Department (not the college) and not recorded in student transcripts. To apply for certificate, contact the department's Chair within one academic year from completing the last course.

### Entrepreneurship Career Certificate (15-19 units)

#### [Non-Transcriptable]

BUSI 95 Entrepreneurship-The Business Plan (4 units)

And THREE courses from the following:

BUSI 53 Survey of International Business (4 units)  
BUSI 53A Business Communications & Technologies (5 units)  
BUSI 59A Web Marketing (5 units)  
BUSI 59B E-Business (5 units)

BUSI 90A Principles of Management (4 units)  
BUSI 96 Entrepreneurship-Starting & Managing a Small Business (3 units)

Note: Non-transcriptable certificates are maintained and awarded by the Business Department (not the college) and not recorded in student transcripts. To apply for certificate, contact the department's Chair within one academic year from completing the last course.

#### **Marketing Career Certificate (11-13 units) [Non-Transcriptable]**

BUSI 59 Principles of Marketing (4 units)

And TWO courses from the following:

BUSI 57 Principles of Advertising (4 units)

BUSI 59A Web Marketing (5 units)

BUSI 62 Principles of Salesmanship (3 units)

Note: Non-transcriptable certificates are maintained and awarded by the Business Department (not the college) and not recorded in student transcripts. To apply for certificate, contact the department's Chair within one academic year from completing the last course.

### **ASSOCIATE DEGREE FOR TRANSFER- BUSINESS ADMINISTRATION**

#### **Program Type(s): Associate in Science for Transfer**

Units required for major: 90

#### **PROGRAM LEARNING OUTCOMES**

- Students will develop skills to interpret resource allocation through research in basic financial literacy skills (computation, critical thinking skills), by analyzing the data with understanding of communication/ leadership local and in the global sphere of the business world. This is accomplished in writing and in their oral presentations.
- As a result of these basic business experiences, students will develop strategies on to which area of business they may enter.

#### **ASSOCIATE DEGREE REQUIREMENTS \***

##### **Core Courses: (30 units)**

ACTG 1A Financial Accounting I (5 units)

ACTG 1B Financial Accounting II (5 units)

or ACTG 1BH Honors Financial Accounting II (5 units)

ACTG 1C Managerial Accounting (5 units)

or ACTG 1CH Honors Managerial Accounting (5 units)

BUSI 18 Business Law I (5 units)

ECON 1A Principles of Macroeconomics (5 units)

ECON 1B Principles of Microeconomics (5 units)

##### **Support Courses: (15 units)**

Complete #1 or #2 from List A:

List A:

1. MATH 12<sup>[7]</sup> Calculus for Business & Economics (5 units)

2. MATH 10 Elementary Statistics (5 units)

or PSYC 7 Statistics for the Behavioral Sciences (5 units)

or SOC 7 Statistics for the Behavioral Sciences (5 units)

And complete TWO courses from List B:

List B:

BUSI 11 Introduction to Information Systems (5 units)

BUSI 22 Principles of Business (5 units)

or BUSI 22H Honors Principles of Business (5 units)

1.<sup>[8]</sup> MATH 12<sup>[7]</sup> Calculus for Business & Economics (5 units)

2.<sup>[8]</sup> MATH 10 Elementary Statistics (5 units)

or PSYC 7 Statistics for the Behavioral Sciences (5 units)

or SOC 7 Statistics for the Behavioral Sciences (5 units)

<sup>[7]</sup> MATH 1A or MATH 1AH may be substituted for MATH 12.

<sup>[8]</sup> If not previously completed for List A. NOTE: for #2, only one course is permitted from: MATH 10, PSYC 7, SOC 7.

### **CHEMISTRY**

#### **Program Type(s): Associate in Science Degree**

Units required for major: 60-63

#### **PROGRAM LEARNING OUTCOMES**

- Students will have knowledge of current theories and applications in the field of chemistry.
- Students will have an enhanced ability to research, assess and evaluate topics of interest.
- Students will have an enhanced ability to communicate effectively, both orally and in writing.
- Students will have facility in the safe handling of chemicals and the execution of common laboratory techniques.

#### **ASSOCIATE DEGREE REQUIREMENTS \***

##### **Core Courses: (60-63 units)**

CHEM 1A General Chemistry (5 units)

or CHEM 1AH Honors General Chemistry (5 units)

CHEM 1B General Chemistry (5 units)

or CHEM 1BH Honors General Chemistry (5 units)

CHEM 1C General Chemistry & Qualitative Analysis (5 units)

CHEM 12A Organic Chemistry (4 units)

and CHEM 12AL Organic Chemistry Laboratory (2 units) or CHEM 13AH

Honors Organic Chemistry Laboratory (3 units)

CHEM 12B Organic Chemistry (4 units)

and CHEM 12BL Organic Chemistry Laboratory (2 units) or CHEM 13BH

Honors Organic Chemistry Laboratory (3 units)

CHEM 12C Organic Chemistry (4 units)

and CHEM 12CL Organic Chemistry Laboratory (2 units) or CHEM 13CH

Honors Organic Chemistry Laboratory (3 units)

And THREE courses from the following:

MATH 1A Calculus (5 units)

or MATH 1AH Honors Calculus I (5 units)

MATH 1B Calculus (5 units)

MATH 1C Calculus (5 units)

MATH 1D Calculus (5 units)

MATH 2A Differential Equations (5 units)

And TWO courses from the following:

PHYS 4A General Physics (Calculus) (6 units)

PHYS 4B General Physics (Calculus) (6 units)

PHYS 4C General Physics (Calculus) (6 units)

PHYS 4D General Physics (Calculus) (6 units)

### **CHILD DEVELOPMENT**

#### **Program Type(s): Associate in Arts Degree, Certificate of Achievement, Certificate of Specialization**

May be transferrable to a four-year university.

Units required for major: 49-50, certificate: 23-86

#### **PROGRAM LEARNING OUTCOMES**

- Students will be able to demonstrate understanding of the needs and characteristics of children from birth through middle childhood, and the multiple influences on their development as related to the high-quality care and education of young children.
- Students will be able to demonstrate understanding of ethical standards and professional behaviors that deepen knowledge and commitment to the field of early care and education as related to National Association for the Education of Young Children Code of Ethical Conduct.

#### **ASSOCIATE DEGREE REQUIREMENTS \***

##### **Core Courses: (43 units)**

CHLD 1 Child Growth & Development: Prenatal through Early Childhood (4 units)

CHLD 2 Child Growth & Development II: Middle Childhood through Adolescence (4 units)

CHLD 51A Affirming Diversity in Education (4 units)

CHLD 56 Observation & Assessment (4 units)

CHLD 56N Principles & Practices of Teaching Young Children (4 units)  
 CHLD 86A Mentoring the Early Care & Education Professional (4 units)  
 CHLD 86B Practicum Student Teaching in an Early Childhood Program (5 units)  
 CHLD 88 Child, Family & Community (4 units)  
 CHLD 88B Positive Behavior Management (2 units)  
 CHLD 89 Curriculum for Early Care & Education Programs (4 units)  
 CHLD 95 Health, Safety & Nutrition in Children's Programs (4 units)

**Support Courses: (6-7 units)**

Select ONE course from the following:  
 CHLD 59 Working with School-Age Children (4 units)  
 CHLD 63N Artistic & Creative Development (3 units)  
 CHLD 79 Caring for Infants & Toddlers in Groups (3 units)

And 3 units from the following:

ANTH 2A Cultural Anthropology (4 units)  
 or ANTH 2AH Honors Cultural Anthropology (4 units)  
 CHLD 50A Infant/Toddler Development (3 units)  
 CHLD 53NC Supporting Children with Special Needs in Children's Programs (3 units)  
 CHLD 53NP Development of Children with Special Needs (3 units)  
 CHLD 54A Developing a Healthy Organizational Climate in Education (1 unit)  
 CHLD 54B The Right Fit: Recruiting, Selecting & Orienting Staff (1 unit)  
 CHLD 54C Leadership in Action: How Effective Directors Get Things Done (1 unit)  
 CHLD 54D From the Inside Out: The Power of Reflection & Self-Awareness (1 unit)  
 CHLD 59<sup>[9]</sup> Working with School-Age Children (4 units)  
 CHLD 63N<sup>[9]</sup> Artistic & Creative Development (3 units)  
 CHLD 71 Planning Creative Art Activities for Children (1 unit)  
 CHLD 73 Music & Movement in the Early Years (2 units)  
 CHLD 74 Science & Nature (1 unit)  
 CHLD 79<sup>[9]</sup> Caring for Infants & Toddlers in Groups (3 units)  
 CHLD 82 Planning Creative Dramatics (1 unit)  
 CHLD 90B Administration & Supervision of Children's Programs Part I (4 units)  
 CHLD 90C Administration & Supervision of Children's Programs Part II (4 units)  
 CHLD 91 Administration & Supervision: Adult Supervision & Leadership (4 units)  
 ENGL 8 Children's Literature (4 units)  
 PSYC 14 Child & Adolescent Development (4 units)  
 SOC 40 Aspects of Marriage & Family (4 units)  
 WMN 5 Introduction to Women's Studies (4 units)

<sup>[9]</sup> May be completed only once for credit to satisfy either the first or second section of the support course requirements.

**Certificate of Achievement in Child Development Teacher (73-74 units)**

This certificate prepares future early childhood educators to work with diverse children in early childhood settings. The program includes academic instruction, job skills training, and field experiences. Students develop skills in integrating developmentally appropriate practices in teaching young children and acquire abilities in building relationships with children and their families.

This certificate fulfills course requirements to qualify as a teacher in an early childhood development program licensed by the Department of Social Services. It also meets the course requirements for the California Commission on Teacher Credentialing Child Development Teacher Permit and Child Development Associate Teacher Permit.

This certificate is awarded upon completion of the core and support courses and 24 units of general education courses (at least one course from each of the following categories):

1. English/Language Arts
2. Mathematics or Science
3. Social Sciences
4. Humanities and/or Fine Arts

**Certificate of Achievement in Program Supervision & Mentoring (85-86 units)**

This certificate prepares future early childhood educators to direct and supervise an early childhood development program; provide care, education and instruction of children in an early childhood development program; and serve as coordinator of curriculum, instruction and staff development.

This certificate fulfills course requirements to qualify as a director in an early childhood development program licensed by the Department of Social Services. It also meets the course requirements for the California Commission on Teacher Credentialing Site Supervisor Permit.

This certificate is awarded upon the completion of the Certificate of Achievement in Child Development Teacher (73-74 units)

AND the following:  
 CHLD 90B Administration & Supervision of Children's Programs Part I (4 units)  
 CHLD 90C Administration & Supervision of Children's Programs Part II (4 units)  
 CHLD 91 Administration & Supervision: Adult Supervision & Leadership (4 units)

**Early Childhood Education Certificate of Specialization (25 units) [Non-Transcriptable]**

This certificate meets the requirements for the California Commission on Teacher Credentialing Child Development Associate Teacher Permit. There are no English or mathematics proficiency requirements for this certificate.

CHLD 1 Child Growth & Development: Prenatal through Early Childhood (4 units)  
 CHLD 2 Child Growth & Development II: Middle Childhood through Adolescence (4 units)  
 CHLD 53NC Supporting Children with Special Needs in Children's Programs (3 units)  
 CHLD 56N Principles & Practices of Teaching Young Children (4 units)  
 CHLD 88 Child, Family & Community (4 units)  
 CHLD 88B Positive Behavior Management (2 units)  
 CHLD 89 Curriculum for Early Care & Education Programs (4 units)

**School-Age Child Care Certificate of Specialization (25 units) [Non-Transcriptable]**

This certificate meets the requirements for the California Commission on Teacher Credentialing Child Development Associate Teacher Permit. There are no English or mathematics proficiency requirements for this certificate.

CHLD 2 Child Growth & Development II: Middle Childhood through Adolescence (4 units)  
 CHLD 53NC Supporting Children with Special Needs in Children's Programs (3 units)  
 CHLD 56N Principles & Practices of Teaching Young Children (4 units)  
 CHLD 59 Working with School-Age Children (4 units)  
 CHLD 88 Child, Family & Community (4 units)  
 CHLD 88B Positive Behavior Management (2 units)  
 CHLD 89 Curriculum for Early Care & Education Programs (4 units)

**Inclusion & Children with Special Needs Certificate of Specialization (24 units) [Non-Transcriptable]**

This certificate meets the requirements for the California Commission on Teacher Credentialing Child Development Associate Teacher Permit. There are no English or mathematics proficiency requirements for this certificate.

CHLD 1 Child Growth & Development: Prenatal through Early Childhood (4 units)  
 CHLD 2 Child Growth & Development II: Middle Childhood through Adolescence (4 units)  
 CHLD 53NC Supporting Children with Special Needs in Children's Programs (3 units)  
 CHLD 53NP Development of Children with Special Needs (3 units)  
 CHLD 56N Principles & Practices of Teaching Young Children (4 units)  
 CHLD 88 Child, Family & Community (4 units)  
 CHLD 88B Positive Behavior Management (2 units)



**Infant Toddler Development Certificate of Specialization (23 units)  
[Non-Transcriptable]**

This certificate meets the requirements for the California Commission on Teacher Credentialing Child Development Associate Teacher Permit. There are no English or mathematics proficiency requirements for this certificate.

- CHLD 1 Child Growth & Development: Prenatal through Early Childhood (4 units)
- CHLD 50A Infant/Toddler Development (3 units)
- CHLD 53NC Supporting Children with Special Needs in Children's Programs (3 units)
- CHLD 56N Principles & Practices of Teaching Young Children (4 units)
- CHLD 79 Caring for Infants & Toddlers in Groups (3 units)
- CHLD 88 Child, Family & Community (4 units)
- CHLD 88B Positive Behavior Management (2 units)

**COMMUNICATION STUDIES**

**Program Type(s): Associate in Arts Degree, Certificate of Proficiency, Certificate of Specialization**

Units required for major: 30, certificate: 15-20

**PROGRAM LEARNING OUTCOMES**

- Students will be able to identify patterns of communication in a variety of contexts.
- Students will be able to utilize appropriate methods of communication in critical thinking and/or communication situations.

**ASSOCIATE DEGREE REQUIREMENTS \***

**Core Courses: (15 units)**

- COMM 1A Public Speaking (5 units)
- or COMM 1AH Honors Public Speaking (5 units)
- COMM 2 Interpersonal Communication (5 units)
- COMM 4 Group Discussion (5 units)

**Support Courses: (15 units)**

- COMM 1B Argumentation & Persuasion (5 units)
- or COMM 1BH Honors Argumentation & Persuasion (5 units)
- COMM 3 Introduction to Communication Studies (5 units)
- COMM 10 Gender, Communication & Culture (5 units)
- COMM 12 Intercultural Communication (5 units)
- COMM 54A Forensic Speech (5 units)
- COMM 54B Forensic Debate (5 units)
- COMM 55 Career & Leadership Communication in the Global Workplace (5 units)

**Communication Studies Certificate of Specialization (20 units)  
[Non-Transcriptable]**

- COMM 10<sup>[10]</sup> Gender, Communication & Culture (5 units)
- or COMM 12<sup>[10]</sup> Intercultural Communication (5 units)

And ONE course from the following:

- COMM 1B<sup>[10]</sup> Argumentation & Persuasion (5 units)
- or COMM 1BH<sup>[10]</sup> Honors Argumentation & Persuasion (5 units)
- COMM 55<sup>[10]</sup> Career & Leadership Communication in the Global Workplace (5 units)

And TWO courses from the following:

- COMM 1A Public Speaking (5 units)
- or COMM 1AH Honors Public Speaking (5 units)
- COMM 1B<sup>[10]</sup> Argumentation & Persuasion (5 units)
- or COMM 1BH<sup>[10]</sup> Honors Argumentation & Persuasion (5 units)
- COMM 2 Interpersonal Communication (5 units)
- COMM 3 Introduction to Communication Studies (5 units)
- COMM 4 Group Discussion (5 units)
- COMM 10<sup>[10]</sup> Gender, Communication & Culture (5 units)
- COMM 12<sup>[10]</sup> Intercultural Communication (5 units)
- COMM 54A Forensic Speech (5 units)
- COMM 54B Forensic Debate (5 units)
- COMM 55<sup>[10]</sup> Career & Leadership Communication in the Global Workplace (5 units)

<sup>[10]</sup> May be completed only once for credit to satisfy certificate requirements.

**Communication Studies Certificate of Proficiency (15 units)  
[Non-Transcriptable]**

- COMM 1A<sup>[10]</sup> Public Speaking (5 units)
- or COMM 1AH<sup>[10]</sup> Honors Public Speaking (5 units)
- or COMM 2<sup>[10]</sup> Interpersonal Communication (5 units)

And TWO courses from the following:

- COMM 1A<sup>[10]</sup> Public Speaking (5 units)
- or COMM 1AH<sup>[10]</sup> Honors Public Speaking (5 units)
- COMM 1B Argumentation & Persuasion (5 units)
- or COMM 1BH Honors Argumentation & Persuasion (5 units)
- COMM 2<sup>[10]</sup> Interpersonal Communication (5 units)
- COMM 3 Introduction to Communication Studies (5 units)
- COMM 4 Group Discussion (5 units)
- COMM 10 Gender, Communication & Culture (5 units)
- COMM 12 Intercultural Communication (5 units)
- COMM 54A Forensic Speech (5 units)
- COMM 54B Forensic Debate (5 units)
- COMM 55 Career & Leadership Communication in the Global Workplace (5 units)

<sup>[10]</sup> May be completed only once for credit to satisfy certificate requirements.

**ASSOCIATE DEGREE FOR TRANSFER-COMMUNICATION STUDIES**

**Program Type(s): Associate in Arts for Transfer**

Units required for major: 90

**PROGRAM LEARNING OUTCOMES**

- Students will be able to identify patterns of communication in a variety of contexts.
- Students will be able to utilize appropriate methods of communication in critical thinking and/or communication situations.

**ASSOCIATE DEGREE REQUIREMENTS \***

**Core Courses: (5 units)**

- COMM 1A Public Speaking (5 units)
- or COMM 1AH Honors Public Speaking (5 units)

**Support Courses: (24-25 units)**

- Complete TWO courses from List A:
- List A:
- COMM 1B Argumentation & Persuasion (5 units)
- or COMM 1BH Honors Argumentation & Persuasion (5 units)
- COMM 2 Interpersonal Communication (5 units)
- COMM 4 Group Discussion (5 units)

And complete TWO courses from List B (or any course from List A not used above):

- List B:
- COMM 54A Forensic Speech (5 units)
- and<sup>[11]</sup> COMM 54B Forensic Debate (5 units)
- COMM 12 Intercultural Communication (5 units)
- COMM 3 Introduction to Communication Studies (5 units)

<sup>[11]</sup> Both courses must be completed to fulfill the requirement.

And complete ONE course from List C (or any course from List A or B not used above):

- List C:
- ANTH 2A Cultural Anthropology (4 units)
- or ANTH 2AH Honors Cultural Anthropology (4 units)
- PSYC 1 General Psychology (5 units)
- or PSYC 1H Honors General Psychology (5 units)
- SOC 1 Introduction to Sociology (5 units)
- or SOC 1H Honors Introduction to Sociology (5 units)
- ENGL 16 Introduction to Literature (4 units)

COMM 10 Gender, Communication & Culture (5 units)  
or COMM 55 Career & Leadership Communication in the Global  
Workplace (5 units)

## COMPUTER SCIENCE

**Program Type(s): Associate in Science Degree, Certificate of Proficiency**

Units required for major: 58, certificate: 23

### PROGRAM LEARNING OUTCOMES

- Students will be able to use standard software engineering tools to create reusable code.
- Students will be able to design a large program that takes advantage of existing code libraries.
- Students will be able to organize a complex program in a logical way, enabling the extension of the program.
- Students will be able to comprehend user requirements and produce code and documentation in an industry-accepted style that satisfies those requirements.
- Students will be able to develop software that solves problems in a variety of fields, including math, physics, chemistry, biology, astronomy, business, and the Internet.

### ASSOCIATE DEGREE REQUIREMENTS \*

#### Core Courses: (38 units)

C S 10 Computer Architecture & Organization (4.5 units)  
MATH 1A Calculus (5 units)  
or MATH 1AH Honors Calculus I (5 units)  
MATH 1B Calculus (5 units)  
MATH 1C Calculus (5 units)  
MATH 22 Discrete Mathematics (5 units)  
or C S 18 Discrete Mathematics (5 units)

And select ONE option from the following:

Option #1: JAVA

C S 1A Object-Oriented Programming Methodologies in Java (4.5 units)  
or C S 1AH Honors Object-Oriented Programming Methodologies in  
Java (4.5 units)

C S 1B Intermediate Software Design in Java (4.5 units)

C S 1C Advanced Data Structures & Algorithms in Java (4.5 units)

Option #2: C++

C S 2A Object-Oriented Programming Methodologies in C++ (4.5 units)  
or C S 2AH Honors Object-Oriented Programming Methodologies in  
C++ (4.5 units)

C S 2B Intermediate Software Design in C++ (4.5 units)

C S 2C Advanced Data Structures & Algorithms in C++ (4.5 units)

#### Support Courses: (20 units)

BIOL 1A Principles of Cell Biology (6 units)  
BIOL 1B Form & Function in Plants & Animals (6 units)  
BIOL 1C Evolution, Systematics & Ecology (6 units)  
C S 2M Intermediate Algorithm & Data Structure Methodologies in  
C++ (4.5 units)  
C S 3A Object-Oriented Programming Methodologies in Python (4.5  
units)  
C S 19A Theory of Quantum Computing I (5 units)  
C S 19B Theory of Quantum Computing II (5 units)  
C S 20A Programming in C# (4.5 units)  
C S 21A Python for Programmers (4.5 units)  
C S 21B Intermediate Python Programming (4.5 units)  
C S 22A JavaScript for Programmers (4.5 units)  
C S 26A Ruby & Functional Programming (4.5 units)  
C S 30A Introduction to Linux (4.5 units)  
C S 30B Linux Shell Programming (4.5 units)  
C S 30C Linux System Administration (4.5 units)  
C S 31A Introduction to Database Management Systems (4.5 units)  
C S 40A Software Engineering Methodologies (4.5 units)  
C S 49 Foundations of Computer Programming (2 units)  
C S 50A Network Basics (CCNA) (4.5 units)

C S 63A Developing Applications for iOS (4.5 units)  
C S 64A Writing Apps for the Android in Java (4.5 units)  
C S 71A Data Analytics & Management (4.5 units)  
C S 80A Open Source Contribution (4.5 units)  
C S 81A 3-D Graphics Programming (4.5 units)  
C S 82A Introduction to Software Quality Assurance (4.5 units)  
C S 84A Database-Driven Web Application Development (4.5 units)  
C S 84B Distributed Databases (4.5 units)  
CHEM 1A General Chemistry (5 units)  
or CHEM 1AH Honors General Chemistry (5 units)  
CHEM 1B General Chemistry (5 units)  
or CHEM 1BH Honors General Chemistry (5 units)  
CHEM 1C General Chemistry & Qualitative Analysis (5 units)  
MATH 1D Calculus (5 units)  
MATH 2A Differential Equations (5 units)  
MATH 2B Linear Algebra (5 units)  
PHYS 2A General Physics (5 units)  
PHYS 2AM General Physics: Calculus Supplement (1 unit)  
PHYS 2B General Physics (5 units)  
PHYS 2BM General Physics: Calculus Supplement (1 unit)  
PHYS 2C General Physics (5 units)  
PHYS 2CM General Physics: Calculus Supplement (1 unit)  
PHYS 4A General Physics (Calculus) (6 units)  
PHYS 4B General Physics (Calculus) (6 units)  
PHYS 4C General Physics (Calculus) (6 units)

### Mobile Applications Certificate of Proficiency (23 units)

#### [Non-Transcriptable]

There is no minimum English proficiency required for this certificate.

C S 10 Computer Architecture & Organization (4.5 units)  
C S 18 Discrete Mathematics (5 units)  
or MATH 22 Discrete Mathematics (5 units)  
C S 40A Software Engineering Methodologies (4.5 units)  
C S 63A<sup>[12]</sup> Developing Applications for iOS (4.5 units)  
or C S 64A<sup>[12]</sup> Writing Apps for the Android in Java (4.5 units)

And ONE course from the following:

C S 1C Advanced Data Structures & Algorithms in Java (4.5 units)

C S 2C Advanced Data Structures & Algorithms in C++ (4.5 units)

C S 22A JavaScript for Programmers (4.5 units)

C S 30B Linux Shell Programming (4.5 units)

C S 63A<sup>[12]</sup> Developing Applications for iOS (4.5 units)

C S 64A<sup>[12]</sup> Writing Apps for the Android in Java (4.5 units)

C S 80A Open Source Contribution (4.5 units)

C S 81A 3-D Graphics Programming (4.5 units)

<sup>[12]</sup> May be completed only once for credit to satisfy certificate requirements.

## ASSOCIATE DEGREE FOR TRANSFER- COMPUTER SCIENCE

**Program Type(s): Associate in Science for Transfer**

Units required for major: 90

### PROGRAM LEARNING OUTCOMES

- Use of standard software engineering tools to create reusable code.
- Design of large programs that take advantage of existing code libraries.
- Organization of complex programs in a logical way, enabling the extension of the program.
- Comprehension of user requirements, and production of code and documentation in an industry-accepted style that satisfies those requirements.
- Development of software that solves problems in a variety of fields, including math, physics, chemistry, biology, astronomy, business, and the Internet.

### ASSOCIATE DEGREE REQUIREMENTS \*

#### Core Courses: (45.5 units)

C S 1A Object-Oriented Programming Methodologies in Java (4.5 units)

## DENTAL HYGIENE

### Program Type(s): Bachelor in Science Degree

Units required for major: 193

### PROGRAM LEARNING OUTCOMES

- Professionalism: The dental hygiene bachelor in science degree graduate will have the skills to implement his/her role as a health professional at the local, state, and national levels. The graduate will possess the ethics, values, skills, and knowledge integral to all aspects of the profession.
- Health Promotion and Disease Prevention: The dental hygiene bachelor in science degree graduate will be competent in the performance and delivery of oral health promotion and disease prevention services in public health, private practice and alternative settings. The graduate will be able to exercise evidence-based practice, critical thinking and communicate effectively in all professional employment settings.

### BACHELOR DEGREE REQUIREMENTS \*

#### Core Courses: (93 units)

##### FIRST YEAR

###### Summer

D H 50 Orientation to Dental Hygiene (1 unit)

###### Fall

D H 300A Oral Biology I (3 units)

D H 302 Assessment Procedures in Dental Hygiene (3 units)

D H 304 Pre-Clinical Dental Hygiene (5 units)

D H 305A Introduction to Dental Radiography I (2 units)

IDS 300<sup>[14]</sup> Research Methodology for Health Professionals (5 units)

###### Winter

D H 300B Oral Biology II (3 units)

D H 305B Dental Radiography II (1 unit)

D H 308 Clinical Technique (6 units)

D H 310 Dental Materials (3 units)

D H 312 Emergency Procedures (2 units)

D H 314 Dental Health Education (2 units)

###### Spring

D H 305C Dental Radiography III (2 units)

D H 316A Periodontics I (3 units)

D H 318 Introduction to Clinic (5 units)

BIOL 300<sup>[14]</sup> Human Pathophysiology & Pharmacology (4 units)

HLTH 300<sup>[14]</sup> Health Across the Lifespan (5 units)

##### SECOND YEAR

###### Summer

D H 320A Clinical Dental Hygiene I (3 units)

D H 322 Local Anesthesia (2.5 units)

###### Fall

D H 316B Periodontics II (2 units)

D H 320B Clinical Dental Hygiene II (8.5 units)

D H 324 Oral Pathology (2 units)

D H 326A Community Dental Health I (2 units)

D H 328A Clinical Dental Hygiene Theory I (2 units)

###### Winter

D H 305D Dental Radiography IV (1 unit)

D H 320C Clinical Dental Hygiene III (8.5 units)

D H 326B Community Dental Health II (2 units)

D H 328B Clinical Dental Hygiene Theory II (2 units)

D H 330 Nitrous Oxide/Oxygen Analgesia (1 unit)

###### Spring

D H 320D Clinical Dental Hygiene IV (8.5 units)

D H 326C Community Dental Health III (2 units)

D H 328C Clinical Dental Hygiene Theory III (2 units)

D H 332 Ethics, Law & Business Practices (3 units)

<sup>[14]</sup> Upper Division General Education courses.

or C S 1AH Honors Object-Oriented Programming Methodologies in Java (4.5 units)

C S 1M<sup>[13]</sup> Intermediate Algorithm & Data Structure Methodologies in Java (4.5 units)

C S 10 Computer Architecture & Organization (4.5 units)

C S 18 Discrete Mathematics (5 units)

or MATH 22 Discrete Mathematics (5 units)

MATH 1A Calculus (5 units)

or MATH 1AH Honors Calculus I (5 units)

MATH 1B Calculus (5 units)

MATH 1C Calculus (5 units)

PHYS 4A General Physics (Calculus) (6 units)

PHYS 4B General Physics (Calculus) (6 units)

<sup>[13]</sup> C S 1B & 1C or C S 2B & 2C may be substituted for C S 1M.

## DENTAL ASSISTING

### Program Type(s): Associate in Science Degree, Certificate of Achievement

Units required for major: 55, certificate: 55

### PROGRAM LEARNING OUTCOMES

- Graduates will demonstrate entry-level competency skills mandated by the Commission on Dental Accreditation and the Dental Board of California.
- Graduates will value and implement proper radiation safety for patients, self, and others.

### ASSOCIATE DEGREE REQUIREMENTS \*

#### Core Courses: (55 units)

##### Fall

D A 50 Orientation to Dental Assisting (2.5 units)

D A 51A Introduction to Chairside Dental Assisting (9 units)

D A 53A Introduction to Radiography I (3 units)

D A 58 Specialty Practice Procedures (1 unit)

D A 62A Dental Sciences I (2 units)

D A 71 Infection Control & Hazardous Waste Management (1.5 units)

##### Winter

D A 51B Intermediate Clinical Dental Assisting (2 units)

D A 53B Dental Radiography II (2 units)

D A 56 Dental Health Education (1 unit)

D A 57 Office Emergency Procedures (2 units)

D A 60A Dental Office Business Practices I (2 units)

D A 62B Dental Sciences II (2 units)

D A 73 Dental Assisting Supervised Clinic (5.5 units)

##### Spring

D A 51C Advanced Dental Assisting Skills (3.5 units)

D A 53C Dental Radiography III (1 unit)

D A 60B Dental Office Business Practices II (3 units)

D A 62C Dental Sciences III (2 units)

D A 63 Special Patient Populations (1 unit)

D A 74 Dental Assisting Clinical Practice (5.5 units)

D A 85 RDA Review (2 units)

D A 88 Pit & Fissure Sealants (1.5 units)

#### Certificate of Achievement in Dental Assisting (55 units)

- The certificate of achievement is awarded upon completion of the core courses (general education courses are not required) and the following:
- Cardiopulmonary Resuscitation Certificate (Health Care Provider, American Heart Association or Professional Rescuer American Red Cross).
- Completion of ENGL 209 or ESLL 236 & ESLL 237 or equivalent.
- Completion of MATH 230 or equivalent on the mathematics placement test.

## DIAGNOSTIC MEDICAL SONOGRAPHY

### Program Type(s): Associate in Science Degree, Certificate of Achievement

Units required for major: 116.5, certificate: 116.5

#### PROGRAM LEARNING OUTCOMES

- Students will demonstrate the necessary knowledge, technical skills, analytical skills, interpersonal skills and diagnostic ability within the scope of practice for diagnostic medical sonography.
- Students will demonstrate the necessary knowledge and values pertaining to professional demeanor, including the implementation of confidentiality and privacy for the practice of diagnostic medical sonography.

#### ASSOCIATE DEGREE REQUIREMENTS \*

##### Core Courses: (116.5 units)

Fall

AHS 50A Introduction to Allied Health Programs (1.5 units)  
DMS 50A Diagnostic Medical Sonography Principles & Protocols (4 units)  
DMS 50B Sonography & Patient Care (2 units)  
DMS 60A Critique & Pathology I (2 units)  
DMS 72A Diagnostic Medical Sonography Procedures & Applications (11.5 units)

Winter

DMS 51A Sectional Anatomy (3 units)  
DMS 53A Diagnostic Medical Sonography I (2 units)  
DMS 54A Gynecology (2 units)  
DMS 60B Critique & Pathology II (2 units)  
DMS 70A Clinical Preceptorship I (11.5 units) (32 hrs/wk for 13 wks)

Spring

DMS 52A Physical Principles of Diagnostic Medical Sonography I (2 units)  
DMS 53B Diagnostic Medical Sonography II (2 units)  
DMS 54B Gynecology & Obstetrics (2 units)  
DMS 60C Critique & Pathology III (2 units)  
DMS 70B Clinical Preceptorship II (10.5 units) (32 hrs/wk for 12 wks)

Summer

DMS 52B Physical Principles of Diagnostic Medical Sonography II (2 units)  
DMS 53C Diagnostic Medical Sonography III (2 units)  
DMS 55A Obstetrics I (2 units)  
DMS 60D Critique & Pathology IV (2 units)  
DMS 70C Clinical Preceptorship III (9.5 units) (32 hrs/wk for 11 wks)

Fall

DMS 55B Obstetrics II (2 units)  
DMS 56A Vascular Sonography (3 units)  
DMS 60E Critique & Pathology V (2 units)  
DMS 70D Clinical Preceptorship IV (11.5 units) (32 hrs/wk for 13 wks)

Winter

DMS 52C Physical Principles of Diagnostic Medical Sonography III (2 units)  
DMS 56B Advanced Applications of Vascular Technology (2 units)  
DMS 60F Critique & Pathology VI (2 units)  
DMS 70E Clinical Preceptorship V (10.5 units) (32 hrs/wk for 12 wks)  
DMS 80A Advanced Sonographic Principles (4 units)

##### Certificate of Achievement in Diagnostic Medical Sonography (116.5 units)

The certificate of achievement is awarded upon completion of the core courses. General education courses are not required; however, the prerequisites and application requirements must be met.

## ASSOCIATE DEGREE FOR TRANSFER- EARLY CHILDHOOD EDUCATION

### Program Type(s): Associate in Science for Transfer

Units required for major: 90

#### PROGRAM LEARNING OUTCOMES

- Students will be able to demonstrate understanding of the needs and characteristics of children from birth through middle childhood and the multiple influences on their development as related to the high-quality care and education of young children.
- Students will be able to demonstrate understanding of ethical standards and professional behaviors that deepen knowledge and commitment to the field of early care and education as related to National Association for the Education of Young Children Code of Ethical Conduct.

#### ASSOCIATE DEGREE REQUIREMENTS \*

##### Core Courses: (37 units)

CHLD 1 Child Growth & Development: Prenatal through Early Childhood (4 units)  
CHLD 2 Child Growth & Development II: Middle Childhood through Adolescence (4 units)  
CHLD 51A Affirming Diversity in Education (4 units)  
CHLD 56 Observation & Assessment (4 units)  
CHLD 56N Principles & Practices of Teaching Young Children (4 units)  
CHLD 86B Practicum Student Teaching in an Early Childhood Program (5 units)  
CHLD 88 Child, Family & Community (4 units)  
CHLD 89 Curriculum for Early Care & Education Programs (4 units)  
CHLD 95 Health, Safety & Nutrition in Children's Programs (4 units)

## ECONOMICS

### Program Type(s): Associate in Arts Degree

Units required for major: 30

#### PROGRAM LEARNING OUTCOMES

- Students will have a working understanding of the role of prices in a market economy, the benefits of trade, economic growth and stability, market structures and competition, market failures and the economic role of government.
- Students will be able to employ economic reasoning to explain the world around them and make objective decisions based on assessments of costs and benefits.

#### ASSOCIATE DEGREE REQUIREMENTS \*

##### Core Courses: (18 units)

ECON 1A Principles of Macroeconomics (5 units)  
ECON 1B Principles of Microeconomics (5 units)  
ECON 9 Political Economy (4 units)  
or ECON 9H Honors Political Economy (4 units)  
or POLI 9 Political Economy (4 units)  
or POLI 9H Honors Political Economy (4 units)  
ECON 25 The Global Economy (4 units)

##### Support Courses: (12 units)

Select 12 units from the following:  
BUSI 53 Survey of International Business (4 units)  
GEOG 5 Introduction to Economic Geography (4 units)  
or GEOG 10 World Regional Geography (4 units)  
MATH 1A Calculus (5 units)  
or MATH 1AH Honors Calculus I (5 units)  
MATH 10 Elementary Statistics (5 units)  
or PSYC 7 Statistics for the Behavioral Sciences (5 units)  
or SOC 7 Statistics for the Behavioral Sciences (5 units)

PSYC 10 Research Methods & Designs (5 units)  
or SOC 10 Research Methods & Designs (5 units)  
ECON 54H Honors Institute Seminar in Economics (1 unit)  
ECON 70R Independent Study in Economics (1 unit)  
ECON 71R Independent Study in Economics (2 units)  
ECON 72R Independent Study in Economics (3 units)  
ECON 73R Independent Study in Economics (4 units)

## ASSOCIATE DEGREE FOR TRANSFER-ECONOMICS

**Program Type(s): Associate in Arts for Transfer**

Units required for major: 90

### PROGRAM LEARNING OUTCOMES

- Students will have a working understanding of the role of prices in a market economy, the benefits of trade, economic growth and stability, market structures and competition, market failures and the economic role of government.
- Students will be able to employ economic reasoning to explain the world around them and make objective decisions based on assessments of costs and benefits.

### ASSOCIATE DEGREE REQUIREMENTS \*

#### Core Courses: (20-25 units)

ECON 1A Principles of Macroeconomics (5 units)  
ECON 1B Principles of Microeconomics (5 units)  
MATH 10 Elementary Statistics (5 units)  
MATH 12 Calculus for Business & Economics (5 units)  
or MATH 1A Calculus (5 units) and<sup>[15]</sup> MATH 1B Calculus (5 units)  
or MATH 1AH Honors Calculus I (5 units) and<sup>[15]</sup> MATH 1B Calculus (5 units)

#### Support Courses: (9-20 units)

Complete ONE course from List A:

List A:

MATH 11 Finite Mathematics (5 units)  
MATH 1B Calculus (5 units) and<sup>[15]</sup> MATH 1C Calculus (5 units)  
ACTG 1A Financial Accounting I (5 units)  
and<sup>[15]</sup> ACTG 1B Financial Accounting II (5 units) or ACTG 1BH Honors  
Financial Accounting II (5 units)  
ACTG 1C Managerial Accounting (5 units)  
or ACTG 1CH Honors Managerial Accounting (5 units)

And complete ONE course from List B:

List B:

Any course not used in List A, or any of the following:  
ECON 25 The Global Economy (4 units)  
ECON 9 Political Economy (4 units)  
or POLI 9 Political Economy (4 units)  
or ECON 9H Honors Political Economy (4 units)  
or POLI 9H Honors Political Economy (4 units)  
MATH 1C Calculus (5 units) and<sup>[15]</sup> MATH 1D Calculus (5 units)  
MATH 2B Linear Algebra (5 units)

<sup>[15]</sup> Both courses must be completed to fulfill the requirement.

## ENGINEERING

**Program Type(s): Associate in Science Degree, Certificate of Proficiency**

Units required for major: 68, certificate: 23-24

### PROGRAM LEARNING OUTCOMES

- Students will be able to formulate logical problem-solving approaches, generate solutions, and assess the reasonableness of the solutions for engineering-type analysis problems.
- Students will be able to design, construct, and produce creative solutions to engineering problems by applying the engineering design process and identifying pertinent design parameters based on the fundamental physics governing a system.

- Students will be able to demonstrate understanding of the fundamental knowledge necessary for the practice of, or for advanced study in, engineering, including scientific principles, rigorous analysis, and problem solving.
- Students will be able to demonstrate clear communication skills, responsible teamwork, professional attitudes and ethics.
- Students will be able to demonstrate a preparation for the complex work environment and continuous learning.

### ASSOCIATE DEGREE REQUIREMENTS \*

#### Core Courses: (53 units)

CHEM 1A General Chemistry (5 units)  
or CHEM 1AH Honors General Chemistry (5 units)  
CHEM 1B General Chemistry (5 units)  
or CHEM 1BH Honors General Chemistry (5 units)  
ENGR 10 Introduction to Engineering (5 units)  
MATH 1B Calculus (5 units)  
MATH 1C Calculus (5 units)  
MATH 1D Calculus (5 units)  
MATH 2A Differential Equations (5 units)  
PHYS 4A General Physics (Calculus) (6 units)  
PHYS 4B General Physics (Calculus) (6 units)  
PHYS 4C General Physics (Calculus) (6 units)

#### Support Courses: (15 units)

C S 1A Object-Oriented Programming Methodologies in Java (4.5 units)  
or C S 1AH Honors Object-Oriented Programming Methodologies in Java (4.5 units)  
C S 2A Object-Oriented Programming Methodologies in C++ (4.5 units)  
or C S 2AH Honors Object-Oriented Programming Methodologies in C++ (4.5 units)  
ENGR 6 Engineering Graphics (4 units)  
ENGR 11 Programming & Problem-Solving in MATLAB (5 units)  
ENGR 12 Computer Architecture & Organization (5 units)  
ENGR 35 Statics (5 units)  
ENGR 37 Introduction to Circuit Analysis (5 units)  
ENGR 45 Properties of Materials (5 units)  
ENGR 62A Introduction to 3-D Printing & Rapid Prototype Design (4 units)  
ENGR 62B Basic Model Making (5 units)  
ENGR 62C 3-D Printing: Advanced Model Making (5 units)  
ENGR 62D 3-D Rapid Model Making & Prototype Development (5 units)  
ENGR 83A Introduction to Biomedical Engineering (5 units)  
ENGR 83B Design & Manufacturing in the Biomedical Engineering Field (5 units)  
ENGR 83C Introduction to Medical Device Regulations (5 units)  
ENGR 83D Introduction to Quality Assurance (5 units)  
MATH 2B Linear Algebra (5 units)  
NANO 10 Introduction to Nanotechnology (5 units)  
PHYS 4D General Physics (Calculus) (6 units)

#### Biomedical Devices Certificate of Proficiency (24 units)

##### [Non-Transcriptable]

ENGR 6 Engineering Graphics (4 units)  
ENGR 83A Introduction to Biomedical Engineering (5 units)  
ENGR 83B Design & Manufacturing in the Biomedical Engineering Field (5 units)  
ENGR 83C Introduction to Medical Device Regulations (5 units)  
ENGR 83D Introduction to Quality Assurance (5 units)

#### Rapid Prototyping Certificate of Proficiency (23 units)

##### [Non-Transcriptable]

ENGR 6 Engineering Graphics (4 units)  
ENGR 62A Introduction to 3-D Printing & Rapid Prototype Design (4 units)  
ENGR 62B Basic Model Making (5 units)  
ENGR 62C 3-D Printing: Advanced Model Making (5 units)  
ENGR 62D 3-D Rapid Model Making & Prototype Development (5 units)

## ENGLISH

### Program Type(s): Associate in Arts Degree

Units required for major: 27-28

#### PROGRAM LEARNING OUTCOMES

- Students will be able to compose a thesis-based essay that clearly communicates a logical, evidence-supported argument.
- Students will demonstrate, in writing, comprehension and critical analysis of college-level texts.

#### ASSOCIATE DEGREE REQUIREMENTS \*

##### Core Courses: (15-19 units)

Select ONE of the following options:

##### Option 1:

ENGL 1B Composition, Critical Reading & Thinking through Literature (5 units)

or ENGL 1BH Honors Composition, Critical Reading & Thinking through Literature (5 units)

##### Option 2:

ENGL 1C Argumentative Writing & Critical Thinking (5 units)

or ENGL 1CH Honors Argumentative Writing & Critical Thinking (5 units)

ENGL 16 Introduction to Literature (4 units)

And, for either option, select any TWO courses from the following:

ENGL 43A<sup>[16]</sup> Survey of British Literature I: Beowulf to the Late 18th Century (5 units)

or ENGL 43AH Honors Survey of British Literature I: Beowulf to the Late 18th Century (5 units)

ENGL 43B<sup>[17]</sup> Survey of British Literature II: The Romantic Period to the Present (5 units)

or ENGL 43BH Honors Survey of British Literature II: The Romantic Period to the Present (5 units)

ENGL 45A<sup>[18]</sup> Survey of American Literature I: Beginnings to 1865 (5 units)  
or ENGL 45AH Honors Survey of American Literature I: Beginnings to 1865 (5 units)

ENGL 45B<sup>[19]</sup> Survey of American Literature II: 1865 to the Present (5 units)

or ENGL 45BH Honors Survey of American Literature II: 1865 to the Present (5 units)

ENGL 47A World Literature I (5 units)

ENGL 47B World Literature II (5 units)

<sup>[16]</sup> Formerly ENGL 46A

<sup>[17]</sup> Formerly ENGL 46B + 46C

<sup>[18]</sup> Formerly ENGL 48A

<sup>[19]</sup> Formerly ENGL 48B + 48C

##### Support Courses: (8-13 units)

For Option 1, select THREE courses from the following, of which TWO courses must be Literature<sup>[20]</sup> courses:

For Option 2, select TWO courses from the following, of which ONE course must be a Literature<sup>[20]</sup> course:

Any of the following, if not used to fulfill the core course requirement:

ENGL 1B, ENGL 1BH, ENGL 1C, ENGL 1CH

ENGL 50C Technical Writing (5 units)

CRWR 6 Introduction to Creative Writing (5 units)

CRWR 39A Introduction to Short Fiction Writing (5 units)

CRWR 39B Advanced Short Fiction Writing (5 units)

CRWR 41A Poetry Writing (5 units)

CRWR 41B Advanced Poetry Writing (5 units)

##### Literature Courses<sup>[20]</sup>:

Any of the following, if not used to fulfill the core course requirement:

ENGL 16, ENGL 43A, ENGL 43AH, ENGL 43B, ENGL 43BH, ENGL 45A, ENGL 45AH, ENGL 45B, ENGL 45BH

ENGL 5 LGBT Literature (4 units)

ENGL 7 Native American Literature (4 units)

ENGL 8 Children's Literature (4 units)

ENGL 11 Introduction to Poetry (4 units)

or ENGL 11H Honors Introduction to Poetry (4 units)

ENGL 12 African American Literature (4 units)

ENGL 14 Traveling the World through Contemporary Literature (4 units)

ENGL 17 Introduction to Shakespeare (4 units)

ENGL 18A Vampire Literature: Multicultural Representations of the Bloodsucker (4 units)

ENGL 22 Women Writers (4 units)

ENGL 24 Unmasking Comics: The Dawn of the Graphic Novel (4 units)

ENGL 31 Latino/a Literature (4 units)

ENGL 34C Literature into Film (4 units)

ENGL 40 Asian American Literature (4 units)

ENGL 41 Literature of Multicultural America (4 units)

<sup>[20]</sup> The student has the option of taking all support courses from the Literature courses.

## ASSOCIATE DEGREE FOR TRANSFER-ENGLISH

### Program Type(s): Associate in Arts for Transfer

Units required for major: 90

#### PROGRAM LEARNING OUTCOMES

- Students will be able to compose a thesis-based essay that clearly communicates a logical, evidence-supported argument.
- Students will demonstrate, in writing, comprehension and critical analysis of college-level texts.

#### ASSOCIATE DEGREE REQUIREMENTS \*

##### Core Courses: (5-9 units)

Select ONE of the following options:

##### Option 1:

ENGL 1C Argumentative Writing & Critical Thinking (5 units)

or ENGL 1CH Honors Argumentative Writing & Critical Thinking (5 units)

ENGL 16 Introduction to Literature (4 units)

##### Option 2:

ENGL 1B Composition, Critical Reading & Thinking through Literature (5 units)

or ENGL 1BH Honors Composition, Critical Reading & Thinking through Literature (5 units)

##### Support Courses: (22-25 units)

Complete TWO courses from List A:

List A:

ENGL 43A<sup>[21]</sup> Survey of British Literature I: Beowulf to the Late 18th Century (5 units)

or ENGL 43AH Honors Survey of British Literature I: Beowulf to the Late 18th Century (5 units)

ENGL 43B<sup>[22]</sup> Survey of British Literature II: The Romantic Period to the Present (5 units)

or ENGL 43BH Honors Survey of British Literature II: The Romantic Period to the Present (5 units)

ENGL 45A<sup>[23]</sup> Survey of American Literature I: Beginnings to 1865 (5 units)  
or ENGL 45AH Honors Survey of American Literature I: Beginnings to 1865 (5 units)

ENGL 45B<sup>[24]</sup> Survey of American Literature II: 1865 to the Present (5 units)

or ENGL 45BH Honors Survey of American Literature II: 1865 to the Present (5 units)

ENGL 47A World Literature I (5 units)

ENGL 47B World Literature II (5 units)

<sup>[21]</sup> Formerly ENGL 46A

<sup>[22]</sup> Formerly ENGL 46B + 46C

<sup>[23]</sup> Formerly ENGL 48A

<sup>[24]</sup> Formerly ENGL 48B + 48C

And complete TWO courses from List B (or any course from List A not used above):

List B:

ENGL 11 Introduction to Poetry (4 units)

or ENGL 11H Honors Introduction to Poetry (4 units)

ENGL 14 Traveling the World through Contemporary Literature (4 units)  
ENGL 16<sup>[25]</sup> Introduction to Literature (4 units)  
ENGL 17 Introduction to Shakespeare (4 units)  
CRWR 6 Introduction to Creative Writing (5 units)

And complete ONE course from List C (or any course from List A or B not used above):

List C:  
ENGL 1B<sup>[25]</sup> Composition, Critical Reading & Thinking through Literature (5 units)  
or ENGL 1BH<sup>[25]</sup> Honors Composition, Critical Reading & Thinking through Literature (5 units)  
ENGL 1C<sup>[25]</sup> Argumentative Writing & Critical Thinking (5 units)  
or ENGL 1CH<sup>[25]</sup> Honors Argumentative Writing & Critical Thinking (5 units)  
ENGL 5 LGBT Literature (4 units)  
ENGL 7 Native American Literature (4 units)  
ENGL 8 Children's Literature (4 units)  
ENGL 12 African American Literature (4 units)  
ENGL 18A Vampire Literature: Multicultural Representations of the Bloodsucker (4 units)  
ENGL 22 Women Writers (4 units)  
ENGL 24 Unmasking Comics: The Dawn of the Graphic Novel (4 units)  
ENGL 31 Latino/a Literature (4 units)  
ENGL 34C Literature into Film (4 units)  
ENGL 40 Asian American Literature (4 units)  
CRWR 39A Introduction to Short Fiction Writing (5 units)  
CRWR 41A Poetry Writing (5 units)  
JAPN 3 Elementary Japanese III (5 units)  
SPAN 3 Elementary Spanish III (5 units)

<sup>[25]</sup> If not used to satisfy the core requirement.

## ENTERPRISE NETWORKING

**Program Type(s): Associate in Science Degree, Certificate of Proficiency**

Units required for major: 49.5, certificate: 18-22.5

### PROGRAM LEARNING OUTCOMES

- The student will be able to design a network infrastructure to support specific user and business requirements.
- The student will be able to design, implement and maintain appropriate security services for network systems.
- The student will be able to select the components to create a virtual infrastructure.
- The student will be able to optimize the performance, reliability and availability of network services.

### ASSOCIATE DEGREE REQUIREMENTS \*

#### Core Courses: (40.5 units)

C S 50A Network Basics (CCNA) (4.5 units)  
C S 50B Routing & Switching Essentials (CCNA) (4.5 units)  
C S 50C Scaling Local Area Networks (CCNA) (4.5 units)  
C S 50D Connecting Networks-WANs (CCNA) (4.5 units)  
C S 52A Advanced IP Routing Protocols & Services (CCNP) (4.5 units)  
C S 52B Advanced Switching & Campus LAN Design (CCNP) (4.5 units)  
C S 52C Advanced Network Troubleshooting (CCNP) (4.5 units)  
C S 54A Storage Area Networks (4.5 units)  
C S 60A Installing & Configuring Windows Server 2012 (4.5 units)

#### Support Courses: (9 units)

Select ONE option from the following:

##### VMware Option:

C S 54B VMware vSphere Install, Configure & Manage (4.5 units)  
C S 54C VMware VIEW (4.5 units)

##### Data Center Visualization & Cloud Computing Option:

C S 54B VMware vSphere Install, Configure & Manage (4.5 units)  
C S 54D Cloud Infrastructure & Services (4.5 units)

##### Microsoft MSCA Server Option:

C S 60B Administering Windows Server 2012 (4.5 units)  
C S 60C Configuring Advanced Windows Server 2012 Services (4.5 units)

##### Infrastructure/Desktop Support Option:

Select TWO courses from the following:

C S 50E Introduction to IP Network Security (4.5 units)  
C S 56A Enterprise Wireless Local Area Networks (4.5 units)  
C S 56B IT Essentials (4.5 units)  
C S 61A Windows 8 Configuration (4.5 units)

##### Enterprise Security Option:

Select TWO courses from the following:

C S 53A Cybersecurity Fundamentals (4.5 units)  
C S 53B Firewalls & Threat Management (4.5 units)  
C S 53C Ethical Hacking (4.5 units)  
C S 53D Introduction to Computer Forensics (4.5 units)

#### VMware Certificate of Proficiency (22.5 units)

##### [Non-Transcriptable]

This series of courses prepares the student to receive the VMware Certified Professional-Data Center Virtualization credential. There are no minimum English or math proficiencies required for this certificate.

C S 50C Scaling Local Area Networks (CCNA) (4.5 units)  
C S 54A Storage Area Networks (4.5 units)  
C S 54B VMware vSphere Install, Configure & Manage (4.5 units)  
C S 54C VMware VIEW (4.5 units)  
C S 54D Cloud Infrastructure & Services (4.5 units)

#### Cisco Academy CCNA Certificate of Proficiency (22.5 units)

##### [Non-Transcriptable]

This series of courses prepares the student to take the CCNA certification exam. There are no English or mathematics proficiencies required for this certificate.

C S 50A Network Basics (CCNA) (4.5 units)  
C S 50B Routing & Switching Essentials (CCNA) (4.5 units)  
C S 50C Scaling Local Area Networks (CCNA) (4.5 units)  
C S 50D Connecting Networks-WANs (CCNA) (4.5 units)  
C S 50E Introduction to IP Network Security (4.5 units)

#### Microsoft Windows MCSA Certificate of Proficiency (18 units)

##### [Non-Transcriptable]

This series of courses prepares the student to take the Microsoft Windows MCSA Certification Exams. There are no English or mathematics proficiencies required for this certificate.

C S 50A Network Basics (CCNA) (4.5 units)  
C S 60A Installing & Configuring Windows Server 2012 (4.5 units)  
C S 60B Administering Windows Server 2012 (4.5 units)  
C S 60C Configuring Advanced Windows Server 2012 Services (4.5 units)

#### Cisco Academy CCNP Certificate of Proficiency (18 units)

##### [Non-Transcriptable]

This series of courses prepares the student to receive the CCNP certification. CCNA-level knowledge is necessary to successfully complete these courses. There are no English or mathematics proficiencies required for this certificate.

C S 52A Advanced IP Routing Protocols & Services (CCNP) (4.5 units)  
C S 52B Advanced Switching & Campus LAN Design (CCNP) (4.5 units)  
C S 52C Advanced Network Troubleshooting (CCNP) (4.5 units)  
C S 56A Enterprise Wireless Local Area Networks (4.5 units)

#### Enterprise Security Certificate of Proficiency (18 units)

##### [Non-Transcriptable]

C S 53A Cybersecurity Fundamentals (4.5 units)  
C S 53B Firewalls & Threat Management (4.5 units)  
C S 53C Ethical Hacking (4.5 units)  
C S 53D Introduction to Computer Forensics (4.5 units)

## ENVIRONMENTAL HORTICULTURE & DESIGN

### Program Type(s): Associate in Science Degree, Certificate of Achievement

Units required for major: 65, certificate: 65

### PROGRAM LEARNING OUTCOMES

- Students will demonstrate skills necessary to design residential landscapes.
- Students will be able to identify plant material.

### ASSOCIATE DEGREE REQUIREMENTS \*

#### Core Courses: (41 units)

HORT 10 Environmental Horticulture & the Urban Landscape (5 units)  
HORT 15 Orientation to Environmental Horticulture (4 units)  
HORT 21 Plant Materials I (3 units)  
HORT 22 Plant Materials II (3 units)  
HORT 30 Horticultural Practices: Soils (3 units)  
HORT 40 Landscape Design: Graphic Communication (4 units)  
HORT 52C Horticultural Practices: Plant Installation & Maintenance (3 units)  
HORT 54A Landscape Construction: General Practices (4 units)  
HORT 54B Landscape Construction: Technical Practices (3 units)  
HORT 54C Landscape Construction: Irrigation Practices (3 units)  
HORT 60B Landscape Design: Theory (3 units)  
HORT 60C Landscape Design: Irrigation (3 units)

#### Support Courses: (24 units)

Plant Material Specialization (2 unit minimum)  
HORT 23 Plant Materials: California Native Plants (2 units)  
HORT 24 Plant Materials: Ground Covers & Vines (2 units)  
HORT 25 Plant Materials: Bamboos & Palms (2 units)  
HORT 26 Plant Materials: Perennials & Annuals (2 units)  
  
And Plant Production Specialization (10 unit minimum)  
HORT 31 Horticultural Practices: Plant Propagation (3 units)  
HORT 52E Horticultural Practices: Greenhouse & Nursery Management (3 units)  
HORT 80A Environmental Horticulture Fall Skills (2 units)  
HORT 80B Environmental Horticulture Winter Skills (2 units)  
HORT 80C Environmental Horticulture Spring Skills (2 units)  
HORT 80D Environmental Horticulture Summer Skills (2 units)

And Career Focus Specialization (10 unit minimum)  
HORT 43 The Timeless Garden (3 units)  
HORT 45 Vectorworks for Landscape Designers (3 units)  
HORT 52G Horticultural Practices: Turfgrass Management (3 units)  
HORT 52H Horticulture Practices: Integrated Pest Management (3 units)  
HORT 54D Landscape Construction: Applied Practices (2 units)  
HORT 54J Horticultural Practices: Insect Identification (2 units)  
HORT 54K Horticultural Practices: Weed Identification (2 units)  
HORT 55A Green Industry Management: Business Practices (3 units)  
HORT 60D Landscape Design: Planting (3 units)  
HORT 60F Landscape Design: Process (3 units)  
HORT 60G Landscape Design: Intermediate Computer Applications (3 units)  
HORT 60J Sketchup for Landscape Designers (3 units)  
SPAN 110 Elementary Spanish Conversation I (3 units)

And Short Course Specialization (2 unit minimum)  
HORT 90A Container Plantings in the Landscape (1 unit)  
HORT 90C Garden Ponds & Water Features (1 unit)  
HORT 90D Herbs: Identification, Use & Folklore (1 unit)  
HORT 90E Horticultural & Landscape Photography (1 unit)  
HORT 90F Landscape Design: Basic Principles (1 unit)  
HORT 90G Landscape Design Forum (1 unit)  
HORT 90H Landscape Lighting (1 unit)  
HORT 90I Landscape Sustainability Practices (1 unit)  
HORT 90K Landscaping with Edibles (1 unit)  
HORT 90L Plant Propagation: Basic Skills (1 unit)  
HORT 90M Plant Nutrition & Fertilization (1 unit)  
HORT 90N Plant Materials: Fall Color (1 unit)  
HORT 90P Pruning: Basic Skills (1 unit)

HORT 90Q Residential Irrigation Systems (1 unit)  
HORT 90S Sustainable Integrated Pest Management (IMP) (1 unit)  
HORT 90U Landscape Design: Perspective Sketching (1 unit)  
HORT 90V Sustainable Organic Gardening (1 unit)  
HORT 90X Water Conservation in Landscape Design (1 unit)  
HORT 90Y Cacti & Succulents (1 unit)  
HORT 90Z Ornamental Grasses (1 unit)  
HORT 91A Composting Theory & Techniques (1 unit)  
HORT 91C Construction Cost Estimating (1 unit)  
VITI 90B Vineyard Establishment (2 units)  
VITI 90C Vineyard Management (2 units)  
VITI 90D Vine Pruning (1 unit)

### Certificate of Achievement in Environmental Horticulture & Design (65 units)

The certificate of achievement is awarded upon completion of the core and support courses. General education courses are not required.

## GENERAL STUDIES - SCIENCE

### Program Type(s): Associate in Science Degree

Units required for major: 40

### PROGRAM LEARNING OUTCOMES

- Students will be able to integrate the various fields of science in order to critically evaluate and interpret scientific information.
- Students will be able to assess how relevant scientific information could be used to inform their own personal economic, political and social decisions.

### ASSOCIATE DEGREE REQUIREMENTS \*

#### Core Courses: (40 units)

Select 20 units from Category I and 20 units from Category II.

#### 1. Category I: Biology

Select at least ONE course each from Area A and Area B. At least one course in this category must include a laboratory.

##### Area A:

BIOL 1C<sup>[26]</sup> Evolution, Systematics & Ecology (6 units)  
BIOL 9 Environmental Biology (may be taken with BIOL 9L to satisfy laboratory requirement) (4 units)  
BIOL 9L Environmental Biology Laboratory (only if taken with BIOL 9) (1 unit)  
BIOL 10<sup>[26]</sup> General Biology: Basic Principles (5 units)  
BIOL 14<sup>[26]</sup> Human Biology (5 units)

##### Area B:

BIOL 1A<sup>[26]</sup> Principles of Cell Biology (6 units)  
BIOL 1B<sup>[26]</sup> Form & Function in Plants & Animals (6 units)  
BIOL 8 Basic Nutrition (5 units)  
BIOL 12 Human Genetics (4 units)  
BIOL 13<sup>[26]</sup> Marine Biology (5 units)  
BIOL 40A<sup>[26]</sup> Human Anatomy & Physiology I (5 units)  
BIOL 40B<sup>[26]</sup> Human Anatomy & Physiology II (5 units)  
BIOL 40C<sup>[26]</sup> Human Anatomy & Physiology III (5 units)  
BIOL 41<sup>[26]</sup> Microbiology (6 units)  
BIOL 45 Introduction to Human Nutrition (4 units)

<sup>[26]</sup> Course includes a laboratory component.

#### 2. Category II: Physical Sciences, Computer Science, Mathematics & Engineering

Select at least 5 units from each of Areas A through D.

##### Area A: Chemistry

CHEM 1A General Chemistry (5 units)  
or CHEM 1AH Honors General Chemistry (5 units)  
CHEM 1B General Chemistry (5 units)  
or CHEM 1BH Honors General Chemistry (5 units)  
CHEM 1C General Chemistry & Qualitative Analysis (5 units)  
CHEM 9 Chemistry of Cooking (5 units)  
CHEM 12A Organic Chemistry (4 units)



and CHEM 12AL Organic Chemistry Laboratory (2 units) or CHEM 13AH Honors Organic Chemistry Laboratory (3 units)  
 CHEM 12B Organic Chemistry (4 units)  
 and CHEM 12BL Organic Chemistry Laboratory (2 units) or CHEM 13BH Honors Organic Chemistry Laboratory (3 units)  
 CHEM 12C Organic Chemistry (4 units)  
 and CHEM 12CL Organic Chemistry Laboratory (2 units) or CHEM 13CH Honors Organic Chemistry Laboratory (3 units)  
 CHEM 20 I Matter: Introduction to Green Chemistry & the Environment (5 units)  
 CHEM 25 Fundamentals of Chemistry (5 units)  
 CHEM 30A Survey of Inorganic & Organic Chemistry (5 units)  
 CHEM 30B Survey of Organic & Biochemistry (5 units)

Area B: Engineering/Computer Science/Astronomy/PSE  
 ASTR 10A General Astronomy: Solar System (5 units)  
 ASTR 10B General Astronomy: Star, Galaxies, Cosmology (5 units)  
 or ASTR 10BH Honors General Astronomy: Stars, Galaxies, Cosmology (5 units)  
 ASTR 10L Astronomy Laboratory (1 unit)  
 ASTR 54H Honors Institute Seminar in Astronomy (1 unit)  
 ASTR 77 Seminar on Exciting Topics in Astronomy (1 unit)  
 C S 1A Object-Oriented Programming Methodologies in Java (4.5 units)  
 or C S 1AH Honors Object-Oriented Programming Methodologies in Java (4.5 units)  
 C S 1B Intermediate Software Design in Java (4.5 units)  
 C S 1C Advanced Data Structures & Algorithms in Java (4.5 units)  
 C S 2A Object-Oriented Programming Methodologies in C++ (4.5 units)  
 or C S 2AH Honors Object-Oriented Programming Methodologies in C++ (4.5 units)  
 C S 2B Intermediate Software Design in C++ (4.5 units)  
 C S 2C Advanced Data Structures & Algorithms in C++ (4.5 units)  
 C S 2M Intermediate Algorithm & Data Structure Methodologies in C++ (4.5 units)  
 C S 3A Object-Oriented Programming Methodologies in Python (4.5 units)  
 C S 10 Computer Architecture & Organization (4.5 units)  
 C S 21A Python for Programmers (4.5 units)  
 C S 21B Intermediate Python Programming (4.5 units)  
 C S 26A Ruby & Functional Programming (4.5 units)  
 C S 49 Foundations of Computer Programming (2 units)  
 ENGR 6 Engineering Graphics (4 units)  
 ENGR 10 Introduction to Engineering (5 units)  
 ENGR 11 Programming & Problem-Solving in MATLAB (5 units)  
 ENGR 35 Statics (5 units)  
 ENGR 37 Introduction to Circuit Analysis (5 units)  
 ENGR 39 Energy, Society & the Environment (5 units)  
 ENGR 40 Introduction to Clean Energy Technology (5 units)  
 ENGR 45 Properties of Materials (5 units)  
 ENGR 49 Engineering Profession (1 unit)  
 ENGR 62A Introduction to 3-D Printing & Rapid Prototype Design (4 units)  
 ENGR 62B Basic Model Making (5 units)  
 ENGR 62C 3-D Printing: Advanced Model Making (5 units)  
 ENGR 62D 3-D Rapid Model Making & Prototype Development (5 units)  
 ENGR 83A Introduction to Biomedical Engineering (5 units)  
 ENGR 83B Design & Manufacturing in the Biomedical Engineering Field (5 units)  
 ENGR 83C Introduction to Medical Device Regulations (5 units)  
 ENGR 83D Introduction to Quality Assurance (5 units)  
 ENGR 83E Introduction to Documentation (5 units)  
 PSE 51 Frontiers in Science (1 unit)

Area C: Mathematics  
 MATH 1A Calculus (5 units)  
 or MATH 1AH Honors Calculus I (5 units) and MATH 1AHP Honors Calculus I Seminar (1 unit)  
 MATH 1B Calculus (5 units)  
 MATH 1C Calculus (5 units)  
 MATH 1D Calculus (5 units)  
 MATH 2A Differential Equations (5 units)  
 MATH 2B Linear Algebra (5 units)  
 MATH 10 Elementary Statistics (5 units)  
 MATH 11 Finite Mathematics (5 units)  
 MATH 12 Calculus for Business & Economics (5 units)

MATH 17 Integrated Statistics II (5 units)  
 MATH 22 Discrete Mathematics (5 units)  
 or C S 18 Discrete Mathematics (5 units)  
 MATH 42 Math for Elementary School Teachers (5 units)  
 MATH 44 Math for the Liberal Arts (5 units)  
 MATH 48A Precalculus I (5 units)  
 MATH 48B Precalculus II (5 units)  
 MATH 48C Precalculus III (5 units)  
 MATH 67 Enhanced Mathematics Learning with Mathematica (3 units)

Area D: Physics  
 PHYS 2A General Physics (5 units)  
 PHYS 2AM General Physics: Calculus Supplement (1 unit)  
 PHYS 2B General Physics (5 units)  
 PHYS 2BM General Physics: Calculus Supplement (1 unit)  
 PHYS 2C General Physics (5 units)  
 PHYS 2CM General Physics: Calculus Supplement (1 unit)  
 PHYS 4A General Physics (Calculus) (6 units)  
 PHYS 4B General Physics (Calculus) (6 units)  
 PHYS 4C General Physics (Calculus) (6 units)  
 PHYS 4D General Physics (Calculus) (6 units)  
 PHYS 6 Introductory Physics (5 units)  
 PHYS 12 Introduction to Modern Physics (5 units)  
 PHYS 54H Honors Institute Seminar in Physics (1 unit)

## GENERAL STUDIES - SOCIAL SCIENCE

**Program Type(s): Associate in Arts Degree**

Units required for major: 30

### PROGRAM LEARNING OUTCOMES

- Students will be able to identify connections and linkages between specific fields of study, events and ideas and larger studies of specific themes, developments and topics in anthropology, economics, geography, history, political science, psychology, and sociology.
- Students will be able to critically analyze a variety of primary and secondary sources in the fields of anthropology, economics, geography, history, political science, psychology, and sociology and draw scholarly interpretations from them.

### ASSOCIATE DEGREE REQUIREMENTS \*

**Core Courses: (30 units)**

Select any combination of 30 units from at least FIVE departments:

Anthropology  
 ANTH 1 Introduction to Physical Anthropology (4 units)  
 or ANTH 1H Honors Introduction to Physical Anthropology (4 units)  
 ANTH 2A Cultural Anthropology (4 units)  
 or ANTH 2AH Honors Cultural Anthropology (4 units)  
 ANTH 2B Patterns of Culture (4 units)  
 ANTH 3 World Prehistory: The Rise & Fall of Early Civilizations (4 units)  
 ANTH 4 First Peoples of North America (4 units)  
 ANTH 5 Magic, Science & Religion (4 units)  
 ANTH 6 Peoples of Africa (4 units)  
 ANTH 8 Introduction to Archaeology (4 units)  
 ANTH 12 Applied Anthropology (4 units)

Economics  
 ECON 1A Principles of Macroeconomics (5 units)  
 ECON 1B Principles of Microeconomics (5 units)  
 ECON 9 Political Economy (4 units)  
 or ECON 9H Honors Political Economy (4 units)  
 or POLI 9 Political Economy (4 units)  
 or POLI 9H Honors Political Economy (4 units)  
 ECON 25 The Global Economy (4 units)

Geography  
 GEOG 1 Physical Geography (5 units)  
 GEOG 2 Human Geography (4 units)  
 GEOG 5 Introduction to Economic Geography (4 units)  
 GEOG 10 World Regional Geography (4 units)

## History

HIST 4A History of Western Civilization to 800 CE (4 units)  
HIST 4B History of Western Civilization: 700-1800 (4 units)  
HIST 4C History of Western Civilization 1789-Present (4 units)  
or HIST 4CH Honors History of Western Civilization 1789-Present (4 units)  
HIST 9 History of Contemporary Europe (4 units)  
or HIST 9H Honors History of Contemporary Europe (4 units)  
HIST 10 History of California: The Multicultural State (4 units)  
HIST 17A History of the United States to 1815 (4 units)  
HIST 17B History of the United States from 1812 to 1914 (4 units)  
HIST 17C History of the United States from 1914 to the Present (4 units)  
HIST 18 Introduction to Middle Eastern Civilization (4 units)  
HIST 20 History of Russia & the Soviet Union (4 units)

## Political Science

POLI 1 Political Science: Introduction to American Government & Politics (5 units)  
POLI 2 Comparative Government & Politics (4 units)  
or POLI 2H Honors Comparative Government & Politics (4 units)  
POLI 3 Introduction to Political Philosophy/Political Theory (5 units)  
or POLI 3H Honors Introduction to Political Philosophy/Political Theory (5 units)  
POLI 15 International Relations/World Politics (4 units)  
or POLI 15H Honors International Relations/World Politics (4 units)

## Psychology

PSYC 1 General Psychology (5 units)  
or PSYC 1H Honors General Psychology (5 units)  
PSYC 4 Introduction to Biopsychology (5 units)  
PSYC 10<sup>[27]</sup> Research Methods & Designs (5 units)  
PSYC 14 Child & Adolescent Development (4 units)  
PSYC 21<sup>[28]</sup> Psychology of Women: Sex & Gender Differences (4 units)  
or WMN 21<sup>[28]</sup> Psychology of Women: Sex & Gender Differences (4 units)  
PSYC 22 Psychology of Prejudice & Discrimination (4 units)  
PSYC 25 Introduction to Abnormal Psychology (4 units)  
PSYC 30<sup>[29]</sup> Social Psychology (4 units)  
PSYC 33 Introduction to Personality Psychology (4 units)  
PSYC 39 Psychology of Sports (4 units)  
PSYC 40 Human Development (5 units)  
PSYC 49 Human Sexuality (4 units)

## Sociology

SOC 1 Introduction to Sociology (5 units)  
or SOC 1H Honors Introduction to Sociology (5 units)  
SOC 8 Popular Culture (4 units)  
SOC 10<sup>[27]</sup> Research Methods & Designs (5 units)  
SOC 11 Introduction to Social Welfare (5 units)  
SOC 14 Sociology of Crime (4 units)  
SOC 15 Law & Society (4 units)  
SOC 19 Alcohol & Drug Abuse (4 units)  
SOC 20 Major Social Problems (4 units)  
SOC 23 Race & Ethnic Relations (4 units)  
SOC 28 Sociology of Gender (4 units)  
SOC 30<sup>[29]</sup> Social Psychology (4 units)  
SOC 40 Aspects of Marriage & Family (4 units)  
WMN 21<sup>[28]</sup> Psychology of Women: Sex & Gender Differences (4 units)

<sup>[27]</sup> The student may complete either PSYC 10 or SOC 10, but not both, to satisfy the core course requirements.

<sup>[28]</sup> The student may complete either PSYC 21 or WMN 21, but not both, to satisfy the core course requirements.

<sup>[29]</sup> The student may complete either PSYC 30 or SOC 30, but not both, to satisfy the core course requirements.

## GEOGRAPHIC INFORMATION SYSTEMS TECHNOLOGY

### Program Type(s): Associate in Science Degree, Certificate of Achievement

Units required for major: 41-44.5, certificate: 21-44.5

### PROGRAM LEARNING OUTCOMES

- Students will be able to apply cartographic principles of scale, resolution, projection, data management and spatial analysis to a geographic nature using a geographic information system.
- Students will be able to plan, evaluate and execute an original geographic information systems project.
- Students will be able to demonstrate the ability to communicate orally, in writing and graphically, the outcome of geographic information systems analysis.
- Students will be able to demonstrate an awareness of professional obligations to society, employers and funders and individuals as outlined in the Geographic Information Systems Professional Certification Institute Code of Ethics.

### ASSOCIATE DEGREE REQUIREMENTS \*

#### Core Courses: (30.5 units)

GIST 11 Introduction to Mapping & Spatial Reasoning (4 units)  
or GEOG 11 Introduction to Mapping & Spatial Reasoning (4 units)  
GIST 12 Introduction to Geospatial Technology (4 units)  
or GEOG 12 Introduction to Geospatial Technology (4 units)  
GIST 52 Geospatial Data Acquisition & Management (4 units)  
GIST 53 Advanced Geospatial Technology & Spatial Analysis (4 units)  
GIST 54A Seminar in Specialized Applications of Geographic Information Systems I (2 units)  
GIST 58 Remote Sensing & Digital Image Processing (3 units)  
GIST 59 Cartography, Map Presentation & Design (2 units)  
C S 1A Object-Oriented Programming Methodologies in Java (4.5 units)  
or C S 1AH Honors Object-Oriented Programming Methodologies in Java (4.5 units)  
or C S 3A Object-Oriented Programming Methodologies in Python (4.5 units)  
ITRN 52 Internship (3 units)

#### Support Courses: (10.5-14 units)

Select TWO courses from the following:  
C S 21A Python for Programmers (4.5 units)  
C S 22A JavaScript for Programmers (4.5 units)  
C S 49 Foundations of Computer Programming (2 units)

And ONE course from the following:

GEOG 1 Physical Geography (5 units)  
GEOG 2 Human Geography (4 units)  
GEOG 10 World Regional Geography (4 units)

#### Certificate of Achievement in Geographic Information Systems Technology I (21-23.5 units)

GIST 11 Introduction to Mapping & Spatial Reasoning (4 units)  
or GEOG 11 Introduction to Mapping & Spatial Reasoning (4 units)  
GIST 12 Introduction to Geospatial Technology (4 units)  
or GEOG 12 Introduction to Geospatial Technology (4 units)  
GIST 52 Geospatial Data Acquisition & Management (4 units)  
GIST 54A Seminar in Specialized Applications of Geographic Information Systems I (2 units)  
GIST 58 Remote Sensing & Digital Image Processing (3 units)  
GIST 59 Cartography, Map Presentation & Design (2 units)

And ONE course from the following:

C S 1A Object-Oriented Programming Methodologies in Java (4.5 units)  
or C S 1AH Honors Object-Oriented Programming Methodologies in Java (4.5 units)  
C S 3A Object-Oriented Programming Methodologies in Python (4.5 units)  
C S 21A Python for Programmers (4.5 units)  
C S 22A JavaScript for Programmers (4.5 units)  
C S 49 Foundations of Computer Programming (2 units)

**Certificate of Achievement in Geographic Information Systems Technology II (29.5-32 units)**

- GIST 11 Introduction to Mapping & Spatial Reasoning (4 units)
- or GEOG 11 Introduction to Mapping & Spatial Reasoning (4 units)
- GIST 12 Introduction to Geospatial Technology (4 units)
- or GEOG 12 Introduction to Geospatial Technology (4 units)
- GIST 52 Geospatial Data Acquisition & Management (4 units)
- GIST 53 Advanced Geospatial Technology & Spatial Analysis (4 units)
- GIST 54A Seminar in Specialized Applications of Geographic Information Systems I (2 units)
- GIST 58 Remote Sensing & Digital Image Processing (3 units)
- GIST 59 Cartography, Map Presentation & Design (2 units)

And TWO courses from the following:

- C S 1A Object-Oriented Programming Methodologies in Java (4.5 units)
- or C S 1AH Honors Object-Oriented Programming Methodologies in Java (4.5 units)
- C S 3A Object-Oriented Programming Methodologies in Python (4.5 units)
- C S 21A Python for Programmers (4.5 units)
- C S 22A JavaScript for Programmers (4.5 units)
- C S 49 Foundations of Computer Programming (2 units)

**Certificate of Achievement in Geographic Information Systems Technology III (41-44.5 units)**

The Certificate of Achievement in Geographic Information Systems Technology III is awarded upon completion of the core and support courses listed for the AS degree. General education courses are not required.

**GEOGRAPHY**

**Program Type(s): Associate in Science Degree**

Units required for major: 37

**PROGRAM LEARNING OUTCOMES**

- Students will be able to interpret spatially distributed data and draw valid conclusions by using maps, graphs and/or Geographic Information Systems (GIS).
- Students will be able to evaluate core concepts in cultural and physical geography and apply them to contemporary events and issues.

**ASSOCIATE DEGREE REQUIREMENTS \***

**Core Courses: (21 units)**

- GEOG 1 Physical Geography (5 units)
- GEOG 2 Human Geography (4 units)
- GEOG 5 Introduction to Economic Geography (4 units)
- GEOG 10 World Regional Geography (4 units)
- GEOG 11 Introduction to Mapping & Spatial Reasoning (4 units)
- or GIST 11 Introduction to Mapping & Spatial Reasoning (4 units)

**Support Courses: (16 units)**

- Select 8 units from the following:
- ANTH 2A Cultural Anthropology (4 units)
- or ANTH 2AH Honors Cultural Anthropology (4 units)
- or ANTH 2B Patterns of Culture (4 units)
- ECON 25 The Global Economy (4 units)
- GEOG 12 Introduction to Geospatial Technology (4 units)
- or GIST 12 Introduction to Geospatial Technology (4 units)
- HIST 4A History of Western Civilization to 800 CE (4 units)
- or HIST 4B History of Western Civilization: 700-1800 (4 units)
- POLI 15 International Relations/World Politics (4 units)
- or POLI 15H Honors International Relations/World Politics (4 units)
- SOSC 1 Introduction to Global Studies (4 units)
- SOSC 2 Global Issues (4 units)

And 8 units<sup>[30]</sup> from the following:

- ANTH 6 Peoples of Africa (4 units)
- HIST 8 History of Latin America (4 units)
- HIST 9 History of Contemporary Europe (4 units)
- or HIST 9H Honors History of Contemporary Europe (4 units)
- HIST 18 Introduction to Middle Eastern Civilization (4 units)

- HIST 20 History of Russia & the Soviet Union (4 units)
- POLI 2 Comparative Government & Politics (4 units)
- or POLI 2H Honors Comparative Government & Politics (4 units)

<sup>[30]</sup> Students may also use courses listed in the first section of support courses to fulfill the requirement for the second section of support courses.

**ASSOCIATE DEGREE FOR TRANSFER-GEOGRAPHY**

**Program Type(s): Associate in Arts for Transfer**

Units required for major: 90

**PROGRAM LEARNING OUTCOMES**

- Students will be able to interpret spatially distributed data and draw valid conclusions by using maps, graphs and/or Geographic Information Systems (GIS).
- Students will be able to evaluate core concepts in cultural and physical geography and apply them to contemporary events and issues.

**ASSOCIATE DEGREE REQUIREMENTS \***

**Core Courses: (9 units)**

- GEOG 1 Physical Geography (5 units)
- GEOG 2 Human Geography (4 units)

**Support Courses: (18 units)**

- List A: (8 units)
- GEOG 10 World Regional Geography (4 units)
- GEOG 12 Introduction to Geospatial Technology (4 units)
- or GIST 12 Introduction to Geospatial Technology (4 units)

And 10 units from List B:

- List B:
- ANTH 2A Cultural Anthropology (4 units)
- or ANTH 2AH Honors Cultural Anthropology (4 units)
- BIOL 10 General Biology: Basic Principles (5 units)
- GEOG 5 Introduction to Economic Geography (4 units)
- GIST 52 Geospatial Data Acquisition & Management (4 units)
- GIST 58 Remote Sensing & Digital Image Processing (3 units)
- GIST 59 Cartography, Map Presentation & Design (2 units)
- PSYC 7 Statistics for the Behavioral Sciences (5 units)
- or SOC 7 Statistics for the Behavioral Sciences (5 units)

**ASSOCIATE DEGREE FOR TRANSFER-GLOBAL STUDIES**

**Program Type(s): Associate in Arts for Transfer**

Units required for major: 90

**PROGRAM LEARNING OUTCOMES**

- Students will be able to identify, analyze, and offer potential solutions to major global challenges from multiple perspectives and worldviews.
- Students will be able to differentiate multiple perspectives on globalization.
- Students will be able to explain how and why the environmental well-being of the world demands personal and collective responsibility.
- Students will be able to explain the interconnectedness of global decisions and events.

**ASSOCIATE DEGREE REQUIREMENTS \***

**Core Courses: (8 units)**

- SOSC 1 Introduction to Global Studies (4 units)
- SOSC 2 Global Issues (4 units)

## Support Courses: (24-29 units)

List A:

Complete SIX courses from at least four of the five areas:

Area 1: Culture and Society

ANTH 2A Cultural Anthropology (4 units)

or ANTH 2AH Honors Cultural Anthropology (4 units)

HIST 8 History of Latin America (4 units)

Area 2: Geography

GEOG 1 Physical Geography (5 units)

or GEOG 5 Introduction to Economic Geography (4 units)

GEOG 2 Human Geography (4 units)

GEOG 10 World Regional Geography (4 units)

Area 3: Economics

ECON 1A Principles of Macroeconomics (5 units)

ECON 1B Principles of Microeconomics (5 units)

ECON 9 Political Economy (4 units)

or ECON 9H Honors Political Economy (4 units)

Area 4: Politics

POLI 2 Comparative Government & Politics (4 units)

or POLI 2H Honors Comparative Government & Politics (4 units)

POLI 9 Political Economy (4 units)

or POLI 9H Honors Political Economy (4 units)

POLI 15 International Relations/World Politics (4 units)

or POLI 15H Honors International Relations/World Politics (4 units)

Area 5: Humanities

ART 2E A History of Women in Art (4.5 units)

or HUMN 1 Cultures, Civilizations & Ideas: The Ancient World (4 units) and<sup>[37]</sup> HUMN 2 Cultures, Civilizations & Ideas: Of Empires & Conflict (4 units)

or PHIL 24 Comparative World Religions: East (4 units) and<sup>[37]</sup> PHIL 25 Comparative World Religions: West (4 units)

ENGL 47A World Literature I (5 units)

ENGL 47B World Literature II (5 units)

JAPN 4 Intermediate Japanese I (5 units)

or SPAN 4 Intermediate Spanish I (5 units)

JAPN 5 Intermediate Japanese II (5 units)

or SPAN 5 Intermediate Spanish II (5 units)

JAPN 6 Intermediate Japanese III (5 units)

or SPAN 6 Intermediate Spanish III (5 units)

<sup>[37]</sup> Both courses must be completed to fulfill the requirement.

## GRAPHIC & INTERACTIVE DESIGN

**Program Type(s): Associate in Arts Degree, Certificate of Achievement, Career Certificate, Skills Certificate**

Units required for major: 58, certificate: 12-58

### PROGRAM LEARNING OUTCOMES

- Students will understand the design process from sketching to final comprehensive.
- Students will be able to create unique graphic designs that communicate ideas to others.

### ASSOCIATE DEGREE REQUIREMENTS \*

#### Core Courses: (54 units)

ART 4A Fundamentals in Drawing (4 units)

ART 5A 2-D Foundations (4 units)

GID 1 History of Graphic Design (4 units)

or ART 36 History of Graphic Design (4 units)

GID 31 Graphic Design Drawing (4 units)

GID 33 Graphic Design Studio I (4 units)

GID 34 Graphic Design Studio II (4 units)

GID 35 Graphic Design Studio III (4 units)

GID 36 Typography (4 units)

GID 41 Digital Art & Graphics (4 units)

or ART 14D Digital Art & Graphics (4 units)

GID 56 Website Design (4 units)

GID 58 Web Design & Development III (4 units)

GID 60 Careers in the Visual Arts (2 units)

GID 61 Portfolio (4 units)

PHOT 5 Introduction to Photography (4 units)

#### Support Courses: (4 units)

ART 15A Digital Painting I (4 units)

ART 15B Digital Painting II (4 units)

ART 20A Color I (4 units)

GID 2 The History of the Printed Book (4 units)

GID 37 Cartooning (4 units)

GID 43 Illustration & Digital Imaging (4 units)

GID 45 Digital Sound, Video & Animation (4 units)

GID 46 Screenprinting (4 units)

or ART 39 Screenprinting (4 units)

GID 47 Motion Graphics (4 units)

or MDIA 32 Motion Graphics (4 units)

GID 53A Beginning T-Shirt Design & Garment Printing (4 units)

GID 53B Intermediate T-Shirt Design & Garment Printing (4 units)

GID 53C Advanced T-Shirt Design & Garment Printing (4 units)

GID 57 Website Design & Development II (4 units)

GID 71 Storyboarding (4 units)

GID 77 Advanced Website Design & Development (4 units)

GID 78 Rapid Website Development (4 units)

#### Certificate of Achievement in Graphic & Interactive Design (58 units)

The certificate of achievement is awarded upon completion of the core and support courses. General education courses are not required.

#### Web Design & Development Career Certificate (20 units)

[Non-Transcriptable]

GID 31 Graphic Design Drawing (4 units)

GID 56 Website Design (4 units)

GID 57 Website Design & Development II (4 units)

GID 58 Web Design & Development III (4 units)

GID 78 Rapid Website Development (4 units)

#### Graphic Design Skills Certificate (12 units)

[Non-Transcriptable]

GID 33 Graphic Design Studio I (4 units)

GID 34 Graphic Design Studio II (4 units)

GID 35 Graphic Design Studio III (4 units)

#### Garment Printing Skills Certificate (12 units)

[Non-Transcriptable]

GID 53A Beginning T-Shirt Design & Garment Printing (4 units)

GID 53B Intermediate T-Shirt Design & Garment Printing (4 units)

GID 53C Advanced T-Shirt Design & Garment Printing (4 units)

#### Illustration Skills Certificate (12 units)

[Non-Transcriptable]

GID 31 Graphic Design Drawing (4 units)

GID 41 Digital Art & Graphics (4 units)

or ART 14D Digital Art & Graphics (4 units)

GID 43 Illustration & Digital Imaging (4 units)

## HISTORY

### Program Type(s): Associate in Arts Degree

Units required for major: 36

#### PROGRAM LEARNING OUTCOMES

- Students will be able to identify connections between specific people, groups, events and ideas and larger historical themes, developments and topics.
- Students will be able to critically analyze a variety of primary and secondary sources and draw valid historical interpretations from them.

#### ASSOCIATE DEGREE REQUIREMENTS \*

##### Core Courses: (24 units)

HIST 4A History of Western Civilization to 800 CE (4 units)  
HIST 4B History of Western Civilization: 700-1800 (4 units)  
HIST 4C History of Western Civilization 1789-Present (4 units)  
or HIST 4CH Honors History of Western Civilization 1789-Present (4 units)  
HIST 17A History of the United States to 1815 (4 units)  
HIST 17B History of the United States from 1812 to 1914 (4 units)  
HIST 17C History of the United States from 1914 to the Present (4 units)

##### Support Courses: (12 units)

HIST 8 History of Latin America (4 units)  
HIST 9 History of Contemporary Europe (4 units)  
or HIST 9H Honors History of Contemporary Europe (4 units)  
HIST 10 History of California: The Multicultural State (4 units)  
HIST 16 Introduction to Ancient Rome (4 units)  
or HIST 16H Honors Introduction to Ancient Rome (4 units)  
HIST 18 Introduction to Middle Eastern Civilization (4 units)  
HIST 19 History of Asia: China/Japan (4 units)  
HIST 20 History of Russia & the Soviet Union (4 units)  
HIST 54H Honors Institute Seminar in History (1 unit)

## ASSOCIATE DEGREE FOR TRANSFER-HISTORY

### Program Type(s): Associate in Arts for Transfer

Units required for major: 90

#### PROGRAM LEARNING OUTCOMES

- Students will be able to identify connections between specific people, groups, events and ideas and larger historical themes, developments and topics.
- Students will be able to critically analyze a variety of primary and secondary sources and draw valid historical interpretations from them.

#### ASSOCIATE DEGREE REQUIREMENTS \*

##### Core Courses: (24 units)

HIST 4A History of Western Civilization to 800 CE (4 units)  
HIST 4B History of Western Civilization: 700-1800 (4 units)  
HIST 4C History of Western Civilization 1789-Present (4 units)  
or HIST 4CH Honors History of Western Civilization 1789-Present (4 units)  
HIST 17A History of the United States to 1815 (4 units)  
HIST 17B History of the United States from 1812 to 1914 (4 units)  
HIST 17C History of the United States from 1914 to the Present (4 units)

##### Support Courses: (8 units)

One course each from List A and List B:

List A:  
ANTH 4 First Peoples of North America (4 units)  
ANTH 6 Peoples of Africa (4 units)  
ART 2E A History of Women in Art (4.5 units)  
ENGL 12 African American Literature (4 units)  
ENGL 31 Latino/a Literature (4 units)  
HIST 8 History of Latin America (4 units)  
HIST 10 History of California: the Multicultural State (4 units)  
HIST 18 Introduction to Middle Eastern Civilization (4 units)  
WMN 5 Introduction to Women's Studies (4 units)

WMN 11 Women in Global Perspective (4 units)

List B:

ANTH 2A Cultural Anthropology (4 units)  
or ANTH 2AH Honors Cultural Anthropology (4 units)  
ANTH 2B Patterns of Culture (4 units)  
GEOG 2 Human Geography (4 units)  
GEOG 10 World Regional Geography (4 units)  
HIST 9 History of Contemporary Europe (4 units)  
or HIST 9H Honors History of Contemporary Europe (4 units)  
HIST 20 History of Russia & the Soviet Union (4 units)  
MUS 8 Music of Multicultural America (5 units)  
or MUS 8H Honors Music of Multicultural America (5 units)  
PHIL 24 Comparative World Religions: East (4 units)  
PHIL 25 Comparative World Religions: West (4 units)  
POLI 1 Political Science: Introduction to American Government & Politics (5 units)

## HUMANITIES

### Program Type(s): Associate in Arts Degree, Certificate of Achievement

Units required for major: 28, certificate: 20

#### PROGRAM LEARNING OUTCOMES

- Students will be able to synthesize critical, empathetic, creative, cooperative and independent thinking skills.
- Students will be able to demonstrate the ability, both orally and in writing, to analyze meaning within various modes of cultural production in relation to their political, economic, social, and religious context.
- Students will be able to formulate knowledge of the deep connection between and within the complexities of diverse historical periods and cultural traditions as a framework for a dynamic understanding of the contemporary world.
- Students will be able to develop the practice of thinking through moral and ethical problems and examining one's own assumptions.
- Students will be able to deepen sources of wisdom through a complex understanding of how others have dealt with failures, successes, adversities and triumphs.
- Students will be able to cultivate the capacity for personal, as well as social, change.

#### ASSOCIATE DEGREE REQUIREMENTS \*

##### Core Courses: (16 units)

Select 16 units from the following:

HUMN 1 Cultures, Civilizations & Ideas: The Ancient World (4 units)  
HUMN 2 Cultures, Civilizations & Ideas: Of Empires & Conflict (4 units)  
HUMN 3 World Myths in Literature Arts & Film (4 units)  
or HUMN 3H Honors World Myths in Literature Arts & Film (4 units)  
HUMN 4 Trauma & the Arts (4 units)  
or HUMN 4H Honors Trauma & the Arts (4 units)  
HUMN 5 Cultures, Civilizations & Ideas: The Modern World (4 units)  
HUMN 6 Cultures, Civilizations & Ideas: The Contemporary World (4 units)  
HUMN 7 Global Religions: Contemporary Practices & Perspectives (4 units)  
HUMN 9 Once Upon a Time? The Immortal Lure of Fairy Tales (4 units)

##### Support Courses: (12 units)

Select at least 12 units within one of the following concentrations:

Visual Arts  
ART 2E A History of Women in Art (4.5 units)  
ART 2F Introduction to Asian Art (4.5 units)  
ART 2J American Art (4.5 units)  
ART 3 History of Modern Art from Post-Impressionism to the Present (4.5 units)  
PHOT 8 Photography of Multicultural America (4 units)  
or PHOT 8H Honors Photography of Multicultural America (4 units)  
PHOT 10 History of Photography (4 units)  
or PHOT 10H Honors History of Photography (4 units)  
PHOT 11 Contemporary Issues in Photography (4 units)

or PHOT 11H Honors Contemporary Issues in Photography (4 units)

#### Film/Theatre

MDIA 1 Introduction to Film Studies (4 units)  
MDIA 2A History of Film 1895-1945 (4 units)  
MDIA 2B History of Film 1945-Current (4 units)  
MDIA 2C Current Trends in Film, TV & the Internet (4 units)  
THTR 1 Introduction to Theatre (4 units)  
THTR 2A History of Dramatic Literature: Classical to Moliere (4 units)  
THTR 2B History of Dramatic Literature: Moliere to Modern (4 units)  
THTR 2F History of American Musical Theatre (4 units)  
THTR 8 Multicultural Theatre Arts in Modern America (4 units)

#### Literature

ENGL 5 LGBT Literature (4 units)  
ENGL 7 Native American Literature (4 units)  
ENGL 8 Children's Literature (4 units)  
ENGL 11 Introduction to Poetry (4 units)  
or ENGL 11H Honors Introduction to Poetry (4 units)  
ENGL 12 African American Literature (4 units)  
ENGL 14 Traveling the World through Contemporary Literature (4 units)  
ENGL 17 Introduction to Shakespeare (4 units)  
ENGL 22 Women Writers (4 units)  
ENGL 31 Latino/a Literature (4 units)  
ENGL 40 Asian American Literature (4 units)  
ENGL 43A Survey of British Literature I: Beowulf to the Late 18th Century (5 units)  
or ENGL 43AH Honors Survey of British Literature I: Beowulf to the Late 18th Century (5 units)  
ENGL 43B Survey of British Literature II: The Romantic Period to the Present (5 units)  
or ENGL 43BH Honors Survey of British Literature II: The Romantic Period to the Present (5 units)  
ENGL 45A Survey of American Literature I: Beginnings to 1865 (5 units)  
or ENGL 45AH Honors Survey of American Literature I: Beginnings to 1865 (5 units)  
ENGL 45B Survey of American Literature II: 1865 to the Present (5 units)  
or ENGL 45BH Honors Survey of American Literature II: 1865 to the Present (5 units)  
ENGL 47A World Literature I (5 units)  
ENGL 47B World Literature II (5 units)

#### Music

MUS 1 Introduction to Music (4 units)  
MUS 2A Great Composers & Music Masterpieces of Western Civilization (5 units)  
MUS 2B Great Composers & Music Masterpieces of Western Civilization (5 units)  
MUS 2C Great Composers & Music Masterpieces of Western Civilization (5 units)  
MUS 2D World Music: Roots to Contemporary Global Fusion (5 units)  
MUS 7 Contemporary Musical Styles: Rock, Pop & Jazz (4 units)  
MUS 7D Contemporary Musical Styles: The Beatles in the Culture of Popular Music (4 units)  
MUS 7E History of the Blues (4 units)  
MUS 8 Music of Multicultural America (5 units)  
or MUS 8H Honors Music of Multicultural America (5 units)  
MUS 9A Music & Media: Edison to Hendrix (4 units)  
MUS 9B Music & Media: Hendrix to Hip-Hop (4 units)  
MUS 11A Jazz & Swing (4 units)  
MUS 11B Funk, Fusion & Hip-Hop (4 units)

#### Philosophy

HUMN 44H Honors Art & Transgression: The Holocaust in the Literary Imagination (2 units)  
PHIL 2 Introduction to Social & Political Philosophy (4 units)  
PHIL 4 Introduction to Philosophy (4 units)  
PHIL 11 Introduction to the Philosophy of Art & Aesthetics (4 units)  
PHIL 20A History of Western Philosophy from Socrates through St. Thomas (4 units)  
PHIL 20B History of Western Philosophy from the Renaissance through Kant (4 units)  
PHIL 20C Contemporary Philosophy: 19th & 20th Century Thought (4 units)

PHIL 24 Comparative World Religions: East (4 units)  
PHIL 25 Comparative World Religions: West (4 units)

#### Certificate of Achievement in Humanities (20 units)

The certificate of achievement is awarded upon completion of 20 units from the list of courses below. General education courses are not required.

HUMN 1 Cultures, Civilizations & Ideas: The Ancient World (4 units)  
HUMN 2 Cultures, Civilizations & Ideas: Of Empires & Conflict (4 units)  
HUMN 3 World Myths in Literature Arts & Film (4 units)  
or HUMN 3H Honors World Myths in Literature Arts & Film (4 units)  
HUMN 4 Trauma & the Arts (4 units)  
or HUMN 4H Honors Trauma & the Arts (4 units)  
HUMN 5 Cultures, Civilizations & Ideas: The Modern World (4 units)  
HUMN 6 Cultures, Civilizations & Ideas: The Contemporary World (4 units)  
HUMN 7 Global Religions: Contemporary Practices & Perspectives (4 units)

## INSTRUCTIONAL DESIGN & TECHNOLOGY

#### Program Type(s): Certificate of Achievement

Units required for certificate: 27

#### PROGRAM LEARNING OUTCOMES

- Students will be able to demonstrate how the foundational principles and processes of Instructional Systems Design (ISD) can be applied in any business or education setting to create instructional content.
- Students will be able to develop and conduct program and learner needs analyses using industry standard survey, interview, and observation methods in order to improve the design of an instructional intervention.
- Students will be able to develop instructional products, resources, and projects that align with the specified learning objectives, activities, and assessment methods.
- Students will be able to use formative and summative assessment processes and instruments to evaluate the outcomes of program and student learning objectives.

#### Certificate of Achievement in Instructional Design & Technology (27 units)

Select 21 units from the following:

LINC 75A Introduction to Instructional Design & Technology (3 units)  
LINC 75B Instructional Technology Strategies (3 units)  
LINC 75C Designing Online Instruction (3 units)  
LINC 82A Introduction to Designing Instructional Technology Projects (3 units)  
LINC 82B Developing Instructional Materials (3 units)  
LINC 82C Creating Interactive Media for Instruction (3 units)  
LINC 91A Introduction to Assessing Instructional Technology (3 units)  
LINC 91B Evaluating Technology-based Learning Outcomes (3 units)  
LINC 91C Evaluating Instructional Programs (3 units)  
LINC 92 Seminar in Instructional Design & Technology (3 units)

And 6 units from the following:

GID 33 Graphic Design Studio I (4 units)  
GID 45 Digital Sound, Video & Animation (4 units)  
GID 56 Website Design (4 units)  
LINC 50F Integrating Technology into a Standards-based Curriculum I (2 units)  
LINC 58 Global Project-based Learning (2 units)  
LINC 79 Multimedia Project Production (2 units)  
LINC 87 Seminar in Teaching with Educational Technology (5 units)  
LINC 90C Online Collaboration Tools (2 units)  
PHOT 5 Introduction to Photography (4 units)  
PSE 56 Seminar in Teaching Pre-collegiate Mathematics (1 unit)

## JAPANESE

### Program Type(s): Associate in Arts Degree

Units required for major: 40

#### PROGRAM LEARNING OUTCOMES

- The student will be able to communicate with native speakers of Japanese, using the appropriate language, styles, sensitivity and level of respectfulness in various situations.
- The student will demonstrate knowledge of Japanese society, culture and history, and will be able to analyze and discuss cultural differences and similarities.

#### ASSOCIATE DEGREE REQUIREMENTS \*

##### Core Courses: (30 units)

JAPN 1 Elementary Japanese I (5 units)  
JAPN 2 Elementary Japanese II (5 units)  
JAPN 3 Elementary Japanese III (5 units)  
JAPN 4 Intermediate Japanese I (5 units)  
JAPN 5 Intermediate Japanese II (5 units)  
JAPN 6 Intermediate Japanese III (5 units)

*Note: For students who can demonstrate proficiency equivalent to one year of college Japanese, JAPN 1, 2 and 3 may be waived. However, if you are waived out of JAPN 1-2-3 (15 units), you must take at least 15 units from the support courses below to satisfy the 30-unit core requirement.*

##### Support Courses: (10 units)

JAPN 13A Intermediate Conversation I (4 units)  
JAPN 13B Intermediate Conversation II (4 units)  
JAPN 14A Advanced Conversation I (4 units)  
JAPN 14B Advanced Conversation II (4 units)  
JAPN 192 Community Service Learning for Japanese (1 unit)

*Note: If you are waived of JAPN 1-2-3 (15 units), you must take at least 15 units from the support courses to satisfy the 30 unit core requirement.*

## ASSOCIATE DEGREE FOR TRANSFER-KINESIOLOGY

### Program Type(s): Associate in Arts for Transfer

Units required for major: 90

#### ASSOCIATE DEGREE REQUIREMENTS \*

##### Core Courses: (20 units)

KINS 1 Introduction to Kinesiology (5 units)  
BIOL 40A Human Anatomy & Physiology I (5 units)  
BIOL 40B Human Anatomy & Physiology II (5 units)  
BIOL 40C Human Anatomy & Physiology III (5 units)

##### Support Courses: (13-15 units)

A. Complete ONE course from three of the five areas:

1. Aquatics:

PHED 10A Aquatics: Level I, Beginning Swimming (1 unit)  
PHED 10B Aquatics: Level II, Intermediate Swimming (1 unit)  
PHED 10C Aquatics Level III, Masters Swimming/Advanced Swim Training (1 unit)  
PHED 11A Water Exercise (1 unit)  
PHED 11B Aquatic Fitness (1 unit)  
PHED 13 Beginning Water Polo (1 unit)  
PHED 13A Intermediate Water Polo (1 unit)  
PHED 13B Advanced Water Polo (1 unit)  
PHED 13C Water Polo: Game Skills (1 unit)

2. Dance:

DANC 1A Beginning Ballet (1 unit)  
DANC 1B Intermediate Ballet (1 unit)  
DANC 1C Advanced Ballet (1 unit)  
DANC 2A Beginning Modern Dance (1 unit)  
DANC 2B Intermediate Modern Dance (1 unit)  
DANC 3A Beginning Jazz Dance (1 unit)  
DANC 3B Intermediate Jazz Dance (1 unit)

DANC 4A Beginning Ballroom & Social Dance (1 unit)  
DANC 4B Intermediate Ballroom & Social Dance (1 unit)  
DANC 4C Advanced Ballroom & Social Dance (1 unit)  
DANC 5 World Dance (1 unit)  
DANC 6 Beginning Country-Western Line Dancing (1 unit)  
DANC 13A Introduction to Contemporary Dance (1 unit)  
DANC 13B Intermediate Contemporary Dance (1 unit)  
DANC 14 Dance Conditioning (1 unit)  
DANC 18A Introduction to Hip-Hop Dance (1 unit)  
DANC 18B Intermediate Hip-Hop Dance (1 unit)

3. Fitness:

PHED 19B Kickboxing for Fitness (1 unit)  
PHED 19C Intermediate Kickboxing for Fitness (1 unit)  
PHED 19D Advanced Kickboxing for Fitness (1 unit)  
PHED 20A Beginning Mat Pilates (1 unit)  
PHED 20B Intermediate Mat Pilates (1 unit)  
PHED 20C Advanced Pilates (1 unit)  
PHED 21 Foundations of Yoga (1 unit)  
PHED 21A Beginning Hatha Yoga (1 unit)  
PHED 21B Intermediate Hatha Yoga (1 unit)  
PHED 21C Advanced Hatha Yoga (1 unit)  
PHED 21D Vinyasa Flow Yoga (1 unit)  
PHED 21E Restorative Yoga (1 unit)  
PHED 22 Beginning Full-Body Flexibility (1 unit)  
PHED 22A Intermediate Full-Body Flexibility (1 unit)  
PHED 22B Pilates & Yoga (1 unit)  
PHED 22C Core Conditioning (1 unit)  
PHED 22E Functional Training for Endurance (1 unit)  
PHED 23A Trail Hiking (1 unit)  
PHED 23B Day Hiking (1 unit)  
PHED 27 Walk for Health (1 unit)  
PHED 27A Run for Fitness (1 unit)  
PHED 27B Intermediate Run for Fitness (1 unit)  
PHED 27C Intermediate Walk for Health (1 unit)  
PHED 41 Indoor Cycling: Spin (1 unit)  
PHED 41A Indoor Cycling: Hills & Sprints (1 unit)  
PHED 41B Intermediate Indoor Cycling (1 unit)  
PHED 41C Intermediate Indoor Cycling: Hills & Sprints (1 unit)  
PHED 45A Foundations of Strength & Conditioning (1 unit)  
PHED 45C Circuit Training (1 unit)  
PHED 46 Weight Lifting for Health & Fitness (1 unit)  
PHED 46A Intermediate Weight Training for Health & Fitness (1 unit)  
PHED 46B Advanced Weight Lifting for Health & Fitness (1 unit)  
PHED 47B Thighs, Abs & Gluteus (TAG) (1 unit)  
PHED 47C High-Intensity Interval Training (HIIT) (1 unit)  
PHED 49A Survivor Training (1 unit)  
PHED 49B Boot Camp Training (1 unit)

4. Individual Sports:

PHED 15A Beginning Pickleball (1 unit)  
PHED 15B Intermediate Pickleball (1 unit)  
PHED 18 Beginning Tai Chi (Taiji) (1 unit)  
PHED 18B Intermediate Tai Chi (Taiji) (1 unit)  
PHED 18C Advanced Tai Chi (Taiji) (1 unit)  
PHED 24 Introduction to Golf (1 unit)  
PHED 24A Swing Development for the Experienced Golfer (1 unit)  
PHED 24B Skills of Golf Course Play (1 unit)  
PHED 24C Intermediate Golf Course Play (2 units)  
PHED 24D Advanced Golf Course Play (2 units)  
PHED 25A Swing Analysis (1 unit)  
PHED 25B Beginning Golf Course Play (2 units)  
PHED 26 Beginning Tennis Skills (1 unit)  
PHED 26A Intermediate Tennis (1 unit)  
PHED 26C Beginning Doubles Tennis (1 unit)  
PHED 26D Intermediate Doubles Tennis (1 unit)  
PHED 26E Advanced Doubles Tennis (1 unit)  
PHED 26F Aerobic Tennis (1 unit)  
PHED 36A Beginning Archery (1 unit)  
PHED 36B Intermediate Archery (1 unit)  
PHED 36C Advanced Archery (1 unit)  
PHED 37 Beginning Badminton: Singles & Doubles (1 unit)  
PHED 37A Intermediate Badminton: Singles & Doubles (1 unit)  
PHED 37B Advanced Badminton: Singles & Doubles (1 unit)  
PHED 42 Bowling for Fitness (1 unit)

5. Team Sports:  
 PHED 31A Futsal: Indoor Soccer Beginning (1 unit)  
 PHED 31B Futsal: Indoor Soccer Intermediate (1 unit)  
 PHED 31C Futsal: Indoor Soccer Advanced (1 unit)  
 PHED 32C Soccer: Game Skills (1 unit)  
 PHED 33 Beginning Table Tennis (1 unit)  
 PHED 33A Intermediate Table Tennis (1 unit)  
 PHED 38A Basketball Fundamentals (1 unit)  
 PHED 38B Basketball Game Skills (1 unit)  
 PHED 38C Beginning Basketball (1 unit)  
 PHED 38D Intermediate Basketball (1 unit)  
 PHED 38E Advanced Basketball (1 unit)  
 PHED 40 Beginning Volleyball (1 unit)  
 PHED 40A Intermediate Volleyball (1 unit)  
 PHED 45 Fitness for Life (1 unit)

B. And complete TWO courses from the following:  
 BIOL 14 Human Biology (5 units)  
 CHEM 30A Survey of Inorganic & Organic Chemistry (5 units)  
 EMS 50 Emergency Medical Response (5 units)  
 MATH 10 Elementary Statistics (5 units)  
 or PSYC 7 Statistics for the Behavioral Sciences (5 units)  
 or SOC 7 Statistics for the Behavioral Sciences (5 units)  
 PHYS 2A General Physics (5 units)  
 and PHYS 2B General Physics (5 units)  
 or PHYS 4A General Physics (Calculus) (6 units)

## MATHEMATICS

**Program Type(s): Associate in Science Degree**  
 Units required for major: 44-48

### PROGRAM LEARNING OUTCOMES

- The student will be able to clearly communicate mathematical ideas through graphs, tables of data, equations and verbal descriptions.
- The student will be able to construct appropriate mathematical models of natural phenomena, develop those models with appropriate mathematical techniques and interpret results of those models.

### ASSOCIATE DEGREE REQUIREMENTS \*

#### Core Courses: (44-48 units)

MATH 1A Calculus (5 units)  
 or MATH 1AH Honors Calculus I (5 units) and MATH 1AHP Honors Calculus I Seminar (1 unit)  
 MATH 1B Calculus (5 units)  
 MATH 1C Calculus (5 units)  
 MATH 1D Calculus (5 units)  
 MATH 2A Differential Equations (5 units)  
 MATH 2B Linear Algebra (5 units)  
 MATH 22 Discrete Mathematics (5 units)  
 or C S 18 Discrete Mathematics (5 units)

And TWO courses from ONE of the four following options:

Option 1:  
 PHYS 2A General Physics (5 units)  
 PHYS 2B General Physics (5 units)  
 PHYS 2C General Physics (5 units)

Option 2:  
 PHYS 4A General Physics (Calculus) (6 units)  
 PHYS 4B General Physics (Calculus) (6 units)  
 PHYS 4C General Physics (Calculus) (6 units)

Option 3:  
 CHEM 1A General Chemistry (5 units)  
 or CHEM 1AH Honors General Chemistry (5 units)  
 CHEM 1B General Chemistry (5 units)  
 or CHEM 1BH Honors General Chemistry (5 units)  
 CHEM 1C General Chemistry & Qualitative Analysis (5 units)

Option 4:  
 C S 1A Object-Oriented Programming Methodologies in Java (4.5 units)  
 or C S 1AH Honors Object-Oriented Programming Methodologies in Java (4.5 units)  
 C S 1B Intermediate Software Design in Java (4.5 units)  
 C S 1C Advanced Data Structures & Algorithms in Java (4.5 units)  
 C S 2A Object-Oriented Programming Methodologies in C++ (4.5 units)  
 or C S 2AH Honors Object-Oriented Programming Methodologies in C++ (4.5 units)  
 C S 2B Intermediate Software Design in C++ (4.5 units)  
 C S 2C Advanced Data Structures & Algorithms in C++ (4.5 units)

## ASSOCIATE DEGREE FOR TRANSFER-MATHEMATICS

**Program Type(s): Associate in Science for Transfer**  
 Units required for major: 90

### PROGRAM LEARNING OUTCOMES

- Students will be able to clearly communicate mathematical ideas through graphs, tables of data, equations and verbal descriptions.
- Students will be able to construct appropriate mathematical models of natural phenomena, develop those models with appropriate mathematical techniques and interpret results of those models.

### ASSOCIATE DEGREE REQUIREMENTS \*

#### Core Courses: (20 units)

MATH 1A Calculus (5 units)  
 or MATH 1AH Honors Calculus I (5 units)  
 MATH 1B Calculus (5 units)  
 MATH 1C Calculus (5 units)  
 MATH 1D Calculus (5 units)

#### Support Courses: (9.5-11 units)

Select ONE course each from List A and List B:

List A:  
 MATH 2A Differential Equations (5 units)  
 MATH 2B Linear Algebra (5 units)

List B:  
 MATH 2A<sup>[32]</sup> Differential Equations (5 units)  
 MATH 2B<sup>[32]</sup> Linear Algebra (5 units)  
 MATH 22 Discrete Mathematics (5 units)  
 or C S 18 Discrete Mathematics (5 units)  
 MATH 10 Elementary Statistics (5 units)  
 PHYS 4A General Physics (Calculus) (6 units)  
 C S 1A Object-Oriented Programming Methodologies in Java (4.5 units)  
 or C S 1AH Honors Object-Oriented Programming Methodologies in Java (4.5 units)  
 C S 2A Object-Oriented Programming Methodologies in C++ (4.5 units)  
 or C S 2AH Honors Object-Oriented Programming Methodologies in C++ (4.5 units)

<sup>[32]</sup> MATH 2A or 2B may be used to satisfy List B requirement if they were not used to meet the requirement for List A.



## MUSIC: GENERAL

**Program Type(s): Associate in Arts Degree, Certificate of Achievement**  
Units required for major: 43, certificate: 25

### PROGRAM LEARNING OUTCOMES

- Through the study of music history/literature, students examine music masterpieces from multiple eras and cultures, synthesizing information and making judgments as they evaluate how music reflects individual composers' lives, as well as the contemporary social/historical context in which the compositions were created and performed.
- Through music theory/composition, students analyze the structure of music and learn to create their own original works satisfying specific and complex compositional requirements.
- Through music performance, students learn how to apply and express their historical, theoretical, and artistic understandings in a presentation addressing an appropriate audience.
- Using this three-lens framework, students increase their community/global consciousness as they learn to appreciate how music is a potent tool for understanding individual and cultural uniqueness within the larger context of our common humanity.

### ASSOCIATE DEGREE REQUIREMENTS \*

#### Core Courses: (35 units)

Select SEVEN courses from the following:

- MUS 2A Great Composers & Music Masterpieces of Western Civilization (5 units)
- MUS 2B Great Composers & Music Masterpieces of Western Civilization (5 units)
- MUS 2C Great Composers & Music Masterpieces of Western Civilization (5 units)
- MUS 2D World Music: Roots to Contemporary Global Fusion (5 units)
- MUS 3A Theory & Musicianship I (5 units)
- MUS 3B Theory & Musicianship II (5 units)
- MUS 3C Theory & Musicianship III (5 units)
- MUS 3D Theory & Musicianship IV (5 units)

#### Support Courses: (8 units)

- MUS 1 Introduction to Music (4 units)
- MUS 2F History of American Musical Theater (4 units)
- MUS 7 Contemporary Musical Styles: Rock, Pop & Jazz (4 units)
- MUS 7D Contemporary Musical Styles: The Beatles in the Culture of Popular Music (4 units)
- MUS 7E History of the Blues (4 units)
- MUS 8 Music of Multicultural America (5 units)  
or MUS 8H Honors Music of Multicultural America (5 units)
- MUS 10 Music Fundamentals (4 units)
- MUS 12A Beginning Class Piano (2 units)
- MUS 12B Intermediate Class Piano (2 units)
- MUS 12C Advanced Class Piano (2 units)
- MUS 13A Class Voice I (4 units)
- MUS 13B Class Voice II (4 units)
- MUS 13C Class Voice III (4 units)
- MUS 14A Beginning Classical Guitar (2 units)
- MUS 14B Intermediate Classical Guitar (2 units)
- MUS 14C Advanced Classical Guitar (2 units)
- MUS 15A Beginning Acoustic Guitar Techniques (2 units)
- MUS 15B Intermediate Acoustic Guitar Techniques (2 units)
- MUS 15C Advanced Acoustic Guitar Techniques (2 units)
- MUS 47A Introduction to Musical Theatre Production (6 units)  
or THTR 47A Introduction to Musical Theatre Production (6 units)
- MUS 47B Intermediate Music Theatre Production Workshop (6 units)  
or THTR 47B Intermediate Music Theatre Production Workshop (6 units)
- MUS 47C Advanced Music Theatre Production Workshop (6 units)  
or THTR 47C Advanced Music Theatre Production Workshop (6 units)
- MUS 47D Advanced Music Theatre Production Workshop II (6 units)  
or THTR 47D Advanced Music Theatre Production Workshop II (6 units)
- MUS 48B Singing Technique for Musical Theatre (4 units)  
or THTR 48B Singing Technique for Musical Theatre (4 units)
- MUS 48C Musical Theatre Repertoire for Singers (4 units)  
or THTR 48C Musical Theatre Repertoire for Singers (4 units)

### Certificate of Achievement in Music History & Literature (25 units)

- MUS 2A Great Composers & Music Masterpieces of Western Civilization (5 units)
- MUS 2B Great Composers & Music Masterpieces of Western Civilization (5 units)
- MUS 2C Great Composers & Music Masterpieces of Western Civilization (5 units)
- MUS 2D World Music: Roots to Contemporary Global Fusion (5 units)
- MUS 8 Music of Multicultural America (5 units)  
or MUS 8H Honors Music of Multicultural America (5 units)

## MUSIC TECHNOLOGY

### Program Type(s): Associate in Arts Degree, Certificate of Achievement, Certificate of Proficiency

May be transferrable to a four-year university.  
Units required for major: 52, certificate: 16-52

### PROGRAM LEARNING OUTCOMES

- Students who complete the traditional transfer course sequence will be able to demonstrate knowledge, skills and understanding in the three emphases identified by the National Association of Schools of Music (NASM): music history/literature, composition/theory, and performance.
- Students who complete the vocational program will also be able to demonstrate knowledge, skills and understanding in the areas of music business, technology and contemporary popular music literature and composition/engineering identified by the program's board of advisors.

### ASSOCIATE DEGREE REQUIREMENTS \*

#### Core Courses: (40 units)

- MTEC 50A Introduction to Music Technology (4 units)
- MTEC 51A Studio Recording I (4 units)  
or MTEC 60A Producing in the Home Studio I (4 units)
- MTEC 52A Mixing & Mastering I (4 units)
- MTEC 53A Audio Plug-Ins & Signal Processing I (4 units)
- MTEC 55A Introduction to Game Audio (4 units)
- MTEC 57A Sound Design for Film & Video (4 units)  
or MDIA 81B Sound Design for Film & Video (4 units)
- MTEC 62A Composing & Producing Electronic Music I (4 units)
- MTEC 70A Pro Tools 101-Avid Certification (4 units)
- MUS 9A Music & Media: Edison to Hendrix (4 units)  
or MUS 11A Jazz & Swing (4 units)  
or MUS 11D History of Electronic Music: Origins-1970 (4 units)
- MUS 9B Music & Media: Hendrix to Hip-Hop (4 units)  
or MUS 11B Funk, Fusion & Hip-Hop (4 units)  
or MUS 11E History of Electronic Music: 1970-Present (4 units)

#### Support Courses: (12 units)

- MTEC 51B Studio Recording II (4 units)
- MTEC 52B Mixing & Mastering II (4 units)
- MTEC 53B Audio Plug-Ins & Signal Processing II (4 units)
- MTEC 55B Advanced Sound Design for Games (4 units)
- MTEC 55C Music Composition for Games (4 units)
- MTEC 57B Surround Sound Production (4 units)
- MTEC 60A<sup>[33]</sup> Producing in the Home Studio I (4 units)
- MTEC 60B Producing in the Home Studio II (4 units)
- MTEC 62B Composing & Producing Electronic Music II (4 units)
- MTEC 62C Composing & Producing Electronic Music III (4 units)
- MTEC 66A Music Video Production (4 units)
- MTEC 70B Pro Tools 110-Avid Certification (4 units)
- MTEC 70C Pro Tools 201-Avid Certification (4 units)
- MTEC 70D Pro Tools 210M-Avid Certification (4 units)
- MTEC 70E Pro Tools 210P-Avid Certification (4 units)
- MTEC 70F Pro Tools 310M-Avid Certification (4 units)
- MTEC 70G Pro Tools 310P-Avid Certification (4 units)
- MTEC 72A Producing Music with Reason (4 units)
- MTEC 72B Producing Music with Ableton Live (4 units)
- MTEC 72C Producing Music with Logic Pro (4 units)
- MTEC 72D Making Music with Apple iOS (4 units)
- MTEC 80A Music Business (4 units)
- MTEC 80B Entertainment Law & New Media (4 units)

MTEC 80C Basics of Music Publishing (4 units)  
 MTEC 82A Careers in Music & Media (4 units)  
 MTEC 82B Marketing Your Music (4 units)  
 MTEC 82C Introduction to the Video Game Business (3.5 units)  
 MTEC 84A Introduction to Music Therapy & Sound Healing (4 units)  
 MTEC 86A Sound Reinforcement & Live Recording (4 units)  
 MTEC 88A Songwriter's Workshop (4 units)  
 MTEC 88B Modern Song Composition (4 units)  
 MTEC 88C Advanced Song Structure (4 units)  
 MUS 7F Music in Film (4 units)  
 MUS 11D<sup>[33]</sup> History of Electronic Music: Origins-1970 (4 units)  
 MUS 11E<sup>[33]</sup> History of Electronic Music: 1970-Present (4 units)  
 MUS 11F Video Games & Popular Culture (4 units)  
 or MDIA 13 Video Games & Popular Culture (4 units)  
 MUS 41 Live Music Performance Workshop (2 units)  
 MUS 70R Independent Study in Music/Music Technology (1 unit)  
 MUS 71R Independent Study in Music/Music Technology (2 units)  
 MUS 72R Independent Study in Music/Music Technology (3 units)  
 MUS 73R Independent Study in Music/Music Technology (4 units)  
 MDIA 1 Introduction to Film Studies (4 units)  
 MDIA 2A History of Film 1895-1945 (4 units)  
 MDIA 2B History of Film 1945-Current (4 units)  
 MDIA 2C Current Trends in Film, TV & the Internet (4 units)  
 MDIA 3 Introduction to Film & Media Criticism (4 units)  
 MDIA 5 American Cinema (4 units)  
 MDIA 6 Film & New Media Genres (4 units)  
 MDIA 9 Global Media (4 units)  
 MDIA 11 Introduction to Popular Culture (4 units)  
 or MDIA 11H Honors Introduction to Popular Culture (4 units)  
 MDIA 12 Popular Culture & United States History (4 units)  
 MDIA 20 Fundamentals of Media Production (4 units)  
 MDIA 30 Digital Video Editing I (4 units)  
 MDIA 31 Digital Video Editing II (4 units)  
 MDIA 40 Digital Sound, Video & Animation (4 units)  
 MDIA 51 Web Video (4 units)  
 MDIA 52 Scriptwriting for Film & Video (4 units)

<sup>[33]</sup> May be completed only once for credit to satisfy either the core or support course requirements.

#### **Certificate of Achievement in Music Technology (52 units)**

The certificate of achievement is awarded after completion of the core and support courses. General education courses are not required.

#### **Certificate of Achievement in Pro Tools (32 units)**

MTEC 50A Introduction to Music Technology (4 units)  
 MTEC 51A Studio Recording I (4 units)  
 or MTEC 60A Producing in the Home Studio I (4 units)  
 MTEC 52A Mixing & Mastering I (4 units)  
 MTEC 53A Audio Plug-Ins & Signal Processing I (4 units)  
 MTEC 70A Pro Tools 101-Avid Certification (4 units)  
 MTEC 70B Pro Tools 110-Avid Certification (4 units)  
 MTEC 70C Pro Tools 201-Avid Certification (4 units)  
 MTEC 70D Pro Tools 210M-Avid Certification (4 units)  
 or MTEC 70E Pro Tools 210P-Avid Certification (4 units)

#### **Songwriting Certificate of Proficiency (24 units)**

##### **[Non-Transcriptable]**

MTEC 80A Music Business (4 units)  
 MTEC 80C Basics of Music Publishing (4 units)  
 MTEC 88A Songwriter's Workshop (4 units)  
 MTEC 88B Modern Song Composition (4 units)  
 MTEC 88C Advanced Song Structure (4 units)  
 MUS 10 Music Fundamentals (4 units)

#### **Music Business Certificate of Proficiency (20 units)**

##### **[Non-Transcriptable]**

MTEC 80A Music Business (4 units)  
 MTEC 80B Entertainment Law & New Media (4 units)  
 MTEC 80C Basics of Music Publishing (4 units)  
 MTEC 82A Careers in Music & Media (4 units)  
 MTEC 82B Marketing Your Music (4 units)

#### **Game Audio Certificate of Proficiency (20 units)**

##### **[Non-Transcriptable]**

MTEC 55A Introduction to Game Audio (4 units)

MTEC 55B Advanced Sound Design for Games (4 units)  
 MTEC 55C Music Composition for Games (4 units)  
 MTEC 70A Pro Tools 101-Avid Certification (4 units)  
 MUS 11F Video Games & Popular Culture (4 units)  
 or MDIA 13 Video Games & Popular Culture (4 units)

#### **Electronic Music Certificate of Proficiency (16 units)**

##### **[Non-Transcriptable]**

MTEC 52A Mixing & Mastering I (4 units)  
 MTEC 62A Composing & Producing Electronic Music I (4 units)  
 MTEC 62B Composing & Producing Electronic Music II (4 units)  
 MTEC 70A Pro Tools 101-Avid Certification (4 units)  
 or MTEC 72B Producing Music with Ableton Live (4 units)  
 or MTEC 72C Producing Music with Logic Pro (4 units)

#### **Audio Post Production Certificate of Proficiency (16 units)**

##### **[Non-Transcriptable]**

MTEC 57A Sound Design for Film & Video (4 units)  
 or MDIA 81B Sound Design for Film & Video (4 units)  
 MTEC 57B Surround Sound Production (4 units)  
 MTEC 70A Pro Tools 101-Avid Certification (4 units)  
 MTEC 70B Pro Tools 110-Avid Certification (4 units)

## **NANOSCIENCE**

#### **Program Type(s): Associate in Science Degree, Certificate of Achievement, Certificate of Proficiency**

Units required for major: 45-50, certificate: 10-30

#### **PROGRAM LEARNING OUTCOMES**

- Students will apply foundational nanoscience principles to understanding and further learning about nanostructures, material properties, and engineering solutions, applying scientific literature, seminars, and webinars.
- Students will develop plausible approaches materials engineering solutions for industrial applications. These include applying characterization skills to elucidating structure, property relationships, process optimization and consistent material manufacturing.
- Students with internships and/or concurrent work experience will support fundamental research and development, process development, characterization (including quality assurance/quality control, failure analysis, etc.) and consistent/quality manufacturing practice in all sizes of high-technology firms.

#### **ASSOCIATE DEGREE REQUIREMENTS \***

##### **Core Courses: (10 units)**

NANO 10 Introduction to Nanotechnology (5 units)  
 NANO 51 Applications of Nanotechnology (5 units)

##### **Support Courses: (35-40 units)**

Select ONE option from the following:

Nanoscience Transfer Option (40 units)  
 CHEM 1B General Chemistry (5 units)  
 or CHEM 1BH Honors General Chemistry (5 units)  
 CHEM 1C General Chemistry & Qualitative Analysis (5 units)  
 MATH 1A Calculus (5 units)  
 or MATH 1AH Honors Calculus I (5 units)  
 MATH 1B Calculus (5 units)  
 MATH 1C Calculus (5 units)  
 And 15 units from the following:  
 BIOL 1A Principles of Cell Biology (6 units)  
 BIOL 1D Introduction to Molecular Genetics (4 units)  
 ENGR 45 Properties of Materials (5 units)  
 NANO 52 Nanomaterials & Nanostructures (5 units)  
 NANO 53 Nanomaterials Characterization (5 units)  
 NANO 54 Nanofabrication Tools & Process (5 units)

Nanoscience Workforce Option (35 units)  
 NANO 52 Nanomaterials & Nanostructures (5 units)  
 NANO 53 Nanomaterials Characterization (5 units)  
 NANO 54 Nanofabrication Tools & Process (5 units)

## NON-CREDIT: MATHEMATICAL FOUNDATIONS

**Program Type(s): Certificate of Completion**

### PROGRAM LEARNING OUTCOMES

- Students will demonstrate numerical literacy and quantitative reasoning skills at an appropriate level for future progression in basic skills credit math courses.

### Mathematical Foundations Certificate of Completion (60 hours)

#### [Non-Transcriptable]

NCBS 401A Mathematical Foundations for College Part I (20 hours)  
NCBS 401B Mathematical Foundations for College Part II (40 hours)  
NCBS 405 Supplemental Instruction: Physical Science, Math & Engineering (60-360 hours)

## PARAMEDIC

**Program Type(s): Associate in Science Degree, Certificate of Achievement**

Units required for major: 70.5, certificate: 70.5

### PROGRAM LEARNING OUTCOMES

- Graduates will become knowledgeable in multiple areas of anatomy and pathophysiology of various illness and injury, which will help the paramedic to provide competent patient care.
- Graduates will have outstanding clinical assessment and skills.
- Graduates will meet or exceed the requirements for state licensure in California.

### ASSOCIATE DEGREE REQUIREMENTS \*

#### Core Courses: (70.5 units)

First Quarter

AHS 50A Introduction to Allied Health Programs (1.5 units)  
EMS 60A Paramedic Cognitive & Affective IA (9 units)  
EMS 60B Paramedic Cognitive, Psychomotor & Affective IB (3 units)

Second Quarter

AHS 50B Interprofessional Patient Competencies (0.5 unit)  
EMS 61A Paramedic Cognitive & Affective IIA (9 units)  
EMS 61B Paramedic Cognitive, Affective & Psychomotor IIB (3 units)  
EMS 63A Paramedic Hospital Specialty Rotations (2 units)

Third Quarter

EMS 62A Paramedic Cognitive & Affective IIIA (9 units)  
EMS 62B Paramedic Cognitive, Affective & Psychomotor IIIB (3 units)

Fourth Quarter

EMS 63B<sup>[36]</sup> Paramedic Hospital Emergency Department Rotations (4.5 units)

Fifth Quarter

EMS 64A<sup>[36]</sup> Paramedic Ambulance Field Internship I (13 units)

Sixth Quarter

EMS 64B<sup>[36]</sup> Paramedic Ambulance Field Internship II (13 units)

<sup>[36]</sup> Students may have the option of completing the program in five quarters, by taking EMS 63B during the third quarter, 64A during the fourth quarter, and 64B during the fifth quarter. For more information, contact program staff.

#### Certificate of Achievement in Paramedic (70.5 units)

The certificate of achievement is awarded upon completion of the core courses. General education courses are not required; however, the program prerequisite requirements must be met.

NANO 62 Nanomaterials Engineering: Structures, Processing & Characterization (5 units)

PHYS 2A<sup>[34]</sup> General Physics (5 units)

PHYS 2B General Physics (5 units)

PHYS 2C General Physics (5 units)

<sup>[34]</sup> PHYS 2A is recommended if the student is preparing to transfer to a four-year institution.

#### Certificate of Achievement in Nanoscience (30 units)

The minimum proficiency requirements for this certificate are ENGL 1A, 1AH, 1S & 1T or ESLL 26, and MATH 17, 105 or 108 completed with a letter grade of "C" or better.

CHEM 1A<sup>[35]</sup> General Chemistry (5 units)

or CHEM 1AH<sup>[35]</sup> Honors General Chemistry (5 units)  
or equivalent course

NANO 10 Introduction to Nanotechnology (5 units)

NANO 51 Applications of Nanotechnology (5 units)

NANO 52 Nanomaterials & Nanostructures (5 units)

NANO 53 Nanomaterials Characterization (5 units)

NANO 54 Nanofabrication Tools & Process (5 units)

<sup>[35]</sup> CHEM 1A or 1AH is a prerequisite for the remaining courses in this certificate.

#### Nanocharacterization Certificate of Proficiency (15 units)

##### [Non-Transcriptable]

The minimum proficiency requirements for this certificate are ENGL 1A, 1AH, 1S & 1T or ESLL 26, and MATH 17, 105 or 108 completed with a letter grade of iCī or better.

NANO 51 Applications of Nanotechnology (5 units)

or NANO 10 Introduction to Nanotechnology (5 units)

NANO 52 Nanomaterials & Nanostructures (5 units)

NANO 53 Nanomaterials Characterization (5 units)

#### Nanofabrication Certificate of Proficiency (15 units)

##### [Non-Transcriptable]

The minimum proficiency requirements for this certificate are ENGL 1A, 1AH, 1S & 1T or ESLL 26, and MATH 17, 105 or 108 completed with a letter grade of iCī or better.

NANO 51 Applications of Nanotechnology (5 units)

or NANO 10 Introduction to Nanotechnology (5 units)

NANO 52 Nanomaterials & Nanostructures (5 units)

NANO 54 Nanofabrication Tools & Process (5 units)

#### Nanostructures Certificate of Proficiency (10 units)

##### [Non-Transcriptable]

NANO 51 Applications of Nanotechnology (5 units)

or NANO 10 Introduction to Nanotechnology (5 units)

NANO 62 Nanomaterials Engineering: Structures, Processing & Characterization (5 units)

## NON-CREDIT: GERIATRIC HOME AIDE

**Program Type(s): Certificate of Completion**

### PROGRAM LEARNING OUTCOMES

- The student will be prepared to administer safe care to ambulatory elderly patients in their own homes under the supervision of a registered nurse.
- The student will be prepared to document their care to ambulatory elderly patients in their own homes under the supervision of a registered nurse.

#### Geriatric Home Aide Certificate of Completion (104 hours)

##### [Non-Transcriptable]

NCSV 400 Geriatric Home Aide Basics (60 hours)

NCSV 401 Geriatric Home Aide-Nutrition (44 hours)

## PERSONAL TRAINER

### Program Type(s): Certificate of Achievement

Units required for certificate: 35

### PROGRAM LEARNING OUTCOMES

In addition to demonstrating competency in required coursework, graduates will have important job skills in the areas of interpersonal interaction, communication, creativity, honesty, leadership and motivation, teamwork, patience, enthusiasm, and the ability to work with a diversity of people and run a business.

### Certificate of Achievement in Personal Trainer (35 units)

BUSI 95 Entrepreneurship-The Business Plan (4 units)  
ITRN 50 Internship (1 unit)  
KINS 8A Theory & Concepts of Exercise Physiology I (5 units)  
KINS 8B Theory & Concepts of Exercise Physiology II (4 units)  
KINS 9 Basic Nutrition for Sports & Fitness (5 units)  
KINS 52 Fitness Assessment Techniques for the Personal Trainer (4 units)  
KINS 53 Current Topics in Personal Training (2 units)  
KINS 65A PNF: Introduction to the Upper Extremity (3 units)  
KINS 65B PNF: Introduction to the Lower Extremity (3 units)  
KINS 81 Introduction to Adaptive Fitness (4 units)

## PHARMACY TECHNICIAN

### Program Type(s): Associate in Science Degree, Certificate of Achievement

Units required for major: 52, certificate: 52

### PROGRAM LEARNING OUTCOMES

- Graduates will demonstrate pharmaceutical knowledge, clinical skills and values necessary to practice as a competent pharmacy technician in both retail and hospital pharmacy settings.
- Graduates will demonstrate competency with entry-level clinical skills in accordance with ASHP/ACPE accreditation requirements.

### ASSOCIATE DEGREE REQUIREMENTS \*

#### Core Courses: (52 units)

Summer

AHS 50A Introduction to Allied Health Programs (1.5 units)

Fall

PHT 50 Orientation to Pharmacy Technology (3 units)

PHT 51 Basic Pharmaceuticals (3 units)

PHT 52A Inpatient Dispensing (3 units)

PHT 53 Ambulatory Pharmacy Practice (4 units)

PHT 54A Dosage Calculations A (3 units)

PHT 55A Pharmacology A (3 units)

Winter

AHS 50B Interprofessional Patient Competencies (0.5 unit)

PHT 52B Aseptic Technique & IV Preparation (4 units)

PHT 54B Dosage Calculations B (3 units)

PHT 55B Pharmacology B (3 units)

PHT 56A Dispensing & Compounding A (3 units)

PHT 60 Retail Clinical (4 units)

or PHT 62 Hospital Clinical (4 units)

Spring

PHT 55C Pharmacology C (3 units)

PHT 56B Dispensing & Compounding B (3 units)

PHT 61 Home Health Care Supplies (3 units)

PHT 63 Pharmacy Technician Certification Exam (PTCE) Review (1 unit)

PHT 60 Retail Clinical (4 units)

or PHT 62 Hospital Clinical (4 units)

### Certificate of Achievement in Pharmacy Technician (52 units)

The certificate of achievement is awarded upon completion of the core courses. General education courses are not required; however, the program prerequisite requirements must be met.

## PHILOSOPHY

### Program Type(s): Associate in Arts Degree

Units required for major: 33-34

### PROGRAM LEARNING OUTCOMES

- Students will be able to critically analyze and evaluate arguments regarding issues of metaphysics and epistemology.
- Students will be able to critically analyze and evaluate arguments regarding issues of ethics and political philosophy.

### ASSOCIATE DEGREE REQUIREMENTS \*

#### Core Courses: (13 units)

PHIL 2 Introduction to Social & Political Philosophy (4 units)

PHIL 4 Introduction to Philosophy (4 units)

PHIL 8 Ethics (5 units)

#### Support Courses: (20-21 units)

Select ONE course from the following:

PHIL 1 Critical Thinking & Writing (5 units)

PHIL 7 Introduction to Symbolic Logic (5 units)

PHIL 30 Introduction to Critical Thinking (4 units)

And 8 units from the following:

PHIL 11 Introduction to the Philosophy of Art & Aesthetics (4 units)

PHIL 12 Philosophy of Science (4 units)

PHIL 20A History of Western Philosophy from Socrates through St. Thomas (4 units)

PHIL 20B History of Western Philosophy from the Renaissance through Kant (4 units)

PHIL 20C Contemporary Philosophy: 19th & 20th Century Thought (4 units)

PHIL 24 Comparative World Religions: East (4 units)

PHIL 25 Comparative World Religions: West (4 units)

And 8 units<sup>[37]</sup> from the following:

ANTH 2A Cultural Anthropology (4 units)

or ANTH 2AH Honors Cultural Anthropology (4 units)

ART 2A History of Art: History of Western Art from Prehistory through Early Christianity (4.5 units)

or ART 2AH Honors History of Art: History of Western Art from Prehistory through Early Christianity (4.5 units)

ART 2B History of Western Art from the Middle Ages to the Renaissance (4.5 units)

or ART 2BH Honors History of Western Art from the Middle Ages to the Renaissance (4.5 units)

ART 2C History of Western Art from the Baroque to Modernism (4.5 units)

ART 2F Introduction to Asian Art (4.5 units)

BUSI 70 Business & Professional Ethics (4 units)

HIST 4A History of Western Civilization to 800 CE (4 units)

HIST 4B History of Western Civilization: 700-1800 (4 units)

HIST 4C History of Western Civilization 1789-Present (4 units)

or HIST 4CH Honors History of Western Civilization 1789-Present (4 units)

HIST 9 History of Contemporary Europe (4 units)

or HIST 9H Honors History of Contemporary Europe (4 units)

HIST 18 Introduction to Middle Eastern Civilization (4 units)

HUMN 1 Cultures, Civilizations & Ideas: The Ancient World (4 units)

HUMN 2 Cultures, Civilizations & Ideas: Of Empires & Conflict (4 units)

POLI 3 Introduction to Political Philosophy/Political Theory (5 units)

or POLI 3H Honors Introduction to Political Philosophy/Political Theory (5 units)

POLI 9 Political Economy (4 units)

or POLI 9H Honors Political Economy (4 units)

PSYC 1 General Psychology (5 units)

or PSYC 1H Honors General Psychology (5 units)

PSYC 4 Introduction to Biopsychology (4 units)

SOC 1 Introduction to Sociology (5 units)

or SOC 1H Honors Introduction to Sociology (5 units)

<sup>[37]</sup> Students may also use courses listed in the second section of support courses to fulfill the requirement for the third section of support courses.

## ASSOCIATE DEGREE FOR TRANSFER-PHILOSOPHY

### Program Type(s): Associate in Arts for Transfer

Units required for major: 90

#### PROGRAM LEARNING OUTCOMES

- Students will be able to critically analyze and evaluate arguments regarding issues of metaphysics and epistemology.
- Students will be able to critically analyze and evaluate arguments regarding issues of ethics and political philosophy.

#### ASSOCIATE DEGREE REQUIREMENTS \*

##### Core Courses: (9-10 units)

PHIL 7 Introduction to Symbolic Logic (5 units)

And ONE of the following:

PHIL 4 Introduction to Philosophy (4 units)

PHIL 8 Ethics (5 units)

##### Support Courses: (20-23 units)

Complete TWO courses from List A:

List A:

Any course not used from the core courses, or any of the following:

PHIL 1 Critical Thinking & Writing (5 units)

PHIL 2 Introduction to Social & Political Philosophy (4 units)

PHIL 4<sup>[38]</sup> Introduction to Philosophy (4 units)

PHIL 8<sup>[38]</sup> Ethics (5 units)

PHIL 20A History of Western Philosophy from Socrates through St. Thomas (4 units)

PHIL 20B History of Western Philosophy from the Renaissance through Kant (4 units)

PHIL 30 Introduction to Critical Thinking (4 units)

<sup>[38]</sup> If not used to fulfill the core requirement.

And TWO items from List B:

List B:

1. Any course not used in List A

2. HIST 4A History of Western Civilization to 800 CE (4 units)

3. HIST 4B History of Western Civilization: 700-1800 (4 units)

and<sup>[39]</sup> HIST 4C History of Western Civilization: 1789-Present (4 units)

4. HIST 4B History of Western Civilization: 700-1800 (4 units)

and<sup>[39]</sup> HIST 4CH Honors History of Western Civilization: 1789-Present (4 units)

5. PHIL 24 Comparative World Religions: East (4 units)

or PHIL 25 Comparative World Religions: West (4 units)

<sup>[39]</sup> When using item 3 or 4 in this section, both courses must be completed to fulfill the requirement.

And ONE course from List C:

List C:

Any course not used in List A or List B, or any of the following:

ENGL 16 Introduction to Literature (4 units)

ENGL 22 Women Writers (4 units)

HUMN 1 Cultures, Civilizations & Ideas: The Ancient World (4 units)

HUMN 2 Cultures, Civilizations & Ideas: Of Empires & Conflict (4 units)

HUMN 3 World Myths in Literature Arts & Film (4 units)

or HUMN 3H Honors World Myths in Literature Arts & Film (4 units)

PHIL 12 Philosophy of Science (4 units)

PHIL 20C Contemporary Philosophy: 19th & 20th Century Thought (4 units)

## PHOTOGRAPHY

### Program Type(s): Associate in Arts Degree, Certificate of Achievement, Skills Certificate

Units required for major: 40, certificate: 12-40

#### PROGRAM LEARNING OUTCOMES

- Students will be able to produce images that demonstrate knowledge of photography's visual and expressive elements (light, color, and composition), using standard professional equipment and production processes.
- Students will be able to analyze how images reflect and shape our culture and assess the contributions made in the field by people from diverse cultures and backgrounds.

#### ASSOCIATE DEGREE REQUIREMENTS \*

##### Core Courses: (32 units)

PHOT 1 Black & White Photography I (4 units)

or PHOT 5 Introduction to Photography (4 units)

PHOT 2 Black & White Photography II (4 units)

or PHOT 4B Photoshop for Photographers II (4 units)

PHOT 3 Black & White Photography III (4 units)

or PHOT 4C Photoshop for Photographers III (4 units)

PHOT 4A Photoshop for Photographers I (4 units)

PHOT 10 History of Photography (4 units)

or PHOT 10H Honors History of Photography (4 units)

PHOT 57B Professional Practices in Photography (4 units)

PHOT 72 Lightroom & Photographic Design (4 units)

PHOT 74A Studio Photography Techniques I (4 units)

or PHOT 71 The Photographic Book (4 units)

##### Support Courses: (8 units)

ART 5A 2-D Foundations (4 units)

ART 6 Collage & Composition (4 units)

ART 20A Color I (4 units)

PHOT 1 Black & White Photography I (4 units)

PHOT 2 Black & White Photography II (4 units)

PHOT 3 Black & White Photography III (4 units)

PHOT 4A Photoshop for Photographers I (4 units)

PHOT 4B Photoshop for Photographers II (4 units)

PHOT 4C Photoshop for Photographers III (4 units)

PHOT 5 Introduction to Photography (4 units)

PHOT 8 Photography of Multicultural America (4 units)

or PHOT 8H Honors Photography of Multicultural America (4 units)

PHOT 10 History of Photography (4 units)

or PHOT 10H Honors History of Photography (4 units)

PHOT 11 Contemporary Issues in Photography (4 units)

or PHOT 11H Honors Contemporary Issues in Photography (4 units)

PHOT 13 Experimental Photography (4 units)

PHOT 22 Photojournalism (4 units)

PHOT 57A Photographic Portfolio Development (4 units)

PHOT 57B Professional Practices in Photography (4 units)

PHOT 68C Studio Lighting Topics in Photography (1 unit)

PHOT 68E Lecture Topics in Photography (1 unit)

PHOT 71 The Photographic Book (4 units)

PHOT 72 Lightroom & Photographic Design (4 units)

PHOT 74A Studio Photography Techniques I (4 units)

PHOT 74B Studio Photography Techniques II (4 units)

PHOT 78A Landscape Field Study in Photography (1 unit)

PHOT 78B Social Concerns Field Study in Photography (1 unit)

PHOT 78C Documentary Field Study in Photography (1 unit)

PHOT 78D Museum/Gallery Field Study in Photography (1 unit)

*NOTE: Courses listed in both the core and support sections may be completed only once for credit to satisfy either the core or support course requirement.*

##### Certificate of Achievement in Photography (40 units)

The certificate of achievement is awarded upon completion of the core and support courses. General education courses are not required. The minimum proficiency requirements for this certificate are ENGL 1A, 1AH, 1S & 1T or ESLL 26, and MATH 17, 105 or 108 completed with a letter grade of "C" or better.

### Certificate of Achievement in Traditional Photography (30 units)

There are no English or mathematics proficiencies required for this certificate.

PHOT 1 Black & White Photography I (4 units)  
PHOT 2 Black & White Photography II (4 units)  
PHOT 3 Black & White Photography III (4 units)  
PHOT 4A Photoshop for Photographers I (4 units)  
PHOT 10 History of Photography (4 units)  
or PHOT 10H Honors History of Photography (4 units)  
PHOT 13 Experimental Photography (4 units)  
PHOT 72 Lightroom & Photographic Design (4 units)  
And 2 units from the support courses list for the degree.

### Certificate of Achievement in Digital Photography (30 units)

There are no English or mathematics proficiencies required for this certificate.

PHOT 1 Black & White Photography I (4 units)  
or PHOT 5 Introduction to Photography (4 units)  
PHOT 4A Photoshop for Photographers I (4 units)  
PHOT 4B Photoshop for Photographers II (4 units)  
PHOT 4C Photoshop for Photographers III (4 units)  
PHOT 10 History of Photography (4 units)  
or PHOT 10H Honors History of Photography (4 units)  
PHOT 71 The Photographic Book (4 units)  
PHOT 72 Lightroom & Photographic Design (4 units)  
And 2 units from the support courses list for the degree.

### Photographic Laboratory Technician Skills Certificate (12 units)

#### [Non-Transcriptable]

There are no English or mathematics proficiencies required for this certificate. This certificate requires the student to have completed 50 hours of work experience verified by an employer or volunteer supervisor.

PHOT 1 Black & White Photography I (4 units)  
PHOT 2 Black & White Photography II (4 units)  
PHOT 3 Black & White Photography III (4 units)  
or PHOT 13 Experimental Photography (4 units)

### Photo Criticism Skills Certificate (12 units)

#### [Non-Transcriptable]

There are no English or mathematics proficiencies required for this certificate.

PHOT 5 Introduction to Photography (4 units)  
PHOT 8 Photography of Multicultural America (4 units)  
or PHOT 8H Honors Photography of Multicultural America (4 units)  
or PHOT 11 Contemporary Issues in Photography (4 units)  
or PHOT 11H Honors Contemporary Issues in Photography (4 units)  
PHOT 10 History of Photography (4 units)  
or PHOT 10H Honors History of Photography (4 units)

## PHYSICAL EDUCATION

### Program Type(s): Associate in Arts Degree

Units required for major: 37-38

#### PROGRAM LEARNING OUTCOMES

- The student will complete this program with the ability to communicate the components of a physical education program to their professional staff.
- The student will demonstrate the necessary knowledge, skills, and values of a multi-disciplinary program, which satisfy core requirements for many physical education transfer majors, including the traditional concentrations in teaching and contemporary choices of fitness, dance and athletic emphasis.

## ASSOCIATE DEGREE REQUIREMENTS \*

### Core Courses: (31-32 units)

BIOL 10 General Biology: Basic Principles (5 units)  
or BIOL 14 Human Biology (5 units)  
KINS 1 Introduction to Kinesiology (5 units)  
KINS 2 Sport in Society (5 units)  
KINS 3 Theories & Techniques of Coaching Sports (4 units)  
or DANC 10 Topics in Dance History (5 units)  
KINS 4 Concepts of Physical Fitness & Wellness (4 units)  
KINS 8A Theory & Concepts of Exercise Physiology I (5 units)  
KINS 16B Emergency Athletic Injury Care (3 units)

### Support Courses: (6 units)

Select 6 units of any combination of activity courses from:  
KINS 10 Women in Sports (5 units)  
KINS 54 Introduction to Sports Management (4 units)  
any Physical Education (PHED) activity course  
any Athletics (ATHL) course  
any Dance (DANC) activity course

### Elective Courses: (Recommended units)

These courses are recommended to fulfill the additional elective requirements to reach 90 units for the degree as they augment the major:

BIOL 40A Human Anatomy & Physiology I (5 units)  
BIOL 40B Human Anatomy & Physiology II (5 units)  
BIOL 40C Human Anatomy & Physiology III (5 units)  
CHEM 25 Fundamentals of Chemistry (5 units)  
or CHEM 30A Survey of Inorganic & Organic Chemistry (5 units)  
DANC 10<sup>[40]</sup> Topics in Dance History (5 units)  
KINS 9 Basic Nutrition for Sports & Fitness (5 units)  
KINS 15 First Aid & CPR/AED (1 unit)  
KINS 16A Prevention of Athletic Injuries (3 units)  
KINS 16C Treatment & Rehabilitation of Athletic Injuries (3 units)  
KINS 51 Performance Enhancing Substances in Sport & Exercise (4 units)  
PSYC 1 General Psychology (5 units)  
or PSYC 1H Honors General Psychology (5 units)

<sup>[40]</sup> May be completed only once for credit to satisfy degree requirements.

## PHYSICS

### Program Type(s): Associate in Science Degree

Units required for major: 59

#### PROGRAM LEARNING OUTCOMES

- Students will know basic physics principles.
- Students will be able to apply their knowledge to practical, theoretical and experimental problems.
- Students will be prepared to advance to the next step in careers in science, industry and education.

## ASSOCIATE DEGREE REQUIREMENTS \*

### Core Courses: (59 units)

CHEM 1A General Chemistry (5 units)  
or CHEM 1AH Honors General Chemistry (5 units)  
CHEM 1B General Chemistry (5 units)  
or CHEM 1BH Honors General Chemistry (5 units)  
MATH 1B Calculus (5 units)  
MATH 1C Calculus (5 units)  
MATH 1D Calculus (5 units)  
MATH 2A Differential Equations (5 units)  
MATH 2B Linear Algebra (5 units)  
PHYS 4A General Physics (Calculus) (6 units)  
PHYS 4B General Physics (Calculus) (6 units)  
PHYS 4C General Physics (Calculus) (6 units)  
PHYS 4D General Physics (Calculus) (6 units)

## ASSOCIATE DEGREE FOR TRANSFER-PHYSICS

### Program Type(s): Associate in Science for Transfer

Units required for major: 90

#### PROGRAM LEARNING OUTCOMES

- Students will know basic physics principles.
- Students will be able to apply their knowledge to practical, theoretical and experimental problems.
- Students will be prepared to advance to the next step in careers in science, industry and education.

#### ASSOCIATE DEGREE REQUIREMENTS \*

##### Core Courses: (44 units)

MATH 1A Calculus (5 units)  
or MATH 1AH Honors Calculus I (5 units)  
MATH 1B Calculus (5 units)  
MATH 1C Calculus (5 units)  
MATH 1D Calculus (5 units)  
PHYS 4A General Physics (Calculus) (6 units)  
PHYS 4B General Physics (Calculus) (6 units)  
PHYS 4C General Physics (Calculus) (6 units)  
PHYS 4D General Physics (Calculus) (6 units)

## POLITICAL SCIENCE

### Program Type(s): Associate in Arts Degree

Units required for major: 35

#### PROGRAM LEARNING OUTCOMES

- Students will be able to demonstrate critical, analytical, research and writing skills in political science and its sub-fields using basic scientific tools underlying modern social science.
- Students will be able to analyze the major theoretical formulations and concepts of political science and its sub-fields and the philosophical basis of those formulations.

#### ASSOCIATE DEGREE REQUIREMENTS \*

##### Core Courses: (18 units)

POLI 1 Political Science: Introduction to American Government & Politics (5 units)  
POLI 2 Comparative Government & Politics (4 units)  
or POLI 2H Honors Comparative Government & Politics (4 units)  
POLI 3 Introduction to Political Philosophy/Political Theory (5 units)  
or POLI 3H Honors Introduction to Political Philosophy/Political Theory (5 units)  
POLI 15 International Relations/World Politics (4 units)  
or POLI 15H Honors International Relations/World Politics (4 units)

##### Support Courses: (17 units)

Select 9 units from the following:  
ECON 1A Principles of Macroeconomics (5 units)  
HIST 9 History of Contemporary Europe (4 units)  
or HIST 9H Honors History of Contemporary Europe (4 units)  
HIST 17A History of the United States to 1815 (4 units)  
or HIST 17B History of the United States from 1812 to 1914 (4 units)  
or HIST 17C History of the United States 1914 to the Present (4 units)  
POLI 9 Political Economy (4 units)  
or POLI 9H Honors Political Economy (4 units)  
or ECON 9 Political Economy (4 units)  
or ECON 9H Honors Political Economy (4 units)

And 8 units<sup>[41]</sup> from the following:

ECON 25 The Global Economy (4 units)  
HIST 8 History of Latin America (4 units)  
HIST 18 Introduction to Middle Eastern Civilization (4 units)  
HIST 20 History of Russia & The Soviet Union (4 units)  
GIST 11 Introduction to Mapping & Spatial Reasoning (4 units)

or GEOG 11 Introduction to Mapping & Spatial Reasoning (4 units)  
SOC 15 Law & Society (4 units)

<sup>[41]</sup> Students may also use courses listed in the first section of support courses to fulfill the requirement for the second section of support courses.

## ASSOCIATE DEGREE FOR TRANSFER-POLITICAL SCIENCE

### Program Type(s): Associate in Arts for Transfer

Units required for major: 90

#### PROGRAM LEARNING OUTCOMES

- Students will be able to demonstrate critical, analytical, research and writing skills in political science and its sub-fields using basic scientific tools underlying modern social science.
- Students will be able to analyze the major theoretical formulations and concepts of political science and its sub-fields and the philosophical basis of those formulations.

#### ASSOCIATE DEGREE REQUIREMENTS \*

##### Core Courses: (5 units)

POLI 1 Political Science: Introduction to American Government & Politics (5 units)

##### Support Courses: (21-24 units)

Complete THREE courses from List A:

List A:

POLI 2 Comparative Government & Politics (4 units)  
or POLI 2H Honors Comparative Government & Politics (4 units)  
POLI 3 Introduction to Political Philosophy/Political Theory (5 units)  
or POLI 3H Honors Introduction to Political Philosophy/Political Theory (5 units)  
POLI 15 International Relations/World Politics (4 units)  
or POLI 15H Honors International Relations/World Politics (4 units)  
MATH 10 Elementary Statistics (5 units)  
or PSYC 7 Statistics for the Behavioral Sciences (5 units)  
or SOC 7 Statistics for the Behavioral Sciences (5 units)

And complete ONE course each from two sections of the four List B sections, below:

List B:

Section #1:

Any course not used from List A

Section #2:

POLI 9 Political Economy (4 units)  
or POLI 9H Honors Political Economy (4 units)  
or ECON 9 Political Economy (4 units)  
or ECON 9H Honors Political Economy (4 units)

Section #3:

ANTH 2A Cultural Anthropology (4 units)  
or ANTH 2AH Honors Cultural Anthropology (4 units)  
BUSI 18 Business Law I (5 units)  
ECON 1A Principles of Macroeconomics (5 units)  
ECON 1B Principles of Microeconomics (5 units)

Section #4:

GEOG 5 Introduction to Economic Geography (4 units)  
HIST 4A History of Western Civilization to 800 CE (4 units)  
HIST 4B History of Western Civilization: 700-1800 (4 units)  
HIST 4C History of Western Civilization 1789-Present (4 units)  
or HIST 4CH Honors History of Western Civilization 1789-Present (4 units)  
HIST 17A History of the United States to 1815 (4 units)  
HIST 17B History of the United States from 1812-1914 (4 units)  
HIST 17C History of the United States from 1914 to the Present (4 units)  
SOC 10 Research Methods & Designs (5 units)

or PSYC 10 Research Methods & Designs (5 units)  
SOC 11 Introduction to Social Welfare (5 units)  
SOC 14 Sociology of Crime (4 units)  
SOC 15 Law & Society (4 units)  
SOC 20 Major Social Problems (4 units)  
SOC 23 Race & Ethnic Relations (4 units)  
WMN 11 Women in Global Perspective (4 units)

## POPULAR CULTURE

### Program Type(s): Certificate of Proficiency

Units required for certificate: 16-17

### Popular Culture Certificate of Proficiency (16-17 units)

#### [Non-Transcriptable]

MDIA 11 Introduction to Popular Culture (4 units)  
MDIA 12 Popular Culture & United States History (4 units)  
SOC 8 Popular Culture (4 units)

And ONE course from the following:

BUSI 57 Principles of Advertising (4 units)  
COMM 10 Gender, Communication & Culture (5 units)  
GID 1 History of Graphic Design (4 units)  
or ART 36 History of Graphic Design (4 units)  
HUMN 3 World Myths in Literature Arts & Film (4 units)  
or HUMN 3H Honors World Myths in Literature Arts & Film (4 units)  
KINS 2 Sport in Society (5 units)  
MDIA 2C Current Trends in Film, TV & the Internet (4 units)  
MDIA 5 American Cinema (4 units)  
MUS 7 Contemporary Musical Styles: Rock, Pop & Jazz (4 units)  
MUS 9A Music & Media: Edison to Hendrix (4 units)  
or MUS 9B Music & Media: Hendrix to Hip-Hop (4 units)  
MUS 11F Video Games & Popular Culture (4 units)  
or MDIA 13 Video Games & Popular Culture (4 units)

## PSYCHOLOGY

### Program Type(s): Associate in Arts Degree

Units required for major: 35

#### PROGRAM LEARNING OUTCOMES

- Students will be able to recognize the diversity of behavior of various populations and be able to explain, interpret, apply, and evaluate a broad base of concepts in the different fields of psychology.
- Students will be able to apply critical thinking skills and psychological theories to real-world situations, and to be able to apply research methodology and data analysis in the process of answering questions about human behavior.

#### ASSOCIATE DEGREE REQUIREMENTS \*

##### Core Courses: (15 units)

PSYC 1 General Psychology (5 units)  
or PSYC 1H Honors General Psychology (5 units)  
PSYC 7 Statistics for the Behavioral Sciences (5 units)  
or SOC 7 Statistics for the Behavioral Sciences (5 units)  
or MATH 10 Elementary Statistics (5 units)  
PSYC 10 Research Methods & Designs (5 units)  
or SOC 10 Research Methods & Designs (5 units)

##### Support Courses: (20 units)

Select 12 units from the following:  
PSYC 4 Introduction to Biopsychology (5 units)  
PSYC 14 Child & Adolescent Development (4 units)  
PSYC 21 Psychology of Women: Sex & Gender Differences (4 units)  
or WMN 21 Psychology of Women: Sex & Gender Differences (4 units)  
PSYC 22 Psychology of Prejudice & Discrimination (4 units)  
PSYC 25 Introduction to Abnormal Psychology (4 units)  
PSYC 30 Social Psychology (4 units)  
or SOC 30 Social Psychology (4 units)

PSYC 33 Introduction to Personality Psychology (4 units)  
PSYC 39 Psychology of Sports (4 units)  
PSYC 40 Human Development (5 units)  
PSYC 49 Human Sexuality (4 units)

and 8 units<sup>[42]</sup> from the following:

ANTH 2A Cultural Anthropology (4 units)  
or ANTH 2AH Honors Cultural Anthropology (4 units)  
BIOL 14 Human Biology (5 units)  
PHIL 4 Introduction to Philosophy (4 units)  
PSYC 51 Applied Research Experience (1 unit)  
PSYC 54H Honors Institute Seminar in Psychology (1 unit)  
PSYC 70R Independent Study in Psychology (1 unit)  
PSYC 71R Independent Study in Psychology (2 units)  
PSYC 72R Independent Study in Psychology (3 units)  
PSYC 73R Independent Study in Psychology (4 units)  
SOC 1 Introduction to Sociology (5 units)  
or SOC 1H Honors Introduction to Sociology (5 units)  
SOC 28 Sociology of Gender (4 units)  
SOC 40 Aspects of Marriage & Family (4 units)  
SPED 2 Psychological Aspects of Disability (4 units)  
WMN 5 Introduction to Women's Studies (4 units)

<sup>[42]</sup> Students may also use courses listed in the first section of support courses to fulfill the requirement for the second section of support courses.

## ASSOCIATE DEGREE FOR TRANSFER-PSYCHOLOGY

### Program Type(s): Associate in Arts for Transfer

Units required for major: 90

#### PROGRAM LEARNING OUTCOMES

- Students will be able to recognize the diversity of behavior of various populations and be able to explain, interpret, apply, and evaluate a broad base of concepts in the various fields of psychology.
- Students will be able to apply critical thinking skills and psychological theories to real-world situations, and to be able to apply research methodology and data analysis in the process of answering questions about human behavior.

#### ASSOCIATE DEGREE REQUIREMENTS \*

##### Core Courses: (20 units)

PSYC 1 General Psychology (5 units)  
or PSYC 1H Honors General Psychology (5 units)  
PSYC 7 Statistics for the Behavioral Sciences (5 units)  
or SOC 7 Statistics for the Behavioral Sciences (5 units)  
or MATH 10 Elementary Statistics (5 units)  
PSYC 10 Research Methods & Designs (5 units)  
or SOC 10 Research Methods & Designs (5 units)

And ONE of the following:

BIOL 10 General Biology: Basic Principles (5 units)  
BIOL 14 Human Biology (5 units)  
PSYC 4 Introduction to Biopsychology (5 units)

##### Support Courses: (8-10 units)

Select ONE course each from List A and List B; any course that was not selected from List A may also be used to satisfy List B.

List A:

ENGL 1A Composition & Reading (5 units)  
or ENGL 1AH Honors Composition & Reading (5 units)  
ENGL 1B Composition, Critical Reading & Thinking through Literature (5 units)  
or ENGL 1BH Honors Composition, Critical Reading & Thinking through Literature (5 units)  
MATH 1A Calculus (5 units)  
or MATH 1AH Honors Calculus I (5 units)  
PHIL 1 Critical Thinking & Writing (5 units)  
PSYC 14 Child & Adolescent Development (4 units)  
PSYC 30 Social Psychology (4 units)



## RADIOLOGIC TECHNOLOGY

### Program Type(s): Associate in Science Degree

Units required for major: 112

### PROGRAM LEARNING OUTCOMES

- Graduates will demonstrate entry-level competency skills in accordance with national and state regulatory agencies.
- Graduates will value and implement proper radiation safety for patients, self, and others.

### ASSOCIATE DEGREE REQUIREMENTS \*

#### Core Courses: (112 units)

##### FIRST YEAR

###### Summer

- AHS 50A Introduction to Allied Health Programs (1.5 units)
- R T 50 Orientation to Radiation Science Technologies (2 units)
- R T 53 Orientation to Radiologic Technology (1 unit)

###### Fall

- R T 51A Fundamentals of Radiologic Technology I (4 units)
- R T 53A Applied Radiographic Technology I (4 units)
- R T 53AL Applied Radiographic Technology Laboratory I (1 unit)
- R T 54A Basic Patient Care for Imaging Technology (2 units)
- R T 55A Principles of Radiologic Technology I (3 units)

###### Winter

- AHS 50B Interprofessional Patient Competencies (0.5 unit)
- R T 51B Fundamentals of Radiologic Technology II (4 units)
- R T 53B Applied Radiographic Technology II (4 units)
- R T 53BL Applied Radiographic Technology Laboratory II (1 unit)
- R T 54B Law & Ethics in Medical Imaging (2 units)
- R T 55B Principles of Radiologic Technology II (3 units)

###### Spring

- R T 51C Fundamentals of Radiologic Technology III (4 units)
- R T 51B Applied Radiographic Technology III (4 units)
- R T 53CL Applied Radiographic Technology Laboratory III (1 unit)
- R T 54C Radiographic Pathology (3 units)
- R T 55C Principles of Radiologic Technology III (3 units)

###### Summer (10 weeks)

- R T 53D Applied Radiologic Technology IV (9 units)
- R T 64 Fluoroscopy (4 units)
- R T 72 Venipuncture (1.5 units)

##### SECOND YEAR

###### Fall

- R T 52D Digital Image Acquisition & Display (2.5 units)
- R T 62A Advanced Modalities in Imaging (3 units)
- R T 63A Radiographic Clinical Practicum I (10.5 units)

###### Winter

- R T 61B Radiology Research Project (1 unit)
- R T 62B Special Procedures & Equipment (3 units)
- R T 63B Radiographic Clinical Practicum II (10.5 units)
- R T 65 Mammography (3 units)

###### Spring

- R T 62C Professional Development in Radiology (2.5 units)
- R T 63 Advanced Radiographic Principles (3 units)
- R T 63C Radiographic Clinical Practicum III (10.5 units)

or SOC 30 Social Psychology (4 units)  
PSYC 40 Human Development (5 units)  
SOC 1 Introduction to Sociology (5 units)  
or SOC 1H Honors Introduction to Sociology (5 units)

#### List B:

ANTH 1 Introduction to Physical Anthropology (4 units)  
or ANTH 1H Honors Introduction to Physical Anthropology (4 units)  
ANTH 2A Cultural Anthropology (4 units)  
or ANTH 2AH Honors Cultural Anthropology (4 units)  
PSYC 21 Psychology of Women: Sex & Gender Differences (4 units)  
or WMN 21 Psychology of Women: Sex & Gender Differences (4 units)  
PSYC 22 Psychology of Prejudice & Discrimination (4 units)  
PSYC 25 Introduction to Abnormal Psychology (4 units)  
PSYC 33 Introduction to Personality Psychology (4 units)  
PSYC 39 Psychology of Sports (4 units)  
PSYC 49 Human Sexuality (4 units)

## ASSOCIATE DEGREE FOR TRANSFER- PUBLIC HEALTH SCIENCE

### Program Type(s): Associate in Science for Transfer

Units required for major: 90

### PROGRAM LEARNING OUTCOMES

- Students will be able to identify, assess, utilize and articulate credible information resources on personal and public health current issues, such as the Internet, social media, media outlets, and libraries.
- Students will be able to effectively communicate strategies or tactics to improve health inequalities, such as advocacy, community organizing, and/or policy change.
- Students will obtain a critical understanding and apply knowledge of Personal and Public Health in real life settings from the sub-disciplines of Human Anatomy and Physiology, Statistics, Chemistry, and Psychology.

### ASSOCIATE DEGREE REQUIREMENTS \*

#### Core Courses: (44-45 units)

BIOL 1A Principles of Cell Biology (6 units)  
or BIOL 10 General Biology: Basic Principles (5 units)  
BIOL 40A Human Anatomy & Physiology I (5 units)  
BIOL 40B Human Anatomy & Physiology II (5 units)  
BIOL 40C Human Anatomy & Physiology III (5 units)  
CHEM 25 Foundations of Chemistry (5 units)  
HLTH 20 Introduction to Public Health (5 units)  
HLTH 21 Contemporary Health Concerns (4 units)  
MATH 10 Elementary Statistics (5 units)  
or PSYC 7 Statistics for the Behavioral Sciences (5 units)  
or SOC 7 Statistics for the Behavioral Sciences (5 units)  
PSYC 1 General Psychology (5 units)  
or PSYC 1H Honors General Psychology (5 units)

#### Support Courses: (4-6 units)

Complete ONE course from the following:

ACTG 1A Financial Accounting I (5 units)  
BIOL 41 Microbiology (6 units)  
BIOL 45 Introduction to Human Nutrition (4 units)  
ECON 1A Principles of Macroeconomics (5 units)  
ECON 1B Principles of Microeconomics (5 units)  
KINS 1 Introduction to Kinesiology (5 units)  
PHYS 12 Introduction to Modern Physics (5 units)  
PSYC 40 Human Development (5 units)  
PSYC 49 Human Sexuality (4 units)  
SOC 1 Introduction to Sociology (5 units)  
or SOC 1H Honors Introduction to Sociology (5 units)

## RESPIRATORY THERAPY

### Program Type(s): Associate in Science Degree

Units required for major: 99

#### PROGRAM LEARNING OUTCOMES

- Graduates will have acquired the necessary knowledge, skills and values for the practice of respiratory therapy.
- Graduates will be able to demonstrate appropriate critical thinking skills, time management skills, communication skills and technical skills necessary to provide competent respiratory care in multidisciplinary care settings.

#### ASSOCIATE DEGREE REQUIREMENTS \*

##### Core Courses: (99 units)

###### FIRST YEAR

###### Fall

AHS 50A Introduction to Allied Health Programs (1.5 units)  
RSPT 50A Respiratory Therapy Procedures (4.5 units)  
RSPT 51A Introduction to Respiratory Anatomy & Physiology (2 units)  
RSPT 52 Applied Science for Respiratory Therapy (3 units)  
RSPT 54 Orientation to Respiratory Care (2 units)  
RSPT 55A Mediated Studies in Respiratory Therapy I (0.5 unit)

###### Winter

AHS 50B Interprofessional Patient Competencies (0.5 unit)  
BIOL 41 Microbiology (6 units)  
RSPT 50B Introduction to Procedures & Hospital Orientation (6 units)  
RSPT 53A Introduction to Respiratory Therapy Pharmacology (2 units)  
RSPT 55B Mediated Studies in Respiratory Therapy II (0.5 unit)

###### Spring

RSPT 50C Therapeutics & Introduction to Mechanical Ventilation (5 units)  
RSPT 51B Respiratory Physiology (3 units)  
RSPT 51C Patient Assessment & Pulmonary Disease (4 units)  
RSPT 55C Mediated Studies in Respiratory Therapy III (0.5 unit)

###### Summer (6 weeks)

RSPT 55D Mediated Studies in Respiratory Therapy IV (0.5 unit)  
RSPT 61A Adult Mechanical Ventilation (4 units)  
RSPT 70A Clinical Rotation I (2 units)

###### SECOND YEAR

###### Fall

AHS 60A Cardiology for Allied Health (2 units)  
PSYC 1 General Psychology (5 units)  
or PSYC 1H Honors General Psychology (5 units)  
RSPT 53B Advanced Respiratory Therapy Pharmacology (2 units)  
RSPT 55E Mediated Studies in Respiratory Therapy V (0.5 unit)  
RSPT 61B Neonatal Respiratory Care (3 units)  
RSPT 70B Clinical Rotation II (8 units)

###### Winter

RSPT 55F Mediated Studies in Respiratory Therapy VI (0.5 unit)  
RSPT 60B Advanced Cardiac Life Support (2 units)  
RSPT 61C Home & Rehabilitative Respiratory Care (2 units)  
RSPT 63A Advanced Pathophysiology & Patient Management (3 units)  
RSPT 65 Computer Patient Simulations (0.5 unit)  
RSPT 70C Clinical Rotation III (8 units)

###### Spring

AHS 50C Interprofessional Competencies for Collaborative Practice (0.5 unit)  
RSPT 55G Mediated Studies in Respiratory Therapy VII (0.5 unit)  
RSPT 60C Pulmonary Diagnostics (3 units)  
RSPT 61D Pediatric Respiratory Care (2 units)  
RSPT 62 Management, Resume & National Board Examination (1 unit)  
RSPT 70D Clinical Rotation IV (8 units)

## SOCIOLOGY

### Program Type(s): Associate in Arts Degree

Units required for major: 30

#### PROGRAM LEARNING OUTCOMES

- Students will be able to demonstrate a working knowledge of the core concepts of sociology: social structure, culture, social stratification and inequality, race, ethnicity, and gender and globalization.
- Students will be able to apply their understanding of sociology to their professional, personal and civic lives.

#### ASSOCIATE DEGREE REQUIREMENTS \*

##### Core Courses: (17 units)

SOC 1 Introduction to Sociology (5 units)  
or SOC 1H Honors Introduction to Sociology (5 units)

And 12 units from the following:

SOC 8 Popular Culture (4 units)  
SOC 10 Research Methods & Designs (5 units)  
or PSYC 10 Research Methods & Designs (5 units)  
SOC 11 Introduction to Social Research (5 units)  
SOC 14 Sociology of Crime (4 units)  
SOC 15 Law & Society (4 units)  
SOC 19 Alcohol & Drug Abuse (4 units)  
SOC 20 Major Social Problems (4 units)  
SOC 23 Race & Ethnic Relations (4 units)  
SOC 28 Sociology of Gender (4 units)  
SOC 30 Social Psychology (4 units)  
or PSYC 30 Social Psychology (4 units)  
SOC 40 Aspects of Marriage & Family (4 units)

##### Support Courses: (13 units)

ANTH 2A Cultural Anthropology (4 units)  
or ANTH 2AH Honors Cultural Anthropology (4 units)  
CHLD 51A Affirming Diversity in Education (4 units)  
CHLD 88 Child, Family & Community (4 units)  
ECON 1A Principles of Macroeconomics (5 units)  
ECON 9 Political Economy (4 units)  
or ECON 9H Honors Political Economy (4 units)  
or POLI 9 Political Economy (4 units)  
or POLI 9H Honors Political Economy (4 units)  
ENGR 39 Energy, Society & the Environment (5 units)  
GEOG 2 Human Geography (4 units)  
GERN 10 Sociology of Aging (3 units)  
GERN 15 Issues of Death, Dying & Bereavement Across Cultures (3 units)  
GERN 56 Aging & Diversity (3 units)  
HIST 8 History of Latin America (4 units)  
HIST 9 History of Contemporary Europe (4 units)  
or HIST 9H Honors History of Contemporary Europe (4 units)  
HIST 10 History of California: The Multicultural State (4 units)  
HIST 17C History of the United States from 1914 to the Present (4 units)  
MATH 10 Elementary Statistics (5 units)  
or PSYC 7 Statistics for the Behavioral Sciences (5 units)  
or SOC 7 Statistics for the Behavioral Sciences (5 units)  
PHIL 1 Critical Thinking & Writing (5 units)  
PSYC 22 Psychology of Prejudice & Discrimination (4 units)  
SOC 54H Honors Institute Seminar in Sociology (1 unit)  
SOC 70R Independent Study in Sociology (1 unit)  
SOC 71R Independent Study in Sociology (2 units)  
SOC 72R Independent Study in Sociology (3 units)  
SOC 73R Independent Study in Sociology (4 units)  
WMN 5 Introduction to Women's Studies (4 units)  
WMN 21 Psychology of Women: Sex & Gender Differences (4 units)  
or PSYC 21 Psychology of Women: Sex & Gender Differences (4 units)

## ASSOCIATE DEGREE FOR TRANSFER-SOCIOLOGY

### Program Type(s): Associate in Arts for Transfer

Units required for major: 90

#### PROGRAM LEARNING OUTCOMES

- Students will be able to demonstrate a working knowledge of the core concepts of sociology: social structure, culture, social stratification and inequality, race, ethnicity, gender and globalization.
- Students will be able to apply their understanding of sociology to their professional, personal and civic lives.

#### ASSOCIATE DEGREE REQUIREMENTS \*

##### Core Courses: (22-23 units)

SOC 1 Introduction to Sociology (5 units)  
or SOC 1H Honors Introduction to Sociology (5 units)

And select TWO courses each from List A and List B:

List A:

SOC 20 Major Social Problems (4 units)  
PSYC 7 Statistics for the Behavioral Sciences (5 units)  
or SOC 7 Statistics for the Behavioral Sciences (5 units)  
or MATH 10 Elementary Statistics (5 units)  
PSYC 10 Research Methods & Designs (5 units)  
or SOC 10 Research Methods & Designs (5 units)

List B:

SOC 20<sup>[43]</sup> Major Social Problems (4 units)  
PSYC 10<sup>[43]</sup> Research Methods & Designs (5 units)  
or SOC 10 Research Methods & Designs (5 units)  
MATH 10<sup>[43]</sup> Elementary Statistics (5 units)  
SOC 14 Sociology of Crime (4 units)  
SOC 23 Race & Ethnic Relations (4 units)  
SOC 28 Sociology of Gender (4 units)  
SOC 30 Social Psychology (4 units)  
or PSYC 30 Social Psychology (4 units)  
SOC 40 Aspects of Marriage & Family (4 units)

<sup>[43]</sup> May be used to satisfy List B if not completed as part of List A.

##### Support Courses: (4-5 units)

Select ONE course from the following:  
ANTH 2A Cultural Anthropology (4 units)  
or ANTH 2AH Honors Cultural Anthropology (4 units)  
ECON 25 The Global Economy (4 units)  
GEOG 2 Human Geography (4 units)  
PHIL 1 Critical Thinking & Writing (5 units)  
PSYC 1 General Psychology (5 units)  
or PSYC 1H Honors General Psychology (5 units)  
PSYC 49 Human Sexuality (4 units)

## SPANISH

### Program Type(s): Associate in Arts Degree

Units required for major: 34

#### PROGRAM LEARNING OUTCOMES

- The student will be able to communicate with native speakers of Spanish, using the appropriate language for any given situation.
- The student will, by presenting research, demonstrate knowledge of Hispanic society, culture, and politics.

#### ASSOCIATE DEGREE REQUIREMENTS \*

##### Core Courses: (30 units)

SPAN 1 Elementary Spanish I (5 units)  
SPAN 2 Elementary Spanish II (5 units)  
SPAN 3 Elementary Spanish III (5 units)  
SPAN 4 Intermediate Spanish I (5 units)  
SPAN 5 Intermediate Spanish II (5 units)  
SPAN 6 Intermediate Spanish III (5 units)

*Note: For students who can demonstrate proficiency equivalent to one year of college Spanish, SPAN 1, 2 and 3 may be waived. However, if you are waived out of SPAN 1-2-3 (15 units), you must take 15 units from the support courses below to satisfy the 30-unit core requirement.*

##### Support Courses: (4 units)

SPAN 10A Spanish for Heritage Speakers (5 units)  
SPAN 13A Intermediate Conversation I (4 units)  
SPAN 13B Intermediate Conversation II (4 units)  
SPAN 14A Advanced Conversation I (4 units)  
SPAN 14B Advanced Conversation II (4 units)  
SPAN 25A Advanced Composition & Reading I (4 units)  
SPAN 25B Advanced Composition & Reading II (4 units)

## ASSOCIATE DEGREE FOR TRANSFER-SPANISH

### Program Type(s): Associate in Arts for Transfer

Units required for major: 90

#### PROGRAM LEARNING OUTCOMES

- The student will be able to communicate with native speakers of Spanish, using the appropriate language for any given situation.
- The student will, by presenting research, demonstrate knowledge of Hispanic society, culture, and politics.

#### ASSOCIATE DEGREE REQUIREMENTS \*

##### Core Courses: (30 units)

Select ONE of the following options:

Option 1:

SPAN 1 Elementary Spanish I (5 units)  
SPAN 2 Elementary Spanish II (5 units)  
SPAN 3 Elementary Spanish III (5 units)  
SPAN 4 Intermediate Spanish I (5 units)  
SPAN 5 Intermediate Spanish II (5 units)  
SPAN 6 Intermediate Spanish III (5 units)

Option 2:

SPAN 1 Elementary Spanish I (5 units)  
SPAN 2 Elementary Spanish II (5 units)  
SPAN 3 Elementary Spanish III (5 units)  
SPAN 4 Intermediate Spanish I (5 units)  
SPAN 6 Intermediate Spanish III (5 units)  
SPAN 10A Spanish for Heritage Speakers (5 units)

##### Support Courses: (4 units)

SPAN 25A Advanced Composition & Reading I (4 units)  
SPAN 25B Advanced Composition & Reading II (4 units)  
ENGL 31 Latino/a Literature (4 units)  
HIST 8 History of Latin America (4 units)

*Please Note: If the student places out of any course and is not awarded units for that course, the student will have to take additional units to compensate for the course/units needed to reach at least 27 total units in the major (per Title 5 regulations). Course substitutions are made at the discretion of the local college and may or may not be delineated in the local degree. Students should see a counselor for details.*

## SPORTS MEDICINE (FORMERLY ATHLETIC INJURY CARE)

### Program Type(s): Associate in Science Degree

Units required for major: 49

### PROGRAM LEARNING OUTCOMES

- Students will demonstrate an entry-level of knowledge and skill in a variety of sports medicine disciplines, including athletic training, physical therapy, strength and conditioning and emergency medical care.
- Students will be able to provide quality medical care for Foothill College intercollegiate athletic teams.

### ASSOCIATE DEGREE REQUIREMENTS \*

#### Core Courses: (49 units)

BIOL 40A Human Anatomy & Physiology I (5 units)  
BIOL 40B Human Anatomy & Physiology II (5 units)  
BIOL 40C Human Anatomy & Physiology III (5 units)  
CHEM 25 Fundamentals of Chemistry (5 units)  
or CHEM 30A Survey of Inorganic & Organic Chemistry (5 units)  
KINS 1 Introduction to Kinesiology (5 units)  
KINS 16A Prevention of Athletic Injuries (3 units)  
KINS 16B Emergency Athletic Injury Care (3 units)  
KINS 16C Treatment & Rehabilitation of Athletic Injuries (3 units)  
KINS 62A Clinical Experiences in Sports Medicine I (3 units)  
KINS 62B Clinical Experiences in Sports Medicine II (3 units)  
KINS 62C Clinical Experiences in Sports Medicine III (3 units)  
KINS 62D Clinical Experiences in Sports Medicine IV (3 units)  
KINS 62E Clinical Experiences in Sports Medicine V (3 units)

#### Elective Courses: (Recommended units)

These courses are recommended to fulfill the additional elective requirements to reach 90 units for the degree as they augment the major:

BIOL 45 Introduction to Human Nutrition (4 units)  
CHEM 1A General Chemistry (5 units)  
or CHEM 1AH Honors General Chemistry (5 units)  
CHEM 1B General Chemistry (5 units)  
or CHEM 1BH Honors General Chemistry (5 units)  
CHEM 1C General Chemistry & Qualitative Analysis (5 units)  
HLTH 21 Contemporary Health Concerns (4 units)  
KINS 4 Concepts of Physical Fitness & Wellness (4 units)  
KINS 15 First Aid & CPR/AED (1 unit)  
KINS 65A PNF: Introduction to the Upper Extremity (3 units)  
KINS 65B PNF: Introduction to the Lower Extremity (3 units)  
MATH 10 Elementary Statistics (5 units)  
PHYS 2A General Physics (5 units)  
PHYS 2B General Physics (5 units)  
PHYS 2C General Physics (5 units)  
PSYC 1 General Psychology (5 units)  
or PSYC 1H Honors General Psychology (5 units)

## ASSOCIATE DEGREE FOR TRANSFER-STUDIO ARTS

### Program Type(s): Associate in Arts for Transfer

Units required for major: 90

### PROGRAM LEARNING OUTCOMES

- Graduates will be equipped with the fundamental formal two- and three-dimensional foundation-level technical skills, materials, concepts, and methods.
- Graduates will gain strong awareness of cultural art traditions through the examination and critical evaluation of culturally significant works of art.
- Graduates will be able to critique and analyze two- and three-dimensional creative projects using the current principles, theories and language of art and design.

### ASSOCIATE DEGREE REQUIREMENTS \*

#### Core Courses: (21 units)

ART 2B History of Western Art from the Middle Ages to the Renaissance (4.5 units)

or ART 2BH Honors History of Western Art from the Middle Ages to the Renaissance (4.5 units)

ART 2C History of Western Art from the Baroque to Modernism (4.5 units)

ART 5A 2-D Foundations (4 units)

ART 5B 3-D Foundations (4 units)

ART 4A Fundamentals in Drawing (4 units)

#### Support Courses: (16.5 units)

Complete ONE course from List A:

List A:

ART 2A History of Art: History of Western Art from Prehistory through Early Christianity (4.5 units)

or ART 2AH Honors History of Art: History of Western Art from Prehistory through Early Christianity (4.5 units)

ART 2F Introduction to Asian Art (4.5 units)

ART 3 History of Modern Art from Post-Impressionism to the Present (4.5 units)

And complete 12 units from three areas in List B:

List B:

Drawing Area:

ART 4D Figure Drawing I (4 units)

and<sup>[44]</sup> ART 4E Heads & Hands Drawing (4 units)

ART 4B Intermediate Drawing (4 units)

and<sup>[44]</sup> ART 4C Representational Drawing (4 units)

Painting Area:

ART 19A Oil Painting I (4 units)

or ART 19B Acrylic Painting I (4 units)

ART 19C Oil Painting II (4 units)

Color Area:

ART 20A Color I (4 units)

and<sup>[44]</sup> ART 20B Color II (4 units)

Ceramics Area:

ART 45A Beginning Ceramics Handbuilding (4 units)

Sculpture Area:

ART 5C Sculpture (4 units)

ART 44 Ceramic Sculpture (4 units)

Other Studio Arts Area:

ART 47A Watercolor I (4 units)

ART 47B Watercolor II (4 units)

Printmaking Area:

GID 38 Introduction to Printmaking (4 units)

or ART 40 Introduction to Printmaking (4 units)

Digital Art Area:

GID 41 Digital Art & Graphics (4 units)

or ART 14D Digital Art & Graphics (4 units)

Photography Area:

PHOT 1 Black & White Photography I (4 units)

or PHOT 5 Introduction to Photography (4 units)

<sup>[44]</sup> Both courses must be completed to fulfill the requirement.

## THEATRE ARTS

### Program Type(s): Associate in Arts Degree, Career Certificate

Units required for major: 48-50, certificate: 26

### PROGRAM LEARNING OUTCOMES

- Students will be able to proceed to further educational opportunities or entry-level workforce employment in their prescribed area of the performing arts with a minimal adjustment period.
- Students will be able to employ skill sets of collaboration relevant to multiple arenas of alliance or teamwork within the performing arts arena.

### ASSOCIATE DEGREE REQUIREMENTS \*

#### Core Courses: (28-32 units)

THTR 1 Introduction to Theatre (4 units)

THTR 20A Acting I (4 units)

THTR 31 Management for the Theatre & Stage (4 units)

And select ONE of the following track options:

Option 1: General Studies

THTR 2A History of Dramatic Literature: Classical to Moliere (4 units)

THTR 2B History of Dramatic Literature: Moliere to Modern (4 units)

THTR 8 Multicultural Theatre Arts in Modern America (4 units)

And 4 units from the following:

THTR 45A Technical Theatre in Production I (4 units)

THTR 45E Technical Theatre Management in Production (6 units)

THTR 47A Introduction to Musical Theatre Production (6 units)

THTR 49A Performance Production I (6 units)

Option 2: Acting Performance

THTR 2A History of Dramatic Literature: Classical to Moliere (4 units)

THTR 2B History of Dramatic Literature: Moliere to Modern (4 units)

or THTR 8 Multicultural Theatre Arts in Modern America (4 units)

THTR 20B Acting II (4 units)

THTR 20C Acting III (4 units)

And 4 units from the following:

THTR 45A Technical Theatre in Production I (4 units)

THTR 45E Technical Theatre Management in Production (6 units)

THTR 47A Introduction to Musical Theatre Production (6 units)

THTR 49A Performance Production I (6 units)

Option 3: Musical Theatre Performance

DANC 3A Beginning Jazz Dance (1 unit)

THTR 2F History of American Musical Theatre (4 units)

THTR 48B Singing Technique for Musical Theatre (4 units)

THTR 48C Musical Theatre Repertoire for Singers (4 units)

And 4 units from the following:

THTR 45A Technical Theatre in Production I (4 units)

THTR 45E Technical Theatre Management in Production (6 units)

THTR 47A Introduction to Musical Theatre Production (6 units)

#### Support Courses: (18-22 units)

For all options, select 4 units from the following:

THTR 21A Scenery & Property Construction (4 units)

THTR 25 Introduction to Fashion & Costume Construction (4 units)

THTR 27 Lighting Design & Technology (4 units)

THTR 40A Basic Theatrical Makeup (4 units)

THTR 42 Introduction to Theatre Design (4 units)

For Option 1, select an additional 18 units<sup>[45]</sup> from the following:

THTR 2F History of American Musical Theatre (4 units)

THTR 7 Introduction to Directing (4 units)

THTR 12A Stage & Screen (4 units)

THTR 20B Acting II (4 units)

THTR 20C Acting III (4 units)

THTR 21B Intermediate Scenery & Property Construction (4 units)

THTR 21C Advanced Scenery & Properties Construction (4 units)

THTR 25B Fashion & Costume Construction II (4 units)

THTR 25C Fashion & Costume Construction III (4 units)

THTR 26 Introduction to Fashion History & Costume Design (4 units)

THTR 38D Stage Combat (2 units)

THTR 40B Theatrical Makeup for Production (4 units)

THTR 43A Script Analysis (4 units)

THTR 43C Foundations in Classical Acting (6 units)

THTR 43E Improvisation (4 units)

THTR 44A Production Projects I (4 units)

THTR 44B Production Projects II (4 units)

THTR 45B Technical Theatre in Production II (4 units)

THTR 45C Technical Theatre in Production III (4 units)

THTR 45D Technical Theatre in Production IV (4 units)

THTR 45F Technical Theatre Management in Production II (6 units)

THTR 46A Theatre Development Workshop I (2 units)

THTR 46B Theatre Development Workshop II (2 units)

THTR 47B Intermediate Music Theatre Production Workshop (6 units)

THTR 47C Advanced Music Theatre Production Workshop (6 units)

THTR 47D Advanced Music Theatre Production Workshop II (6 units)

THTR 48A Vocal Production & Speech (4 units)

THTR 48B Singing Technique for Musical Theatre (4 units)

THTR 48C Musical Theatre Repertoire for Singers (4 units)

THTR 49B Performance Production II (6 units)

THTR 49C Performance Production III (6 units)

THTR 49D Performance Production IV (6 units)

THTR 57 Actor Marketing Strategies (4 units)

THTR 63A Film & Television Acting Workshop (4 units)

For Option 2, select an additional 14 units<sup>[45]</sup> from the following:

THTR 2F History of American Musical Theatre (4 units)

THTR 7 Introduction to Directing (4 units)

THTR 12A Stage & Screen (4 units)

THTR 38D Stage Combat (2 units)

THTR 43A Script Analysis (4 units)

THTR 43C Foundations in Classical Acting (6 units)

THTR 43E Improvisation (4 units)

THTR 48A Vocal Production & Speech (4 units)

THTR 48B Singing Technique for Musical Theatre (4 units)

THTR 57 Actor Marketing Strategies (4 units)

THTR 63A Film & Television Acting Workshop (4 units)

For Option 3, select an additional 15 units<sup>[45]</sup> from the following:

DANC 3B Intermediate Jazz Dance (1 unit)

THTR 2A History of Dramatic Literature: Classical to Moliere (4 units)

THTR 2B History of Dramatic Literature: Moliere to Modern (4 units)

THTR 8 Multicultural Theatre Arts in Modern America (4 units)

THTR 20B Acting II (4 units)

THTR 20C Acting III (4 units)

THTR 38D Stage Combat (2 units)

THTR 43A Script Analysis (4 units)

THTR 43C Foundations in Classical Acting (6 units)

THTR 43E Improvisation (4 units)

THTR 48A Vocal Production & Speech (4 units)

THTR 48F Musical Theatre Repertoire for Singers II (4 units)

THTR 57 Actor Marketing Strategies (4 units)

THTR 63A Film & Television Acting Workshop (4 units)

<sup>[45]</sup> Students may also use courses listed in the first section of support courses to fulfill this requirement.

### Actor Training Career Certificate (26 units)

#### [Non-Transcriptable]

Select 26 units from the following:

THTR 20B Acting II (4 units)

THTR 20C Acting III (4 units)

THTR 38D Stage Combat (2 units)

THTR 43A Script Analysis (4 units)

THTR 43C Foundations in Classical Acting (6 units)

THTR 43E Improvisation (4 units)

THTR 48A Vocal Production & Speech (4 units)

THTR 48B Singing Technique for Musical Theatre (4 units)

THTR 57 Actor Marketing Strategies (4 units)

THTR 63A Film & Television Acting Workshop (4 units)

## ASSOCIATE DEGREE FOR TRANSFER-THEATRE ARTS

### Program Type(s): Associate in Arts for Transfer

Units required for major: 90

### PROGRAM LEARNING OUTCOMES

- Students will be able to proceed to further educational opportunities or entry-level workforce employment in their prescribed area of the performing arts with a minimal adjustment period.
- Students will be able to employ skill sets of collaboration relevant to multiple arenas of alliance or teamwork within the performing arts arena.

### ASSOCIATE DEGREE REQUIREMENTS \*

#### Core Courses: (12-18 units)

THTR 1 Introduction to Theatre (4 units)

or

THTR 2A History of Dramatic Literature: Classical to Moliere (4 units)

and<sup>[46]</sup> THTR 2B History of Dramatic Literature: Moliere to Modern (4 units)

<sup>[46]</sup> Both courses must be completed to fulfill the requirement.

And select TWO courses from the following:

THTR 20A Acting I (4 units)

THTR 49A Performance Production I (6 units)

or THTR 45A Technical Theatre in Production I (4 units)

#### Support Courses: (16-18 units)

Select FOUR courses from the following:

THTR 20B Acting II (4 units)

THTR 27 Lighting Design & Technology (4 units)

THTR 40A Basic Theatrical Makeup (4 units)

THTR 21A Scenery & Property Construction (4 units)

THTR 49A<sup>[47]</sup> Performance Production I (6 units)

or THTR 45A<sup>[47]</sup> Technical Theatre in Production I (4 units)

<sup>[47]</sup> If not used to satisfy the core course requirement.

## THEATRE TECHNOLOGY

### Program Type(s): Associate in Arts Degree, Certificate of Achievement, Career Certificate

Units required for major: 48, certificate: 24-48

### PROGRAM LEARNING OUTCOMES

- Students will be able to explore further educational or workforce experience in technical theatre with a minimal fundamental adjustment period.
- Students will function effectively in a variety of roles within a collaborative technical theatre environment.
- Students will develop skills for evaluating their own and others' contributions to successful outcomes in technical theatre.

### ASSOCIATE DEGREE REQUIREMENTS \*

#### Core Courses: (32 units)

ART 4A Fundamentals in Drawing (4 units)

GID 33 Graphic Design Studio I (4 units)

THTR 1 Introduction to Theatre (4 units)

or THTR 8 Multicultural Theatre Arts in Modern America (4 units)

THTR 20A Acting I (4 units)

THTR 21A Scenery & Property Construction (4 units)

THTR 25 Introduction to Fashion & Costume Construction (4 units)

or THTR 26 Introduction to Fashion History & Costume Design (4 units)

THTR 31 Management for the Theatre & Stage (4 units)

THTR 42 Introduction to Theatre Design (4 units)

#### Support Courses: (16 units)

Select 8 units from the following:

ART 5A 2-D Foundations (4 units)

or ART 5B 3-D Foundations (4 units)

MTEC 86A Sound Reinforcement & Live Recording (4 units)

or MTEC 51A Studio Recording I (4 units)

THTR 21B Intermediate Scenery & Property Construction (4 units)

THTR 21C Advanced Scenery & Properties Construction (4 units)

THTR 25B Fashion & Costume Construction II (4 units)

THTR 27 Lighting Design & Technology (4 units)

THTR 32 CAD Drafting for the Theatre, Film & Television (4 units)

THTR 32A Advanced CAD Drafting for the Theatre, Film & Television (4 units)

THTR 40A Basic Theatrical Makeup (4 units)

THTR 43A Script Analysis (4 units)

And 8 units from the following:

THTR 45A Technical Theatre in Production I (4 units)

THTR 45B Technical Theatre in Production II (4 units)

THTR 45C Technical Theatre in Production III (4 units)

THTR 45E Technical Theatre Management in Production (6 units)

THTR 45F Technical Theatre Management in Production II (6 units)

### Certificate of Achievement in Theatre Technology (48 units)

The certificate of achievement is awarded upon completion of the core and support courses. General education courses are not required.

### Theatre Technology Career Certificate (24 units)

#### [Non-Transcriptable]

MTEC 86A Sound Reinforcement & Live Recording (4 units)

or MTEC 51A Studio Recording I (4 units)

THTR 21A Scenery & Property Construction (4 units)

THTR 25 Introduction to Fashion & Costume Construction (4 units)

THTR 27 Lighting Design & Technology (4 units)

THTR 32 CAD Drafting for the Theatre, Film & Television (4 units)

THTR 42 Introduction to Theatre Design (4 units)

### Theatre Production Organization Career Certificate (24 units)

#### [Non-Transcriptable]

THTR 21A Scenery & Property Construction (4 units)

THTR 31 Management for the Theatre & Stage (4 units)

THTR 42 Introduction to Theatre Design (4 units)

And 12 units from the following:

THTR 45A Technical Theatre in Production I (4 units)

THTR 45B Technical Theatre in Production II (4 units)

THTR 45C Technical Theatre in Production III (4 units)

THTR 45D Technical Theatre in Production IV (4 units)

THTR 45E Technical Theatre Management in Production (6 units)

THTR 45F Technical Theatre Management in Production II (6 units)

## TRANSFER STUDIES—CSU GE

### Program Type(s): Certificate of Achievement

Units required for Certificate: 52

### Certificate of Achievement in Transfer Studies—CSU GE (52 Units)

The following course requirement information is current as of the publication date. As additional courses may be added to the CSU GE pattern after the catalog is published, please consult a Foothill College counselor for an updated listing.

#### AREA A: Communication in the English Language & Critical Thinking (minimum 12 units)

CSU admission requires completion of one course from each of the following areas: A1, A2 and A3.

A1. Oral Communication: COMM 1A, 1AH, 1B, 1BH, 2, 3, 4.

A2. Written Communication: ENGL 1A, 1AH, 1B, 1BH, ENGL 1S & 1T (if 1S & 1T are selected to satisfy this area, both 1S & 1T must be completed) or ESLL 26.

A3. Critical Thinking: ENGL 1B, 1BH, 1C, 1CH; PHIL 1, 7, 30.

#### AREA B: Natural Sciences & Mathematics (12-15 units)

Complete one course from category B1, B2, and B4. One Physical or Biological Science must include a laboratory experience (noted with asterisk).

## TRANSFER STUDIES-IGETC

### Program Type(s): Certificate of Achievement

Units required for Certificate: 48

### Certificate of Achievement in Transfer Studies--IGETC (48 Units)

The following course requirement information is current as of the publication date. As additional courses may be added to the IGETC pattern after the catalog is published, please consult a Foothill College counselor for an updated listing.

#### AREA 1: English Communication (10-15 units)

**For UC:** Complete one course from Group A and one course from Group B.

**For CSU:** Complete one course from Group A, Group B and Group C.

Group A: English Composition: ENGL 1A or 1AH or 1S & 1T (if 1S & 1T are selected to satisfy this area, both 1S & 1T must be completed). (5 units)

Group B: Critical Thinking/English Composition: ENGL 1B, 1BH, 1C, 1CH; PHIL 1. (5 units)

Group C: Oral Communication (required for CSU only): COMM 1A, 1AH, 1B, 1BH, 2, 3, 4. (5 units)

#### AREA 2: Mathematical Concepts and Quantitative Reasoning (5 units)

Complete a minimum of one course.

C S 18; MATH 1A, 1AH, 1B, 1C, 1D, 2A, 2B, 10, 11, 12, 17, 22, 44, 48C; PSYC 7; SOC 7.

#### AREA 3: Arts and Humanities (12-15 units)

Complete at least three courses: one course from Arts and one course from Humanities, plus one additional course from either Arts or Humanities.

Arts: ART 1, 2A, 2AH, 2B, 2BH, 2C, 2E, 2F, 2J, 3; DANC 10; MDIA 1, 2A, 2B, 2C, 3, 6; MUS 1, 2A, 2B, 2C, 2D, 2F, 3A, 3B, 3C, 7, 7D, 7E, 7F, 8, 8H, 9A, 9B, 10, 11A, 11B, 11D, 11E; PHIL 11; PHOT 5, 8, 8H, 10, 10H, 11, 11H; THTR 1, 2A, 2B, 2F, 8, 12A, 26.

Humanities: ENGL 5, 7, 8, 11, 11H, 12, 14, 16, 17, 18A, 24, 31, 40, 41, 43A, 43B, 45A, 45B, 47A, 47B; HIST 4A, 4B, 4C, 4CH; HUMN 1, 2, 3, 3H, 4, 4H, 5, 6, 7; JAPN 4, 5, 6, 35; MDIA 11, 12; PHIL 2, 4, 8, 20A, 20B, 20C, 24, 25; SPAN 4, 5, 6, 10A, 25A, 25B; THTR 2A, 2B.

#### AREA 4: Social and Behavioral Sciences (12-15 units)

Complete at least three courses from two different subjects.

ANTH 2A, 2AH, 2B, 3, 4, 5, 6, 8, 12, 14, 15, 20, 22; ART 2E; CHLD 1, 2; COMM 10, 12; ECON 1A, 1B, 9, 9H, 25; GEOG 2, 5, 10; HIST 4A, 4B, 4C, 4CH, 8, 9, 9H, 10, 16, 16H, 17A, 17B, 17C, 18, 20; HLTH 20; KINS 2, 10; MDIA 9; MUS 11F; PHOT 8, 8H; POLI 1, 2, 2H, 3, 3H, 9, 9H, 15, 15H; PSYC 1, 4, 10, 14, 21, 22, 25, 30, 33, 39, 40, 49; SOC 1, 1H, 8, 10, 11, 14, 15, 20, 23, 28, 30, 40; SOSC 20; SPED 1, 2; WMN 5, 11, 21.

**NOTE: American Institutions CSU Graduation Requirement:**

For graduation from CSU, students must complete two courses in American history. The following Foothill courses may be used to satisfy this requirement. Students may complete these courses in partial fulfillment of Area 4 AND satisfy the American Institutions requirement. Students should complete POLI 1 and one of the following: HIST 17A, 17B, 17C.

#### AREA 5: Physical and Biological Sciences (9-12 units)

Complete at least two courses: one Physical Science course and one Biological Science course; at least one must include a laboratory (noted with asterisk\*).

**NOTE:** Either UC or CSU may limit credit (please see a Foothill College Counselor for clarification).

Physical Sciences: ASTR 10A, 10B, 10BH, 10L\*; CHEM 1A\*, 1B\*, 1C\*, 9\*, 12A\*, 12B\*, 12C\*, 20\*, 25\*, 30A\*, 30B\*; GEOG 1\*; PHYS 2A\*, 2B\*, 2C\*, 4A\*, 4B\*, 4C\*, 4D\*, 6, 12.

Biological Sciences: ANTH 1, 1H, 1HL\*, 1L\*; BIOL 1A\*, 1B\*, 1C\*, 1D, 9, 9L\*, 10\*, 12, 13\*, 14\*, 15\*, 40A\*, 40B\*, 40C\*, 41\*, 45; HORT 10\*.

B1. Physical Science: ASTR 10A, 10B, 10BH, 10L\*; CHEM 1A\*, 1B\*, 1C\*, 9\*, 12A\*, 12B\*, 12C\*, 20\*, 25\*, 30A\*, 30B\*; GEOG 1\*; PHYS 2A\*, 2B\*, 2C\*, 4A\*, 4B\*, 4C\*, 4D\*, 6, 12.

B2. Biological & Life Science: ANTH 1, 1H, 1HL\*, 1L\*; BIOL 1A\*, 1B\*, 1C\*, 1D, 9, 9L\*, 10\*, 12, 13\*, 14\*, 15\*, 40A\*, 40B\*, 40C\*, 41\*, 45; HORT 10\*.

B4. Mathematics/Quantitative Reasoning: (Completion of one course is required for CSU Admission) C S 18; MATH 1A, 1AH, 1B, 1C, 1D, 2A, 2B, 10, 11, 12, 17, 22, 42, 44, 48A, 48B, 48C; PSYC 7; SOC 7.

### AREA C: Arts, Literature, Philosophy & Foreign Language (12-15 units)

Completion of a minimum of three courses, to include at least one course from Arts and one course from Humanities.

**NOTE:** Students who did not complete ENGL 1B or 1BH for Area A3 above must complete ENGL 1B or 1BH as one of the Area C courses. Courses may not be counted in more than one area.

C1. Arts (Art, Dance, Music, Theater): ART 1, 2A, 2AH, 2B, 2BH, 2C, 2E, 2F, 2J, 3, 4A, 6; DANC 10; MDIA 1, 2C, 3, 6; MUS 1, 2A, 2B, 2C, 2D, 3A, 3B, 3C, 7, 7D, 7E, 7F, 8, 8H, 9A, 9B, 10, 11A, 11B, 11D, 11E; PHIL 11; PHOT 1, 5, 8, 8H, 10, 10H, 11, 11H; THTR 1, 2A, 2B, 2F, 8, 12A, 20A, 26.

C2. Humanities (Literature, Philosophy, Foreign Languages): COMM 12; CRWR 6, 39A, 39B, 41A, 41B; ENGL 1B, 1BH, 5, 7, 8, 11, 11H, 12, 14, 16, 17, 18A, 24, 31, 40, 41, 43A, 43B, 45A, 45B, 47A, 47B; HIST 4A, 4B, 4C, 4CH; HUMN 1, 2, 3, 3H, 4, 4H, 5, 6, 7; JAPN 1, 2, 3, 4, 5, 6, 35; MDIA 2A, 2B, 3, 11, 12; PHIL 2, 4, 8, 12, 20A, 20B, 20C, 24, 25; SPAN 1, 2, 3, 4, 5, 6, 10A, 25A, 25B; THTR 2A, 2B.

### AREA D: Social, Political & Economic Institutions (12-15 units)

Two CSU graduation requirements: minimum of three courses.

**Requirement 1:** Three courses, selected from D-1 through D-0 and including at least two different areas;

**Strongly Recommended:** POLI 1 and either HIST 17A or 17B or 17C (This satisfies the F1 CSU American Institutions Requirement which is required of all CSU graduates).

D1. Anthropology & Archaeology: ANTH 2A, 2AH, 2B, 3, 4, 5, 6, 8, 12, 14, 15, 16L, 17L, 20, 22, 52.

D2. Economics: ECON 1A, 1B, 9, 9H, 25; GEOG 5; POLI 9, 9H.

D3. Ethnic Studies: (Please note that some CSU campuses may require additional courses after transfer to meet this requirement.) ANTH 2B, 4, 6, 20; CHLD 51A; COMM 12; ENGL 12, 31; HIST 10; MUS 8, 8H; PHIL 24, 25; PHOT 8, 8H; PSYC 21, 22; SOC 23; SOSC 20; WMN 21.

D4. Gender Studies: ART 2E; COMM 10; ENGL 22; KINS 10; PSYC 21; SOC 28; WMN 5, 11, 21.

D5. Geography: GEOG 2, 5, 10.

D6. History: HIST 4A, 4B, 4C, 4CH, 8, 9, 9H, 10, 16, 16H, 17A, 17B, 17C, 18, 20.

D7. Interdisciplinary Social or Behavioral Science: CHLD 1, 2, 51A; HIST 18; HLTH 20; KINS 2, 10; MDIA 9; MUS 11F; SOC 8; SOSC 20; SPED 1, 2.

D8. Political Science, Government, & Legal Institutions: ECON 9, 9H; POLI 1, 2, 2H, 3, 3H, 9, 9H, 15, 15H.

D9. Psychology: CHLD 50A; PSYC 1, 4, 10, 14, 21, 22, 25, 30, 33, 39, 40, 49; SOC 10, 30; SPED 1; WMN 21.

D0. Sociology & Criminology: PSYC 10, 21, 30; SOC 1, 1H, 8, 10, 11, 14, 15, 20, 23, 28, 30, 40; WMN 21.

### AREA E: Lifelong Understanding & Self Development (4-5 units)

E. BIOL 8; CNSL 52, 72; CRLP 7; DANC 1A, 1B, 1C, 2A, 2B, 3A, 3B, 4A, 4B, 4C, 5, 6, 7, 8, 11A, 11B, 11C, 12A, 12B, 12C, 13A, 13B, 14, 18A, 18B (Note: DANC counts as PE Activity); HLTH 21, 60; any ATHL, PHDA, PHED, Activity course (limited to 2 units); KINS 4, 9, 15; SOC 19, 40; SPED 1, 2.

**Note:** Courses completed for this Certificate of Achievement must be on the approved list during the year in which they were taken. Please consult a counselor with any questions.

**AREA 6: Language Other Than English (UC requirement only)**

Proficiency equivalent to two years of high school study in the same language with a grade of "C" or better or completion of one of the following courses. If Foothill College courses are not used to satisfy this requirement, students must provide official documentation of completion elsewhere:  
JAPN 2, 3, 4, 5, 6; SPAN 2, 3, 4, 5, 6, 10A.

Note: Courses completed for this Certificate of Achievement must be on the approved list during the year in which they were taken. Please consult a counselor with any questions.

## VETERINARY TECHNOLOGY

**Program Type(s): Associate in Science Degree, Career Certificate**

Units required for major: 89, certificate: 12.5

**PROGRAM LEARNING OUTCOMES**

- The student will demonstrate competency in the necessary knowledge, skills, and abilities required for the practice of veterinary technology in a wide scope of practice settings.
- The graduates will demonstrate entry-level clinical skills competency in accordance with accreditation requirements.

**ASSOCIATE DEGREE REQUIREMENTS \*****Core Courses: (89 units)****FIRST YEAR**

## Summer

AHS 50A Introduction to Allied Health Programs (1.5 units)

## Fall

V T 50A Current Topics in Veterinary Technology I (1 unit)

V T 53A Medical Terminology (2 units)

V T 54A Comparative Veterinary Anatomy & Physiology for the Veterinary Technician (5 units)

V T 55 Animal Management & Clinical Skills I (4 units)

V T 75A Animal Care Skills I (1 unit)

## Winter

V T 50B Current Topics in Veterinary Technology II (1 unit)

V T 53B Medical Calculations (2 units)

V T 54B Comparative Veterinary Anatomy & Physiology for the Veterinary Technician (5 units)

V T 56 Animal Management & Clinical Skills II (4 units)

V T 60 Veterinary Office Practice (2 units)

V T 75B Animal Care Skills II (1 unit)

## Spring

V T 50C Current Topics in Veterinary Technology III (1 unit)

V T 53C Introduction to Large Animal Care (2 units)

V T 75C Animal Care Skills III (1 unit)

V T 81 Clinical Pathology Methods (5 units)

V T 86 Laboratory Animal Technology (4 units)

V T 89 Clinical Internship I (3 units)

**SECOND YEAR**

## Fall

V T 50D Current Topics in Veterinary Technology IV (1 unit)

V T 70 Fundamentals of Veterinary Diagnostic Imaging (4 units)

V T 83 Pharmacology for Technicians (4 units)

V T 87A Advanced Animal Care Skills I (1 unit)

V T 91 Clinical Internship II (3 units)

## Winter

V T 50E Current Topics in Veterinary Technology V (1 unit)

V T 61 Animal Diseases (6 units)

V T 72 Principles of Veterinary Dentistry (2.5 units)

V T 85 Veterinary Emergency & Critical Care (4 units)

V T 87B Advanced Animal Care Skills II (1 unit)

V T 92 Clinical Internship III (3 units)

## Spring

V T 50F Current Topics in Veterinary Technology VI (1 unit)

V T 66 Exotic Animal Care (2 units)

V T 84 Anesthesiology for Technicians (5 units)

V T 93 Clinical Internship IV (3 units)

V T 95 Veterinary Technician Proficiency (2 units)

Note: All courses must be taken in sequence and completed with a grade of "C" or better.

**Online Veterinary Assisting Career Certificate (12.5 units)****[Non-Transcriptable]**

V T 52A Veterinary Assisting I (5 units)

V T 52B Veterinary Assisting II (5 units)

V T 88A Clinical Preceptorship I (2.5 units)

Note: Student must have a high school diploma or a valid GED certificate and be able to read and write proficiently in English and perform mathematical computations at the high school graduate level.

## WOMEN'S STUDIES

**Program Type(s): Associate in Arts Degree**

Units required for major: 32

**PROGRAM LEARNING OUTCOMES**

- The student will be able to identify connections between specific people, groups, events and ideas and larger sociological, psychological, historical and gender studies specific themes, developments and topics.
- The student will be able to critically analyze a variety of primary and secondary sources and draw valid sociological, psychological, historical, and gender studies interpretations from them.

**ASSOCIATE DEGREE REQUIREMENTS \*****Core Courses: (16 units)**

SOC 28 Sociology of Gender (4 units)

WMN 5 Introduction to Women's Studies (4 units)

WMN 11 Women in Global Perspective (4 units)

WMN 21 Psychology of Women: Sex & Gender Differences (4 units)

or PSYC 21 Psychology of Women: Sex & Gender Differences (4 units)

**Support Courses: (16 units)**

ART 2E A History of Women in Art (4.5 units)

COMM 10 Gender, Communication & Culture (5 units)

PSYC 14 Child & Adolescent Development (4 units)

PSYC 22 Psychology of Prejudice & Discrimination (4 units)

SOC 30 Social Psychology (4 units)

or PSYC 30 Social Psychology (4 units)

SOC 40 Aspects of Marriage & Family (4 units)

SOSC 20 Cross-Cultural Perspectives for a Multicultural Society (4 units)

WMN 70R Independent Study in Women's Studies (1 unit)

WMN 71R Independent Study in Women's Studies (2 units)

WMN 72R Independent Study in Women's Studies (3 units)

WMN 73R Independent Study in Women's Studies (4 units)









# Course Listings

Course Numbering System

Course Listings

## Course Numbering System

The following course numbering system provides a detailed explanation regarding course number designations. When in doubt about the transferability of a course, always consult a counselor. Students are responsible for reviewing prerequisites and repeatability as noted in course descriptions. Where there is a conflict between the catalog statements and published curriculum sheets, the latter will take precedence. New courses and programs may be added throughout the year. For more information, access the online catalog at [foothill.edu](http://foothill.edu).

A degree-applicable credit course is a course that has been designated as appropriate to Foothill College degrees, which has been recommended by the College Curriculum Committee and approved by the district governing board as a collegiate course meeting the needs of students.

- Courses numbered 1–49 are typically approved for transfer to the University of California (UC).\*
- Courses numbered 1–99 are typically transferable to the California State University (CSU).\*
- Courses numbered 100 and above are typically not transferable.\*
- Courses numbered 200–299 are non-degree-applicable and include prerequisites for required courses that lead to the associate degree.
- Courses numbered 300–399 are upper division courses for the Foothill baccalaureate degree program.\*\*
- Courses numbered 400–499 are non-credit, adaptive learning, or other areas that do not apply to the associate degree.
- Community services courses are fee-based, and are scheduled and publicized separately from the state-supported courses identified in this catalog.

\* There are some exceptions to this rule; therefore, students should consult with a counselor and/or access [ASSIST.org](http://ASSIST.org) to verify course transferability.

\*\*Prior to the 2016-17 academic year, courses numbered 300-399 were workshop, review and other courses offered to meet special collegiate needs of a community nature.

## ACCOUNTING

Business and Social Sciences  
650.949.7322 [foothill.edu/bss](http://foothill.edu/bss)

### ACTG 1A FINANCIAL ACCOUNTING I 5 Units

**Advisory:** Eligibility for MATH 220 and ENGL 110 or ESLL 26.  
**Grade Type:** Letter Grade, the student may select Pass/No Pass  
**Not Repeatable.**

**5 hours lecture. (60 hours total per quarter)**

Study of accounting as an information system, examining why it is important and how it is used by investors, creditors, and others to make decisions. The course covers the accounting information system, including recording and reporting of business transactions with a focus on the accounting cycle, ethics in accounting, the application of generally accepted accounting principles, international financial reporting standards, the financial statements, and financial statement analysis. Includes issues relating to asset, liability, and equity valuation, revenue and expense recognition, cash flow, internal controls, and ethics. Financial Accounting is covered over a 2-course sequence: ACTG 1A and ACTG 1B.

**FHGE: Non-GE Transferable: UC/CSU**

### ACTG 1B FINANCIAL ACCOUNTING II 5 Units

**Prerequisite:** ACTG 1A.

**Advisory:** Eligibility for MATH 220 and ENGL 110 or ESLL 26; not open to students with credit in ACTG 1BH.

**Grade Type:** Letter Grade, the student may select Pass/No Pass  
**Not Repeatable.**

**5 hours lecture. (60 hours total per quarter)**

Continuation of ACTG 1A focusing on accounting as an information system, examining why it is important and how it is used by investors, creditors, and others to make decisions. Long-term assets, short- and long-term liabilities, equity valuation, revenue and expense recognition, statement of cash flows, financial statement analysis, internal controls, and ethics.

**FHGE: Non-GE Transferable: UC/CSU**

### ACTG 1BH HONORS FINANCIAL ACCOUNTING II 5 Units

**Prerequisites:** ACTG 1A; Honors Institute participant.

**Advisory:** Eligibility for MATH 220 and ENGL 110 or ESLL 26; not open to students with credit in ACTG 1B, 51A, 51B, or 51C.

**Grade Type:** Letter Grade, the student may select Pass/No Pass  
**Not Repeatable.**

**5 hours lecture. (60 hours total per quarter)**

Continuation of ACTG 1A focusing on accounting as an information system, examining why it is important and how it is used by investors, creditors, and others to make decisions. Long-term assets, short- and long-term liabilities, equity valuation, revenue and expense recognition, statement of cash flows, financial statement analysis, internal controls, and ethics. As an honors course, it is a full hands-on course with advanced teaching methods focusing on extensive research of selected accounting theory or applying accounting techniques in preparing analytical papers and analyses related to selected accounting problems. Distinguishing features include: deep focus on research, analysis, application, strong communication and critical thinking.

**FHGE: Non-GE Transferable: UC/CSU**

### ACTG 1C MANAGERIAL ACCOUNTING 5 Units

**Prerequisite:** ACTG 1B or 1BH.

**Advisory:** MATH 10 or high school algebra; not open to students with credit in ACTG 1CH.

**Grade Type:** Letter Grade, the student may select Pass/No Pass  
**Not Repeatable.**

**5 hours lecture. (60 hours total per quarter)**

Study of accounting information system for internal uses for decision-making, planning, directing operations and controlling. Process costing, job-order costing, activity-based costing, standard costing, cost behavior and cost-volume profit analysis, budgeting, performance evaluation, capital investment analysis, and ethics.

**FHGE: Non-GE Transferable: UC/CSU**

**ACTG 1CH HONORS MANAGERIAL ACCOUNTING 5 Units**

**Prerequisites:** ACTG 1B or 1BH; Honors Institute participant.  
**Advisory:** MATH 10 or high school algebra; not open to students with credit in ACTG 1C or 66.  
**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**5 hours lecture. (60 hours total per quarter)**

Study of accounting information system for internal uses for decision-making, planning, directing operations and controlling. Process costing, job-order costing, activity-based costing, standard costing, cost behavior and cost-volume profit analysis, budgeting, performance evaluation, capital investment analysis, and ethics. As an honors course, it is a full hands-on course with advanced teaching methods focusing on extensive research of selected accounting theory or applying accounting techniques in preparing analytical papers and analyses related to selected managerial accounting problems. Distinguishing features include: deep focus on research, analysis, application, strong communication and critical thinking.  
**FHGE: Non-GE Transferable: UC/CSU**

**ACTG 51A INTERMEDIATE ACCOUNTING I 5 Units**

**Prerequisite:** ACTG 1B or 1BH.  
**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**5 hours lecture. (60 hours total per quarter)**

Review of financial accounting standards, accounting information processing systems and the resulting financial statements. Selected topics related to present value applications, valuation techniques, and revenue recognition. Also covered, accounting for cash, receivables, and inventory.  
**FHGE: Non-GE Transferable: CSU**

**ACTG 51B INTERMEDIATE ACCOUNTING II 5 Units**

**Prerequisite:** ACTG 1B or 1BH.  
**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**5 hours lecture. (60 hours total per quarter)**

Accounting for property, plant & equipment, intangible assets, current liabilities, long-term liabilities, and equity.  
**FHGE: Non-GE Transferable: CSU**

**ACTG 51C INTERMEDIATE ACCOUNTING III 5 Units**

**Prerequisite:** ACTG 1B or 1BH.  
**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**5 hours lecture. (60 hours total per quarter)**

Accounting for investments, income taxes, pensions and post-retirement benefits, leases, and accounting changes and error analysis; also covered, the cash flows statement, and full disclosure in financial reporting.  
**FHGE: Non-GE Transferable: CSU**

**ACTG 52 ADVANCED ACCOUNTING 5 Units**

**Prerequisite:** ACTG 51A.  
**Advisory:** Eligibility for MATH 220 and ESLL 26.  
**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**5 hours lecture. (60 hours total per quarter)**

Presents financial accounting theories and practices related to business combinations and consolidated financial reporting. This includes the development of complex business structures and forms of business combinations; consolidated financial reporting for intercorporate acquisitions and operations; and the accounting for transactions of affiliated companies. Also includes accounting and reporting issues in the multinational business environment. Accounting theory and practice related to the formation, operation and liquidation of partnerships is covered.  
**FHGE: Non-GE Transferable: CSU**

**ACTG 53 FINANCIAL STATEMENT ANALYSIS 5 Units**

**Prerequisite:** ACTG 1B or 1BH.  
**Advisory:** ACTG 51A, MATH 220 and ESLL 26.  
**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**5 hours lecture. (60 hours total per quarter)**

The student will develop a set of core skills essential to financial statement analysis. It will cover strategic ratio analysis, cash flow analysis, forecasting, proforma financial statements, and firm valuation using discounted cash flow and residual income techniques. The course emphasizes the practical application of the material using a combination of lecture and hands-on examples.  
**FHGE: Non-GE Transferable: CSU**

**ACTG 58 AUDITING 5 Units**

**Prerequisite:** ACTG 51A.  
**Advisory:** Eligibility for MATH 220 and ESLL 26.  
**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**5 hours lecture. (60 hours total per quarter)**

Study of the contemporary auditing environment, auditing profession, and the principle, and practices of financial statement audit. Topics include auditing, attestation and assurance services, Generally Accepted Auditing Standards (GAAS), attestation standards, professional ethics, Sarbanes-Oxley Act 2002 regulatory requirements, internal controls and audit risk, audit planning, procedures, evidence, documentation and report writing.  
**FHGE: Non-GE Transferable: CSU**

**ACTG 59 FRAUD EXAMINATION 5 Units**

**Prerequisite:** ACTG 51A.  
**Advisory:** Eligibility for MATH 220 and ESLL 26.  
**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**5 hours lecture. (60 hours total per quarter)**

This course covers important topics associated with modern forensic accounting and fraud examination. Topics include an examination of the various types of occupational fraud, as well as the techniques to prevent and detect fraud in organizations. In addition, students will learn principals of fraud examination including who and why individuals commit fraud.  
**FHGE: Non-GE Transferable: CSU**

**ACTG 60 ACCOUNTING FOR SMALL BUSINESS 5 Units**

**Advisory:** Eligibility for MATH 220 and ESLL 26.  
**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**5 hours lecture. (60 hours total per quarter)**

Pre-professional accounting course introducing the theory of double-entry bookkeeping/accounting. Emphasis on basic accounting cycle, elementary accounting principles and procedures, and financial records.  
**FHGE: Non-GE Transferable: CSU**

**ACTG 64A COMPUTERIZED ACCOUNTING PRACTICE USING QUICKBOOKS 4 Units**

**Corequisite:** Completion of or concurrent enrollment in ACTG 1A or 60.  
**Advisory:** Not open to students with credit in CIS 64A.  
**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**4 hours lecture. (48 hours total per quarter)**

Focus on using QuickBooks to record financial data. Reviewing the accounting cycle, processing business transactions and preparing financial statements.  
**FHGE: Non-GE Transferable: CSU**

**ACTG 64B COMPUTERIZED ACCOUNTING PRACTICE USING EXCEL** 4 Units  
**Corequisite:** Completion of or concurrent enrollment in ACTG 1B or 1BH.  
**Advisory:** Not open to students with credit in CIS 64B.  
**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.  
**4 hours lecture. (48 hours total per quarter)**  
 Practice in using an electronic spreadsheet program to organize and process financial and managerial accounting data. Includes research on the Internet.  
**FHGE: Non-GE Transferable: CSU**

**ACTG 65 PAYROLL & BUSINESS TAX ACCOUNTING** 4 Units  
**Prerequisite:** ACTG 1A.  
**Advisory:** Eligibility for MATH 220 and ESLL 26.  
**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.  
**4 hours lecture. (48 hours total per quarter)**  
 Presentation of basic payroll procedures used in business today. Provides practice in recording procedures and preparation of tax returns.  
**FHGE: Non-GE Transferable: CSU**

**ACTG 66 COST ACCOUNTING** 5 Units  
**Prerequisite:** ACTG 1C or 1CH, or equivalent experience.  
**Advisory:** Eligibility for MATH 220 and ESLL 26.  
**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.  
**5 hours lecture. (60 hours total per quarter)**  
 Fundamentals of activity-based costing, job-order, process cost, and standard cost accounting systems.  
**FHGE: Non-GE Transferable: CSU**

**ACTG 67 TAX ACCOUNTING** 5 Units  
**Advisory:** Eligibility for MATH 220 and ESLL 26.  
**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.  
**5 hours lecture. (60 hours total per quarter)**  
 Current federal and California income tax law as it relates to individuals, emphasizing practical application, tax planning and tax form preparation.  
**FHGE: Non-GE Transferable: CSU**

**ACTG 68A ADVANCED TAX ACCOUNTING I** 5 Units  
**Prerequisite:** ACTG 67.  
**Advisory:** Eligibility for MATH 220 and ESLL 26.  
**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.  
**5 hours lecture. (60 hours total per quarter)**  
 Current federal income tax law as it relates to sole proprietorship and partnership.  
**FHGE: Non-GE Transferable: CSU**

**ACTG 68B ADVANCED TAX ACCOUNTING II** 5 Units  
**Prerequisite:** ACTG 67.  
**Advisory:** Eligibility for MATH 220 and ESLL 26.  
**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.  
**5 hours lecture. (60 hours total per quarter)**  
 Current federal income tax law as it relates to corporations, estate, trust and gift taxes.  
**FHGE: Non-GE Transferable: CSU**

**ACTG 68C ADVANCED TAX ACCOUNTING III** 3 Units  
**Prerequisite:** ACTG 67.  
**Advisory:** Eligibility for MATH 220 and ESLL 26.  
**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.  
**3 hours lecture. (36 hours total per quarter)**  
 Current federal income tax administration and procedures and review of Enrolled Agent Exam.  
**FHGE: Non-GE Transferable: CSU**

**ACTG 70R INDEPENDENT STUDY IN ACCOUNTING** 1 Unit  
**ACTG 71R** 2 Units  
**ACTG 72R** 3 Units  
**ACTG 73R** 4 Units  
**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.  
**3-12 hours laboratory per week. (36-144 hours total per quarter)**  
 Provides an opportunity for the student to expand their studies in Accounting beyond the classroom by completing a project or an assignment arranged by agreement between the student and instructor. The student is required to contract with the instructor to determine the scope of assignment and the unit value assigned for successful completion. Students may take a maximum of 6 units of Independent Study per department.  
**FHGE: Non-GE Transferable: CSU**

**ACTG 75 ACCOUNTING FOR GOVERNMENT & NOT-FOR-PROFIT** 5 Units  
**Prerequisite:** ACTG 1B or 1BH.  
**Advisory:** Eligibility for MATH 220 and ESLL 26.  
**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.  
**5 hours lecture. (60 hours total per quarter)**  
 Study of governmental and not-for-profit accounting. Topics include financial reporting; federal, state and local government accounting; budgetary accounting; general and special revenue funds; proprietary funds; trust and agency funds; fixed assets and long term debt; and nonprofit accounting for entities such as public colleges, universities and health care providers.  
**FHGE: Non-GE Transferable: CSU**

**ACTG 76 ETHICS IN ACCOUNTING** 5 Units  
**Prerequisite:** ACTG 1A.  
**Advisory:** Eligibility for MATH 220 and ESLL 26.  
**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.  
**5 hours lecture. (60 hours total per quarter)**  
 Study of professional ethics for accounting from a business perspective in context of financial statement frauds such as Enron. Topics include nature of accounting, ethical behavior in accounting, ethical theory, rules of the code of conduct, ethics of tax accounting and ethics of the auditing function.  
**FHGE: Non-GE Transferable: CSU**

**ADAPTIVE LEARNING: COMMUNITY BASED**  
 Counseling and Student Services  
 650.949.7017 foothill.edu/al

**ALCB 201 BEGINNING LIP READING** .5 Units  
**Non-degree applicable credit course.**  
**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.  
**1.5 hours laboratory. (18 hours total per quarter)**  
 Intended for adults with acquired, congenital or progressive hearing impairment. Includes basic sounds of the English language and how production of basic speech sounds appears on the lips and face of the speaker. Mechanics of the ear and sound will be presented. Physiological problems related to hearing will be discussed as well as some technological solutions. Practical experience in lip reading.  
**FHGE: Non-GE**

**ALCB 202 INTERMEDIATE LIP READING & MANAGING YOUR HEARING LOSS .5 Units**  
 Non-degree applicable credit course.  
**Grade Type: Letter Grade, the student may select Pass/No Pass Not Repeatable.**  
**1.5 hours laboratory. (18 hours total per quarter)**  
 Intended to meet the needs of the hearing-impaired adult with acquired hearing impairment.  
**FHGE: Non-GE**

**ALCB 203 ADVANCED LIP READING & MANAGING YOUR HEARING LOSS .5 Units**  
 Non-degree applicable credit course.  
**Prerequisites: ALCB 201, 202 or equivalent skills.**  
**Grade Type: Letter Grade, the student may select Pass/No Pass Not Repeatable.**  
**1.5 hours laboratory. (18 hours total per quarter)**  
 Advanced instruction in lip-reading techniques for the hearing-impaired adult.  
**FHGE: Non-GE**

**ALCB 223 CAREER RESOURCES 2 Units**  
 Non-degree applicable credit course.  
**Grade Type: Letter Grade, the student may select Pass/No Pass Not Repeatable.**  
**6 hours laboratory. (72 hours total per quarter)**  
 Career Resources is an introduction and hands-on use of resources available to research and find employment in the Bay Area. Resources include daily online job postings, internet, telephones, corporate events, casual labor, job fairs and career library. Intended for students with disabilities.  
**FHGE: Non-GE**

**ALCB 400B LIP-READING: VOWELS 0 Units**  
 Non-degree applicable non-credit course.  
**Grade Type: Non-credit course that receives no grade Unlimited Repeatability.**  
**24 hours total.**  
 Designed for adults with acquired, congenital or progressive hearing impairment and/or difficulty processing speech in adverse listening conditions. Includes the most visible vowel sounds of English language and contrasting the appearance of production of different vowel sounds by the oral and facial structures of the speaker. Aspects of hearing and the auditory range of vowels will be discussed. Small area assistive listening devices will be introduced along with special features of hearing aids (e.g., restaurant programs, t-coils, music programs). Practical experience in lip-reading both in and out of class.  
**FHGE: Non-GE**

**ALCB 400D SPEECHREADING CHALLENGE 0 Units**  
 Non-degree applicable non-credit course.  
**Grade Type: Non-credit course that receives no grade Unlimited Repeatability.**  
**24 hours total.**  
 For adults who have been practicing lip-reading/speech-reading techniques and want to maintain performance levels through highly challenging practice sessions that use the variety of skills needed for ease of communication barriers caused by hearing loss. Improve ability to lip-read in real time and complex conversational situations.  
**FHGE: Non-GE**

**ALCB 406Y WORLD NEWS DISCUSSION 0 Units**  
 Non-degree applicable non-credit course.  
**Grade Type: Non-credit course that receives no grade Unlimited Repeatability.**  
**24 hours total.**  
 Intended for the disabled to study world news by examining turning points in history, comparing and contrasting them with current world events to enhance memory retention and self-esteem.  
**FHGE: Non-GE**

**ALCB 407Y SOCIAL CHANGE 0 Units**  
 Non-degree applicable non-credit course.  
**Grade Type: Non-credit course that receives no grade Unlimited Repeatability.**  
**24 hours total.**  
 Intended for the disabled to improve memory and understanding of changes in society to increase awareness of the impact of these changes and increase social interaction.  
**FHGE: Non-GE**

**ALCB 408Y ART APPRECIATION 0 Units**  
 Non-degree applicable non-credit course.  
**Grade Type: Non-credit course that receives no grade Unlimited Repeatability.**  
**24 hours total.**  
 Intended for the disabled student to acquire an appreciation of artists and their work. Provides opportunity for social interaction and intellectual stimulation made possible through shared knowledge of artists and their work.  
**FHGE: Non-GE**

**ALCB 409Y MUSIC APPRECIATION 0 Units**  
 Non-degree applicable non-credit course.  
**Grade Type: Non-credit course that receives no grade Unlimited Repeatability.**  
**24 hours total.**  
 Intended for the disabled student to acquire appreciation of composers and their work. Emphasis on identification and recall of auditory input.  
**FHGE: Non-GE**

**ALCB 413 RELAXATION TECHNIQUES 0 Units**  
 Non-degree applicable non-credit course.  
**Grade Type: Non-credit course that receives no grade Unlimited Repeatability.**  
**12 hours total.**  
 This course develops the ability of students to identify their key stressors and put into action innovative and individualized strategies to manage stress. Students become familiar with the psychobiology of stress and how it undermines health and well-being.  
**FHGE: Non-GE**

**ALCB 413Y RELAXATION TECHNIQUES 0 Units**  
 Non-degree applicable non-credit course.  
**Grade Type: Letter Grade, the student may select Pass/No Pass Unlimited Repeatability.**  
**24 hours total.**  
 Intended for the disabled student to acquire information about and develop techniques for achieving relaxation by releasing mental and physical tension.  
**FHGE: Non-GE**

**ALCB 414Y STRESS MANAGEMENT 0 Units**  
 Non-degree applicable non-credit course.  
**Grade Type: Non-credit course that receives no grade Unlimited Repeatability.**  
**24 hours total.**  
 Intended for the disabled student to recognize stress symptoms and become aware of signals which cause triggers in stress. Learn stress management skills from passive to an active take-charge role.  
**FHGE: Non-GE**

**ALCB 421Y AROUND THE WORLD  
IN TRAVEL STUDY** 0 Units

Non-degree applicable non-credit course.  
Grade Type: Non-credit course that receives no grade  
Unlimited Repeatability.  
24 hours total.

Intended for the disabled student to recall personal travel. Focuses on the discussion of geography, history, religions and arts of other cultures to increase knowledge and social interaction, and improve memory retention.  
FHGE: Non-GE

**ALCB 431Y ANALYSIS OF CURRENT EVENTS** 0 Units

Non-degree applicable non-credit course.  
Grade Type: Non-credit course that receives no grade  
Unlimited Repeatability.  
24 hours total.

Intended for the disabled student to acquire information about current events with an emphasis on comparing and contrasting current with past events to enhance memory retention and self-esteem.  
FHGE: Non-GE

**ALCB 451Y DRAWING & PAINTING** 0 Units

Non-degree applicable non-credit course.  
Grade Type: Non-credit course that receives no grade  
Unlimited Repeatability.  
24 hours total.

Intended for the disabled student to improve expressive capability, manipulatory skills and eye-hand coordination, increase self-esteem and increase social interaction through the use of painting, drawing and sketching materials, tools, and techniques to create two-dimensional art in a group setting.  
FHGE: Non-GE

**ALCB 456Y CRAFTS** 0 Units

Non-degree applicable non-credit course.  
Grade Type: Letter Grade, the student may select Pass/No Pass  
Unlimited Repeatability.  
24 hours total.

Intended for the disabled student to improve expressive capability, manipulatory skills and eye-hand coordination, increase self-esteem and increase social interaction through the use of seasonal, leather, wood, fabric, yarn and paper materials to create crafts projects in a group setting.  
FHGE: Non-GE

**ALCB 462Y VERBAL EXPRESSION** 0 Units

Non-degree applicable non-credit course.  
Grade Type: Non-credit course that receives no grade  
Unlimited Repeatability.  
24 hours total.

Intended for the disabled student to teach techniques in verbal communication specifically to improve family, social and work-related situations.  
FHGE: Non-GE

**ALCB 463Y CREATIVE WRITING** 0 Units

Non-degree applicable non-credit course.  
Grade Type: Non-credit course that receives no grade  
Unlimited Repeatability.  
24 hours total.

Intended for the disabled student to present written autobiographical, fictional and non-fictional experiences which are shared orally for both appreciation and constructive input to enhance self-esteem, memory retention and writing ability.  
FHGE: Non-GE

**ALCB 465Y CREATIVE SELF-EXPRESSION** 0 Units

Non-degree applicable non-credit course.  
Grade Type: Non-credit course that receives no grade  
Unlimited Repeatability.  
24 hours total.

Intended for the disabled student to provide directed experiences in self-expression. Emphasis on various activities designed to enhance physical and cognitive creative expression and enable the student to develop independent creative activities through adapted drama, music, art and writing.  
FHGE: Non-GE

**ADAPTIVE LEARNING: COMPUTER ACCESS  
CENTER**

Counseling and Student Services  
650.949.7017 foothill.edu/al

**ALCA 201 COMPUTER ACCESS EVALUATION** 1 Unit

Non-degree applicable credit course.  
Advisory: Not open to students with credit in ALCA 101.  
Grade Type: Pass/No Pass Only  
Not Repeatable.

3 hours laboratory. (36 hours total per quarter)  
Survey course designed to provide students with an overview of current assistive technologies including Dragon Naturally Speaking, Kurzweil, Inspiration, etc. Course content includes an evaluation of technology needs, tutorials and hands-on practice for various software and hardware.  
FHGE: Non-GE

**ADAPTIVE LEARNING: LEARNING DISABILITY**

Counseling and Student Services  
650.949.7017 foothill.edu/al

**ALLD 206 PARAGRAPH REMEDIATION** 2 Units

Non-degree applicable credit course.  
Corequisites: ENGL 110 and 209.  
Grade Type: Pass/No Pass Only  
Not Repeatable.

6 hours laboratory. (72 hours total per quarter)  
A paragraph development class with an emphasis on writing concisely with correct grammar. Provides support and instruction to students in remedial English courses who struggle with basic reading and writing skills. Focus on research, reading comprehension, content development and writing structure.  
FHGE: Non-GE

**ALLD 210 UNDERSTANDING LEARNING  
DIFFERENCES** 3 Units

Non-degree applicable credit course.  
Advisory: Not open to students with credit in ALLD 601.  
Grade Type: Pass/No Pass Only  
Not Repeatable.

3 hours lecture. (36 hours total per quarter)  
Focuses on learning differences, learning theory and strategies related to specific learning challenges. Creation of individual learning portfolio to identify learning style, strengths and weaknesses. Covers understanding of learning differences, methods of retention and output of knowledge. Cognitive and achievement testing will be provided as appropriate to identify student individual learning profile.  
FHGE: Non-GE



**ADAPTIVE LEARNING: TRANSITION TO WORK**

Counseling and Student Services  
650.949.7017 foothill.edu/al

**ALTW 201 BASIC ENGLISH FOR THE DISABLED STUDENT 2 Units**

Non-degree applicable credit course.

Advisory: Not open to students with credit in ALTW 105.

Grade Type: Letter Grade, the student may select Pass/No Pass Not Repeatable.

2 hours lecture. (24 hours total per quarter)

This basic English class emphasis is grammar, sentence and paragraph structure with practical applications related to business, public and/or non-profit settings.

FHGE: Non-GE

**ALTW 202 BASIC MATH SKILLS FOR STUDENTS WITH DISABILITIES 2 Units**

Non-degree applicable credit course.

Grade Type: Letter Grade, the student may select Pass/No Pass Not Repeatable.

2 hours lecture. (24 hours total per quarter)

Emphasis on functional math concepts that include skill building for money handling exchanges, budget planning for independent living, comparison shopping strategies and other related practical math applications.

FHGE: Non-GE

**ALTW 203 LEARNING STYLES & STRATEGIES FOR STUDENTS WITH DISABILITIES 2 Units**

Non-degree applicable credit course.

Grade Type: Letter Grade, the student may select Pass/No Pass Not Repeatable.

2 hours lecture. (24 hours total per quarter)

This course enables students to explore and identify their learning styles, values, personality traits and develop a personal profile that helps them with their vocational choices.

FHGE: Non-GE

**ALTW 204 COMMUNICATION SKILLS IN THE WORKPLACE 2 Units**

Non-degree applicable credit course.

Grade Type: Letter Grade, the student may select Pass/No Pass Not Repeatable.

2 hours lecture. (24 hours total per quarter)

Focuses on proper communication skills in written business formats, verbal presentations, and appropriate body language styles in order for students to be able to communicate effectively in competitive employment settings.

FHGE: Non-GE

**ALTW 205 OFFICE SKILLS FOR THE DISABLED STUDENT 3 Units**

Non-degree applicable credit course.

Grade Type: Letter Grade, the student may select Pass/No Pass Not Repeatable.

3 hours lecture. (36 hours total per quarter)

Practical office skills needed for successful employment in an entry level position in office, retail, warehouse and garden settings. Focuses on business filing systems, records management, mail handling, shipping and receiving processes. Internal and external customer service skills will be emphasized in addition to career information via speakers and field trips.

FHGE: Non-GE

**ALTW 206 BEGINNING WORD PROCESSING 3 Units**

Non-degree applicable credit course.

Advisory: Not open to students with credit in ALTW 112.

Grade Type: Letter Grade, the student may select Pass/No Pass Not Repeatable.

3 hours lecture. (36 hours total per quarter)

Introduction to the word processing computer application, Microsoft Office Suite and Google Chrome. Beginning level word processing to be used in private, non profit and government work environments.

FHGE: Non-GE

**ALTW 207 RESOURCES IN THE COMMUNITY FOR STUDENTS WITH DISABILITIES 2 Units**

Non-degree applicable credit course.

Grade Type: Letter Grade, the student may select Pass/No Pass Not Repeatable.

2 hours lecture. (24 hours total per quarter)

Overview of community and campus resources for students with disabilities.

FHGE: Non-GE

**ALTW 208 JOB TRAINING/INTERNSHIP FOR THE DISABLED STUDENT 1.5 Units**

Non-degree applicable credit course.

Grade Type: Letter Grade, the student may select Pass/No Pass Not Repeatable.

4.5 hours laboratory. (54 hours total per quarter)

Practical skills needed for successful employment. Emphasis on on-the-job training experiences to learn workplace standards. Preparation for work-readiness through hands-on work duties in and off campus settings. Discussion and evaluation of work performance.

FHGE: Non-GE

**ALTW 209 SOCIAL SKILLS 2 Units**

Non-degree applicable credit course.

Grade Type: Letter Grade, the student may select Pass/No Pass Not Repeatable.

2 hours lecture. (24 hours total per quarter)

Focuses on the etiquette of appropriate interaction in the general public, educational settings, community involvement and employment arenas. Emphasis on building self-esteem and socialization skills in order to increase confidence in personal and social interactions.

FHGE: Non-GE

**ALTW 211 INTRODUCTION TO EXCEL 3 Units**

Non-degree applicable credit course.

Grade Type: Letter Grade, the student may select Pass/No Pass Not Repeatable.

3 hours lecture. (36 hours total per quarter)

Introduction to spreadsheet computer application. Beginning level of spreadsheet database tool, emphasis on spreadsheets, charts and tables.

FHGE: Non-GE

**ALTW 212 JOB SEARCH SKILLS: THE RESUME 2 Units**

Non-degree applicable credit course.

Grade Type: Letter Grade, the student may select Pass/No Pass Not Repeatable.

2 hours lecture. (24 hours total per quarter)

Focuses on successful resume writing techniques including the creation and completion of a resume. In addition, understanding online electronic processes for submission of resume, hidden job market, and types of resumes. Development of a Master Application will be developed that will be used in the job search process.

FHGE: Non-GE

**ALTW 213 WORK ATTITUDES & BEHAVIOR ON THE JOB 2 Units**

Non-degree applicable credit course.  
Grade Type: Letter Grade, the student may select Pass/No Pass Not Repeatable.  
2 hours lecture. (24 hours total per quarter)  
Will assist the student to develop appropriate work behavior and attitudes. Learn conflict management and proactive problem-solving skills in an entry-level job environment.  
FHGE: Non-GE

**ALTW 214 JOB SEARCH SKILLS: INTERVIEW PREPARATION 2 Units**

Non-degree applicable credit course.  
Grade Type: Letter Grade, the student may select Pass/No Pass Not Repeatable.  
2 hours lecture. (24 hours total per quarter)  
Focuses on interviewing techniques and the special problems faced by people with disabilities when seeking employment. Interview preparation, mock interviews and behavioral interviewing techniques will be explored through lectures, role-play and feedback. Constructive feedback will be given to students in order to enhance their interviewing techniques.  
FHGE: Non-GE

**ALTW 216 DISABILITY & THE LAW 3 Units**

Non-degree applicable credit course.  
Grade Type: Letter Grade, the student may select Pass/No Pass Not Repeatable.  
3 hours lecture. (36 hours total per quarter)  
Understanding basic citizens' rights and responsibilities. Emphasis on the Americans with Disabilities Act (ADA), Rehabilitation Act of 1973, IDEA, and other laws related to people with disabilities. Understand the meaning of accommodation and apply to work and school settings.  
FHGE: Non-GE

**ALTW 217 INTERMEDIATE COMPUTER APPLICATIONS 3 Units**

Non-degree applicable credit course.  
Grade Type: Letter Grade, the student may select Pass/No Pass Not Repeatable.  
3 hours lecture. (36 hours total per quarter)  
Course will combine Microsoft Word, Microsoft Excel and Microsoft PowerPoint to produce intermediate documents to be used in academic, non-profit, government and or business environment.  
FHGE: Non-GE

**ALTW 218 CURRENT EVENTS FOR THE DISABLED STUDENT 2 Units**

Non-degree applicable credit course.  
Grade Type: Letter Grade, the student may select Pass/No Pass Not Repeatable.  
2 hours lecture. (24 hours total per quarter)  
Exploration of global, national and community topics through a variety of media sources. Discussion on the pros and cons of different news media formats and perspectives.  
FHGE: Non-GE

**ALTW 219 USING THE INTERNET 2 Units**

Non-degree applicable credit course.  
Grade Type: Letter Grade, the student may select Pass/No Pass Not Repeatable.  
2 hours lecture. (24 hours total per quarter)  
This is a hands-on introduction to the use of internet tools such as Google Docs, cloud applications, apps, Internet research and social media applications.  
FHGE: Non-GE

**ALTW 223 INDEPENDENT LIVING SKILLS: FINANCIAL LITERACY 4 Units**

Non-degree applicable credit course.  
Grade Type: Letter Grade, the student may select Pass/No Pass Not Repeatable.  
4 hours lecture. (48 hours total per quarter)  
Basic banking and personal saving concepts with emphasis placed upon establishing credit and responsible credit card use, personal budgeting, connecting employment choices to financial outcomes and making responsible financial choices. Intended for students with disabilities enrolled in the Transition to Work Program.  
FHGE: Non-GE

**ALTW 229 HEALTHY RELATIONSHIPS 3 Units**

Non-degree applicable credit course.  
Grade Type: Letter Grade, the student may select Pass/No Pass Not Repeatable.  
3 hours lecture. (36 hours total per quarter)  
Development of understanding of personal boundaries and making positive choices in relationships. Emphasis placed upon increasing self-esteem, developing appropriate personal rules for intimate, personal, professional and general relationships, and recognizing and effectively handling personal safety issues. Provides students with disabilities tools to effectively communicate and make good relationship choices. Intended for students with disabilities enrolled in the Transition to Work program.  
FHGE: Non-GE

**ALLIED HEALTH SCIENCES**

Biological and Health Sciences  
650.949.7249 foothill.edu/bio

**AHS 50A INTRODUCTION TO ALLIED HEALTH PROGRAMS 1.5 Units**

Formerly: AHS 50  
Prerequisites: ENGL 1A, 1AH, 1S & 1T or ESLL 26; MATH 105.  
Advisory: Not open to students with credit in AHS 50.  
Grade Type: Letter Grade Only  
Not Repeatable.  
1.5 hours lecture. (18 hours total per quarter)  
Introduction to Foothill College Allied Health Programs for the incoming first year student. Overview of HIPAA and patient privacy, Academic Honor Code, student rights and responsibilities, strategies for student success, stress and time management, professionalism and ethical behavior in the health care environment, and individual program policies and procedures for allied health students. Introduction to peer reviewed literature in the professional discipline, analyzing a research study, writing a full research essay of a peer-reviewed research study and understanding the data analysis of the research. Intended for students who have applied and been accepted into Allied Health Programs; enrollment is limited to students accepted in the program.  
FHGE: Non-GE Transferable: CSU

**AHS 50B INTERPROFESSIONAL PATIENT COMPETENCIES .5 Units**

Grade Type: Letter Grade Only  
Not Repeatable.  
6 hours total.  
This is the second of three courses focusing on interprofessional education (IPE). This course will include an overview on the pediatric patient, the geriatric patient, communication issues in health care settings and understanding the skills and scope of practice of other health care professionals. Enrollment is limited to students accepted in an Allied Health Program.  
FHGE: Non-GE Transferable: CSU

**AHS 50C INTERPROFESSIONAL COMPETENCIES FOR COLLABORATIVE PRACTICE .5 Units**

**Grade Type: Letter Grade Only**  
**Not Repeatable.**  
**6 hours total.**

This is the third of three courses focusing on interprofessional education (IPE). This course will include an overview on the health care team, professional communication issues in health care settings and values and ethics for interprofessional practice. Enrollment is limited to students accepted in an Allied Health Program.

**FHGE: Non-GE Transferable: CSU**

**AHS 51 HEALTH CAREERS EXPLORATION 1 Unit**

**Grade Type: Letter Grade, the student may select Pass/No Pass**  
**Not Repeatable.**  
**1 hour lecture. (12 hours total per quarter)**

This course focuses on assessment and career research in the development of a health care career plan. Careers include but are not limited to EMT, paramedic/fire science, nursing, pharmacology technology, dental hygiene, dental assisting, respiratory therapy and radiologic technology. Emphasis is on interest, personality testing, values clarification, career information, research skills, individual skills assessment, decision making, and goal setting specifically in the health care field. The course also covers health care job trends, education and licensure requirements.

**FHGE: Non-GE Transferable: CSU**

**AHS 55 COMMUNITY HEALTH PROMOTION 2 Units**

**Advisory: This course requires clinical field experiences that may take place outside of the U.S. The cost of travel is borne by the student.**

**Grade Type: Letter Grade Only**  
**Not Repeatable.**

**1 hour lecture, 3 hours laboratory. (48 hours total per quarter)**

Introduction to community approaches to disease prevention and health promotion with an emphasis on a holistic approach, risk and resilience, social capital, and social change to promote community health in communities with limited access to care. Students have the opportunity to shadow licensed doctors, dentists and other health care professionals in urgent and preventive medical/dental services. Intended for students pursuing an allied health or medical career.

**FHGE: Non-GE Transferable: CSU**

**AHS 60A CARDIOLOGY FOR ALLIED HEALTH 2 Units**

**Formerly: RSPT 60A**

**Advisory: Not open to students with credit in RSPT 60A.**

**Grade Type: Letter Grade Only**  
**Not Repeatable.**

**2 hours lecture. (24 hours total per quarter)**

Electrocardiogram and rhythm recognition. Invasive and non-invasive hemodynamic monitoring; cardiac diagnostic and therapeutic procedures; and fluid balance.

**FHGE: Non-GE Transferable: CSU**

**AHS 200 ORIENTATION TO HEALTH CARE CAREERS 3 Units**

**Grade Type: Letter Grade Only**  
**Not Repeatable.**

**3 hours lecture. (36 hours total per quarter)**

Orientation to health care programs preparing students to differentiate among the health care professions and to enter the profession of their choice. Defining the American health care system. Discussion of health care economics, delivery of and changes to the health care system, professionalism, ethics, expectations of the health care professional including interpersonal skills. The importance of HIPAA regulations including confidentiality, legal issues, death and dying, medical terminology, infection control, governmental regulations, cultural diversity, and academic skills, related to allied health careers and the consumer.

**FHGE: Non-GE**

**ANTHROPOLOGY**

**Business and Social Sciences**

**650.949.7322 foothill.edu/bss**

**ANTH 1 INTRODUCTION TO PHYSICAL ANTHROPOLOGY 4 Units**

**Advisory: Not open to students with credit in ANTH 1H.**

**Grade Type: Letter Grade, the student may select Pass/No Pass**  
**Not Repeatable.**

**4 hours lecture. (48 hours total per quarter)**

Survey and investigation of the basic processes of evolution and their application to the development of modern humans. Impact of natural selection and genetics on development of new species. Evolutionary processes behind the physical and behavioral development of primates. History of the human lineage by reconstructing the fossil record, using investigations by paleoanthropologists, geologists, biologists, and archaeologists. Relationship between contemporary biology and behavior, facilitating an understanding of the effect of them upon future humankind.

**FHGE: Natural Sciences Transferable: UC/CSU**

**ANTH 1H HONORS INTRODUCTION TO PHYSICAL ANTHROPOLOGY 4 Units**

**Prerequisite: Honors Institute participant.**

**Advisory: Not open to students with credit in ANTH 1.**

**Grade Type: Letter Grade Only**  
**Not Repeatable.**

**4 hours lecture. (48 hours total per quarter)**

Survey and investigation of the basic processes of evolution and their application to the development of modern humans. Impact of natural selection and genetics on development of new species. Evolutionary processes behind the physical and behavioral development of primates. History of the human lineage by reconstructing the fossil record, using investigations by paleoanthropologists, geologists, biologists, and archaeologists. Relationship between contemporary biology and behavior, facilitating an understanding of the effect of them upon future humankind. As an honors course, it is a full thematic seminar with advanced teaching methods focusing on major writing, reading, and research assignments, student class lectures, group discussions and interactions.

**FHGE: Natural Sciences Transferable: UC/CSU**

**ANTH 1HL HONORS PHYSICAL ANTHROPOLOGY LABORATORY 1 Unit**

**Prerequisite: Honors Institute participant.**

**Corequisite: Completion of or concurrent enrollment in ANTH 1H.**

**Advisory: Not open to students with credit in ANTH 1L.**

**Grade Type: Letter Grade Only**  
**Not Repeatable.**

**3 hours laboratory. (36 hours total per quarter)**

Introductory laboratory course focusing on scientific methodology to explore/experiment with topics from anthropology lecture sections. Topics include Mendelian genetics, population genetics, human variability, forensics, medical anthropology, epidemiology, hominid dietary patterns, non-human primates, primate dental and skeletal anatomy, fossil hominids, chronometric dating, environmental challenges to hominids, environmental impact of hominid behavior, general methodologies utilized in physical anthropological research, and the general study of hominids as bio-culturally adapting animals. As an honors course, it is a full thematic seminar with advanced teaching methods focusing on major writing, reading, and research assignments, student class lectures, group discussions and interactions. Material covered will be enhanced and research techniques and methodologies explored in greater depth than in the non-honors version of this course.

**FHGE: Natural Sciences Transferable: UC/CSU**

**ANTH 1L PHYSICAL ANTHROPOLOGY LABORATORY 1 Unit**

**Corequisite:** Completion of or concurrent enrollment in ANTH 1 or 1H.

**Advisory:** Not open to students with credit in ANTH 1HL.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**3 hours laboratory. (36 hours total per quarter)**

Introductory laboratory course focusing on scientific methodology to explore/experiment with topics from anthropology lecture sections. Topics include Mendelian genetics, population genetics, human variability, forensics, medical anthropology, epidemiology, hominid dietary patterns, non-human primates, primate dental and skeletal anatomy, fossil hominids, chronometric dating, environmental challenges to hominids, environmental impact of hominid behavior, general methodologies utilized in physical anthropological research, and the general study of hominids as bio-culturally adapting animals.

**FHGE: Natural Sciences Transferable: UC/CSU**

**ANTH 2A CULTURAL ANTHROPOLOGY 4 Units**

**Advisory:** Not open to students with credit in ANTH 2AH.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**4 hours lecture. (48 hours total per quarter)**

Introduction to the study of human culture and the concepts, theories, and methods used in the comparative study of sociocultural systems, with an emphasis on understanding and appreciating human diversity. Topics include a cross-cultural exploration of: subsistence strategies; social, political and economic organization; language and communication; marriage and kinship; religion; gender; ethnicity and race; social inequality; culture change; and the effects of colonialism and globalization. Focus is made on the application of anthropological perspectives to contemporary social issues.

**FHGE: Social & Behavioral Sciences Transferable: UC/CSU**

**ANTH 2AH HONORS CULTURAL ANTHROPOLOGY 4 Units**

**Prerequisite:** Honors Institute participant.

**Advisory:** Not open to students with credit in ANTH 2A.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**4 hours lecture. (48 hours total per quarter)**

Introduction to the study of human culture and the concepts, theories, and methods used in the comparative study of sociocultural systems, with an emphasis on understanding and appreciating human diversity. Topics include a cross-cultural exploration of: subsistence strategies; social, political and economic organization; language and communication; marriage and kinship; religion; gender; ethnicity and race; social inequality; culture change; and the effects of colonialism and globalization. Focus is made on the application of anthropological perspectives to contemporary social issues. As an honors course, it is a full thematic seminar with advanced teaching methods focusing on major writing, reading, and research assignments, student class lectures, group discussions and interactions.

**FHGE: Social & Behavioral Sciences Transferable: UC/CSU**

**ANTH 2B PATTERNS OF CULTURE 4 Units**

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**4 hours lecture. (48 hours total per quarter)**

A cross-cultural, comparative and hands-on study of patterns in culture with a focus on recognizing, understanding and appreciating cultural diversity through ethnographic case studies. Introduces students to qualitative research methods in the social sciences in general, and more specifically to the concepts, theories and ethnographic methods used by cultural anthropologists in the study of human culture and societies. Students are provided with an opportunity to design and carry out original research through ethnographic field study.

**FHGE: Social & Behavioral Sciences Transferable: UC/CSU**

**ANTH 3 WORLD PREHISTORY: THE RISE & FALL OF EARLY CIVILIZATIONS 4 Units**

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**4 hours lecture. (48 hours total per quarter)**

Survey of world prehistory as reconstructed by archaeologists. Human culture history from Stone Age beginnings to establishment and collapse of the world's first major civilizations. Covers societies from Asia and Africa to Europe and the Americas. Introduction to archaeological methods and interpretation. First use of tools, social complexity, urbanization, domestication of plants and animals, and the rise and fall of civilizations.

**FHGE: Social & Behavioral Sciences Transferable: UC/CSU**

**ANTH 4 FIRST PEOPLES OF NORTH AMERICA 4 Units**

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**4 hours lecture. (48 hours total per quarter)**

Survey of Native American societies and cultures north of Mexico from a cultural perspective. Includes social organization, economics, technology and belief systems. Historic and current relationship between the federal government and the Native Americans. Contemporary issues of Native American communities.

**FHGE: Non-GE Transferable: UC/CSU**

**ANTH 5 MAGIC, SCIENCE & RELIGION 4 Units**

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**4 hours lecture. (48 hours total per quarter)**

An introduction to the anthropological study of religion and belief systems. This course is a cross-cultural exploration into the ways humans around the world and through time have conceptualized their relationship between their natural and social worlds and the supernatural, beginning with prehistoric times and concluding with modern day society and the contemporary world. Cross-cultural study of the beliefs about the nature of reality, spirituality, death, magic, science and healing.

**FHGE: Social & Behavioral Sciences Transferable: UC/CSU**

**ANTH 6 PEOPLES OF AFRICA 4 Units**

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**4 hours lecture. (48 hours total per quarter)**

An anthropological survey of the peoples of Africa. Issues addressed include: the colonial and Cold War experience and legacy in Africa; popular Western (mis)perceptions and portrayals of Africa and Africans; patterns of social organization, family, and kinship; political organization; economic systems; current political and economic conditions and ties to the global economy; conceptual systems; health and disease; popular culture; art and music; and social change. The course draws upon classic and contemporary anthropological research, research from other disciplines, ethnographies, and literature by African writers. A case study approach is used for some topics allowing in-depth analysis of particular African societies.

**FHGE: Non-GE Transferable: UC/CSU**

**ANTH 8 INTRODUCTION TO ARCHAEOLOGY 4 Units**

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**4 hours lecture. (48 hours total per quarter)**

Introduction to the historical development, theory and techniques of archaeological research and fieldwork. Development of comparative approach to the study of ancient cultures. Focus on cultural resource management, survey and selection of field sites, dating, excavation, artifact classification, interpretation of data and written analysis.

**FHGE: Social & Behavioral Sciences Transferable: UC/CSU**

**ANTH 12 APPLIED ANTHROPOLOGY 4 Units****Grade Type: Letter Grade, the student may select Pass/No Pass Not Repeatable.****4 hours lecture. (48 hours total per quarter)**

Applied anthropology focuses on the use of anthropological theories, perspectives and methods in real world, contemporary contexts of practice or problem-solving. This course, an introduction to the "5th field" of anthropology, provides students with theories, perspectives and skills that will help them recognize, more deeply understand and solve problems affecting local communities in this country and abroad, which have arisen as a result of culture change, modernization and globalization. Major areas of study will include development anthropology, the use of technology in field settings, anthropology and health care, anthropology and advocacy, anthropology and law, tourism and cultural heritage, organizational and business anthropology, and land and cultural resource management.

**FHGE: Social & Behavioral Sciences Transferable: UC/CSU****ANTH 13 INTRODUCTION TO FORENSIC ANTHROPOLOGY 4 Units****Grade Type: Letter Grade, the student may select Pass/No Pass Not Repeatable.****4 hours lecture. (48 hours total per quarter)**

Introduction to the application of anthropology as a science to the medical-legal process and its emphasis on the identification of human skeletal remains. Uses the scientific methodology to cover basic human osteology and odontology, assessment of age at time of death, sex, ancestry, trauma analysis, pathology, crime scene analysis, animal scavenging, and identification procedures. Focuses on the varying applications of science in the modern world in which forensic anthropology is utilized ranging from crime scene investigation, missing person identification, human rights, and humanitarian investigations.

**FHGE: Non-GE Transferable: UC/CSU****ANTH 13L FORENSIC ANTHROPOLOGY LABORATORY 1 Unit****Corequisite: Completion of or concurrent enrollment in ANTH 13.****Grade Type: Letter Grade, the student may select Pass/No Pass Not Repeatable.****3 hours laboratory. (36 hours total per quarter)**

Introductory laboratory course focusing on scientific methodology to reinforce topics from Forensic Anthropology lecture sections using hands-on technical training. Focuses on the medico-legal process utilized in forensics with an emphasis on the identification of human skeletal remains and evidence description. Contains exercises in identifying basic human osteology/odontology elements and morphological features. Will include standardized procedures for the assessment of age at time of death, sex, ancestry, trauma analysis, pathology, physical characteristics including height and weight, crime scene analysis, animal scavenging, and identification procedures. Focuses on how laboratory conclusions are utilized in courtroom proceedings during expert witness testimony.

**FHGE: Non-GE Transferable: UC/CSU****ANTH 14 LINGUISTIC ANTHROPOLOGY 4 Units****Grade Type: Letter Grade, the student may select Pass/No Pass Not Repeatable.****4 hours lecture. (48 hours total per quarter)**

Introduces students to the anthropological study of language and non-verbal human communication. Using a cross-cultural perspective, students will examine the relationship between culture and the ways in which humans communicate. Topics include language structure, acquisition, diversity, and change.

**FHGE: Social & Behavioral Sciences Transferable: UC/CSU****ANTH 15 MEDICAL ANTHROPOLOGY: METHODS & PRACTICE 4 Units****Formerly: ANTH 50****Advisory: Not open to students with credit in ANTH 50.****Grade Type: Letter Grade, the student may select Pass/No Pass Not Repeatable.****4 hours lecture. (48 hours total per quarter)**

Introduction to Medical Anthropology, a subfield of the discipline of anthropology that seeks to understand and highlight how health, illness and healing practices are culturally constructed and mediated. Students will investigate global, cross-cultural and local issues related to health, sickness, healing, epidemiology, aging and dying from an applied and biocultural perspective, using anthropological theory and ethnographic fieldwork methods. Students will be exposed to diverse cultural interpretations of health, sickness and healing, the importance of viewing medical systems as social systems, understanding the socio-cultural context of medical decision making and therapy management, the principles of cultural competency, and the recurrent and ongoing problems of socioeconomic inequality and ecological disruptions that have an impact upon the differential distribution and treatment of human diseases.

**FHGE: Social & Behavioral Sciences Transferable: UC/CSU****ANTH 16L BASIC ARCHAEOLOGY LABORATORY 1 Unit****Formerly: ANTH 8L****Advisory: UC transferability is limited to 3 units maximum for ANTH 16L, 17L & 18L; not open to students with credit in ANTH 8L.****Grade Type: Letter Grade, the student may select Pass/No Pass Not Repeatable.****3 hours laboratory. (36 hours total per quarter)**

An introduction to basic laboratory methods and techniques of archaeology using the scientific method, including cataloging, care and analysis of artifacts, bone recognition, and archaeological excavation. This class will introduce concepts within an anthropological research framework. In addition to gaining expertise in laboratory research, students will examine, discuss, critique and write about the techniques, tools, laboratory terminology and processes of laboratory research at a basic level. Students will use archaeology vocabulary in verbal and written class reports.

**FHGE: Non-GE Transferable: UC/CSU****ANTH 17L INTERMEDIATE ARCHAEOLOGY LABORATORY 2 Units****Formerly: ANTH 8LX****Advisory: UC transferability is limited to 3 units maximum for ANTH 16L, 17L & 18L; not open to students with credit in ANTH 8LX.****Grade Type: Letter Grade, the student may select Pass/No Pass Not Repeatable.****6 hours laboratory. (72 hours total per quarter)**

An introduction to intermediate level laboratory methods and techniques of archaeology using the scientific method, including cataloging, care and analysis of artifacts, bone recognition, and archaeological excavation. This class will further develop concepts within an anthropological research framework, focusing on guided laboratory analysis of active archaeology research projects. Students develop expertise in detailed laboratory research and write about the techniques, tools, laboratory terminology and processes of laboratory research at an intermediate level. Students will use archaeology vocabulary in verbal and written class reports based on active research projects.

**FHGE: Non-GE Transferable: UC/CSU****ANTH 20 NATIVE PEOPLES OF CALIFORNIA 4 Units****Grade Type: Letter Grade, the student may select Pass/No Pass Not Repeatable.****4 hours lecture. (48 hours total per quarter)**

Study of the many cultures of the different native inhabitants of California from the prehistoric period to the present time. Covers an introduction to the diversity and complexity of aboriginal California. Includes the environmental adaptation, material culture, social structure, ideology, and response to change. Examines the impact of the other Native, European, Asian and African groups on those cultures as well as the contributions of Native Californians to the cultures of the Americas.

**FHGE: Social & Behavioral Sciences Transferable: UC/CSU**

**ANTH 22 THE AZTEC, MAYA, INCA & THEIR PREDECESSORS: CIVILIZATIONS OF THE AMERICAS 4 Units**

**Grade Type: Letter Grade, the student may select Pass/No Pass Not Repeatable.**

**4 hours lecture. (48 hours total per quarter)**

Survey of the origin, spread, and decline of pre-Columbian civilizations in Central and South America with a focus on the Maya, Inca and Aztec. Applies understandings of archaeology and cultural anthropology to examine the dynamics economic, social, political, cultural, and religious systems of Mesoamerica and South America over time. Covers the colonization process by the Spanish and current day indigenous issues in Mesoamerica and South America.

**FHGE: Social & Behavioral Sciences Transferable: UC/CSU**

**ANTH 51 ARCHAEOLOGY SURVEY 2 Units**

**Advisory: Not open to students with credit in ANTH 11B.**

**Grade Type: Letter Grade, the student may select Pass/No Pass Not Repeatable.**

**6 hours laboratory. (72 hours total per quarter)**

Introduction to field survey in archaeology. Emphasis on site identification, survey techniques and recording skills. All work is conducted at field sites.

**FHGE: Non-GE Transferable: CSU**

**ANTH 52 ARCHAEOLOGICAL FIELD METHODS 4 Units**

**Prerequisite: Instructor permission necessary for enrollment.**

**Advisory: Completion of or concurrent enrollment in ANTH 8 recommended; outdoor archaeology activities may be strenuous; not open to students with credit in ANTH 11.**

**Grade Type: Letter Grade, the student may select Pass/No Pass Not Repeatable.**

**1 hour lecture, 9 hours field work. (120 hours total per quarter)**

Introduction to archaeological field methods at an archaeological site either in the Bay Area or in another country. Locating different types of archaeological sites with field survey. Methods of field excavation. Study of local artifact types and lab techniques for artifact cleaning and identification. Selection of archaeological site, mapping, excavation, and preparation of artifacts, written analysis. Working and living with members of an indigenous culture.

**FHGE: Non-GE Transferable: CSU**

**ANTH 55 APPLIED CULTURAL ANTHROPOLOGY FIELD METHODS 1 Unit**

**Grade Type: Letter Grade, the student may select Pass/No Pass Not Repeatable.**

**1 hour lecture. (12 hours total per quarter)**

Applied anthropology focuses on the use of anthropological theories, perspectives and data-gathering methods in real-world contexts of practice or problem-solving. This 1-unit course provides students with the opportunity to learn and apply field methods from the sub-discipline of applied cultural anthropology to problems found in their own communities. Students will learn how to identify a research topic, write a proposal and project plan with specific milestones and deliverables, carry out research with the most appropriate field methodologies of applied research, and produce a "product" at the end of the course. Projects for this course will be in one of the major arenas of applied cultural anthropology, including: design anthropology, development anthropology, anthropology and health care, anthropology and social work, anthropology and education, organizational and business anthropology. Students will utilize field methodologies unique to applied cultural anthropology.

**FHGE: Non-GE Transferable: CSU**

**ANTH 56 APPLIED PHYSICAL ANTHROPOLOGY FIELD METHODS 1 Unit**

**Grade Type: Letter Grade, the student may select Pass/No Pass Not Repeatable.**

**1 hour lecture. (12 hours total per quarter)**

Applied anthropology focuses on the use of anthropological theories, perspectives and data-gathering methods in real-world contexts of practice or problem-solving. This 1-unit course provides students with the opportunity to learn and apply field methods from the sub-discipline of applied physical anthropology to problems found in their own communities. Students will learn how to identify a research topic, write a proposal and project plan with specific milestones and deliverables, carry out research with the most appropriate field methodologies of applied research, and produce a "product" at the end of the course. Projects for this course will be in one of the major arenas of applied physical anthropology, including: forensic anthropology and osteology, design anthropology (human engineering), medical anthropology, and environmental anthropology. Students will utilize field methodologies unique to applied physical anthropology.

**FHGE: Non-GE Transferable: CSU**

**ANTH 57 APPLIED ARCHAEOLOGY FIELD METHODS 1 Unit**

**Grade Type: Letter Grade, the student may select Pass/No Pass Not Repeatable.**

**1 hour lecture. (12 hours total per quarter)**

Applied anthropology focuses on the use of anthropological theories, perspectives and data-gathering methods in real-world contexts of practice or problem-solving. This 1-unit course provides students with the opportunity to learn and apply field methods from the sub-discipline of applied archaeology to problems found in their own communities. Students will learn how to identify a research topic, write a proposal and project plan with specific milestones and deliverables, carry out research with the most appropriate field methodologies of applied research, and produce a "product" at the end of the course. Projects for this course will be in one of the major arenas of applied archaeology, including: cultural resource management (CRM), historic preservation, museum studies, preservation law and ethics, and students will utilize field methodologies unique to applied archaeology.

**FHGE: Non-GE Transferable: CSU**

**ANTH 67A CULTURES OF THE WORLD: ECUADOR 4 Units**

**Grade Type: Letter Grade, the student may select Pass/No Pass Not Repeatable.**

**4 hours lecture. (48 hours total per quarter)**

Investigation of a specific culture of the world, in this case Ecuador, in which the student group is conducting research. Covers archaeological and historical past of these cultures. Explores the diversity within each culture. Uncovers the dynamics of power relationships within the culture in ancient and modern contexts. Examines politics, economics, religion, and social development in the culture area.

**FHGE: Non-GE Transferable: CSU**

**ANTH 67B CULTURES OF THE WORLD: BELIZE 4 Units**

**Grade Type: Letter Grade, the student may select Pass/No Pass Not Repeatable.**

**4 hours lecture. (48 hours total per quarter)**

Investigation of a specific culture of the world, in this case Belize, in which the student group is conducting research. Covers archaeological and historical past of these cultures. Explores the diversity within each culture. Uncovers the dynamics of power relationships within the culture in ancient and modern contexts. Examines politics, economics, religion, and social development in the culture area.

**FHGE: Non-GE Transferable: CSU**

**ANTH 67C CULTURES OF THE WORLD: BRITISH ISLES** 4 Units

**Grade Type: Letter Grade, the student may select Pass/No Pass Not Repeatable.**

**4 hours lecture. (48 hours total per quarter)**

This course is part of a series to explore the diverse cultural heritage of the world using an anthropological perspective. In this case students cover the British Isles starting with the archaeological and historical past. Using anthropological methodology students explore the diversity within each culture, and then analyze the relationships within a worldwide context. As well, students are expected to synthesize the dynamics of power relationships within the culture in ancient and modern contexts by evaluating politics, economics, religion, and social development in the culture area. The class is designed to work with students either on an international program or intending to participate in a program of study on the British Isles.

**FHGE: Non-GE Transferable: CSU**

**ANTH 67E CULTURES OF THE WORLD: MEDITERRANEAN** 4 Units

**Grade Type: Letter Grade, the student may select Pass/No Pass Not Repeatable.**

**4 hours lecture. (48 hours total per quarter)**

This course is part of a series to explore the diverse cultural heritage of the world using an anthropological perspective. In this case students cover the Mediterranean starting with the archaeological and historical past. Using anthropological methodology students explore the diversity within each culture, and then analyze the relationships within a worldwide context. As well, students are expected to synthesize the dynamics of power relationships within the culture in ancient and modern contexts by evaluating politics, economics, religion, and social development in the culture area. The class is designed to work with students either on an international program or intending to participate in a program of study in the Mediterranean.

**FHGE: Non-GE Transferable: CSU**

**ANTH 70R INDEPENDENT STUDY IN ANTHROPOLOGY** 1 Unit  
**ANTH 71R ANTHROPOLOGY** 2 Units  
**ANTH 72R** 3 Units  
**ANTH 73R** 4 Units

**Grade Type: Letter Grade, the student may select Pass/No Pass Not Repeatable.**

**3-12 hours laboratory per week. (36-144 hours total per quarter)**

Provides an opportunity for the student to expand their studies in anthropology beyond the classroom by completing a project or an assignment arranged by agreement between the student and instructor. The student is required to contract with the instructor to determine the scope of assignment and the unit value assigned for successful completion. Students may take a maximum of 6 units of Independent Study per department.

**FHGE: Non-GE Transferable: CSU**

**APPRENTICESHIP: ELECTRICIAN**

Apprenticeship  
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**APEL 112 RESIDENTIAL ELECTRICAL AIR CONDITIONING & REFRIGERATION; TELEPHONE SYSTEMS** 3 Units

**Prerequisite: Per California Code of Regulations, this course is limited to students admitted to the Electrical Apprenticeship Program.**

**Advisory: Not open to students with credit in APRT 112.**

**Grade Type: Letter Grade, the student may select Pass/No Pass Not Repeatable.**

**75 hours total: 24 hours lecture, 51 hours laboratory.**

An introduction to air conditioning and refrigeration systems used in residential applications; telephone systems. Students will study the wiring, circuitry and controls in these systems. Continued study of the National Electrical Code as it relates to current and load calculations. Review of A/C and D/C theory.

**FHGE: Non-GE**

**APEL 113 RESIDENTIAL ELECTRICAL SYSTEMS: BASIC SECURITY, SOLAR POWER, HOME AUTOMATION & LIFE SAFETY** 3 Units

**Prerequisite: Per California Code of Regulations, this course is limited to students admitted to the Electrical Apprenticeship Program.**

**Advisory: Not open to students with credit in APRT 113.**

**Grade Type: Letter Grade, the student may select Pass/No Pass Not Repeatable.**

**75 hours total: 24 hours lecture, 51 hours laboratory.**

A study of residential electrical systems and installation practices. Home automation including home theater. Fundamentals of solar power systems and recommended practices. Life safety systems. Expanded study of the National Electrical Code as it relates to communication circuits, and water applications such as pools and fountains.

**FHGE: Non-GE**

**APEL 120 ORIENTATION TO THE ELECTRICAL TRADE** 4 Units

**Prerequisite: Per California Code of Regulations, this course is limited to students admitted to the Electrical Apprenticeship Program. Student is a registered State indentured apprentice.**

**Advisory: Not open to students with credit in APRT 120.**

**Grade Type: Letter Grade, the student may select Pass/No Pass Not Repeatable.**

**96 hours total: 24 hours lecture, 72 hours laboratory.**

Orientation to the commercial/industrial electrical industry with an introduction to electrical theory, tools, materials, wiring methods, and job skills. Review of mathematics as applied in the electrical construction trades.

**FHGE: Non-GE**

**APEL 120A ORIENTATION TO THE ELECTRICAL TRADE, CPR & FIRST AID** 5 Units

**Prerequisites: Per California Code of Regulations, this course is limited to students admitted to the San Francisco Inside Wireman Electrical Program; MATH 105, 108 or equivalent.**

**Advisory: Not open to students will credit in APEL 120.**

**Grade Type: Letter Grade, the student may select Pass/No Pass Not Repeatable.**

**120 hours total: 36 hours lecture, 84 hours laboratory.**

Orientation to the commercial/industrial electrical industry with an introduction to electrical theory, tools, materials, wiring methods, and job skills. Review of mathematics as applied in the electrical construction trades. Industry applications, hands on labs. Topics include CPR, first aid, job orientation, sexual harassment and drug abuse.

**FHGE: Non-GE**

<p><b>APEL 121</b>      <b>ELECTRON THEORY; BASIC BLUEPRINT READING; DC THEORY; NATIONAL ELECTRICAL CODE INTRODUCTION</b>      <b>4 Units</b></p> <p><b>Prerequisite:</b> Per California Code of Regulations, this course is limited to students admitted to the Electrical Apprenticeship Program.  <b>Advisory:</b> Not open to students with credit in APRT 121.  <b>Grade Type:</b> Letter Grade, the student may select Pass/No Pass Not Repeatable.  <b>96 hours total: 24 hours lecture, 72 hours laboratory.</b>  Introduction to the National Electrical Code (NEC), DC theory, principles of magnetism and electromagnetism, basic blueprint reading.  <b>FHGE: Non-GE</b></p>	<p><b>APEL 123</b>      <b>AC THEORY; TRANSFORMERS; INTERMEDIATE NATIONAL ELECTRICAL CODE</b>      <b>4 Units</b></p> <p><b>Prerequisite:</b> Per California Code of Regulations, this course is limited to students admitted to the Electrical Apprenticeship Program.  <b>Advisory:</b> Not open to students with credit in APRT 123.  <b>Grade Type:</b> Letter Grade, the student may select Pass/No Pass Not Repeatable.  <b>96 hours total: 24 hours lecture, 72 hours laboratory.</b>  Study of AC theory, transformer fundamental design and function. Expanded study of the National Electrical Code. Students will learn the fundamentals of AC theory and how it relates to transformer design. They will also learn to understand how National Electrical codes are applied for the safe and proper installation transformers.  <b>FHGE: Non-GE</b></p>
<p><b>APEL 121A</b>      <b>ELECTRON THEORY; AC &amp; DC ELECTRICAL THEORY; NATIONAL ELECTRICAL CODE INTRODUCTION; PARALLEL &amp; COMBINATION CIRCUITS</b>      <b>5 Units</b></p> <p><b>Prerequisite:</b> Per California Code of Regulations, this course is limited to students admitted to the San Francisco Inside Wireman Electrical Program.  <b>Advisory:</b> Not open to students with credit in APRT 121.  <b>Grade Type:</b> Letter Grade, the student may select Pass/No Pass Not Repeatable.  <b>120 hours total: 36 hours lecture, 84 hours laboratory.</b>  Introduction to the National Electrical Code (NEC), applied codeology towards the National Electrical Code. Discuss and demonstrate basic AC and DC electrical generation. Ohm's Law, Understand DC parallel and combination circuits. Basic three-phase AC.  <b>FHGE: Non-GE</b></p>	<p><b>APEL 123A</b>      <b>GROUNDING &amp; BONDING, OVERCURRENT PROTECTION, CODE &amp; PRACTICES, BLUEPRINTS, CODEOLOGY SKILLS</b>      <b>5 Units</b></p> <p><b>Prerequisite:</b> Per California Code of Regulations, this course is limited to students admitted to the San Francisco Inside Wireman Electrical Program.  <b>Grade Type:</b> Letter Grade, the student may select Pass/No Pass Not Repeatable.  <b>120 hours total: 36 hours lecture, 84 hours laboratory.</b>  Intended for apprentices to become trained in electrical grounding and bonding. Focus will be on learning the electrical code and overcurrent protective devices (OCPD). Apprentices will demonstrate their ability to read residential, commercial, and industrial blueprints and to perform circuit layouts. This course meets the requirements of electrical safety standards for third-year apprentices who are pursuing their certificate.  <b>FHGE: Non-GE</b></p>
<p><b>APEL 122</b>      <b>CODEOLOGY; TEST EQUIPMENT; PIPE BENDING; BLUEPRINTS</b>      <b>4 Units</b></p> <p><b>Prerequisite:</b> Per California Code of Regulations, this course is limited to students admitted to the Electrical Apprenticeship Program.  <b>Advisory:</b> Not open to students with credit in APRT 122.  <b>Grade Type:</b> Letter Grade, the student may select Pass/No Pass Not Repeatable.  <b>96 hours total: 24 hours lecture, 72 hours laboratory.</b>  Study of the National Electrical Code, AC Theory and basic fundamentals of using blueprints.  <b>FHGE: Non-GE</b></p>	<p><b>APEL 124</b>      <b>DC/AC THEORY REVIEW; ELECTRONICS; INDUSTRIAL BLUEPRINTS</b>      <b>4 Units</b></p> <p><b>Prerequisite:</b> Per California Code of Regulations, this course is limited to students admitted to the Electrical Apprenticeship Program.  <b>Advisory:</b> Not open to student with credit in APRT 124.  <b>Grade Type:</b> Letter Grade, the student may select Pass/No Pass Not Repeatable.  <b>96 hours total: 24 hours lecture, 72 hours laboratory.</b>  Review of DC/AC theory. The study of overcurrent protection and the implementation of safe work practices.  <b>FHGE: Non-GE</b></p>
<p><b>APEL 122A</b>      <b>CODEOLOGY; NEC CODE; TEST EQUIPMENT; PIPE BENDING; BLUEPRINTS</b>      <b>5 Units</b></p> <p><b>Prerequisite:</b> Per California Code of Regulations, this course is limited to students admitted to the San Francisco Inside Wireman Electrical Program.  <b>Advisory:</b> Not open to students with credit in APRT 122.  <b>Grade Type:</b> Letter Grade, the student may select Pass/No Pass Not Repeatable.  <b>120 hours total: 36 hours lecture, 84 hours laboratory.</b>  Study of the National Electrical Code, applied codeology, and basic fundamentals of using blueprints. Instruction on usage of test equipment and pipe bending tools.  <b>FHGE: Non-GE</b></p>	<p><b>APEL 124A</b>      <b>DC/AC THEORY REVIEW; ELECTRONICS; INDUSTRIAL BLUEPRINTS; TRANSFORMERS, GROUNDING; ELECTRICAL SYSTEMS</b>      <b>5 Units</b></p> <p><b>Prerequisite:</b> Per California Code of Regulations, this course is limited to students admitted to the San Francisco Inside Wireman Electrical Program.  <b>Advisory:</b> Not open to students with credit in APRT 124.  <b>Grade Type:</b> Letter Grade, the student may select Pass/No Pass Not Repeatable.  <b>120 hours total: 36 hours lecture, 84 hours laboratory.</b>  Review of AC/DC theory. Study of electronics principles and applications, and industrial blueprint reading. Transformer installation, grounding &amp; electrical systems.  <b>FHGE: Non-GE</b></p>



**APEL 125      NEC GROUNDING; OVERCURRENT PROTECTION; TRANSFORMER CONNECTIONS      4 Units**

**Prerequisite:** Per California Code of Regulations, this course is limited to students admitted to the Electrical Apprenticeship Program.

**Advisory:** Not open to students with credit in APRT 125.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**96 hours total: 24 hours lecture, 72 hours laboratory.**

This course will cover grounding and bonding of transformers, fire alarm systems and industrial blueprint reading.

**FHGE: Non-GE**

**APEL 125A      FIRE ALARM SYSTEMS, EMERGENCY COMMUNICATION SYSTEMS, PUBLIC EMERGENCY SYSTEMS      5 Units**

**Prerequisite:** Per California Code of Regulations, this course is limited to students admitted to the Electrical Apprenticeship Program.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**120 hours total: 36 hours lecture, 84 hours laboratory.**

Introduction to fire alarm systems and their components. Student will be required to demonstrate knowledge in alarm system interfaces, safety control functions, advanced detection topics, emergency communications system, public emergency systems and supervising stations. Comprehension of residential fire alarm systems, telephone and security basics is covered in detail. This course meets the requirements of electrical safety standards for third-year apprentices who are pursuing their certificate.

**FHGE: Non-GE**

**APEL 126      MOTORS; MOTOR CONTROL; LIGHTING PROTECTION      4 Units**

**Prerequisite:** Per California Code of Regulations, this course is limited to students admitted to the Electrical Apprenticeship Program.

**Advisory:** Not open to students with credit in APRT 126.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**96 hours total: 24 hours lecture, 72 hours laboratory.**

A study of different motor types and controls with emphasis on protecting the motors and the buildings they are in with lightning protection systems. Reading and interpretation of schematic drawings.

**FHGE: Non-GE**

**APEL 127      DIGITAL ELECTRONICS; MOTOR SPEED CONTROL; ADVANCED NATIONAL ELECTRICAL CODE      4 Units**

**Prerequisite:** Per California Code of Regulations, this course is limited to students admitted to the Electrical Apprenticeship Program.

**Advisory:** Not open to students with credit in APRT 127.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**96 hours total: 24 hours lecture, 72 hours laboratory.**

The use of Boolean algebra in the development of logic circuits and logic control. Introduction to the principles of motor speed control. Review of AC theory. Expanded coverage of the National Electrical Code.

**FHGE: Non-GE**

**APEL 128      PROGRAMMABLE LOGIC CONTROLLERS; LOW-VOLTAGE SYSTEMS & HIGH-VOLTAGE SYSTEMS      4 Units**

**Prerequisite:** Per California Code of Regulations, this course is limited to students admitted to the Electrical Apprenticeship Program.

**Advisory:** Not open to students with credit in APRT 128.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**96 hours total: 24 hours lecture, 72 hours laboratory.**

Introduction to programmable controllers, alarm systems, telephone wiring, instrumentation, and high voltage testing.

**FHGE: Non-GE**

**APEL 129      NATIONAL ELECTRICAL CODE REVIEW      4 Units**

**Prerequisite:** Per California Code of Regulations, this course is limited to students admitted to the Electrical Apprenticeship Program.

**Advisory:** Not open to students with credit in APRT 129.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**96 hours total: 24 hours lecture, 72 hours laboratory.**

Review of the National Electrical Code and preparation for the California State Certification Test. Jobsite management, system testing, fiber optics; heating, air conditioning, and refrigeration systems.

**FHGE: Non-GE**

**APEL 135      RESIDENTIAL ELECTRICAL ORIENTATION; SAFETY & CODE INTRODUCTION      3 Units**

**Prerequisite:** Per California Code of Regulations, this course is limited to students admitted to the Electrical Apprenticeship Program.

**Advisory:** Not open to students with credit in APRT 135.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**75 hours total: 24 hours lecture, 51 hours laboratory.**

Orientation to the electrical industry with a residential emphasis; on-the-job safety; identification of tools and materials; review of basic math. Introduction to the National Electrical Code.

**FHGE: Non-GE**

**APEL 136      RESIDENTIAL ELECTRICAL D/C THEORY; BLUEPRINT READING      3 Units**

**Prerequisite:** Per California Code of Regulations, this course is limited to students admitted to the Electrical Apprenticeship Program.

**Advisory:** Not open to student with credit in APRT 136.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**75 hours total: 24 hours lecture, 51 hours laboratory.**

Introduction to D/C electrical theory and circuitry as it relates to residential installations; conductors used in electrical wiring. Course also introduces blueprint reading including architectural and engineering symbols and scale.

**FHGE: Non-GE**

**APEL 137      RESIDENTIAL ELECTRICAL A/C THEORY & CIRCUITRY      3 Units**

**Prerequisite:** Per California Code of Regulations, this course is limited to students admitted to the Electrical Apprenticeship Program.

**Advisory:** Not open to students with credit in APRT 137.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**75 hours total: 24 hours lecture, 51 hours laboratory.**

Introduction to A/C electrical theory and circuitry as they relate to residential installations; job costing and industrial standards. Further study of the National Electrical Code focusing on codeology. Expanded development of blueprint reading skills.

**FHGE: Non-GE**

**APEL 138 RESIDENTIAL WIRING LAYOUT & INSTALLATION 3 Units**

**Prerequisite:** Per California Code of Regulations, this course is limited to students admitted to the Electrical Apprenticeship Program.

**Advisory:** Not open to students with credit in APRT 138.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**75 hours total: 24 hours lecture, 51 hours laboratory.**

A study of electrical wiring methods, circuitry, and conduit installation in residential applications. Students will also practice wiring layout for residential housing. Continued study of the National Electrical Code as it relates to circuits, grounding and cable assemblies.

**FHGE: Non-GE**

**APPRENTICESHIP: IRONWORKERS**

**Apprenticeship**

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**APIW 100 INTRODUCTION TO IRONWORKING 3 Units**

**Prerequisite:** Per California Code of Regulations, this course is limited to students admitted to the Ironworkers Apprenticeship Program.

**Advisory:** Not open to students with credit in APPR 170.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**64 hours total: 24 hours lecture, 40 hours laboratory.**

Overview of ironworker's skill and knowledge areas needed to make the newly indentured apprentice a safe and productive worker from the earliest period of job dispatch. Includes a review of basic math principles. OSHA safety.

**FHGE: Non-GE**

**APIW 101 MIXED BASE 2 Units**

**Prerequisite:** Per California Code of Regulations, this course is limited to students admitted to the Ironworkers Apprenticeship Program.

**Advisory:** Not open to students with credit in APPR 171.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**40 hours total: 24 hours lecture, 16 hours laboratory.**

Introduction to blueprint reading and continuation of basic trade mathematics.

**FHGE: Non-GE**

**APIW 102 REINFORCING IRON I 2 Units**

**Prerequisite:** Per California Code of Regulations, this course is limited to students admitted to the Ironworkers Apprenticeship Program.

**Advisory:** Not open to students with credit in APPR 172.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**40 hours total: 24 hours lecture, 16 hours laboratory.**

Instruction in reinforced concrete principles, applications, and processes. Study of the forces at work when iron and concrete are combined as a building material.

**FHGE: Non-GE**

**APIW 103 RIGGING I 2 Units**

**Prerequisite:** Per California Code of Regulations, this course is limited to students admitted to the Ironworkers Apprenticeship Program.

**Advisory:** Not open to students with credit in APPR 173.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**40 hours total: 24 hours lecture, 16 hours laboratory.**

Introduction to rigging operations such as wire rope, chains, slings, cranes, helicopters, ladders and scaffolds used in the ironworkers' trade. Rigging safety, knot recognition and strength identification, and knot application to rigging are included.

**FHGE: Non-GE**

**APIW 104 IRONWORKER HISTORY & TRADE SCIENCE 2 Units**

**Prerequisite:** Per California Code of Regulations, this course is limited to students admitted to the Ironworkers Apprenticeship Program.

**Advisory:** Not open to students with credit in APPR 174.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**40 hours total: 24 hours lecture, 16 hours laboratory.**

Acquaints the student with the history of the ironworking trade. Study of the State and Federal laws giving the apprenticeship program in California its legal authority, the manner in which each law affects the workers, and the privileges and obligations of the workers in the trade. Procedures for dispatch of workers and the effect of wages and benefits on workers' compensation insurance will also be covered.

**FHGE: Non-GE**

**APIW 105 WELDING I 2 Units**

**Prerequisite:** Per California Code of Regulations, this course is limited to students admitted to the Ironworkers Apprenticeship Program.

**Advisory:** Not open to students with credit in APPR 175.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**40 hours total: 24 hours lecture, 16 hours laboratory.**

Introduction to welding and welding concepts for construction job sites. Basic welding safety and basic welding terms, definitions, positions, and cutting operations are included.

**FHGE: Non-GE**

**APIW 106 STRUCTURAL I 2 Units**

**Prerequisite:** Per California Code of Regulations, this course is limited to students admitted to the Ironworkers Apprenticeship Program.

**Advisory:** Not open to students with credit in APPR 176.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**40 hours total: 24 hours lecture, 16 hours laboratory.**

Introduction to high steel construction. Emphasis will be on erection of beams and skeletons, fastening structural steel, manufacture of iron and steel, safety positions, finishing operations. Scaffold user course. Sub-part R safety training.

**FHGE: Non-GE**

**APIW 107 WELDING II 2 Units**

**Prerequisite:** Per California Code of Regulations, this course is limited to students admitted to the Ironworkers Apprenticeship Program.

**Advisory:** Not open to students with credit in APPR 177.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**40 hours total: 24 hours lecture, 16 hours laboratory.**

Intermediate Welding. A further study of welding safety and welding concepts for construction job sites. Welding processes, shielded metal-arc, gas shielded-arc, and oxy-acetylene welding, symbols, and certification qualifications are included.

**FHGE: Non-GE**

**APIW 109 POST-TENSIONING I 2 Units**

**Prerequisite:** Per California Code of Regulations, this course is limited to students admitted to the Ironworkers Apprenticeship Program.

**Advisory:** Not open to students with credit in APPR 179.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**40 hours total: 24 hours lecture, 16 hours laboratory.**

History of post-tensioning, modern efforts and safety advantages. Special materials, preparation and stressing of post-tensioning systems. Special applications of post-tensioning systems. Discussion of thread-bar post-tensioning systems.

**FHGE: Non-GE**

**APIW 110 ARCHITECTURAL I 2 Units**

**Prerequisite:** Per California Code of Regulations, this course is limited to students admitted to the Ironworkers Apprenticeship Program.

**Advisory:** Not open to students with credit in APPR 182A.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**40 hours total: 24 hours lecture, 16 hours laboratory.**

A study of the procedures and practices employed by the ironworker in architectural and ornamental ironworking with emphasis on the principles, theory and application of ornamental hand tools, power-actuated tools, anchors, and fasteners. Application of window walls, curtain walls, sealants, glazing, and window and curtain wall systems.

**FHGE: Non-GE**

**APIW 111 ARCHITECTURAL II 2 Units**

**Prerequisite:** Per California Code of Regulations, this course is limited to students admitted to the Ironworkers Apprenticeship Program.

**Advisory:** Not open to students with credit in APPR 182B.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**40 hours total: 24 hours lecture, 16 hours laboratory.**

A continued study of the procedures and practices of the ironworker trade with emphasis in architectural and ornamental ironworking. Students will learn elements of iron construction to include load-bearing, skeletal structure; stairs, fire escapes, ladders, conveyor systems, doors, elevators, windows, railings and other metal features of modern construction. Use and care of tools is covered in detail.

**FHGE: Non-GE**

**APIW 112 LEAD HAZARD TRAINING 2 Units**

**Prerequisite:** Per California Code of Regulations, this course is limited to students admitted to the Ironworkers Apprenticeship Program.

**Advisory:** Not open to students with credit in APRT 185.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**40 hours total: 24 hours lecture, 16 hours laboratory.**

A study of the history of lead and the health hazards of lead exposure in the ironworking trade. Teaches those elements of knowledge, coordination and skill needed for safety, stressing the use of proper protective equipment and work methods. OSHA regulations, sampling methods and legal rights of workers. First Aid/CPR Training by American Red Cross.

**FHGE: Non-GE**

**APIW 113 SMALL STRUCTURE ERECTION 2 Units**

**Prerequisite:** Per California Code of Regulations, this course is limited to students admitted to the Ironworkers Apprenticeship Program.

**Advisory:** Not open to students with credit in APPR 188.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**40 hours total: 24 hours lecture, 16 hours laboratory.**

An introduction to small structure erection of prefab and precast concrete buildings. Study of charts, tables, blueprints, anchors, framing and fasteners. Particular emphasis given to the rigging, handling and installing of precast concrete members.

**FHGE: Non-GE**

**APIW 114 WELDING III 2 Units**

**Prerequisite:** Per California Code of Regulations, this course is limited to students admitted to the Ironworkers Apprenticeship Program.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**40 hours total: 24 hours lecture, 16 hours laboratory.**

Advanced welding. A further study of welding safety and welding concepts for construction job sites. Welding processes, shielded metal-arc, flux-core arc welding, gas shielded-arc, and TiG welding, symbols, and certification qualifications are included.

**FHGE: Non-GE**

**APIW 115 CRANES 2 Units**

**Prerequisite:** Per California Code of Regulations, this course is limited to students admitted to the Ironworkers Apprenticeship Program.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**40 hours total: 24 hours lecture, 16 hours laboratory.**

Provides the ironworker student with training in how to erect and dismantle mobile cranes, describe principles of crane operation, identify quadrants of crane operation, read crane load charts, identify crane capacity factors, plan pre-lift planning and set up, describe mobile crane operating procedures, and erect, climb, dismantle and transport tower cranes.

**FHGE: Non-GE**

**APIW 116 FOREMAN TRAINING 2 Units**

**Prerequisite:** Per California Code of Regulations, this course is limited to students admitted to the Ironworkers Apprenticeship Program.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**40 hours total: 24 hours lecture, 16 hours laboratory.**

Prepares the student with the roles and responsibilities of the foreman. In addition, students learn how to create an effective work team, communicate effectively, apply problem-solving skills, document and maintain records, maintain labor-management relations, plan and schedule work, implement a safety program and ensure the quality of work.

**FHGE: Non-GE**

**APIW 117 GENERAL SAFETY/OSHA 30/COMET 2 Units**

**Prerequisite:** Per California Code of Regulations, this course is limited to students admitted to the Ironworkers Apprenticeship Program.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**40 hours total: 24 hours lecture, 16 hours laboratory.**

Provides the ironworker student with 30 hours of training required by the Occupational Health and Safety Act (OSHA). This course applies toward the 30-hour construction industry course completion card. The COMET portion within this course requires a minimum of 8 classroom hours and provides apprentices with useful information about the challenges facing the ironworker union and provides thought provoking questions and suggestions for how to navigate the world of construction in the 21st century.

**FHGE: Non-GE**

## APPRENTICESHIP: PIPE TRADES

### Apprenticeship

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#### APPT 121 INTRODUCTION TO RESIDENTIAL PLUMBING, SAFETY & TOOLS 2.5 Units

**Prerequisite:** Per California Code of Regulations, this course is limited to students admitted to the Residential Plumbing Apprenticeship Program.

**Advisory:** Current employment in the pipe trades industry.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**54 hours total: 18 hours lecture, 36 hours laboratory.**

An introduction to basic residential plumbing standards, employment information and procedures, history and heritage of plumbing, organization and construction safety. Necessary trade skills include cutting and threading, use and care of tools, and soldering and brazing are taught along with construction terminology and plumbing definitions.  
**FHGE: Non-GE**

#### APPT 122 RESIDENTIAL DRAINAGE SYSTEMS 2.5 Units

**Prerequisite:** Per California Code of Regulations, this course is limited to students admitted to the Residential Plumbing Apprenticeship Program.

**Advisory:** Current employment in the pipe trades industry.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**54 hours total: 18 hours lecture, 36 hours laboratory.**

Overview of the installation and design criteria of residential drainage, waste and vent systems, with emphasis and study of the applied theory, design and installation criteria. Includes application of local codes.  
**FHGE: Non-GE**

#### APPT 123 RESIDENTIAL GAS & WATER INSTALLATIONS 2.5 Units

**Prerequisite:** Per California Code of Regulations, this course is limited to students admitted to the Residential Plumbing Apprenticeship Program.

**Advisory:** Current employment in the pipe trades industry.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**54 hours total: 18 hours lecture, 36 hours laboratory.**

Overview of the installation and design criteria of residential hot and cold water, and fuel gas installations. Includes piping materials and hanger systems, material handling and environmental concerns.  
**FHGE: Non-GE**

#### APPT 124 MATHEMATICS FOR RESIDENTIAL PLUMBING 2.5 Units

**Prerequisite:** Per California Code of Regulations, this course is limited to students admitted to the Residential Plumbing Apprenticeship Program.

**Advisory:** Current employment in the pipe trades industry; not open to students with credit in APRT 195.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**54 hours total: 18 hours lecture, 36 hours laboratory.**

A review of basic math concepts and operation, followed by instruction in pipe measurements, formulas, and off-set calculations. Use of common electronic calculators will be included.  
**FHGE: Non-GE**

#### APPT 125 RESIDENTIAL BLUEPRINT READING 4.5 Units

**Prerequisite:** Per California Code of Regulations, this course is limited to students admitted to the Residential Plumbing Apprenticeship Program.

**Advisory:** Current employment in the pipe trades industry.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**108 hours total: 30 hours lecture, 78 hours laboratory.**

Familiarize with the various blueprints, drawings and sketches used in residential construction. Plan types, details and symbols will be covered, as well as common construction terms and methods. Working from a set of building plans, students will create isometric drawings of plumbing systems.

**FHGE: Non-GE**

#### APPT 126 RESIDENTIAL PIPING LAYOUT & INSTALLATION; RESIDENTIAL FIXTURES 4.5 Units

**Prerequisite:** Per California Code of Regulations, this course is limited to students admitted to the Residential Plumbing Apprenticeship Program.

**Advisory:** Current employment in the pipe trades industry.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**108 hours total: 30 hours lecture, 78 hours laboratory.**

Introduction to the various methods of inserting and sleeving in residential construction. Students will practice the layout and installation of residential copper pipe and tube systems. Hands-on practice of plumbing fixture installation, service and repair will be provided.

**FHGE: Non-GE**

#### APPT 127 RESIDENTIAL PLUMBING CODE 2.5 Units

**Prerequisite:** Per California Code of Regulations, this course is limited to students admitted to the Residential Plumbing Apprenticeship Program.

**Advisory:** Current employment in the pipe trades industry.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**54 hours total: 18 hours lecture, 36 hours laboratory.**

A comprehensive overview of the Plumbing Code. Students will examine each chapter of the code book and practice proper application through worksheets, system design, and sizing exercises.

**FHGE: Non-GE**

#### APPT 128 RESIDENTIAL GAS INSTALLATIONS; SERVICE WORK 2.5 Units

**Prerequisite:** Per California Code of Regulations, this course is limited to students admitted to the Residential Plumbing Apprenticeship Program.

**Advisory:** Current employment in the pipe trades industry; not open to students with credit in APRT 183.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**54 hours total: 18 hours lecture, 36 hours laboratory.**

Introduction to safe practices for working in excavations and confined spaces. Instructions and hands-on practice will be provided in underground polyethylene gas installations and residential service work.

**FHGE: Non-GE**

**APPT 129 SPECIAL TOPICS 2.5 Units**

**Prerequisite:** Per California Code of Regulations, this course is limited to students admitted to the Plumbing/Steamfitting & Pipefitting/Air Conditioning Refrigeration Technology Apprenticeship Program.

**Advisory:** Not open to students with credit in APPR 109.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**54 hours total: 18 hours lecture, 36 hours laboratory.**

A study of special topics: Study pipe trade related software and computer assisted drawing. Develop advanced welding skills. Introduce concepts of digital controls. Certify in repair of back flow control devices. Further examine management techniques for planning and organizing projects.

**FHGE: Non-GE**

**APPT 130 REVIEW & TURNOUT 2.5 Units**

**Prerequisite:** Per California Code of Regulations, this course is limited to students admitted to the Plumbing/Steamfitting & Pipefitting/Air Conditioning Refrigeration Technology Apprenticeship Program.

**Advisory:** Not open to students with credit in APPR 130.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**54 hours total: 18 hours lecture, 36 hours laboratory.**

A comprehensive overview of the entire plumbing, steamfitting, and refrigeration courses of instruction and preparation for completion examinations. Presentation of the latest current code and safety information. Planning and performing hands on piping projects. Perform hands on trouble shooting projects for air conditioning systems.

**FHGE: Non-GE**

**APPT 131 P-101 BASIC PLUMBING SKILLS 4.5 Units**

**Prerequisite:** Per California Code of Regulations, this course is limited to students admitted to the Plumbing Technology Apprenticeship Program.

**Advisory:** Not open to students with credit in APPR 110.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**108 hours total: 30 hours lecture, 78 hours laboratory.**

Orientation to the apprenticeship program, JATC policies and procedures. UA history and heritage will also be covered at this time. Safety training is introduced next, with instruction in general construction safety. This is followed up with necessary trade skills including, use and care of tools, pipe and tube installations and soldering and brazing.

**FHGE: Non-GE**

**APPT 132 P-102 APPLIED & RELATED THEORY 4.5 Units**

**Prerequisite:** Per California Code of Regulations, this course is limited to students admitted to the Plumbing Technology Apprenticeship Program.

**Advisory:** Not open to students with credit in APPR 102.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**108 hours total: 30 hours lecture, 78 hours laboratory.**

Review of basic math before introducing new concepts including pipe measuring and calculation of simple offsets. Students will learn fundamental scientific principles related to the installation and design of basic plumbing systems. Installation and design of fuel gas piping and drainage systems will also be studied.

**FHGE: Non-GE**

**APPT 133 P-201 BEGINNING DRAWING & DESIGN 4.5 Units**

**Prerequisite:** Per California Code of Regulations, this course is limited to students admitted to the Plumbing Technology Apprenticeship Program.

**Advisory:** Not open to students with credit in APPR 112.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**108 hours total: 30 hours lecture, 78 hours laboratory.**

Drawing fundamentals to instruction in isometric drawing. Students learn the proper design and sizing of simple waste, water and gas systems. An in-depth study of water supply systems will also be included. Students will also learn to read and interpret simple residential building plans, designing and coordinating plumbing systems within the structure.

**FHGE: Non-GE**

**APPT 134A P-202A RIGGING; LAYOUT 2.5 Units**

**Prerequisite:** Per California Code of Regulations, this course is limited to students admitted to the Plumbing Technology Apprenticeship Program.

**Advisory:** Not open to students with credit in APPR 113.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**54 hours total: 18 hours lecture, 36 hours laboratory.**

Instruction in identification and tying various types of knots, study hands on safe practices of rigging and hoisting piping materials. Instruction in the use of a transit, builder's level, laser level and other measuring instruments in the layout and installation of piping systems. Establish the invert elevations and coordination of piping systems by means of profile drawings.

**FHGE: Non-GE**

**APPT 134B INDUSTRIAL SAFETY 2.5 Units**

**Prerequisite:** Per California Code of Regulations, this course is limited to students admitted to the Plumbing/Steamfitting & Pipefitting Technology Apprenticeship Program.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**54 hours total: 18 hours lecture, 36 hours laboratory.**

Study in the requirements for emergency response to and handling of hazardous materials. Laws of chemical hazards, electrical hazards, personal protective equipment, and confined spaces, monitoring equipment, and Federal and Cal-OSHA Standards for the construction industry will be covered.

**FHGE: Non-GE**

**APPT 135A P-301A PLUMBING FIXTURES 2.5 Units**

**Prerequisite:** Per California Code of Regulations, this course is limited to students admitted to the Plumbing Technology Apprenticeship Program.

**Advisory:** Not open to students with credit in APPR 116.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**54 hours total: 18 hours lecture, 36 hours laboratory.**

Instruction in plumbing fixtures and appliances. Names and design features of various plumbing fixtures will be discussed. Proper installation, maintenance and repair of fixtures and appliances will be studied.

**FHGE: Non-GE**

**APPT 135B P-301B PLUMBING CODES 2.5 Units**

**Prerequisite:** Per California Code of Regulations, this course is limited to students admitted to the Plumbing Technology Apprenticeship Program.

**Advisory:** Not open to students with credit in APPR 119.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**54 hours total: 18 hours lecture, 36 hours laboratory.**

Learn and demonstrate the procedures for coordinating the testing and inspection of plumbing systems and applicable codes that a plumbing systems test must meet. Knowledge of general regulations, including accessibility and ADA requirements will also be discussed.

**FHGE: Non-GE**

**APPT 136 P-302 ADVANCED TRADE MATH FOR PLUMBERS 4.5 Units**

**Prerequisite:** Per California Code of Regulations, this course is limited to students admitted to the Plumbing Technology Apprenticeship Program.

**Advisory:** Not open to students with credit in APPR 118.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**108 hours total: 30 hours lecture, 78 hours laboratory.**

Extensive use of piping formulas to solve typical piping layout calculations. Students will calculate compound offsets and accurately determine center to center and end to end piping measurements for plumbing systems.

**FHGE: Non-GE**

**APPT 137A P-401A WATER SYSTEMS 2.5 Units**

**Prerequisite:** Per California Code of Regulations, this course is limited to students admitted to the Plumbing Technology Apprenticeship Program.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**54 hours total: 18 hours lecture, 36 hours laboratory.**

Development and operation of domestic and industrial water supply and distribution systems for installation and operation. An overview of water sources, methods used to plan and configure supply, purification and distribution systems, for operation and maintenance.

**FHGE: Non-GE**

**APPT 137B P-401B APPLIED WELDING 2.5 Units**

**Prerequisite:** Per California Code of Regulations, this course is limited to students admitted to the Plumbing Technology Apprenticeship Program.

**Advisory:** Not open to students with credit in APPR 117.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**54 hours total: 18 hours lecture, 36 hours laboratory.**

Instruction and practice in oxy-fuel cutting, oxy-fuel welding and arc welding of steel plate and pipe. Safety and accuracy in measuring, lay-out and torch handling is emphasized.

**FHGE: Non-GE**

**APPT 138 P-402 ADVANCED DRAWING & BLUEPRINT READING 4.5 Units**

**Prerequisite:** Per California Code of Regulations, this course is limited to students admitted to the Plumbing Technology Apprenticeship Program.

**Advisory:** Not open to students with credit in APPR 114.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**108 hours total: 30 hours lecture, 78 hours laboratory.**

Interpretation of orthographic and isometric drawings and building plans that make up working drawings for the proper installation of piping systems. Standard graphic symbols used to represent piping, fittings and valves on construction drawings will be covered, as well as various construction methods and materials, specifications and submittals. Hands on exercises in the creation and coordination of shop drawings.

**FHGE: Non-GE**

**APPT 139A INDUSTRIAL INSTALLATIONS 2.5 Units**

**Prerequisite:** Per California Code of Regulations, this course is limited to students admitted to the Plumbing/Steamfitting & Pipefitting Technology Apprenticeship Program.

**Advisory:** Not open to students with credit in APPT 139.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**54 hours total: 18 hours lecture, 36 hours laboratory.**

Process piping and high purity water piping systems (HPW) and will cover hazards associated with these installations. Water treatment and clean steam parameters for the pharmaceutical and biotech manufacturing industries will also be presented. Pneumatic control systems will be covered including the identification, and installation of regulators and valves, pneumatic tubing and use of air compressors and refrigerated air-dryers. Control systems will also be discussed. Hands-on experience with tube bending.

**FHGE: Non-GE**

**APPT 139B MEDICAL GAS INSTALLATIONS 2.5 Units**

**Prerequisite:** Per California Code of Regulations, this course is limited to students admitted to the Plumbing/Steamfitting & Pipefitting Technology Apprenticeship Program.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**54 hours total: 18 hours lecture, 36 hours laboratory.**

Installation procedures of medical gas and vacuum systems. Apprentices will learn about station outlets/inlets, manufactured assemblies and pressure/vacuum indicators. Brazing requirements will be described and proper techniques will be demonstrated. Practice brazing techniques in order to prepare for the brazing qualification exam.

**FHGE: Non-GE**

**APPT 141 SF 101 BASIC STEAMFITTING SKILLS 4.5 Units**

**Prerequisite:** Per California Code of Regulations, this course is limited to students admitted to the Steamfitting & Pipefitting Technology Apprenticeship Program.

**Advisory:** Not open to students with credit in APPR 123.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**108 hours total: 30 hours lecture, 78 hours laboratory.**

Orientation to the apprenticeship program, JATC policies and procedures. UA history and heritage will also be covered at this time. Safety training is introduced next, with instruction in general construction safety. This is followed up with necessary trade skills, including use and care of tools, pipe and tube installations and soldering and brazing.

**FHGE: Non-GE**

**APPT 142 SF 102 RELATED MATH, DRAWING & RIGGING 4.5 Units**

**Prerequisite:** Per California Code of Regulations, this course is limited to students admitted to the Steamfitting & Pipefitting Technology Apprenticeship Program.

**Advisory:** Not open to students with credit in APPR 124.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**108 hours total: 30 hours lecture, 78 hours laboratory.**

Review of basic math before introducing new concepts including pipe measuring and calculation of simple offsets. Students will then learn drawing fundamentals before moving to instruction in isometric drawing. Instruction in identification and tying various types of knots, study hands on safe practices of rigging and hoisting piping materials.

**FHGE: Non-GE**

**APPT 143 SF 201 STEAMFITTER CUTTING & WELDING 4.5 Units**

**Prerequisite:** Per California Code of Regulations, this course is limited to students admitted to the Steamfitting & Pipefitting Technology Apprenticeship Program.  
**Advisory:** Not open to students with credit in APPR 122.  
**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.  
**108 hours total: 30 hours lecture, 78 hours laboratory.**  
Instruction and practice in oxy-fuel cutting, oxy-fuel welding and arc welding of steel plate and pipe. Safety and accuracy in measuring, lay-out and torch handling is emphasized.  
**FHGE: Non-GE**

**APPT 144A SF 202A SCIENCE; ELECTRICITY & AIR CONDITIONING 2.5 Units**

**Prerequisite:** Per California Code of Regulations, this course is limited to students admitted to the Steamfitting & Pipefitting Technology Apprenticeship Program.  
**Advisory:** Not open to students with credit in APPR 126.  
**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.  
**54 hours total: 18 hours lecture, 36 hours laboratory.**  
Foundation for subsequent courses through instruction in the fundamentals of science, electrical theory and circuitry, and the principles of refrigeration and air conditioning.  
**FHGE: Non-GE**

**APPT 145 SF 301 ADVANCED TRADE MATH FOR STEAMFITTERS 4.5 Units**

**Prerequisite:** Per California Code of Regulations, this course is limited to students admitted to the Steamfitting & Pipefitting Technology Apprenticeship Program.  
**Advisory:** Not open to students with credit in APPR 121.  
**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.  
**108 hours total: 30 hours lecture, 78 hours laboratory.**  
Extensive use of piping formulas to solve typical piping layout calculations. Students will calculate compound offsets and accurately determine center to center and end to end piping measurements.  
**FHGE: Non-GE**

**APPT 146 SF 302 STEAM TECHNOLOGY 4.5 Units**

**Prerequisite:** Per California Code of Regulations, this course is limited to students admitted to the Steamfitting & Pipefitting Technology Apprenticeship Program.  
**Advisory:** Not open to students with credit in APPR 127.  
**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.  
**108 hours total: 30 hours lecture, 78 hours laboratory.**  
Basic properties and concepts of steam. Instruction on steam traps, installation techniques and general operation. One-pipe systems will be compared to two-pipe systems. Importance of steam piping, proper pipe sizing, expansion joints and connections. Heat transfer devices and steam boilers will also be discussed with focus on types and proper installation and connection methods.  
**FHGE: Non-GE**

**APPT 147A SF 401A HYDRONIC SYSTEMS 2.5 Units**

**Prerequisite:** Per California Code of Regulations, this course is limited to students admitted to the Steamfitting & Pipefitting Technology Apprenticeship Program.  
**Advisory:** Not open to students with credit in APPR 125.  
**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.  
**54 hours total: 18 hours lecture, 36 hours laboratory.**  
Basic principles of various hydronic systems including equipment selection, pipe sizing, piping connections and proper installation methods. Start, test and balance procedures.  
**FHGE: Non-GE**

**APPT 147B SF 401B INDUSTRIAL RIGGING 2.5 Units**

**Prerequisite:** Per California Code of Regulations, this course is limited to students admitted to the Steamfitting & Pipefitting Technology Apprenticeship Program.  
**Advisory:** Not open to students with credit in APRT 180.  
**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.  
**54 hours total: 18 hours lecture, 36 hours laboratory.**  
Appropriate knots required for specific rigging operations. Rigging safety protocol will be reviewed which will include health and safety legislation and the responsibilities of specified rigging personnel. Crane signals and will practice rigging skills both through observation and hands-on activities.  
**FHGE: Non-GE**

**APPT 148 SF 402 ADVANCED DRAWING & BLUEPRINT READING 4.5 Units**

**Prerequisite:** Per California Code of Regulations, this course is limited to students admitted to the Steamfitting & Pipefitting Technology Apprenticeship Program.  
**Advisory:** Not open to students with credit in APPR 120.  
**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.  
**108 hours total: 30 hours lecture, 78 hours laboratory.**  
Study of technical drawings, piping drawings, building plans, specifications and submittals. Interpretation of three view, plan view, elevation view and isometric drawings will be discussed. Hands-on exercises in the process of creating coordinated drawings beginning with sketching principles, calculating and drawing, and finishing with drawing coordination and system design.  
**FHGE: Non-GE**

**APPT 151 RF 101 BASIC REFRIGERATION SERVICE SKILLS 4.5 Units**

**Prerequisite:** Per California Code of Regulations, this course is limited to students admitted to the Air Conditioning & Refrigeration Technology Apprenticeship Program.  
**Advisory:** Not open to students with credit in APPR 131.  
**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.  
**108 hours total: 30 hours lecture, 78 hours laboratory.**  
Orientation to the apprenticeship program, JATC policies and procedures UA history and heritage will also be covered at this time. Safety training is introduced next, with instruction in general construction safety and hazardous materials awareness. Necessary trade skills including pipe and tube installations and soldering and brazing.  
**FHGE: Non-GE**

**APPT 152 RF 102 BASIC ELECTRICITY & REFRIGERATION 4.5 Units**

**Prerequisite:** Per California Code of Regulations, this course is limited to students admitted to the Air Conditioning & Refrigeration Technology Apprenticeship Program.  
**Advisory:** Not open to students with credit in APPR 132.  
**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.  
**108 hours total: 30 hours lecture, 78 hours laboratory.**  
Laws pertaining to basic electrical theory and their application to mechanical equipment service. Refrigeration theory and application of the vapor compression cycle will also be covered.  
**FHGE: Non-GE**

**APPT 153 RF 201 MECHANICAL SYSTEMS 4.5 Units**

**Prerequisite:** Per California Code of Regulations, this course is limited to students admitted to the Air Conditioning & Refrigeration Technology Apprenticeship Program.

**Advisory:** Not open to students with credit in APPR 133C.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**108 hours total: 30 hours lecture, 78 hours laboratory.**

Basic and advanced refrigeration concepts. Extensive study of the design, assembly, and operation of compression systems. It will include liquid and vapor control, metering devices, system components, and piping design.

**FHGE: Non-GE**

**APPT 154 RF 202 ELECTRIC CONTROLS FUNDAMENTALS 4.5 Units**

**Prerequisite:** Per California Code of Regulations, this course is limited to students admitted to the Air Conditioning & Refrigeration Technology Apprenticeship Program.

**Advisory:** Not open to students with credit in APPR 134.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**108 hours total: 30 hours lecture, 78 hours laboratory.**

Fundamentals of electrical controls related to HVAC and refrigeration equipment. Students will assemble and wire actual electrical components and controls.

**FHGE: Non-GE**

**APPT 155 RF 301 ADVANCED ELECTRIC CONTROLS 4.5 Units**

**Prerequisite:** Per California Code of Regulations, this course is limited to students admitted to the Air Conditioning & Refrigeration Technology Apprenticeship Program.

**Advisory:** Not open to students with credit in APPR 140.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**108 hours total: 30 hours lecture, 78 hours laboratory.**

Advanced principles of electric controls used for mechanical equipment in the HVAC industry. Study control diagrams and further develop skills and service procedures used to troubleshoot electrical problems in HVACR equipment.

**FHGE: Non-GE**

**APPT 156 RF 302 HVAC PNEUMATIC & ELECTRONIC CONTROL SYSTEMS 4.5 Units**

**Prerequisite:** Per California Code of Regulations, this course is limited to students admitted to the Air Conditioning & Refrigeration Technology Apprenticeship Program.

**Advisory:** Not open to students with credit in APPR 135.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**108 hours total: 30 hours lecture, 78 hours laboratory.**

Introduction to HVAC fundamentals, energy sources and control system principals. Focus on pneumatic, electrical, electronic and building automation control systems and components.

**FHGE: Non-GE**

**APPT 157 RF 401 INDUSTRIAL REFRIGERATION & AIR-CONDITIONING SERVICE 4.5 Units**

**Prerequisite:** Per California Code of Regulations, this course is limited to students admitted to the Air Conditioning & Refrigeration Technology Apprenticeship Program.

**Advisory:** Not open to students with credit in APPR 107.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**108 hours total: 30 hours lecture, 78 hours laboratory.**

Servicing industrial Refrigeration and Air conditioning systems. Alignment and repair of circulating pumps and compressors will be covered as well as industrial valve applications and repair. Rigging procedures, refrigerant handling and basic office computer skills will also be covered in computer lab.

**FHGE: Non-GE**

**APPT 158 RF 402 ADVANCED REFRIGERATION & CHILLERS 4.5 Units**

**Prerequisite:** Per California Code of Regulations, this course is limited to students admitted to the Air Conditioning & Refrigeration Technology Apprenticeship Program.

**Advisory:** Not open to students with credit in APPR 108.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**108 hours total: 30 hours lecture, 78 hours laboratory.**

Study of the operation and design of positive displacement water chillers and commercial boilers and boiler room equipment. Single-stage and multi-stage centrifugal water chillers will also be covered. Methods of evaluating chiller performance and developing troubleshooting skills.

**FHGE: Non-GE**

**APPT 159 RF 501 START, TEST & BALANCE; HVAC SYSTEMS 4.5 Units**

**Prerequisite:** Per California Code of Regulations, this course is limited to students admitted to the Air Conditioning & Refrigeration Technology Apprenticeship Program.

**Advisory:** Not open to students with credit in APPR 149A.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**108 hours total: 30 hours lecture, 78 hours laboratory.**

Use of balancing instruments and devices for HVACR systems. The theory and operation of mechanical systems, equipment and testing instruments will be covered. This course stresses the necessity of comprehending the design and intent for the mechanical project, the proper use of testing apparatus and the production of professional reports.

**FHGE: Non-GE**

**APPT 161 SAFETY/OSHA/TOOLS/HERITAGE/SERVICE 4 Units**

**Prerequisite:** Per California Code of Regulations, this course is limited to students admitted to the Plumbing & Pipefitting Apprenticeship Program.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**99 hours total: 24 hours lecture, 75 hours laboratory.**

First-year course of the Plumber & Pipefitter Apprenticeship Program. Provides students with a working knowledge of plumbing industry materials and standards. Learn use and care of pipe trade tools, practice safety and heritage of the United Association. Also provides OSHA 30 certification.

**FHGE: Non-GE**



**APPT 162 MATHEMATICS/SCIENCE FOR THE PLUMBING TRADE 4.5 Units**  
**Prerequisite:** Per California Code of Regulations, this course is limited to students admitted to the Plumbing & Pipefitting Apprenticeship Program.  
**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.  
**102 hours total: 30 hours lecture, 72 hours laboratory.**  
 First year of the Plumber & Pipefitter Apprenticeship Program. This course provides students with a working knowledge of mathematics and science as it applies to the plumbing industry.  
**FHGE: Non-GE**

**APPT 163 CODE/WATER SUPPLY SYSTEMS 4 Units**  
**Prerequisite:** Per California Code of Regulations, this course is limited to students admitted to the Plumbing & Pipefitting Apprenticeship Program.  
**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.  
**99 hours total: 24 hours lecture, 75 hours laboratory.**  
 First year of the Plumber & Pipefitter Apprenticeship Program. This course provides students with a working knowledge of Plumbing Code I and Water Supply Systems.  
**FHGE: Non-GE**

**APPT 164 DRAWING I FOR THE PLUMBING TRADE 4.5 Units**  
**Prerequisite:** Per California Code of Regulations, this course is limited to students admitted to the Plumbing & Pipefitting Apprenticeship Program.  
**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.  
**102 hours total: 30 hours lecture, 72 hours laboratory.**  
 Third-year course of the Plumber & Pipefitter Apprenticeship Program. This course provides students with a working knowledge of plumbing and piping layouts, drainage systems, piping and fixture supports as it applies to mechanical drawings.  
**FHGE: Non-GE**

**APPT 165 DRAWING II FOR THE PLUMBING TRADE 4 Units**  
**Prerequisite:** Per California Code of Regulations, this course is limited to students admitted to the Plumbing & Pipefitting Apprenticeship Program.  
**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.  
**99 hours total: 24 hours lecture, 75 hours laboratory.**  
 Second-year course of the Plumber & Pipefitter Apprenticeship Program. This course provides students with a working knowledge of Technical Drawings, Isometric Drawings and the creation of Building Plans as it applies to the Plumbing trade.  
**FHGE: Non-GE**

**APPT 166 WELDING/OXY-ACETYLENE TRAINING 4.5 Units**  
**Prerequisite:** Per California Code of Regulations, this course is limited to students admitted to the Plumbing & Pipefitting Apprenticeship Program.  
**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.  
**102 hours total: 30 hours lecture, 72 hours laboratory.**  
 Third-year course of the Plumber & Pipefitter Apprenticeship Program. This course provides students with a working knowledge of welding principles, as it relates to Metal ARC welding, Gas ARC welding, TIG Welding, MIG Welding and Oxygen/Acetylene burning and welding.  
**FHGE: Non-GE**

**APPT 167 STEAM SYSTEMS/RIGGING/ PIPE FITTING & SERVICE 4 Units**  
**Prerequisite:** Per California Code of Regulations, this course is limited to students admitted to the Plumbing & Pipefitting Apprenticeship Program.  
**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.  
**99 hours total: 24 hours lecture, 75 hours laboratory.**  
 Fourth year of the Plumber & Pipefitter Apprenticeship Program. This course provides students with a working knowledge of Layout, Cut, and Fit for Water Piping and Steamfitting systems.  
**FHGE: Non-GE**

**APPT 168 MEDICAL GAS/HYDRONICS/ SIGNAL PERSON 4.5 Units**  
**Prerequisite:** Per California Code of Regulations, this course is limited to students admitted to the Plumbing & Pipefitting Apprenticeship Program.  
**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.  
**102 hours total: 30 hours lecture, 72 hours laboratory.**  
 Fourth-year course of the Plumber & Pipefitter Apprenticeship Program. This course provides students with a working knowledge of Medical Gas, Brazer, Crane Signaling, and Hydronic Systems.  
**FHGE: Non-GE**

**APPT 169 ADVANCED DRAWING/LAYOUT FOR THE PLUMBING TRADES/ UA FOREMAN TRAINING 4 Units**  
**Prerequisite:** Per California Code of Regulations, this course is limited to students admitted to the Plumbing & Pipefitting Apprenticeship Program.  
**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.  
**99 hours total: 24 hours lecture, 75 hours laboratory.**  
 Fifth-year course of the Plumber and Pipefitter Apprenticeship Program. This course provides students with a working knowledge of advanced drawing, plumbing layout and building detailing. Practical field knowledge of plumbing duties, processes, objectives and code callouts is covered in-depth.  
**FHGE: Non-GE**

**APPT 170 CODE II/JUNIOR MECHANICS REVIEW & EXAM 4.5 Units**  
**Prerequisite:** Per California Code of Regulations, this course is limited to students admitted to the Plumbing & Pipefitting Apprenticeship Program.  
**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.  
**102 hours total: 30 hours lecture, 72 hours laboratory.**  
 Fifth-year course of the Plumber & Pipefitter Apprenticeship Program. This course provides students with a working knowledge of Plumbing Codes and review of how changes affect the Plumbing Codes.  
**FHGE: Non-GE**

**APPT 171 BASIC REFRIGERATION/ HERITAGE/CFC/OSHA 10 4 Units**  
**Prerequisite:** Per California Code of Regulations, this course is limited to students admitted to the Refrigeration & Air Conditioning Mechanical Service Apprenticeship Program.  
**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.  
**99 hours total: 24 hours lecture, 75 hours laboratory.**  
 First-year course of the Refrigeration & Air Conditioning Apprenticeship Program. This course provides students with a working knowledge of Thermodynamics, Chloro-Fluoro Carbons (CFC), and basic Refrigeration, as it pertains to the Air Conditioning Service industry. Also provides OSHA 10 certification.  
**FHGE: Non-GE**

**APPT 172 REFRIGERATION SCIENCE 4.5 Units**

**Prerequisite:** Per California Code of Regulations, this course is limited to students admitted to the Refrigeration & Air Conditioning Mechanical Service Apprenticeship Program.  
**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**102 hours total: 30 hours lecture, 72 hours laboratory.**

First-year course of the Refrigeration & Air Conditioning Apprenticeship Program. This course provides students with a working knowledge of basic refrigeration, refrigeration equipment, and equipment maintenance.

**FHGE: Non-GE**

**APPT 173 BASIC ELECTRICITY FOR THE HVAC SERVICE TRADE 4 Units**

**Prerequisite:** Per California Code of Regulations, this course is limited to students admitted to the Refrigeration & Air Conditioning Mechanical Service Apprenticeship Program.  
**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**99 hours total: 24 hours lecture, 75 hours laboratory.**

Provides students with a working knowledge of basic electricity, including AC/DC theory and Ohm's Law. Students will be expected to apply these theories in the laboratory using electronic and testing instruments.

**FHGE: Non-GE**

**APPT 174 ADVANCED ELECTRICITY/PNEUMATIC DDC INTRODUCTION 4.5 Units**

**Prerequisite:** Per California Code of Regulations, this course is limited to students admitted to the Refrigeration & Air Conditioning Mechanical Service Apprenticeship Program.  
**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**102 hours total: 30 hours lecture, 72 hours laboratory.**

Second-year course of the Refrigeration & Air Conditioning Apprenticeship Program. This course provides students with a working knowledge of Advanced Electricity, Motors, Starter, Circuitry, and Variable Drives.

**FHGE: Non-GE**

**APPT 175 CONTROLS I/ELECTRO PNEUMATICS 4 Units**

**Prerequisite:** Per California Code of Regulations, this course is limited to students admitted to the Refrigeration & Air Conditioning Mechanical Service Apprenticeship Program.  
**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**99 hours total: 24 hours lecture, 75 hours laboratory.**

Third-year course of the Refrigeration & Air Conditioning Apprenticeship Program. This course provides students with a working knowledge of Controls, Control Theory, Timing Circuits, Computerized Control, and Energy Management Systems.

**FHGE: Non-GE**

**APPT 176 CONTROLS II/ADVANCED PNEUMATICS CALIBRATION/HYDRONICS 4.5 Units**

**Prerequisite:** Per California Code of Regulations, this course is limited to students admitted to the Refrigeration & Air Conditioning Mechanical Service Apprenticeship Program.  
**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**102 hours total: 30 hours lecture, 72 hours laboratory.**

Third year of the Refrigeration & Air Conditioning Apprenticeship Program. This course provides students with a working knowledge of advanced control systems, including the uses of 2-Position, Floating and Modulating Controls. Fiber Optics and Direct Digital Controls are introduced.

**FHGE: Non-GE**

**APPT 177 START, TEST & BALANCE I 4 Units**

**Prerequisite:** Per California Code of Regulations, this course is limited to students admitted to the Refrigeration & Air Conditioning Mechanical Service Apprenticeship Program.  
**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**99 hours total: 24 hours lecture, 75 hours laboratory.**

This course provides students with an introduction to Start, Test and Balance for fluid distribution. Ducting, Cooling, Fans, and Air Distribution is covered in the laboratory exercises.

**FHGE: Non-GE**

**APPT 178 START, TEST & BALANCE II/ENERGY AUDITING PRACTICES 4.5 Units**

**Prerequisite:** Per California Code of Regulations, this course is limited to students admitted to the Refrigeration & Air Conditioning Mechanical Service Apprenticeship Program.  
**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**102 hours total: 30 hours lecture, 72 hours laboratory.**

Fourth-year course of the Refrigeration & Air Conditioning Apprenticeship Program. This course provides students with a working knowledge of Start, Test and Balance for Piping Systems, Pumps, Chillers, Boilers, and Condensers. Students will learn how to audit mechanical equipment to ensure proper energy efficiency techniques are applied.

**FHGE: Non-GE**

**APPT 179 CHILLERS/SPECIAL SYSTEMS/HVACR STAR REVIEW 4 Units**

**Prerequisite:** Per California Code of Regulations, this course is limited to students admitted to the Refrigeration & Air Conditioning Mechanical Service Apprenticeship Program.  
**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**99 hours total: 24 hours lecture, 75 hours laboratory.**

Provides students with a working knowledge of pipe drafting and blueprint reading for Heating, Ventilation and Air Conditioning (HVAC) systems. Hands-on activities include applying airside, waterside and pressure testing systems.

**FHGE: Non-GE**

**APPT 180 HVACR STAR REVIEW & EXIT EXAM 4.5 Units**

**Prerequisite:** Per California Code of Regulations, this course is limited to students admitted to the Refrigeration & Air Conditioning Mechanical Service Apprenticeship Program.  
**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**102 hours total: 30 hours lecture, 72 hours laboratory.**

Fifth-year course of the Refrigeration & Air Conditioning Apprenticeship Program. This course provides students with a working knowledge of Troubleshooting, Test and Repair of Refrigeration and Air-Conditioning systems.

**FHGE: Non-GE**

**APPT 185 PIPE MATERIALS, SAFETY & TOOLS, SOLDERING & BRAZING 3 Units**

**Prerequisite:** Student is a registered State indentured apprentice.  
**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**114 hours total: 7 hours lecture, 107 hours laboratory.**

This course provides students with a working knowledge of soldering and brazing along with safe practices as it relates to on-the-job-training.

**FHGE: Non-GE**

**APPT 186 MATHEMATICS/RIGGING & SIGNALING 3 Units**

**Prerequisite:** Per California Code of Regulations, this course is limited to students admitted to the Plumbing & Pipefitting Apprenticeship Program.  
**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.  
**108 hours total: 6 hours lecture, 102 hours laboratory.**  
This course provides students with a working knowledge of mathematics, rigging and signaling as it applies to the Plumbing and Pipefitting industry. Students will apply safety practices as it relates to on-the-job training.  
**FHGE: Non-GE**

**APPT 187 DRAWING INTERPRETATION & PLAN READING/SCIENCE 3 Units**

**Prerequisite:** Per California Code of Regulations, this course is limited to students admitted to the Plumbing & Pipefitting Apprenticeship Program.  
**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.  
**119 hours total: 5 hours lecture, 114 hours laboratory.**  
Students will gain a working knowledge of Drawing Interpretation, Plan Reading and Science as it applies to the plumbing industry. This course is required to meet the certificate requirements to become a journeyman plumber.  
**FHGE: Non-GE**

**APPT 188 ADVANCED PLAN READING/CAD 3 Units**

**Prerequisite:** Per California Code of Regulations, this course is limited to students admitted to the plumbing & pipefitting apprenticeship program.  
**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.  
**102 hours total: 13 hours lecture, 89 hours laboratory.**  
Students will gain a working knowledge of advanced plan reading and computer-aided drafting (CAD) as it applies to the plumbing industry. This course is required to meet the certificate requirements to become a journeyman plumber.  
**FHGE: Non-GE**

**APPT 189 WELDING/OXYGEN-ACETYLENE 3 Units**

**Prerequisite:** Per California Code of Regulations, this course is limited to students admitted to the plumbing & pipefitting apprenticeship program.  
**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.  
**108 hours total: 6 hours lecture, 102 hours laboratory.**  
Students will gain a working knowledge of welding and using Oxy-Acetylene torch as it applies to the plumbing industry. This course is required to meet the certificate requirements to become a journeyman plumber.  
**FHGE: Non-GE**

**APPT 190 PIPE FITTING WITH A CALCULATOR 3 Units**

**Prerequisite:** Per California Code of Regulations, this course is limited to students admitted to the plumbing & pipefitting apprenticeship program.  
**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.  
**108 hours total: 6 hours lecture, 102 hours laboratory.**  
This course provides students with a working knowledge of mathematics and pipe fitting as it applies to the plumbing and pipe fitting industry. Students will apply safety practices as it relates to on-the-job training.  
**FHGE: Non-GE**

**APPT 191 PLUMBING CODE APPLICATION, PLUMBING FIXTURES 3 Units**

**Prerequisite:** Per California Code of Regulations, this course is limited to students admitted to the plumbing & pipefitting apprenticeship program.  
**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.  
**111 hours total: 6 hours lecture, 105 hours laboratory.**  
This course provides students with a working knowledge of the plumbing Code application and plumbing fixtures as it applies to the plumbing and pipe fitting industry. Students will apply safety practices as it relates to on-the-job training. This course is required to meet the certificate requirements to become journeyman plumber.  
**FHGE: Non-GE**

**APPT 192 NATURAL GAS INSTALLATION, DRAINAGE 3 Units**

**Prerequisite:** Per California Code of Regulations, this course is limited to students admitted to the plumbing & pipefitting apprenticeship program.  
**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.  
**111 hours total: 6 hours lecture, 105 hours laboratory.**  
This course provides students with a working knowledge of Natural Gas Installations and Drainage as it applies to the plumbing and pipe fitting industry. This course is required to meet the certificate requirements to become journeyman plumber.  
**FHGE: Non-GE**

**APPT 193 WATER SUPPLY, PATTERNS 2 Units**

**Prerequisite:** Per California Code of Regulations, this course is limited to students admitted to the plumbing & pipefitting apprenticeship program.  
**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.  
**70 hours total: 17 hours lecture, 53 hours laboratory.**  
This course provides students with a working knowledge of water supply and patterns as it applies to the plumbing and pipe fitting industry. Students will apply safety practices as it relates to on-the-job training.  
**FHGE: Non-GE**

**APPT 194 MEDICAL GAS, REVIEW EXIT EXAM/FINAL EXAM 1.5 Units**

**Prerequisite:** Per California Code of Regulations, this course is limited to students admitted to the Plumbing & Pipefitting Apprenticeship Program.  
**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.  
**60 hours total: 5 hours lecture, 55 hours laboratory.**  
Apprentices learn the installation procedures of medical gas and vacuum systems. This includes medical gas alarms systems, valve stations, inlets, outlets and the complete vacuum system. Brazing techniques will be described and demonstrated.  
**FHGE: Non-GE**

## APPRENTICESHIP: PIPE TRADES, SHEET METAL, FIELD IRONWORKERS

Apprenticeship

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### APPR 150 JOB SAFETY, OSHA, MATHEMATICS, HERITAGE & RIGGING I 4.5 Units

**Prerequisite:** Per California Code of Regulations, this course is limited to students admitted to the Plumbing/Pipefitting/Refrigeration/HVAC Apprenticeship Program.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**108 hours total: 30 hours lecture, 78 hours laboratory.**

First course of the Plumber & Pipefitter Apprenticeship Program. The course provides students with a working knowledge of mathematics, plumbing industry materials and standards (as it applies to the plumbing industry), learn use and care of pipe trade tools, practice safety, rigging, and a review of Heritage of the United Association.

**FHGE: Non-GE**

### APPR 151 OXY-ACC, ARC & PLASTIC WELDING, SOLDERING/ BRAZING CERTIFICATION 4.5 Units

**Prerequisite:** Per California Code of Regulations, this course is limited to students admitted to the Plumbing/Pipefitting/Refrigeration/HVAC Apprenticeship Program.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**108 hours total: 30 hours lecture, 78 hours laboratory.**

Second-year course of the Plumber & Pipefitter Apprenticeship Program. The course will provide students with a working knowledge of welding principles, as it relates to Oxygen/Acetylene burning, brazing, soldering and welding. Apprentice plumber is a five-year certificate program. No certification for welding provided in this course.

**FHGE: Non-GE**

### APPR 152 BASIC ARC WELDING & BASIC DRAWING 4.5 Units

**Prerequisite:** Per California Code of Regulations, this course is limited to students admitted to the Plumbing Apprenticeship Program.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**108 hours total: 30 hours lecture, 78 hours laboratory.**

Third-year course of the Plumber & Pipefitter Apprenticeship Program. The course will provide students with a working knowledge of plumbing and piping layouts, drainage systems, piping and fixture supports as it applies to mechanical drawings. This course also offers instruction and practice in oxy-fuel cutting, oxy-fuel welding and arc welding of steel plate and pipe. Safety and accuracy in measuring, lay-out and torch handling is emphasized.

**FHGE: Non-GE**

### APPR 153 PLUMBING FIXTURES, RIGGING & SCIENCE 4.5 Units

**Prerequisite:** Per California Code of Regulations, this course is limited to students admitted to the Plumbing Apprenticeship Program.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**108 hours total: 30 hours lecture, 78 hours laboratory.**

Instruction in plumbing fixtures and appliances, identification and tying of various types of knots. This course also studies hands-on safety practices of rigging and hoisting piping materials, and a working knowledge of science as it applies to the plumbing industry.

**FHGE: Non-GE**

### APPR 154 GAS & WATER SUPPLY 4.5 Units

**Prerequisite:** Per California Code of Regulations, this course is limited to students admitted to the Plumbing Apprenticeship Program.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**108 hours total: 30 hours lecture, 78 hours laboratory.**

Third-year course of the Plumber & Pipefitting Apprentice Program. The course provides the student with a working knowledge of the supply and treatment of potable water as well as the design and construction of potable water conveyance systems. This course also offers instruction in the use of natural gas and liquid propane gas systems as they apply to the piping industry.

**FHGE: Non-GE**

### APPR 155 UNIFORM PLUMBING CODE & MEDICAL GAS FOR APPRENTICES 4.5 Units

**Prerequisite:** Per California Code of Regulations, this course is limited to students admitted to the Plumbing Apprenticeship Program.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**108 hours total: 30 hours lecture, 78 hours laboratory.**

Installation procedures of medical gas and vacuum systems, and demonstrate the procedures for coordinating the testing and inspection of plumbing systems and applicable codes that a plumbing system must meet. Brazing requirements will be described and proper techniques will be demonstrated.

**FHGE: Non-GE**

### APPR 156 DRAINAGE; ADVANCED DRAWING 4.5 Units

**Prerequisite:** Per California Code of Regulations, this course is limited to students admitted to the Plumbing Apprenticeship Program.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**108 hours total: 30 hours lecture, 78 hours laboratory.**

Third-year course of the Plumber & Pipefitting Apprentice Program. Provides the student with a working knowledge of building plans, specifications and isometric drawings as they apply to the piping industry. This course also offers instruction in the principles and methods of disposal of sewage, the drainage systems that convey sewage both public and private, and the principles of plumbing vent systems and their importance to proper drainage.

**FHGE: Non-GE**

### APPR 157 STEAMFITTING & PIPEFITTING 4.5 Units

**Prerequisite:** Per California Code of Regulations, this course is limited to students admitted to the Plumbing Apprenticeship Program.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**108 hours total: 30 hours lecture, 78 hours laboratory.**

Fourth-year course of the Plumbing & Pipefitting Apprenticeship Program. The course provides students with a working knowledge of the design, layout, components, specific safety hazards and accepted engineering practices associated with steam heating, hydronic heating and cooling systems.

**FHGE: Non-GE**

**APPR 159    ADVANCED ARC WELDING                    4.5 Units**  
**Prerequisite:** Per California Code of Regulations, this course is limited to students admitted to the Plumbing Apprenticeship Program.  
**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.  
**108 hours total: 30 hours lecture, 78 hours laboratory.**  
 Fifth-year course of the Plumber & Pipefitter Apprenticeship Program. Provides the student with the knowledge and ability to perform uphill welds on pipe in all positions using E-6010 and E-7018 electrodes. Enables the student to pass the various weld certifications tests required for welders in the industry.  
**FHGE: Non-GE**

**APPR 160A    EPA, CUSTOMER SERVICE,                    4.5 Units**  
**REFRIGERATION & ELECTRICAL**  
**Prerequisite:** Per California Code of Regulations, this course is limited to students admitted to the Refrigeration & Air Conditioning Apprenticeship Program.  
**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.  
**108 hours total: 30 hours lecture, 78 hours laboratory.**  
 Third-year course of the Plumber, Pipefitter & Service Tech Apprenticeship Program regarding HVAC students will include: Basic refrigeration, EPA 608 certification, safety and customer service.  
**FHGE: Non-GE**

**APPR 161    AIR CONDITIONING, PNEUMATIC                    4.5 Units**  
**CONTROLS, INSTRUMENTATION**  
**& PROCESS CONTROLS**  
**Prerequisite:** Per California Code of Regulations, this course is limited to students admitted to the Refrigeration & Air Conditioning Apprenticeship Program.  
**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.  
**108 hours total: 30 hours lecture, 78 hours laboratory.**  
 Third-year course of the Plumber, Pipefitter & Service Tech Apprenticeship Program. The course will review the theory and application of the related math and science as well as the vapor compression cycle and refrigeration components and systems. The Refrigeration Apprentice program is a 5-year certificate program.  
**FHGE: Non-GE**

**APPR 162A    ELECTRICAL TROUBLESHOOTING,                    4.5 Units**  
**REFRIGERATION CONTROLS**  
**Prerequisite:** Per California Code of Regulations, this course is limited to students admitted to the Refrigeration & Air Conditioning Apprenticeship Program.  
**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.  
**108 hours total: 30 hours lecture, 78 hours laboratory.**  
 Third-year course of the Plumber, Pipefitter & Service Tech Apprenticeship Program. The course will review electrical principles as applied to refrigeration, including single and three phase circuits, and series and parallel circuits. The course will also review Symbols and electrical diagrams and Direct/Alternating current voltage.  
**FHGE: Non-GE**

**APPR 162B    COMPUTER LITERACY &                    4.5 Units**  
**PNEUMATIC CONTROLS**  
**Prerequisite:** Per California Code of Regulations, this course is limited to students admitted to the Refrigeration & Air Conditioning Apprenticeship Program.  
**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.  
**108 hours total: 30 hours lecture, 78 hours laboratory.**  
 Fourth-year course of the HVAC Apprenticeship Program. Provides a working knowledge of pneumatic control systems and computer literacy as they apply to the HVAC industry.  
**FHGE: Non-GE**

**APPR 162C    ELECTRONIC CONTROLS,                    4.5 Units**  
**DDC CONTROLS**  
**Prerequisite:** Per California Code of Regulations, this course is limited to students admitted to the Refrigeration & Air Conditioning Apprenticeship Program.  
**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.  
**108 hours total: 30 hours lecture, 78 hours laboratory.**  
 Fourth-year course of the HVACR Apprenticeship Program. Provides a working knowledge of direct digital control systems and the electronics involved with these systems as they apply to comfort air and building control management.  
**FHGE: Non-GE**

**APPR 163    REFRIGERATION & HYDRONICS                    4.5 Units**  
**PIPING, UA STAR**  
**Prerequisite:** Per California Code of Regulations, this course is limited to students admitted to the Refrigeration & Air Conditioning Apprenticeship Program.  
**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.  
**108 hours total: 30 hours lecture, 78 hours laboratory.**  
 Fifth-year course of the Plumber & Pipefitter Apprenticeship Program. Provides students with the theory and application of psychrometrics, refrigerant piping design, advanced refrigeration, and a review of teachings from the prior four years in preparation for the UA STAR certification exam. Additionally, there will be further instruction in customer service and in safety. A proctored exam to provide a UA STAR certification.  
**FHGE: Non-GE**

**APPR 166    JOB SUPERVISION                    4.5 Units**  
**Prerequisite:** Per California Code of Regulations, this course is limited to students admitted to the Plumbing/Pipefitting Apprentice Program.  
**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.  
**108 hours total: 30 hours lecture, 78 hours laboratory.**  
 Provides students with the knowledge and skills to properly supervise, schedule and document a construction project. No certification in job supervision is provided.  
**FHGE: Non-GE**

**APPR 167    START, TEST & BALANCE                    4.5 Units**  
**Prerequisite:** Per California Code of Regulations, this course is limited to students admitted to the Refrigeration/HVAC Apprenticeship Program.  
**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.  
**108 hours total: 30 hours lecture, 78 hours laboratory.**  
 Fifth-year course of the Plumber & Pipefitter Apprenticeship Program. Provide students with a working knowledge of the Start, Test, & Balance of HVACR equipment and systems.  
**FHGE: Non-GE**

**APPR 168    SUPERMARKET REFRIGERATION                    4.5 Units**  
**Prerequisite:** Per California Code of Regulations, this course is limited to students admitted to the Refrigeration/HVAC Apprenticeship Program.  
**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.  
**108 hours total: 30 hours lecture, 78 hours laboratory.**  
 Second-year course of the Plumber, Pipefitter and Service Technician Apprenticeship Program. Provides the student with a working knowledge of the fundamentals of oil return and oil separators, electric and hot gas exhaust, multi-stage compressor systems and pump down systems.  
**FHGE: Non-GE**

**APPR 183A BASIC ELECTRICITY FOR SHEET METAL & AIR CONDITIONING SERVICE 4.5 Units**

**Prerequisite:** Per California Code of Regulations, this course is limited to students admitted to the Sheet Metal-Air Conditioning Service Mechanic Program.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**108 hours total: 30 hours lecture, 78 hours laboratory.**

Development of basic skills necessary for sheet metal workers to service air conditioning equipment with special emphasis on the basics of electricity and refrigeration principles.

**FHGE: Non-GE**

**APPR 183B ADVANCED ELECTRICITY FOR SHEET METAL & AIR CONDITIONING SERVICE 4.5 Units**

**Prerequisite:** Per California Code of Regulations, this course is limited to students admitted to the Sheet Metal-Air Conditioning Service Mechanic Program.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**108 hours total: 30 hours lecture, 78 hours laboratory.**

Continued development of skills necessary for sheet metal workers to service air conditioning equipment with special emphasis on the use of basic electrical testing instruments, principles, transformers, relays, contacts and safety around electrical equipment.

**FHGE: Non-GE**

**APPR 184A AIR CONDITIONING; COMMERCIAL SYSTEMS; HEATING (FOURTH-YEAR SERVICE) 4.5 Units**

**Prerequisite:** Per California Code of Regulations, this course is limited to students admitted to the Sheet Metal-Air Conditioning Service Mechanic Program.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**108 hours total: 30 hours lecture, 78 hours laboratory.**

Development of skills necessary for sheet metal workers to service air conditioning equipment with emphasis on air-cooled commercial systems, refrigerant line components, installation and commercial applications.

**FHGE: Non-GE**

**APPR 184B COMMERCIAL SYSTEMS; HEAT LOADS; PIPING (FOURTH-YEAR SERVICE) 4.5 Units**

**Prerequisite:** Per California Code of Regulations, this course is limited to students admitted to the Sheet Metal-Air Conditioning Service Mechanic Program.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**108 hours total: 30 hours lecture, 78 hours laboratory.**

Continued development of skills necessary for sheet metal workers to service air conditioning equipment with emphasis on commercial systems, servicing, heat loads and piping.

**FHGE: Non-GE**

**APPR 185A BASIC REFRIGERATION FOR SHEET METAL AIR CONDITIONING SERVICE 4.5 Units**

**Prerequisite:** Per California Code of Regulations, this course is limited to students admitted to the Sheet Metal-Air Conditioning Service Mechanic Program.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**108 hours total: 30 hours lecture, 78 hours laboratory.**

Introduction to the use of refrigeration evacuation service equipment, charging refrigeration systems, and to the use of oxy-acetylene brazing equipment.

**FHGE: Non-GE**

**APPR 185B ADVANCED REFRIGERATION FOR SHEET METAL AIR CONDITIONING SERVICE 4.5 Units**

**Prerequisite:** Per California Code of Regulations, this course is limited to students admitted to the Sheet Metal-Air Conditioning Service Mechanic Program.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**108 hours total: 30 hours lecture, 78 hours laboratory.**

Continued development of refrigeration skills with emphasis on the function of compressors, multiphase electric motors and piping systems.

**FHGE: Non-GE**

**APPR 186A PROPERTIES OF AIR DISTRIBUTION FOR SHEET METAL AIR CONDITIONING SERVICE 4.5 Units**

**Prerequisite:** Per California Code of Regulations, this course is limited to students admitted to the Sheet Metal-Air Conditioning Service Mechanic Program.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**108 hours total: 30 hours lecture, 78 hours laboratory.**

Introduction to the different properties of air distribution with air volumes, pressures, humidity and temperature; basic air balance procedures.

**FHGE: Non-GE**

**APPR 186B REFRIGERATION THEORY FOR SHEET METAL AIR CONDITIONING SERVICE 4.5 Units**

**Prerequisite:** Per California Code of Regulations, this course is limited to students admitted to the Sheet Metal-Air Conditioning Service Mechanic Program.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**108 hours total: 30 hours lecture, 78 hours laboratory.**

Continuing refrigeration theory with emphasis on all the major parts of refrigeration systems. The explanation of the principles and function of the heat pump in a residential application.

**FHGE: Non-GE**

**APPR 188A ORIENTATION; SAFETY & BEGINNING RESIDENTIAL SHEET METAL INSTALLATION (SPECIALIST 1A) 1.5 Units**

**Prerequisite:** Per California Code of Regulations, this course is limited to students admitted to the Sheet Metal Specialist Apprenticeship Program.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**54 hours total: 6 hours lecture, 48 hours laboratory.**

An introduction to residential and light commercial sheet metal installation, safety, tools, materials, equipment and related industry practices. Emphasis will be on safety and soldering techniques.

**FHGE: Non-GE**

**APPR 188B RESIDENTIAL COMPONENTS IDENTIFICATION & INSTALLATION (SPECIALIST 1B) 1.5 Units**

**Prerequisite:** Per California Code of Regulations, this course is limited to students admitted to the Sheet Metal Specialist Apprenticeship Program.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**54 hours total: 6 hours lecture, 48 hours laboratory.**

A continued development of concepts and practices already introduced and used in residential and light commercial installations of sheet metal ductwork. Emphasis will be on materials information and skills development.

**FHGE: Non-GE**

**APPR 189A RESIDENTIAL SYSTEMS; DUCT & HVAC SYSTEMS (SPECIALIST 2A) 1.5 Units**

**Prerequisite:** Per California Code of Regulations, this course is limited to students admitted to the Sheet Metal Specialist Apprenticeship Program.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**54 hours total: 6 hours lecture, 48 hours laboratory.**

A study of typical residential sheet metal flashing, waterproofing, ventilation and HVAC systems. Development of installation techniques.

**FHGE: Non-GE**

**APPR 189B PLANS & ARCHITECTURAL APPLICATIONS FOR RESIDENTIAL SHEET METAL (SPECIALIST 2B) 1.5 Units**

**Prerequisite:** Per California Code of Regulations, this course is limited to students admitted to the Sheet Metal Specialist Apprenticeship Program.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**54 hours total: 6 hours lecture, 48 hours laboratory.**

An advanced study of industry standards, values and requirements in residential sheet metal work including architectural applications of metal roofing, complex flashing, gutter and downspouts. Use of plans for coordinating installations. Mathematics review and further development of soldering skills.

**FHGE: Non-GE**

**APPRENTICESHIP: PIPE TRADES, SHEET METAL, FIELD IRONWORKERS, ELEVATORS**

Apprenticeship

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**APRT 106A SHEET METAL CONTROL SYSTEMS (FIFTH-YEAR SERVICE) 4.5 Units**

**Prerequisite:** Per California Code of Regulations, this course is limited to students admitted to the Sheet Metal-Air Conditioning Service Mechanic Program.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**108 hours total: 30 hours lecture, 78 hours laboratory.**

Development of skills necessary for sheet metal workers to service air conditioning equipment with emphasis on control methods and systems, computerized building management, zone control and variable air volume systems.

**FHGE: Non-GE**

**APRT 106B ENERGY MANAGEMENT & CUSTOMER SERVICE (FIFTH-YEAR SERVICE) 4.5 Units**

**Prerequisite:** Per California Code of Regulations, this course is limited to students admitted to the Sheet Metal-Air Conditioning Service Mechanic Program.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**108 hours total: 30 hours lecture, 78 hours laboratory.**

Development of skills necessary for sheet metal workers to service air conditioning equipment with emphasis on digital control systems, energy management, business and shop operations and OSHA regulations.

**FHGE: Non-GE**

**APRT 111 COMPUTER LITERACY FOR TRADE APPRENTICES 1.5 Units**

**Prerequisite:** Per California Code of Regulations, this course is limited to students admitted to the Sheet Metal Apprenticeship Program.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**36 hours total: 12 hours lecture, 24 hours laboratory.**

Introduction to general computer principles and basic computer operations. Topics will include hardware familiarity, basic system components and design, basics of file management, and beginning word processing, spreadsheet and presentation application use, as it relates to the trades.

**FHGE: Non-GE**

**APRT 140A ELECTRICAL BASICS FOR RESIDENTIAL HVAC SERVICE I 2.5 Units**

**Prerequisite:** Per California Code of Regulations, this course is limited to students admitted to the Sheet Metal Residential Service Apprenticeship Program.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**54 hours total: 24 hours lecture, 30 hours laboratory.**

Development of basic skills necessary for service technicians to service heating and air conditioning equipment with special emphasis on the basics of electricity and air filtration.

**FHGE: Non-GE**

**APRT 140B REFRIGERATION BASICS FOR RESIDENTIAL HVAC SERVICE 2.5 Units**

**Prerequisite:** Per California Code of Regulations, this course is limited to students admitted to the Sheet Metal Residential Service Apprenticeship Program.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**54 hours total: 24 hours lecture, 30 hours laboratory.**

Development of the basics of refrigeration principles and residential systems for service technicians to service heating and air conditioning equipment.

**FHGE: Non-GE**

**APRT 141A COMPONENTS OF RESIDENTIAL HVAC SERVICE 2.5 Units**

**Prerequisite:** Per California Code of Regulations, this course is limited to students admitted to the Sheet Metal Residential Service Apprenticeship Program.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**54 hours total: 24 hours lecture, 30 hours laboratory.**

Identifying components and evaluating their status in servicing heating and air conditioning equipment. Discussion of the service technician's approach to field problems.

**FHGE: Non-GE**

**APRT 141B TROUBLESHOOTING DIAGNOSIS & REPAIR FOR RESIDENTIAL HVAC SERVICE 2.5 Units**

**Prerequisite:** Per California Code of Regulations, this course is limited to students admitted to the Sheet Metal Residential Service Apprenticeship Program.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**54 hours total: 24 hours lecture, 30 hours laboratory.**

Troubleshooting approaches for HVAC equipment problems, with diagnosis and repair. Testing and tracing of circuits; visual evaluations for electrical and mechanical HVAC equipment. Review and practice of all basic skills necessary for A/C residential service technicians.

**FHGE: Non-GE**

**APRT 143A AIR BALANCE TEST EQUIPMENT & INSTRUMENTS (FIRST YEAR) 4.5 Units**

**Prerequisite:** Per California Code of Regulations, this course is limited to students admitted to the Sheet Metal Testing & Air Balance Apprenticeship Program.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**108 hours total: 30 hours lecture, 78 hours laboratory.**

Development of skills necessary to use test and balance instruments and equipment for HVAC systems and automatic control systems. Use of practical mathematics and mathematical equations to measure air velocity and duct outlets, and to solve air and hydronic balancing problems.

**FHGE: Non-GE**

**APRT 143B TEMPERATURE MEASUREMENT INSTRUMENTS & DUCT SYSTEMS (FIRST YEAR) 4.5 Units**

**Prerequisite:** Per California Code of Regulations, this course is limited to students admitted to the Sheet Metal Testing & Air Balance Apprenticeship Program.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**108 hours total: 30 hours lecture, 78 hours laboratory.**

Continuing study of skills necessary to test and balance instruments and equipment for HVAC systems and automatic control systems. Use of practical mathematics and mathematical equations to measure air velocity and duct outlet, and to solve air and hydronic balancing problems.

**FHGE: Non-GE**

**APRT 144A INTRODUCTION TO MARINE SHEET METAL TRAINING FOR APPRENTICES I 2.5 Units**

**Prerequisite:** Per California Code of Regulations, this course is limited to students admitted to the Sheet Metal Apprenticeship Program.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**54 hours total: 24 hours lecture, 30 hours laboratory.**

Introductory course for Ship Yard Sheet Metal worker apprentices. Students will begin to learn how ship yard sheet metal workers use structural shapes and sheet metals of varying thicknesses and materials, up to 3/16ths of an inch, in the ship building and repair environment. This course includes an orientation to ship yard sheet metal work, trade history, tool and machine safety, measuring, trade math, and an introduction to sheet metal products specific to ship yard sheet metal work.

**FHGE: Non-GE**

**APRT 144B INTRODUCTION TO MARINE SHEET METAL TRAINING FOR APPRENTICES II 2.5 Units**

**Prerequisite:** Per California Code of Regulations, this course is limited to students admitted to the Sheet Metal Apprenticeship Program.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**54 hours total: 24 hours lecture, 30 hours laboratory.**

Continuation of the Ship Yard Sheet Metal Apprenticeship. It involves a continuation of working with sheet metals which may include copper, brass, bronze, lead, zinc, aluminum, black and galvanized iron, monel and stainless steel. Pattern development techniques are increasingly utilized to make duct fittings and items specific to ship fabrication, including spool flanges, flat oval and radius corner duct.

**FHGE: Non-GE**

**APRT 149A ELECTRICAL SYSTEMS OPERATION, CONTROLS & DEVICES (TAB-2) 4.5 Units**

**Prerequisite:** Per California Code of Regulations, this course is limited to students admitted to the Sheet Metal Testing & Air Balance Apprenticeship Program.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**108 hours total: 30 hours lecture, 78 hours laboratory.**

Study of individual electrical components and devices of control systems, and understanding their operation and relationship to each other. Identify and use instruments in measuring air movement. Learn how to interpret, use and understand drawings relating to the construction of a building.

**FHGE: Non-GE**

**APRT 149B HVAC TESTING & BALANCING PROCEDURES (TAB-2) 4.5 Units**

**Prerequisite:** Per California Code of Regulations, this course is limited to students admitted to the Sheet Metal Testing & Air Balance Apprenticeship Program.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**108 hours total: 30 hours lecture, 78 hours laboratory.**

Utilize skills and knowledge previously learned to apply methods of balancing HVAC systems. Balancing of systems will include both air and hydronic. Information gathered during the balancing will be used in completing reports required by the building engineer and owner.

**FHGE: Non-GE**

**APRT 150A AIR DISTRIBUTION & MANUFACTURING SYSTEMS (TAB-3) 4.5 Units**

**Prerequisite:** Per California Code of Regulations, this course is limited to students admitted to the Sheet Metal Testing & Air Balance Apprenticeship Program.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**108 hours total: 30 hours lecture, 78 hours laboratory.**

The difference, advantages and disadvantages of pneumatic and direct digital control systems will be compared to electrical systems. Students will use laptop computers to access a control system from a remote location; take readings and make minor adjustments to the system. Clean room operation and protocol will be examined.

**FHGE: Non-GE**

**APRT 150B SYSTEMS INSTALLATION & TROUBLESHOOTING (TAB-3) 4.5 Units**

**Prerequisite:** Per California Code of Regulations, this course is limited to students admitted to the Sheet Metal Testing & Air Balance Apprenticeship Program.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**108 hours total: 30 hours lecture, 78 hours laboratory.**

Proper layout and installation procedures on various control systems. This will include system programming, adjustment, testing, maintenance and repair of the installed system.

**FHGE: Non-GE**

**APRT 151A INTERMEDIATE MARINE SHEET METAL TRAINING FOR APPRENTICES I 2.5 Units**

**Prerequisite:** Per California Code of Regulations, this course is limited to students admitted to the Sheet Metal Residential Service Apprenticeship Program.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**54 hours total: 24 hours lecture, 30 hours laboratory.**

Continues study of topics specific to sheet metal ship building and repair, for Ship Yard Sheet Metal apprentices. Installation and/or fabrication of items including marine blowers, filter housings, non-structural bulkheads, lockers, tanks, deck coaming, overhead curtains, access covers and gaskets, galley sinks and countertops. Pattern development, forming and welding skills are practiced.

**FHGE: Non-GE**



**APRT 153A CONTROL SYSTEMS & CUSTOMER SERVICE I (TAB-4) 4.5 Units**

**Prerequisite:** Per California Code of Regulations, this course is limited to students admitted to the Sheet Metal Testing & Air Balance Apprenticeship Program.  
**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.  
**108 hours total: 30 hours lecture, 78 hours laboratory.**  
Develop skills and knowledge of various control systems in use today in the HVAC test and air balance industry. Develop customer relations in order to effectively deal with the consumer.  
**FHGE: Non-GE**

**APRT 153B CONTROL SYSTEMS & CUSTOMER SERVICE II (TAB-4) 4.5 Units**

**Prerequisite:** Per California Code of Regulations, this course is limited to students admitted to the Sheet Metal Testing & Air Balance Apprenticeship Program.  
**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.  
**108 hours total: 30 hours lecture, 78 hours laboratory.**  
Continuation of APRT 153A. Develop skills and knowledge of various control systems in use today in the HVAC test and air balance industry. Further development of customer relations in order to effectively deal with the consumer.  
**FHGE: Non-GE**

**APRT 154A PROJECT MANAGEMENT FOR THE TEST & AIR BALANCE INDUSTRY (TAB-5) 4.5 Units**

**Prerequisite:** Per California Code of Regulations, this course is limited to students admitted to the Sheet Metal Testing & Air Balance Apprenticeship Program.  
**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.  
**108 hours total: 30 hours lecture, 78 hours laboratory.**  
Develop skills and knowledge of project management in use today in the HVAC test and air balance industry. Develop customer relations to effectively deal with the customer, project foreperson, and project engineers.  
**FHGE: Non-GE**

**APRT 154B HAZARDOUS MATERIAL RECOGNITION FOR THE TEST & AIR BALANCE INDUSTRY (TAB-5) 4.5 Units**

**Prerequisite:** Per California Code of Regulations, this course is limited to students admitted to the Sheet Metal Testing & Air Balance Apprenticeship Program.  
**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.  
**108 hours total: 30 hours lecture, 78 hours laboratory.**  
Develop skills and knowledge to recognize hazardous materials in the HVAC test and air balance industry. Use personal protective equipment and tools properly as they relate to hazardous materials. Review current laws governing hazardous material recognition and response.  
**FHGE: Non-GE**

**APRT 155A SAFETY & TOOLS FOR SHEET METAL SIDING & DECKING APPRENTICES 4.5 Units**

**Prerequisite:** Per California Code of Regulations, this course is limited to students admitted to the Sheet Metal Apprenticeship Program.  
**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.  
**108 hours total: 30 hours lecture, 78 hours laboratory.**  
Develop the skills and knowledge to safely work in the Siding & Decking segment of the sheet metal industry. To understand and practice job site safety in the layout and installation of siding and decking materials.  
**FHGE: Non-GE**

**APRT 155B BLUEPRINT READING FOR SHEET METAL SIDING & DECKING APPRENTICES 4.5 Units**

**Prerequisite:** Per California Code of Regulations, this course is limited to students admitted to the Sheet Metal Apprenticeship Program.  
**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.  
**108 hours total: 30 hours lecture, 78 hours laboratory.**  
Continue to develop the skills and knowledge to safely work in the Siding & Decking segment of the sheet metal industry. To understand and practice job site safety in the layout and installation of siding and decking materials.  
**FHGE: Non-GE**

**APRT 156A WELDING FOR SHEET METAL SIDING & DECKING APPRENTICES 4.5 Units**

**Prerequisite:** Per California Code of Regulations, this course is limited to students admitted to the Sheet Metal Apprenticeship Program.  
**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.  
**108 hours total: 30 hours lecture, 78 hours laboratory.**  
Development of basic skills necessary for the siding and decking apprentice to apply in oxyacetylene, shielded metal arc, and Gas Tungsten arc welding with special emphasis on welding safety.  
**FHGE: Non-GE**

**APRT 156B MEASURING, DRAWING & LIFTING DEVICES FOR SHEET METAL SIDING & DECKING APPRENTICES 4.5 Units**

**Prerequisite:** Per California Code of Regulations, this course is limited to students admitted to the Ironworkers Apprenticeship Program.  
**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.  
**108 hours total: 30 hours lecture, 78 hours laboratory.**  
Develop the skills and knowledge to measure, draw, fabricate and install various related sheet metal components used in the siding and decking industry. Understand and apply the proper methods of hoisting, rigging, and use of lifting devices to install products on the job.  
**FHGE: Non-GE**

**APPRENTICESHIP: SHEET METAL**

Apprenticeship  
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**APSM 101 SMQ-1 TRADE INTRODUCTION 3 Units**

**Prerequisite:** Per California Code of Regulations, this course is limited to students admitted to the Sheet Metal Apprenticeship Program.  
**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.  
**40 hours total: 36 hours lecture, 4 hours laboratory.**  
Introduction to Sheet Metal as a skilled construction trade including: general overview, trade history and related issues, material handling and safety, sheet metal materials, hardware, and HVAC careers. Includes first aid and CPR training and certifications.  
**FHGE: Non-GE**

**APSM 102 SMQ-2 CERTIFIED SAFETY & BEGINNING TRADE MATH 3 Units**

**Prerequisite:** Per California Code of Regulations, this course is limited to students admitted to the Sheet Metal Apprenticeship Program.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**40 hours total: 38 hours lecture, 2 hours laboratory.**

Course introduces OSHA and related safety issues including job site safety, and aerial lift safety training and certification. Students will learn and apply the math skills necessary to meet the current industry standards in the construction trades. Course consists of basic arithmetic, geometry, algebra and trigonometry principles as applied in the construction trades.

**FHGE: Non-GE**

**APSM 103 SMQ-3 SHEET METAL TOOLS & SHOP 1.5 Units**

**Prerequisite:** Per California Code of Regulations, this course is limited to students admitted to the Sheet Metal Apprenticeship Program.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**40 hours total: 16 hours lecture, 24 hours laboratory.**

Using sheet metal tools including hand tools and snips, shear, roll, and hand brake. Use of arithmetic and algebraic principles relating to sheet metal layout, fabrication of duct, pan, 45 degree tap-in, and plenum. Demonstration of other shop equipment used in the sheet metal industry.

**FHGE: Non-GE**

**APSM 104 SMQ-4 SOLDERING & COMMON SEAMS 2 Units**

**Prerequisite:** Per California Code of Regulations, this course is limited to students admitted to the Sheet Metal Apprenticeship Program.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**40 hours total: 18 hours lecture, 22 hours laboratory.**

Course covers basic soldering and seam fabrication techniques. Includes soldering lap and vertical seams, soldering with various materials and flux, alternate seam fabrication, and fabrication of non-soldered seams.

**FHGE: Non-GE**

**APSM 105 SMQ-5 DRAFTING INTRODUCTION & VIEWS 2.5 Units**

**Prerequisite:** Per California Code of Regulations, this course is limited to students admitted to the Sheet Metal Apprenticeship Program.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**40 hours total: 32 hours lecture, 8 hours laboratory.**

Introduction to communication of construction details through drafting of plans and patterns. Topics include drafting equipment and materials, use of an architect's scale, drawing format, geometric construction, basic views, square and radius elbows, and drawing duct runs.

**FHGE: Non-GE**

**APSM 106 SMQ-6 BEGINNING DUCT FITTINGS 1.5 Units**

**Prerequisite:** Per California Code of Regulations, this course is limited to students admitted to the Sheet Metal Apprenticeship Program.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**40 hours total: 12 hours lecture, 28 hours laboratory.**

Focus is on the variety of duct connections, sealing, elbows and transitions common to the sheet metal industry.

**FHGE: Non-GE**

**APSM 107 SMQ-7 PARALLEL LINE FITTINGS 1.5 Units**

**Prerequisite:** Per California Code of Regulations, this course is limited to students admitted to the Sheet Metal Apprenticeship Program.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**40 hours total: 16 hours lecture, 24 hours laboratory.**

Introduction to communicating construction details through drafting of plans. Topics include drafting equipment and materials, use of an architect's scale, drawing format, geometric construction, basic views, square and radius elbows, and drawing duct runs.

**FHGE: Non-GE**

**APSM 108 SMQ-8 TRIANGULATION FITTINGS 1.5 Units**

**Prerequisite:** Per California Code of Regulations, this course is limited to students admitted to the Sheet Metal Apprenticeship Program.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**40 hours total: 16 hours lecture, 24 hours laboratory.**

Triangulation fittings introduces another of three traditional sheet metal pattern development methods. Triangulation is a versatile method, often applied when other methods won't work. Between the method, practice drawings and fabricated projects, there is much to cover in this course.

**FHGE: Non-GE**

**APSM 109 SMQ-9 RADIAL LINE LAYOUT & OGEE OFFSETS 1.5 Units**

**Prerequisite:** Per California Code of Regulations, this course is limited to students admitted to the Sheet Metal Apprenticeship Program.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**40 hours total: 14 hours lecture, 26 hours laboratory.**

Radial Line layout introduces a third of three traditional sheet metal pattern development methods. Concepts are applied to conical sheet metal projects. In addition, the ogee offset fitting, sometimes important in maintaining efficient air flow is developed in flat and compound forms.

**FHGE: Non-GE**

**APSM 110 SMQ-10 BASICS OF ARCHITECTURAL SHEET METAL 2 Units**

**Prerequisite:** Per California Code of Regulations, this course is limited to students admitted to the Sheet Metal Apprenticeship Program.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**40 hours total: 18 hours lecture, 22 hours laboratory.**

This course focuses on essential skills used in architectural sheet metal work, including joint design for water flow, caulking and soldering applications, miters, and expansion joints. Discussion of use of architectural sheet metal in order to protect buildings from moisture and mold damage. Roof and scaffold safety is discussed.

**FHGE: Non-GE**

**APSM 111 SMQ-11 ARCHITECTURAL SHEET METAL 1.5 Units**

**Prerequisite:** Per California Code of Regulations, this course is limited to students admitted to the Sheet Metal Apprenticeship Program.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**40 hours total: 12 hours lecture, 28 hours laboratory.**

This architectural sheet metal course seeks to develop an understanding of the common applications and general skills used in architectural sheet metal construction. Chimney saddles, downspouts, flashings and counter flashings, soffits, and scuppers are covered in detail. Students fabricate many of these items.

**FHGE: Non-GE**

**APSM 112 SMQ-12 FIELD INSTALLATION 2 Units**

**Prerequisite:** Per California Code of Regulations, this course is limited to students admitted to the Sheet Metal Apprenticeship Program.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**40 hours total: 28 hours lecture, 12 hours laboratory.**

This course addresses knowledge and application specific to field work in the sheet metal industry. Students receive training and safety certifications for forklift, scissor lift, or articulating booms. Proper techniques for rigging and hoisting loads are presented. Field measurement and job-site layout considerations are practiced. In addition, fire damper types are presented as well as the necessity of following the manufacturer's specifications for applications related to life safety in buildings.

**FHGE: Non-GE**

**APSM 113 SMQ-13 WELDING 1: PROCESS & SAFETY OVERVIEW 1.5 Units**

**Prerequisite:** Per California Code of Regulations, this course is limited to students admitted to the Sheet Metal Apprenticeship Program.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**40 hours total: 16 hours lecture, 24 hours laboratory.**

This course begins with an overview of common welding safety hazards and personal protective equipment for welding. The Gas Metal Arc Welding process is introduced and practiced by students as commonly used in the sheet metal industry. Machine set-up and basic skills are stressed.

**FHGE: Non-GE**

**APSM 114 SMQ-14 WELDING 2: GMAW 1.5 Units**

**Prerequisite:** Per California Code of Regulations, this course is limited to students admitted to the Sheet Metal Apprenticeship Program.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**40 hours total: 12 hours lecture, 28 hours laboratory.**

This course continues with development of Gas Metal Arc Welding and Flux Core Arc Welding skills. In addition, the SMAW welding process and metallurgy are introduced. Progress in student welding skill development is essential.

**FHGE: Non-GE**

**APSM 116 SMQ-16 PLANS & SPECIFICATIONS 3 Units**

**Prerequisite:** Per California Code of Regulations, this course is limited to students admitted to the Sheet Metal Apprenticeship Program.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**40 hours total: 38 hours lecture, 2 hours laboratory.**

Introduction to plans and specifications and their applications in the sheet metal construction industry. This includes reading and interpreting title blocks, lines, abbreviations, symbols, sections, details and schedules for residential and commercial projects. Architectural, structural, mechanical, electrical, control, and specialty drawings are covered in detail.

**FHGE: Non-GE**

**APSM 117 SMQ-17 SUBMITTALS & SHOP DRAWINGS 2.5 Units**

**Prerequisite:** Per California Code of Regulations, this course is limited to students admitted to the Sheet Metal Apprenticeship Program.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**40 hours total: 34 hours lecture, 6 hours laboratory.**

This course continues to build on job specification and blueprint reading instructions and adds the creation of a shop drawing and use of submittals as done in the sheet metal industry. This includes reading typical plans, specifications and submittals, identifying specific information on the submittal, applying a numbering system to the shop drawing, creating material lists from the shop drawing or submittal, and field use of drawings and submittals.

**FHGE: Non-GE**

**APSM 118 SMQ-18 INDUSTRIAL & STAINLESS STEEL INTRODUCTION 1.5 Units**

**Prerequisite:** Per California Code of Regulations, this course is limited to students admitted to the Sheet Metal Apprenticeship Program.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**40 hours total: 16 hours lecture, 24 hours laboratory.**

Course introduces heavy gage industrial sheet metal techniques and stainless steel applications used in the industry. Topics include calculations of bend allowances for heavy gauge metal, layout and forming heavy gauge metal, using a blowpipe, material handling equipment, marking, forming and surface finishing stainless steel products. Safety and material handling practices are reviewed.

**FHGE: Non-GE**

**APSM 119 SMQ-19 HVAC AIR SYSTEMS & DUCT DESIGN 3 Units**

**Prerequisite:** Per California Code of Regulations, this course is limited to students admitted to the Sheet Metal Apprenticeship Program.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**40 hours total: 36 hours lecture, 4 hours laboratory.**

Course addresses the basics and critical details of heating, ventilating, and air conditioning (HVAC), and system design, operation, installation, and fabrication standards. Students will learn how HVAC systems can be designed with human comfort and efficient operation in mind. Students will learn basic components, and how to identify loss factors of typical HVAC systems. Load calculations and air flow calculations are performed and duct leak testing is introduced, stressing the importance of energy efficiency with today's environmental concerns.

**FHGE: Non-GE**

**APSM 120 SMQ-20 MEASURING & SKETCHING 1.5 Units**

**Prerequisite:** Per California Code of Regulations, this course is limited to students admitted to the Sheet Metal Apprenticeship Program.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**40 hours total: 14 hours lecture, 26 hours laboratory.**

Field measuring and sketching techniques are discussed in detail as it relates to sheet metal work. Topics covered include measuring techniques and safety, reference points, calculations, and industry accepted symbols, views and representations. Students measure and produce sketches.

**FHGE: Non-GE**

**APSM 121 SMQ-21 FABRICATION & SHORTCUTS 1 Unit**

**Prerequisite:** Per California Code of Regulations, this course is limited to students admitted to the Sheet Metal Apprenticeship Program.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**40 hours total: 8 hours lecture, 32 hours laboratory.**

Theory and application of sheet metal fabrication and shortcuts used in residential and commercial construction are reviewed in this course. Students will gain a working knowledge of alternative fabrication techniques and theory. Geometry and math associated with fabrication are an integral part of this course. Jobsite conditions and fabrication of specialty items are emphasized.

**FHGE: Non-GE**

**APSM 122 SMQ-22 CODES & STANDARDS 3 Units**

**Prerequisite:** Per California Code of Regulations, this course is limited to students admitted to the Sheet Metal Apprenticeship Program.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**40 hours total: 38 hours lecture, 2 hours laboratory.**

Students are introduced to the organization and interpretation of building codes and standards in the sheet metal industry. The restrictions and limitations these codes place on the construction industry are covered in detail. Students work with codes common to the industry and use SMACNA standards to research information.

**FHGE: Non-GE**

**APSM 123 SMQ-23 RESIDENTIAL SHEET METAL 2 Units**

**Prerequisite:** Per California Code of Regulations, this course is limited to students admitted to the Sheet Metal Apprenticeship Program.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**40 hours total: 18 hours lecture, 22 hours laboratory.**

Introduction to sheet metal work specific to residential construction including: the various types of residential heating, ventilation and air conditioning systems, combustion theory, basic air distribution, furnace construction, filters, humidifiers, installation techniques, maintenance procedures and roof drainage system requirements.

**FHGE: Non-GE**

**APSM 124 SMQ-24 METAL ROOFING 2 Units**

**Prerequisite:** Per California Code of Regulations, this course is limited to students admitted to the Sheet Metal Apprenticeship Program.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**40 hours total: 18 hours lecture, 22 hours laboratory.**

Overview of the different types of metal roofs used in the sheet metal industry, installation skills, and safety concerns. Common roof seams are fabricated. Use of manufactured and shop-fabricated materials for roof lay out and installation is practiced, including roof penetrations and related flashings.

**FHGE: Non-GE**

**APSM 125 SMQ-25 DETAILING 3 Units**

**Prerequisite:** Per California Code of Regulations, this course is limited to students admitted to the Sheet Metal Apprenticeship Program.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**40 hours total: 36 hours lecture, 4 hours laboratory.**

Detailing in the sheet metal industry is a specialized skill that requires extensive knowledge and proper attention to detail when working with drawings and specifications. In this course, students will compile detail information from plans, specs, submittals, standards, field measurements, and codes.

**FHGE: Non-GE**

**APSM 126 SMQ-26 FOREMAN TRAINING 2.5 Units**

**Prerequisite:** Per California Code of Regulations, this course is limited to students admitted to the Sheet Metal Apprenticeship Program.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**40 hours total: 32 hours lecture, 8 hours laboratory.**

This course is for journeyman-level sheet metal workers who want to become supervisors, site managers, leads, and foreman. In this course, students will be able to identify the roles and responsibilities of the foreman, and reasons to become a foreman. Students will practice self-evaluation, successful foreman attributes, managing and leading others, and project management. They will learn to start a project and see it through to successful completion.

**FHGE: Non-GE**

**APSM 127 SMQ-27 BASIC AUTOCAD 1.5 Units**

**Prerequisite:** Per California Code of Regulations, this course is limited to students admitted to the Sheet Metal Apprenticeship Program.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**40 hours total: 12 hours lecture, 28 hours laboratory.**

In the Basic AutoCAD class students learn how to follow the proper protocols for computer lab use and perform essential computer file management operations. The students will navigate through the basic AutoCAD screen and command menus. The students will demonstrate the basic use of the AutoCAD program by creating and plotting a drawing assignment within parameters and given template. The students will be able to demonstrate how AutoCAD is used in the Sheet Metal Industry.

**FHGE: Non-GE**

**APSM 128 SMQ-28 HVAC ENERGY CONSERVATION & ENVIRONMENTAL TECHNOLOGY 2.5 Units**

**Prerequisite:** Per California Code of Regulations, this course is limited to students admitted to the Sheet Metal Apprenticeship Program.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**40 hours total: 30 hours lecture, 10 hours laboratory.**

This course is an introduction to energy and environmental technologies for the sheet metal and HVAC industry. It includes an introduction to California Title 24 requirements for HVAC systems, duct system testing, assessing utility bill and equipment nameplate data, the LEED point system, and basic heat transfer calculations. It also includes an overview of upcoming energy initiatives in California.

**FHGE: Non-GE**

**APSM 130 SMQ-30 ADVANCED WELDING 1.5 Units**

**Prerequisite:** Per California Code of Regulations, this course is limited to students admitted to the Sheet Metal Apprenticeship Program.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**40 hours total: 14 hours lecture, 26 hours laboratory.**

Advanced techniques used in Oxy-Fuel/ Plasma cutting, GMAW, and GTAW on various types and thicknesses of base material.

**FHGE: Non-GE**

**APSM 131 SMQ-31 CAD DETAILING (BEGINNING CAD DUCT) 1 Unit**

**Prerequisite:** Per California Code of Regulations, this course is limited to students admitted to the Sheet Metal Apprenticeship Program.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**40 hours total: 10 hours lecture, 30 hours laboratory.**

Course covers basic computer-aided design (CAD) drawing skills required by industry. Use of CAD DUCT or similar specialized 3rd party sheet metal detailing software to set up drawings, including 3-D duct detailing program with emphasis on electronic coordination. This course focuses on file management and drawing protocol and utilization of structural and architectural backgrounds. Students will design ducting within the CAD drawing and use CAD DUCT or similar software for location and elevation, as well as collision checks. Note: Other industry recognized third party software may be utilized in lieu of CAD DUCT, such as "Benchmark Draft" software, for similar lessons.

**FHGE: Non-GE**

**APSM 132 SMQ-32 INTERMEDIATE CAD DETAILING THIRD PARTY 1 Unit**

**Prerequisite:** Per California Code of Regulations, this course is limited to students admitted to the Sheet Metal Apprenticeship Program.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**40 hours total: 10 hours lecture, 30 hours laboratory.**

Continuation of 3-D duct detailing program for electronic coordination, emphasizing accessing, editing, and recovering files with the CAD DUCT or similar third party sheet metal detailing software system. Students will use format standards, tag files, and program utilities. Using contract documents, students will work through the steps necessary to create a job file.

**FHGE: Non-GE**

**APSM 133 SMQ-33 ADVANCED ARCHITECTURAL 1.5 Units**

**Prerequisite:** Per California Code of Regulations, this course is limited to students admitted to the Sheet Metal Apprenticeship Program.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**40 hours total: 12 hours lecture, 28 hours laboratory.**

Develop advanced skills to layout architectural custom flashing and cornices. Work with the newest metal roofing material. Work with copper and other materials to lay out and fabricate specialized architectural items.

**FHGE: Non-GE**

**APSM 134 SMQ-34 ADVANCED LAYOUT FABRICATION 1 Unit**

**Prerequisite:** Per California Code of Regulations, this course is limited to students admitted to the Sheet Metal Apprenticeship Program.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**40 hours total: 10 hours lecture, 30 hours laboratory.**

Course addresses advanced methods of pattern development using both calculator and manual methods. Students will utilize math formulas relating to sheet metal lay out, fabrication, and shop procedures with the ITI Sheet Metal Pro Calculator, as well as apply geometric construction techniques to advanced patterns and job-site layouts.

**FHGE: Non-GE**

**APSM 135 SMQ-35 PROJECT MANAGEMENT, TAKEOFFS & ESTIMATES 2 Units**

**Prerequisite:** Per California Code of Regulations, this course is limited to students admitted to the Sheet Metal Apprenticeship Program.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**40 hours total: 26 hours lecture, 14 hours laboratory.**

Course covers the development of skills in supervision, management of various types of projects, performing takeoffs, (component ordering details according to shop or manufacturer's standards directly from contract drawings), and creating a detailed estimate of a specific project.

**FHGE: Non-GE**

**APSM 136 SMQ-36 SERVICE BASICS 2 Units**

**Prerequisite:** Per California Code of Regulations, this course is limited to students admitted to the Sheet Metal Apprenticeship Program.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**40 hours total: 26 hours lecture, 14 hours laboratory.**

This course addresses the knowledge and development of the basic skills necessary for a sheet metal worker to service a basic HVAC building system.

**FHGE: Non-GE**

**APSM 137 SMQ-37 FINAL HVAC PROJECT 1 Unit**

**Prerequisite:** Per California Code of Regulations, this course is limited to students admitted to the Sheet Metal Apprenticeship Program.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**40 hours total: 6 hours lecture, 34 hours laboratory.**

This course covers the design, fabrication, and installation of a typical HVAC system from concept design drawing to the finished installed project. This course focuses on proper duct design and fabrication.

**FHGE: Non-GE**

**APSM 138 SMQ-38 FINAL ARCHITECTURAL, INDUSTRIAL & ORNAMENTAL PROJECT 1 Unit**

**Prerequisite:** Per California Code of Regulations, this course is limited to students admitted to the Sheet Metal Building Trades Apprenticeship Program.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**40 hours total: 6 hours lecture, 34 hours laboratory.**

This course covers more complex and intricate design, fabrication, and installation work, utilizing a typical architectural, industrial or ornamental project from concept design drawing to the finished installed project.

**FHGE: Non-GE**

**APPRENTICESHIP: SOUND & COMMUNICATION**

Apprenticeship

650.949.7208 foothill.edu/apprenticeships

**APSC 111 JOB INFORMATION, SAFETY, TEST INSTRUMENTS, STRUCTURED CABLING, FIBER OPTICS 3.5 Units****Prerequisite:** Per California Code of Regulations, this course is limited to students admitted to the Northern CA Sound & Communication JATC Apprenticeship Program.**Advisory:** Not open to students with credit in APRT 130.**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.**80 hours total: 30 hours lecture, 50 hours laboratory.**

Introduction to the sound and communication industry. Students are exposed to the basic tools of the trade, test instruments, proper care and safety of tools, use of fastening devices and how to tie basic knots. This course will cover the TIA/EIA standards and students apply codeology to cabling systems, connectors, unshielded twisted pair cables and connecting hardware. This course also includes a fiber optic overview of different optical cables, connectors and connection joints. This course teaches students how to properly install, test and certify fiber optical cables.

**FHGE: Non-GE****APSC 112 CODES & PRACTICES, CONNECTORS & RACEWAYS, BLUEPRINT READING, DC THEORY 3.5 Units****Prerequisite:** Per California Code of Regulations, this course is limited to students admitted to the Northern CA Sound & Communication JATC Apprenticeship Program.**Advisory:** Not open to students with credit in APRT 131.**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.**80 hours total: 30 hours lecture, 50 hours laboratory.**

This course will cover the National Electrical Code (NEC). Students apply codeology to cabling systems, boxes, connectors, and raceways. It covers the fundamentals of blueprints, scales, mechanical and electrical symbols, using industry elevations and schedules. This course will also cover DC theory, how electricity works, how to calculate and measure voltage, current, resistance and power in a series and/or parallel circuit.

**FHGE: Non-GE****APSC 121 AC THEORY, SECURITY, ACCESS CONTROL 3.5 Units****Prerequisite:** Per California Code of Regulations, this course is limited to students admitted to the Northern CA Sound & Communication JATC Apprenticeship Program.**Advisory:** Not open to students with credit in APRT 132.**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.**80 hours total: 30 hours lecture, 50 hours laboratory.**

Study of AC theory. The student will become familiar with sine waves, inductance, inductive reactance, capacitive reactance, frequency and AC impedance. They learn to calculate voltage, current, impedance and power in both a series and parallel AC circuit and power quality. This introduction concentrates on how power quality relates to communication systems. Design and layout of security systems and electronic access control systems (alarms). Components of security systems, magnetic contacts, motion sensors, control panels, access control systems including card, and biometric readers.

**FHGE: Non-GE****APSC 122 FIRE ALARM SYSTEMS & GROUNDING, TELEPHONY & PAGING SYSTEMS 3.5 Units****Prerequisite:** Per California Code of Regulations, this course is limited to students admitted to the Northern CA Sound & Communication JATC Apprenticeship Program.**Advisory:** Not open to students with credit in APRT 133.**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.**80 hours total: 30 hours lecture, 50 hours laboratory.**

Fundamentals of fire alarm systems including building a small scale fire alarm system using Norcal's fire alarm trainers, initiating and notification devices, testing and maintenance. Theory and practices of grounding and how proper grounding relates to safety and system performance. Telephone systems and how they are wired in detail, and a familiarity with electronic key systems, PBX systems, paging systems, speakers and troubleshooting.

**FHGE: Non-GE****APSC 131 VDV PREP, NETWORKING, NURSE CALL, COMPUTER LITERACY 3.5 Units****Prerequisite:** Per California Code of Regulations, this course is limited to students admitted to the Northern CA Sound & Communication JATC Apprenticeship Program.**Advisory:** Not open to students with credit in APRT 160.**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.**80 hours total: 30 hours lecture, 50 hours laboratory.**

Preparation for the Voice Data Video state certification. Review of navigating the NEC, overview of the certification application process and a lecture on most aspects of the Voice Data Video industry. Introduction to nurse call systems which includes system components, ancillary systems, system design, installation and troubleshooting techniques. Instruction on personal computing software such as Microsoft Word and Excel Programs. The course concludes with sample exam tests using Norcal's Classroom Performance System.

**FHGE: Non-GE****APSC 132 CCTV SYSTEMS, AUDIO VISUAL 3.5 Units****Prerequisite:** Per California Code of Regulations, this course is limited to students admitted to the Northern CA Sound & Communication JATC Apprenticeship Program.**Advisory:** Not open to students with credit in APRT 161.**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.**80 hours total: 30 hours lecture, 50 hours laboratory.**

Advanced study of closed circuit television systems including video camera types, lenses, optics, lighting characteristics and study signal transmission methods. Introduction to Plasma, LCD and OLED displays, small scale CCTV systems that includes different cameras and switchers reporting to a digital video recorder. Audio and video fundamentals, properties of sound, distributed audio and video, planning and testing of audio visual systems. Students perform hands-on design with entertainment and application platforms for audio-visual, cabling, coax, fiber optics and networking systems.

**FHGE: Non-GE**

**ART**

Fine Arts and Communication  
650.949.7584 foothill.edu/fa

Foothill offers art activity courses in seven different family categories. No single course may be repeated. Enrollment is limited to six courses per family within the Foothill-De Anza Community College District. Please refer to the De Anza College Catalog for the corresponding families and courses.

Drawing Family: ART 4B, 4C, 4D, 4E & 4I

Painting Family: ART 19A, 19B, 19C, 47A & 47B

Printmaking Family: ART 39 or GID 46 & ART 40 or GID 38

Ceramic Construction Family: ART 44, 45A, 45B, 45C & 46B

Art Ceramic Surface Family: ART 45F

Book Arts & Paper Family: ART 6

Sculpture Family: ART 5C

**ART 1 INTRODUCTION TO ART 4.5 Units**

**Grade Type: Letter Grade, the student may select Pass/No Pass Not Repeatable.**

**4 hours lecture, 1.5 hours laboratory. (66 hours total per quarter)**

An introduction to new ways of thinking about the visual arts, including examinations of the visual elements and artistic media, particularly as they contribute to the development of visual literacy. Includes analysis of western and non-western traditions in the visual arts within a social and historical context.

**FHGE: Humanities Transferable: UC/CSU**

**ART 2A HISTORY OF ART: HISTORY OF WESTERN ART FROM PREHISTORY THROUGH EARLY CHRISTIANITY 4.5 Units**

**Advisory: Not open to students with credit in ART 2AH.**

**Grade Type: Letter Grade, the student may select Pass/No Pass Not Repeatable.**

**4 hours lecture, 1.5 hours laboratory. (66 hours total per quarter)**

History of Western art from Prehistory through Early Christianity. An introductory survey examining images, objects, and architecture produced from the Paleolithic era to the end of the Roman Empire. We will discuss Prehistoric, Mesopotamian, Egyptian, Greek, Roman, and Early Christian and Byzantine culture. Illustrated lectures and readings.

**FHGE: Humanities Transferable: UC/CSU**

**ART 2AH HONORS HISTORY OF ART: HISTORY OF WESTERN ART FROM PREHISTORY THROUGH EARLY CHRISTIANITY 4.5 Units**

**Prerequisite: Honors Institute participant.**

**Advisory: Not open to students with credit in ART 2A.**

**Grade Type: Letter Grade, the student may select Pass/No Pass Not Repeatable.**

**4 hours lecture, 1.5 hours laboratory. (66 hours total per quarter)**

History of Western art from Prehistory through Early Christianity. An introductory survey examining images, objects, and architecture produced from the Paleolithic era to the end of the Roman Empire. We will discuss Prehistoric, Mesopotamian, Egyptian, Greek, Roman, Early Christian and Early Byzantine culture. Illustrated lectures and readings. The honors sections expand the primary sources for the student. In addition to the textbook, students have a reading list of sources (on reserve in the library). Lectures are more interactive and the student is expected to participate in group discussions. Exams are more exacting with an emphasis on the student being able to comfortably assimilate political, social, and economic factors into their analysis.

**FHGE: Humanities Transferable: UC/CSU**

**ART 2B HISTORY OF WESTERN ART FROM THE MIDDLE AGES TO THE RENAISSANCE 4.5 Units**

**Advisory: Not open to students with credit in ART 2BH.**

**Grade Type: Letter Grade, the student may select Pass/No Pass Not Repeatable.**

**4 hours lecture, 1.5 hours laboratory. (66 hours total per quarter)**

History of Western art from ca.600 through ca.1600. This course examines the Middle Ages and the Renaissance using images, objects, and architecture to develop a comprehensive understanding of the social, political, and religious forces that shaped this period. Illustrated lectures and readings.

**FHGE: Humanities Transferable: UC/CSU**

**ART 2BH HONORS HISTORY OF WESTERN ART FROM THE MIDDLE AGES TO THE RENAISSANCE 4.5 Units**

**Prerequisite: Honors Institute participant.**

**Advisory: Not open to students with credit in ART 2B.**

**Grade Type: Letter Grade, the student may select Pass/No Pass Not Repeatable.**

**4 hours lecture, 1.5 hours laboratory. (66 hours total per quarter)**

History of Western art from ca.600 through ca.1600. This course examines the Middle Ages and the Renaissance using images, objects, and architecture to develop a comprehensive understanding of the social, political, and religious forces that shaped this period. Illustrated lectures and readings. The honors sections expand the primary sources for the student. In addition to the textbook, students have a reading list of sources (on reserve in the library). Lectures are more interactive and the student is expected to participate in group discussions. Exams are more exacting with an emphasis on the student being able to comfortably assimilate political, social, and economic factors into their analysis.

**FHGE: Humanities Transferable: UC/CSU**

**ART 2C HISTORY OF WESTERN ART FROM THE BAROQUE TO MODERNISM 4.5 Units**

**Advisory: Not open to students with credit in ART 2CH.**

**Grade Type: Letter Grade, the student may select Pass/No Pass Not Repeatable.**

**4 hours lecture, 1.5 hours laboratory. (66 hours total per quarter)**

History of Western Art from ca. 1600 to the 20th century. An introductory survey examining images, objects, and architecture produced from the late Renaissance to Modernism. Illustrated lectures and readings.

**FHGE: Humanities Transferable: UC/CSU**

**ART 2E A HISTORY OF WOMEN IN ART 4.5 Units**

**Advisory: Not open to students with credit in WMN 15.**

**Grade Type: Letter Grade, the student may select Pass/No Pass Not Repeatable.**

**4 hours lecture, 1.5 hours laboratory. (66 hours total per quarter)**

A chronological, thematic, and cross-cultural examination of art works and gender issues concerning women artists from the early Middle Ages to the 21st century. Includes the influences on art produced by women of such issues as race, gender, socio-economic and political conditions, increasing urbanization, and conceptions of nature, etc.

**FHGE: Humanities Transferable: UC/CSU**

**ART 2F INTRODUCTION TO ASIAN ART 4.5 Units**

**Advisory: Not open to students with credit in ART 12.**

**Grade Type: Letter Grade, the student may select Pass/No Pass Not Repeatable.**

**4 hours lecture, 1.5 hours laboratory. (66 hours total per quarter)**

An introduction to the art of India, China and Japan from the Neolithic Age to the present, covering painting, sculpture, architecture and ceramics. This course emphasizes the cultural, social and historical meaning of art and traces the changes in style, meaning, and use of art within the broader context of the great religious traditions of China, Japan, and India.

**FHGE: Humanities Transferable: UC/CSU**

**ART 2J AMERICAN ART 4.5 Units**

**Advisory:** Not open to students with credit in ART 14.  
**Grade Type:** Letter Grade, the student may select Pass/No Pass  
**Not Repeatable.**

**4 hours lecture, 1.5 hours laboratory. (66 hours total per quarter)**  
A history of the culturally diverse arts produced in North America (specifically the United States) from prehistory to the present. American art is considered thematically and chronologically, focusing on the important influences on art of nature, landscape, urbanization, gender, race, religion, ethnicity, socio-economic and political reforms, and civil and international wars.

**FHGE:** Humanities **Transferable:** UC/CSU

**ART 3 HISTORY OF MODERN ART FROM POST-IMPRESSIONISM TO THE PRESENT 4.5 Units**

**Grade Type:** Letter Grade, the student may select Pass/No Pass  
**Not Repeatable.**

**4 hours lecture, 1.5 hours laboratory. (66 hours total per quarter)**  
A study of art and architecture from Post Impressionism to the present day emphasizing the importance of social, economic, and political influences on the art of this period. This course is designed to relate contemporary artistic expression to modern thought. Lectures will be directed towards illustrating and interpreting the subjects listed in the course content. We will study painting, sculpture, architecture, conceptual art, environmental art, and modern digital media from across the world. A field trip will be taken to a museum.

**FHGE:** Non-GE **Transferable:** UC/CSU

**ART 4A FUNDAMENTALS IN DRAWING 4 Units**

**Grade Type:** Letter Grade Only  
**Not Repeatable.**

**3 hours lecture, 3 hours laboratory. (72 hours total per quarter)**  
In this beginning level drawing course students will analyze form and incorporate value, the concepts of light and shadow patterns, perspective, proportion and composition in the practice of drawing. In-depth theory and practice of charcoal drawing. Great works of historical drawings will be studied in relation to value, line, form, space and composition.

**FHGE:** Humanities **Transferable:** UC/CSU

**ART 4B INTERMEDIATE DRAWING 4 Units**

**Prerequisite:** ART 4A.  
**Advisory:** ART 5A; this course is included in the Drawing family of activity courses.

**Grade Type:** Letter Grade Only  
**Not Repeatable.**

**3 hours lecture, 3 hours laboratory. (72 hours total per quarter)**  
Exploration of artistic concepts, styles, and creative expression related to intermediate-level drawing, focusing on complex subject matter and concepts using a variety of drawing mediums, techniques, and methodologies. Students in this course will build on fundamental drawing skills to develop personalized approaches to content and materials in exercises covering multiple historical and contemporary approaches to drawing.

**FHGE:** Non-GE **Transferable:** UC/CSU

**ART 4C REPRESENTATIONAL DRAWING 4 Units**

**Prerequisite:** ART 4A.  
**Advisory:** This course is included in the Drawing family of activity courses.

**Grade Type:** Letter Grade, the student may select Pass/No Pass  
**Not Repeatable.**

**3 hours lecture, 3 hours laboratory. (72 hours total per quarter)**  
An intermediate level representational drawing course concentrating on observation and depiction of volume and linear perspective in a variety of drawing media.

**FHGE:** Non-GE **Transferable:** UC/CSU

**ART 4D FIGURE DRAWING I 4 Units**

**Advisory:** This course is included in the Drawing family of activity courses.

**Grade Type:** Letter Grade Only  
**Not Repeatable.**

**3 hours lecture, 3 hours laboratory. (72 hours total per quarter)**  
Introduction to drawing the human figure from observation from a live figure model using a wide variety of drawing media and techniques. Students in this course will learn both descriptive and interpretive approaches to drawing the figure. Topics include an introduction to basic figure drawing approaches and the historical and contemporary roles of figure drawing in the visual arts.

**FHGE:** Non-GE **Transferable:** UC/CSU

**ART 4E HEADS & HANDS DRAWING 4 Units**

**Advisory:** This course is included in the Drawing family of activity courses.

**Grade Type:** Letter Grade, the student may select Pass/No Pass  
**Not Repeatable.**

**3 hours lecture, 3 hours laboratory. (72 hours total per quarter)**  
A beginning drawing course focusing on the representation and interpretation of the head and hands; with attention to drawing from life from a live figure model.

**FHGE:** Non-GE **Transferable:** UC/CSU

**ART 4I FIGURE DRAWING II 4 Units**

**Advisory:** This course is included in the Drawing family of activity courses.

**Grade Type:** Letter Grade, the student may select Pass/No Pass  
**Not Repeatable.**

**3 hours lecture, 3 hours laboratory. (72 hours total per quarter)**  
Intermediate figure drawing class emphasizing the development of skill in depicting the human figure. This class is a practical and theoretical course that emphasizes proportion and basic human anatomy. The course will also expose students to great works of historical and contemporary figure drawing in relationship to figure drawing.

**FHGE:** Non-GE **Transferable:** UC/CSU

**ART 5A 2-D FOUNDATIONS 4 Units**

**Grade Type:** Letter Grade Only  
**Not Repeatable.**

**3 hours lecture, 3 hours laboratory. (72 hours total per quarter)**  
Introduction to the concepts, applications, and historical and contemporary references related to two-dimensional art and composition, including the study of the basic principles and elements of line, shape, texture, value, color and spatial illusion. Development of a visual vocabulary for creative expression through lecture presentations, studio projects, problem solving, and written assignments.

**FHGE:** Humanities **Transferable:** UC/CSU

**ART 5B 3-D FOUNDATIONS 4 Units**

**Grade Type:** Letter Grade Only  
**Not Repeatable.**

**3 hours lecture, 3 hours laboratory. (72 hours total per quarter)**  
Introduction to the concepts, applications, and historical references related to three-dimensional design and spatial composition, including the study of the elements and organizing principles of design as they apply to three-dimensional space and form. Development of a visual vocabulary for creative expression through lecture presentations and use of appropriate materials for non-representational three-dimensional studio projects.

**FHGE:** Humanities **Transferable:** UC/CSU



**ART 5C SCULPTURE 4 Units**  
**Advisory:** This course is included in the Sculpture family of activity courses.  
**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.  
**3 hours lecture, 3 hours laboratory. (72 hours total per quarter)**  
Introduction to three-dimensional sculptural principles, techniques, and concepts utilizing a wide range of materials and practices. Various sculpture methods are practiced with attention to creative self-expression and historical context.  
**FHGE: Non-GE Transferable: UC/CSU**

**ART 6 COLLAGE & COMPOSITION 4 Units**  
**Advisory:** ART 4A or 5A; this course is included in the Book Arts & Paper family of activity courses.  
**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.  
**3 hours lecture, 3 hours laboratory. (72 hours total per quarter)**  
Studio experience in structuring the elements of visual form using, but not limited to, the exploratory medium of collage. Development of a personal sensitivity to visual organization and the vocabulary of art as it relates to expressiveness and content.  
**FHGE: Non-GE Transferable: UC/CSU**

**ART 14D DIGITAL ART & GRAPHICS 4 Units**  
**Advisory:** Familiarity with computer operating systems; ART 4A or GID 31; ART 5A; PHOT 1; not open to students with credit in ART 56 or GID 41.  
**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.  
**3 hours lecture, 3 hours laboratory. (72 hours total per quarter)**  
Introduction to using computers and software for painting, drawing, image processing, photo composites and typography. Emphasis on image making and creative problem solving.  
**FHGE: Non-GE Transferable: UC/CSU**

**ART 15A DIGITAL PAINTING I 4 Units**  
**Advisory:** Familiarity with current interface operations for desktop computers, laptops and digital tablets; not open to students with credit in ART 14C or 86.  
**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.  
**3 hours lecture, 3 hours laboratory. (72 hours total per quarter)**  
Basic instruction using computers, digital tablets and software to produce digital paintings and images for artistic expression, design and illustration.  
**FHGE: Non-GE Transferable: UC/CSU**

**ART 15B DIGITAL PAINTING II 4 Units**  
**Prerequisite:** ART 15A.  
**Advisory:** Familiarity with current interface operations for desktop computers, laptops and digital tablets.  
**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.  
**3 hours lecture, 3 hours laboratory. (72 hours total per quarter)**  
Intermediate instruction using computers, digital tablets and software to produce digital paintings and images for artistic expression, design and illustration.  
**FHGE: Non-GE Transferable: UC/CSU**

**ART 19A OIL PAINTING I 4 Units**  
**Prerequisite:** ART 4A.  
**Advisory:** This course is included in the Painting family of activity courses.  
**Grade Type:** Letter Grade Only Not Repeatable.  
**3 hours lecture, 3 hours laboratory. (72 hours total per quarter)**  
Introduction to the theory and practice of basic oil painting, including the use of value, color and light to model the three-dimensional form.  
**FHGE: Non-GE Transferable: UC/CSU**

**ART 19B ACRYLIC PAINTING I 4 Units**  
**Prerequisite:** ART 4A.  
**Advisory:** This course is included in the Painting family of activity courses.  
**Grade Type:** Letter Grade Only Not Repeatable.  
**3 hours lecture, 3 hours laboratory. (72 hours total per quarter)**  
Introduction to the theory and practice of basic acrylic painting, including the use of value, color and light to model the three-dimensional form.  
**FHGE: Non-GE Transferable: UC/CSU**

**ART 19C OIL PAINTING II 4 Units**  
**Prerequisite:** ART 19A.  
**Advisory:** This course is included in the Painting family of activity courses.  
**Grade Type:** Letter Grade Only Not Repeatable.  
**3 hours lecture, 3 hours laboratory. (72 hours total per quarter)**  
The theory and practice of oil painting and continuation of Oil Painting I. Building on fundamental, oil painting skills to develop personalized style, complex subject matter, color theory and composition.  
**FHGE: Non-GE Transferable: UC/CSU**

**ART 20A COLOR I 4 Units**  
**Grade Type:** Letter Grade Only Not Repeatable.  
**3 hours lecture, 3 hours laboratory. (72 hours total per quarter)**  
A study of the principles, theories, and applications of additive and subtractive color in two dimensions. Topics will include color theory systems, color organizations, perceptual color, production of projects in applied color, and the elements of design as they apply to color.  
**FHGE: Non-GE Transferable: UC/CSU**

**ART 20B COLOR II 4 Units**  
**Prerequisite:** ART 20A.  
**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.  
**3 hours lecture, 3 hours laboratory. (72 hours total per quarter)**  
An intermediate study of the principles, theories, and applications of subtractive color in two dimensions. Topics will include researching major art historical color systems, art works and color symbolism. Topics will also include application of applied color, simultaneous contrast, color transparencies and color proportions in creative designs.  
**FHGE: Humanities Transferable: UC/CSU**

**ART 36 HISTORY OF GRAPHIC DESIGN 4 Units**  
**Advisory:** Not open to students with credit in GID 1 or GRDS 36.  
**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.  
**4 hours lecture. (48 hours total per quarter)**  
A study of the development of visual communication in art, graphic design, illustration and popular culture. Emphasis on the role, impact and interpretation of images, symbols, and typography used in informative and persuasive media.  
**FHGE: Humanities Transferable: UC/CSU**

**ART 39 SCREENPRINTING 4 Units**  
**Advisory:** This course is included in the Printmaking family of activity courses; not open to students with credit in GID 46.  
**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.  
**3 hours lecture, 3 hours laboratory. (72 hours total per quarter)**  
Introduction to screen printing processes, exploring the techniques of hand-cut stencils, direct-drawn stencils and photographic processes. Theory and practice making images for limited-edition and one-of-a-kind fine art prints.  
**FHGE: Non-GE Transferable: UC/CSU**

**ART 40 INTRODUCTION TO PRINTMAKING 4 Units**  
**Advisory:** ART 4A and 5A; this course is included in the Printmaking family of activity courses; not open to students with credit in ART 69, GID 38 or GRDS 69.  
**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.  
**3 hours lecture, 3 hours laboratory. (72 hours total per quarter)**  
 Introduction to the printmaking processes of relief, intaglio, screenprinting and monoprinting. Theory and practice making limited-edition and one-of-a-kind fine art prints.  
**FHGE: Non-GE Transferable: UC/CSU**

**ART 44 CERAMIC SCULPTURE 4 Units**  
**Prerequisite:** ART 45A.  
**Advisory:** This course is included in the Ceramic Construction family of activity courses.  
**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.  
**3 hours lecture, 3 hours laboratory. (72 hours total per quarter)**  
 Studio practice in designing and creating original ceramic sculpture.  
**FHGE: Non-GE Transferable: UC/CSU**

**ART 45A BEGINNING CERAMICS HANDBUILDING 4 Units**  
**Advisory:** This course is included in the Ceramic Construction family of activity courses.  
**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.  
**3 hours lecture, 3 hours laboratory. (72 hours total per quarter)**  
 An introduction to basic ceramic hand-building techniques, and its historical and contemporary significance. This class will introduce ceramic hand-building techniques including pinching, coil, and slab construction, as well as examine various high and low-fire glazing techniques. In addition to sculpting and constructing hand built vessels students will examine, critically discuss, analyze and write about clay, glaze and hand-building techniques, tools, ceramic terminology and processes of historical and contemporary clay hand-built vessels. Students will learn ceramic vocabulary, and participate in verbal and written class critiques.  
**FHGE: Non-GE Transferable: UC/CSU**

**ART 45B BEGINNING CERAMICS POTTER'S WHEEL 4 Units**  
**Advisory:** This course is included in the Ceramic Construction family of activity courses.  
**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.  
**3 hours lecture, 3 hours laboratory. (72 hours total per quarter)**  
 An introduction to throwing on the potter's wheel, and its historical and contemporary significance. This class will introduce the process of wedging clay, centering a pot, pulling a wall, shaping processes, and trimming techniques to complete well balanced forms on the potter's wheel. In addition to gaining expertise in wheel-throwing, students will examine, discuss, critique and write about the techniques, tools, ceramic terminology and processes of historical and contemporary thrown clay vessels. Students will use ceramic vocabulary in verbal and written class critiques.  
**FHGE: Humanities Transferable: UC/CSU**

**ART 45C ADVANCED CERAMICS 4 Units**  
**Prerequisites:** ART 45A and 45B.  
**Advisory:** This course is included in the Ceramic Construction family of activity courses.  
**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.  
**3 hours lecture, 3 hours laboratory. (72 hours total per quarter)**  
 Laboratory practice in throwing advanced forms on the potter's wheel, combining hand-built and wheel-thrown forms, glazing these forms, and understanding kiln loading and firing procedures.  
**FHGE: Non-GE Transferable: UC/CSU**

**ART 45F LOW-TEMPERATURE CERAMIC FIRING & GLAZING TECHNIQUES 4 Units**  
**Prerequisite:** ART 45A or 45B.  
**Advisory:** This course is included in the Ceramic Surface family of activity courses.  
**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.  
**3 hours lecture, 3 hours laboratory. (72 hours total per quarter)**  
 Studio practice in the glazing and firing of ceramic pieces using four low-temperature methods: electric kiln oxidation firing, luster firing, raku firing and pit firing.  
**FHGE: Non-GE Transferable: UC/CSU**

**ART 46B POTTER'S WHEEL II 4 Units**  
**Prerequisite:** ART 45B.  
**Advisory:** This course is included in the Ceramic Construction family of activity courses.  
**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.  
**3 hours lecture, 3 hours laboratory. (72 hours total per quarter)**  
 Provides intermediate level instruction in clay processes covering intermediate wheel-throwing methods, glazing, decorating, and firing procedures. Explores technical problem solving, and creative design.  
**FHGE: Non-GE Transferable: UC/CSU**

**ART 47A WATERCOLOR I 4 Units**  
**Advisory:** ART 4A or 5A; ART 4B, 20A; this course is included in the Painting family of activity courses; not open to students with credit in ART 47.  
**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.  
**3 hours lecture, 3 hours laboratory. (72 hours total per quarter)**  
 Study of transparent and opaque watercolor techniques. Emphasis on basic techniques of painting and composition.  
**FHGE: Non-GE Transferable: UC/CSU**

**ART 47B WATERCOLOR II 4 Units**  
**Prerequisite:** ART 47A.  
**Advisory:** ART 4A or 5A; ART 4B, 20A; this course is included in the Painting family of activity courses.  
**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.  
**3 hours lecture, 3 hours laboratory. (72 hours total per quarter)**  
 Study of intermediate techniques using transparent and opaque water-media. Emphasis on intermediate techniques of painting, composition, and design.  
**FHGE: Non-GE Transferable: UC/CSU**

**ART 70R INDEPENDENT STUDY IN ART 1 Unit**  
**ART 71R 2 Units**  
**ART 72R 3 Units**  
**ART 73R 4 Units**  
**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.  
**3-12 hours laboratory per week. (36-144 hours total per quarter)**  
 Provides an opportunity for the student to expand their studies in Art beyond the classroom by completing a project or an assignment arranged by agreement between the student and instructor. The student is required to contract with the instructor to determine the scope of assignment and the unit value assigned for successful completion. Students may take a maximum of 6 units of Independent Study per department.  
**FHGE: Non-GE Transferable: CSU**

**ART 71A INDUSTRIAL DESIGN FOUNDATIONS I 4 Units**

**Advisory:** ART 74 and 74A.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**3 hours lecture, 3 hours laboratory. (72 hours total per quarter)**

Introduction to the processes and presentation of foundation level basic hands-on three-dimensional Industrial Design. This course emphasizes the principles of design and the fundamental aesthetic application of color, texture, shape, form, structure and space through the functional Industrial design problems. Introduction to hands-on model making using a wide range of three-dimensional media such as paint, textured surfaces, clay, plaster molds and wood.

**FHGE: Non-GE Transferable: CSU**

**ART 71B INDUSTRIAL DESIGN FOUNDATIONS II 4 Units**

**Advisory:** ART 71A.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**3 hours lecture, 3 hours laboratory. (72 hours total per quarter)**

Continuation of ART 71A, introduction to hands-on processes of foundation level Industrial and Product Designers. Continue integrating of the principles of design and the fundamental aesthetic application of color, texture, shape, volume, structure and space through and hands-on projects. Generate digital three-dimensional industrial design three-dimensional printing prototypes, digital software, mock-ups, and models using industry standard techniques.

**FHGE: Non-GE Transferable: CSU**

**ART 72 STUDIO ART PORTFOLIO PREPARATION 4 Units**

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**3 hours lecture, 3 hours laboratory. (72 hours total per quarter)**

Preparation, organization, and assembly of previous and current artwork to create a cohesive studio art portfolio. This course enables students and practicing artists the preparation in creating a professional portfolio for transfer into higher institutions, career opportunities, art exhibitions, art competitions, funding, or professional practice. Documenting work, writing artist statements, practice interviews, and assembling portable portfolios are included in this course.

**FHGE: Non-GE Transferable: CSU**

**ART 74 INDUSTRIAL DESIGN VISUALIZATION I 4 Units**

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**3 hours lecture, 3 hours laboratory. (72 hours total per quarter)**

Hands-on two-dimensional design foundation course in the sketching processes utilized by industrial and product designers. This class is a practical and theoretical course that emphasizes rapid visualization, creative problem solving, portfolio development and communication skills used by contemporary product and industrial designers. These skills include free hand sketching techniques, geometric analysis of functional objects, abstract forms, basic perspective, basic color theory and rendering marker applications.

**FHGE: Non-GE Transferable: CSU**

**ART 74A INDUSTRIAL DESIGN VISUALIZATION II 4 Units**

**Grade Type:** Letter Grade Only

**Not Repeatable.**

**3 hours lecture, 3 hours laboratory. (72 hours total per quarter)**

Continuation of ART 74, hands-on and digital visualization course in the rapid sketching processes utilized by industrial designers. This class is a practical, theoretical and creative course that emphasizes visualization, problem solving and communication drawing skills used by contemporary product and industrial designers. Hands-on and digital sketching techniques including rendering volumes using lighting effects, two dimensional visual textures, markers techniques, orthogonal views and linear perspective specific to the human form, artistic component layout drawings, explanatory drawings, creative thumbnail sketching and idea development.

**FHGE: Non-GE Transferable: CSU**

**ASTRONOMY**

Physical Sciences, Mathematics & Engineering  
650.949.7259 foothill.edu/ast

**ASTR 10A GENERAL ASTRONOMY: SOLAR SYSTEM 5 Units**

**Advisory:** Concurrent enrollment in ASTR 10L.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**5 hours lecture. (60 hours total per quarter)**

Non-technical introduction to astronomy, with emphasis on the planets, dwarf planets, moons, and smaller bodies which make up our solar system, as well as the scientific search for life elsewhere in the universe. Topics include the nature of light, the atom, and telescopes; an examination of the planets and their moons and rings, dwarf planets, comets, asteroids, and meteors; catastrophic events (including the impact that may have killed the dinosaurs); the search for planets and life around other stars, the challenges of space travel, and modern views on extraterrestrial contact. No background in science or math is assumed.

**FHGE: Natural Sciences Transferable: UC/CSU**

**ASTR 10B GENERAL ASTRONOMY: STAR, GALAXIES, COSMOLOGY 5 Units**

**Advisory:** Concurrent enrollment in ASTR 10L; not open to students with credit in ASTR 10BH.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**5 hours lecture. (60 hours total per quarter)**

Non-technical introduction to astronomy, with emphasis on stars, galaxies, and the origin and evolution of the universe. Topics covered include the nature of light, atoms, and telescopes; the birth, evolution, and death of stars (including an introduction to black holes); the Milky Way Galaxy and its development over time; normal galaxies, active galaxies, and cannibal galaxies; and the Big Bang model (of the origin and ultimate fate of the cosmos). No background in science or math is assumed.

**FHGE: Natural Sciences Transferable: UC/CSU**

**ASTR 10BH HONORS GENERAL ASTRONOMY: STARS, GALAXIES, COSMOLOGY** 5 Units

**Prerequisite:** Honors Institute participant.

**Corequisite:** ASTR 54H.

**Advisory:** Concurrent enrollment in ASTR 10L; not open to students with credit in ASTR 10B.

**Grade Type:** Letter Grade, the student may select Pass/No Pass  
**Not Repeatable.**

**5 hours lecture. (60 hours total per quarter)**

A non-technical introduction to astronomy, with an emphasis on stars, galaxies, and the origin and evolution of the universe, with additional material for honors students. Topics covered include the nature of light, atoms, and telescopes; the birth, evolution, and death of stars (including an introduction to black holes); the Milky Way Galaxy and its development over time; normal galaxies, active galaxies, and cannibal galaxies; and the Big Bang model (of the origin and ultimate fate of the cosmos). The honors section offers a challenging intellectual environment which covers the same outline as the general class but in more depth. The students will also apply the classroom knowledge and research in developing a deeper appreciation for the stellar astronomy.

**FHGE:** Natural Sciences **Transferable:** UC/CSU

**ASTR 10L ASTRONOMY LABORATORY** 1 Unit

**Corequisite:** Completion of or concurrent enrollment in ASTR 10A, 10B or 10BH.

**Grade Type:** Letter Grade, the student may select Pass/No Pass  
**Not Repeatable.**

**3 hours laboratory. (36 hours total per quarter)**

A hands-on approach to the scientific method, using astronomical data and equipment. Divided into small lab groups, students will do experiments and observing projects about a range of astronomical topics, including star and constellation finding, the phases of the Moon, the reasons for the seasons, the rotation, revolution, and sphericity of the Earth, the H-R Diagram and the classification of stars, Hubble's Law and the expansion of the universe, the questionable validity of astrology, tracking the moons of Jupiter, etc. Each session will also include guided discussion of the meaning and importance of the data and how the particular activity fits into the larger scheme of understanding the universe and applying the scientific method.

**FHGE:** Natural Sciences **Transferable:** UC/CSU

**ASTR 54H HONORS INSTITUTE SEMINAR IN ASTRONOMY** 1 Unit

**Prerequisite:** Honors Institute participant.

**Corequisite:** ASTR 10BH.

**Advisory:** Not open to students with credit in ASTR 34 or 34H.

**Grade Type:** Letter Grade, the student may select Pass/No Pass  
**Not Repeatable.**

**1 hour lecture. (12 hours total per quarter)**

This honors seminar goes beyond the topics covered in ASTR 10BH, to explore additional ideas and recent discoveries in astronomy. The subject matter will include a variety of topics drawn from the frontiers of astronomical research, but explained and discussed in non-technical ways appropriate for non-science majors with an interest in astronomy. Such topics may include: how black holes can warp space and make a kind of time travel possible, the messy evolution of close pairs of stars, and new ideas about the ultimate fate of the universe.

**FHGE:** Non-GE **Transferable:** CSU

**ASTR 70R INDEPENDENT STUDY** 1 Unit

**ASTR 71R IN ASTRONOMY** 2 Units

**ASTR 72R** 3 Units

**ASTR 73R** 4 Units

**Grade Type:** Letter Grade, the student may select Pass/No Pass  
**Not Repeatable.**

**3-12 hours laboratory per week. (36-144 hours total per quarter)**

Provides an opportunity for the student to expand their studies in Astronomy beyond the classroom by completing a project or an assignment arranged by agreement between the student and instructor. The student is required to contract with the instructor to determine the scope of assignment and the unit value assigned for successful completion. Students may take a maximum of 6 units of Independent Study per department.

**FHGE:** Non-GE **Transferable:** CSU

**ASTR 77 SEMINAR ON EXCITING TOPICS IN ASTRONOMY** 1 Unit

**Corequisite:** Completion of or concurrent enrollment in ASTR 10B or 10BH.

**Grade Type:** Letter Grade Only  
**Not Repeatable.**

**1 hour lecture. (12 hours total per quarter)**

This seminar is intended for students who would like to go beyond the contents of the ASTR 10B or 10BH course in exploring new ideas and new discoveries in astronomy. The subject matter will include a range of topics drawn from the frontiers of astronomical research but explained in non-technical ways for non-science majors such as black holes, new planets being discovered around other stars, and colliding galaxies.

**FHGE:** Non-GE **Transferable:** CSU

## ATHLETICS

**Kinesiology and Athletics**

**650.949.7742**

**ATHL 4 INTERCOLLEGIATE FOOTBALL I (MEN)** 2 Units

**Grade Type:** Letter Grade, the student may select Pass/No Pass  
**May be taken six times for credit.**

**6 hours laboratory. (72 hours total per quarter)**

Competitive intercollegiate football emphasizing early season conditioning, development of skills and strategy, and team building through pre-conference and conference competition. Intended for participants of the men's football team.

**FHGE:** Lifelong Learning **Transferable:** UC/CSU

**ATHL 4A PRESEASON CONDITIONING FOR FOOTBALL** 2 Units

**Grade Type:** Letter Grade, the student may select Pass/No Pass  
**May be taken six times for credit.**

**6 hours laboratory. (72 hours total per quarter)**

The development of athletic skills and mental conditioning which is required to be successful in the intercollegiate sport of football.

**FHGE:** Lifelong Learning **Transferable:** UC/CSU

**ATHL 4B SPORT TECHNIQUES & CONDITIONING FOR FOOTBALL** 2 Units

**Grade Type:** Letter Grade, the student may select Pass/No Pass  
**May be taken six times for credit.**

**6 hours laboratory. (72 hours total per quarter)**

This course teaches and provides practice specific techniques and conditioning for the sport of football. This includes drills, weight and flexibility training, and cardio-respiratory development.

**FHGE:** Lifelong Learning **Transferable:** UC/CSU

**ATHL 4C FUNCTIONAL FITNESS FOR FOOTBALL** 1 Unit  
**Grade Type:** Letter Grade, the student may select Pass/No Pass  
**May be taken six times for credit.**  
**3 hours laboratory. (36 hours total per quarter)**  
 This course will provide advanced training and instruction in the use of weights for the sport of football.  
**FHGE: Lifelong Learning Transferable: UC/CSU**

**ATHL 4E INTERCOLLEGIATE FOOTBALL (MEN)** 1 Unit  
**Formerly:** PHED 35B  
**Grade Type:** Letter Grade, the student may select Pass/No Pass  
**May be taken six times for credit.**  
**3 hours laboratory. (36 hours total per quarter)**  
 Competitive intercollegiate football working toward personal and physical development, athletic scholarship, transfer, and career opportunities. Intended for participants of the men's football team.  
**FHGE: Lifelong Learning Transferable: UC/CSU**

**ATHL 4F INTERCOLLEGIATE FOOTBALL II (MEN)** 3 Units  
**Grade Type:** Letter Grade, the student may select Pass/No Pass  
**May be taken six times for credit.**  
**9 hours laboratory. (108 hours total per quarter)**  
 Competitive intercollegiate football emphasizing athletic skill and strategy development and performance through conference and post-conference competition. Intended for participants of the men's football team.  
**FHGE: Lifelong Learning Transferable: UC/CSU**

**ATHL 11 INTERCOLLEGIATE BASKETBALL I (MEN)** 3 Units  
**Grade Type:** Letter Grade, the student may select Pass/No Pass  
**May be taken six times for credit.**  
**9 hours laboratory. (108 hours total per quarter)**  
 Competitive intercollegiate men's basketball emphasizing early season conditioning, development of skills and strategy, and team building through pre-conference and conference competition. Intended for participants of the men's basketball team.  
**FHGE: Lifelong Learning Transferable: UC/CSU**

**ATHL 11A PRESEASON CONDITIONING FOR MEN'S BASKETBALL** 2 Units  
**Grade Type:** Letter Grade, the student may select Pass/No Pass  
**May be taken six times for credit.**  
**6 hours laboratory. (72 hours total per quarter)**  
 The development of athletic skills and mental conditioning which is required to be successful in the intercollegiate sport of basketball.  
**FHGE: Lifelong Learning Transferable: UC/CSU**

**ATHL 11B SPORT TECHNIQUES & CONDITIONING FOR MEN'S BASKETBALL** 2 Units  
**Grade Type:** Letter Grade, the student may select Pass/No Pass  
**May be taken six times for credit.**  
**6 hours laboratory. (72 hours total per quarter)**  
 This course teaches and provides practice specific techniques and conditioning for the sport of basketball. This includes drills, weight and flexibility training, and cardio-respiratory development.  
**FHGE: Lifelong Learning Transferable: UC/CSU**

**ATHL 11C FUNCTIONAL FITNESS FOR MEN'S BASKETBALL** 1 Unit  
**Grade Type:** Letter Grade, the student may select Pass/No Pass  
**May be taken six times for credit.**  
**3 hours laboratory. (36 hours total per quarter)**  
 This course will provide advanced training and instruction in the use of weights for the sport of basketball.  
**FHGE: Lifelong Learning Transferable: UC/CSU**

**ATHL 11E INTERCOLLEGIATE BASKETBALL (MEN)** 1 Unit  
**Formerly:** PHED 35C  
**Grade Type:** Letter Grade, the student may select Pass/No Pass  
**May be taken six times for credit.**  
**3 hours laboratory. (36 hours total per quarter)**  
 Competitive intercollegiate men's basketball working toward personal and physical development, athletic scholarship, transfer, and career opportunities. Intended for participants of the men's intercollegiate basketball team.  
**FHGE: Lifelong Learning Transferable: UC/CSU**

**ATHL 11F INTERCOLLEGIATE BASKETBALL II (MEN)** 2 Units  
**Grade Type:** Letter Grade, the student may select Pass/No Pass  
**May be taken six times for credit.**  
**6 hours laboratory. (72 hours total per quarter)**  
 Competitive intercollegiate men's basketball emphasizing athletic skill and strategy development and performance through conference and post-conference competition. Intended for participants of the men's basketball team.  
**FHGE: Lifelong Learning Transferable: UC/CSU**

**ATHL 12 INTERCOLLEGIATE BASKETBALL I (WOMEN)** 3 Units  
**Grade Type:** Letter Grade, the student may select Pass/No Pass  
**May be taken six times for credit.**  
**9 hours laboratory. (108 hours total per quarter)**  
 Competitive intercollegiate Women's basketball emphasizing early season conditioning, development of skills and strategy, and team building through pre-conference and conference competition. Intended for participants of the women's basketball team.  
**FHGE: Lifelong Learning Transferable: UC/CSU**

**ATHL 12A PRESEASON CONDITIONING FOR WOMEN'S BASKETBALL** 2 Units  
**Grade Type:** Letter Grade, the student may select Pass/No Pass  
**May be taken six times for credit.**  
**6 hours laboratory. (72 hours total per quarter)**  
 The development of athletic skills and mental conditioning which is required to be successful in the intercollegiate sport of basketball.  
**FHGE: Lifelong Learning Transferable: UC/CSU**

**ATHL 12B SPORT TECHNIQUES & CONDITIONING FOR WOMEN'S BASKETBALL** 2 Units  
**Grade Type:** Letter Grade, the student may select Pass/No Pass  
**May be taken six times for credit.**  
**6 hours laboratory. (72 hours total per quarter)**  
 This course is teaches and provides practice specific techniques and conditioning for the sport of basketball. This includes drills, weight and flexibility training, and cardio-respiratory development.  
**FHGE: Lifelong Learning Transferable: UC/CSU**

**ATHL 12C FUNCTIONAL FITNESS FOR WOMEN'S BASKETBALL** 1 Unit  
**Grade Type:** Letter Grade, the student may select Pass/No Pass  
**May be taken six times for credit.**  
**3 hours laboratory. (36 hours total per quarter)**  
 This course will provide advanced training and instruction in the use of weights for the sport of basketball.  
**FHGE: Lifelong Learning Transferable: UC/CSU**

**ATHL 12E INTERCOLLEGIATE BASKETBALL (WOMEN) 1 Unit**

Formerly: H P 35D, PHED 34C

**Grade Type: Letter Grade, the student may select Pass/No Pass  
May be taken six times for credit.**

**3 hours laboratory. (36 hours total per quarter)**

Competitive intercollegiate Women's basketball working toward personal and physical development, athletic scholarship, transfer, and career opportunities. Intended for participants of the women's basketball team.

**FHGE: Lifelong Learning Transferable: UC/CSU**

**ATHL 12F INTERCOLLEGIATE BASKETBALL II (WOMEN) 2 Units**

**Grade Type: Letter Grade, the student may select Pass/No Pass  
May be taken six times for credit.**

**6 hours laboratory. (72 hours total per quarter)**

Competitive intercollegiate Women's basketball emphasizing athletic skill and strategy development and performance through conference and post-conference competition. Intended for participants of the women's basketball team.

**FHGE: Lifelong Learning Transferable: UC/CSU**

**ATHL 21 INTERCOLLEGIATE SOCCER I (MEN) 2 Units**

**Grade Type: Letter Grade, the student may select Pass/No Pass  
May be taken six times for credit.**

**6 hours laboratory. (72 hours total per quarter)**

Competitive intercollegiate soccer emphasizing early season conditioning, development of skills and strategy, and team building through pre-conference and conference competition. Intended for participants of the men's soccer team.

**FHGE: Lifelong Learning Transferable: UC/CSU**

**ATHL 21A PRESEASON CONDITIONING FOR MEN'S SOCCER 2 Units**

**Grade Type: Letter Grade, the student may select Pass/No Pass  
May be taken six times for credit.**

**6 hours laboratory. (72 hours total per quarter)**

The development of athletic skills and mental conditioning which is required to be successful in the intercollegiate sport of soccer.

**FHGE: Lifelong Learning Transferable: UC/CSU**

**ATHL 21B SPORT TECHNIQUES & CONDITIONING FOR MEN'S SOCCER 2 Units**

**Grade Type: Letter Grade, the student may select Pass/No Pass  
May be taken six times for credit.**

**6 hours laboratory. (72 hours total per quarter)**

This course teaches and provides practice specific techniques and conditioning for the sport of soccer. This includes drills, weight and flexibility training, and cardio-respiratory development.

**FHGE: Lifelong Learning Transferable: UC/CSU**

**ATHL 21C FUNCTIONAL FITNESS FOR MEN'S SOCCER 1 Unit**

**Grade Type: Letter Grade, the student may select Pass/No Pass  
May be taken six times for credit.**

**3 hours laboratory. (36 hours total per quarter)**

This course will provide advanced training and instruction in the use of weights for the sport of soccer.

**FHGE: Lifelong Learning Transferable: UC/CSU**

**ATHL 21E INTERCOLLEGIATE SOCCER (MEN) 1 Unit**

Formerly: PHED 35A

**Grade Type: Letter Grade, the student may select Pass/No Pass  
May be taken six times for credit.**

**3 hours laboratory. (36 hours total per quarter)**

Competitive intercollegiate soccer working toward personal and physical development, athletic scholarship, transfer, and career opportunities. Intended for participants of the men's soccer team.

**FHGE: Lifelong Learning Transferable: UC/CSU**

**ATHL 21F INTERCOLLEGIATE SOCCER II (MEN) 3 Units**

**Grade Type: Letter Grade, the student may select Pass/No Pass  
May be taken six times for credit.**

**9 hours laboratory. (108 hours total per quarter)**

Competitive intercollegiate soccer emphasizing athletic skill and strategy development and performance through conference and post-conference competition. Intended for participants of the men's soccer team.

**FHGE: Lifelong Learning Transferable: UC/CSU**

**ATHL 22 INTERCOLLEGIATE SOCCER I (WOMEN) 2 Units**

**Grade Type: Letter Grade, the student may select Pass/No Pass  
May be taken six times for credit.**

**6 hours laboratory. (72 hours total per quarter)**

Competitive intercollegiate soccer emphasizing early season conditioning, development of skill and strategy, and team building through pre-conference and conference competition. Intended for participants of the women's soccer team.

**FHGE: Lifelong Learning Transferable: UC/CSU**

**ATHL 22A PRESEASON CONDITIONING FOR WOMEN'S SOCCER 2 Units**

**Grade Type: Letter Grade, the student may select Pass/No Pass  
May be taken six times for credit.**

**6 hours laboratory. (72 hours total per quarter)**

The development of athletic skills and mental conditioning which is required to be successful in the intercollegiate sport of soccer.

**FHGE: Lifelong Learning Transferable: UC/CSU**

**ATHL 22B SPORT TECHNIQUES & CONDITIONING FOR WOMEN'S SOCCER 2 Units**

**Grade Type: Letter Grade, the student may select Pass/No Pass  
May be taken six times for credit.**

**6 hours laboratory. (72 hours total per quarter)**

This course teaches and provides practice specific techniques and conditioning for the sport of soccer. This includes drills, weight and flexibility training, and cardio-respiratory development.

**FHGE: Lifelong Learning Transferable: UC/CSU**

**ATHL 22C FUNCTIONAL FITNESS FOR WOMEN'S SOCCER 1 Unit**

**Grade Type: Letter Grade, the student may select Pass/No Pass  
May be taken six times for credit.**

**3 hours laboratory. (36 hours total per quarter)**

This course will provide advanced training and instruction in the use of weights for the sport of soccer.

**FHGE: Lifelong Learning Transferable: UC/CSU**

**ATHL 22E INTERCOLLEGIATE SOCCER (WOMEN) 1 Unit**

Formerly: PHED 34A

**Grade Type: Letter Grade, the student may select Pass/No Pass  
May be taken six times for credit.**

**3 hours laboratory. (36 hours total per quarter)**

Competitive intercollegiate soccer working toward personal and physical development, athletic scholarship, transfer and career opportunities. Intended for participants of the women's soccer team.

**FHGE: Lifelong Learning Transferable: UC/CSU**

**ATHL 22F INTERCOLLEGIATE SOCCER II (WOMEN) 3 Units**

**Grade Type: Letter Grade, the student may select Pass/No Pass  
May be taken six times for credit.**

**9 hours laboratory. (108 hours total per quarter)**

Competitive intercollegiate soccer emphasizing athletic skill and strategy development and performance through conference and post conference competition. Intended for participants of the women's soccer team.

**FHGE: Lifelong Learning Transferable: UC/CSU**

**ATHL 31 INTERCOLLEGIATE SOFTBALL I (WOMEN)** 3 Units  
**Grade Type:** Letter Grade, the student may select Pass/No Pass  
**May be taken six times for credit.**  
**9 hours laboratory. (108 hours total per quarter)**  
 Competitive intercollegiate softball emphasizing early season conditioning, development of skills and strategy, and team building through pre-conference and conference competition. Intended for participants of the women's softball team with previous high school, club or collegiate softball playing experience.  
**FHGE: Lifelong Learning Transferable: UC/CSU**

**ATHL 31A PRESEASON CONDITIONING FOR SOFTBALL** 2 Units  
**Grade Type:** Letter Grade, the student may select Pass/No Pass  
**May be taken six times for credit.**  
**6 hours laboratory. (72 hours total per quarter)**  
 The development of athletic skills and mental conditioning which is required to be successful in the intercollegiate sport of softball.  
**FHGE: Lifelong Learning Transferable: UC/CSU**

**ATHL 31B SPORT TECHNIQUES & CONDITIONING FOR SOFTBALL** 2 Units  
**Grade Type:** Letter Grade, the student may select Pass/No Pass  
**May be taken six times for credit.**  
**6 hours laboratory. (72 hours total per quarter)**  
 This course teaches and provides practice specific techniques and conditioning for the sport of softball. This includes drills, weight and flexibility training, and cardio-respiratory development.  
**FHGE: Lifelong Learning Transferable: UC/CSU**

**ATHL 31C FUNCTIONAL FITNESS FOR SOFTBALL** 1 Unit  
**Grade Type:** Letter Grade, the student may select Pass/No Pass  
**May be taken six times for credit.**  
**3 hours laboratory. (36 hours total per quarter)**  
 This course will provide advanced training and instruction in the use of weights for the sport of softball.  
**FHGE: Lifelong Learning Transferable: UC/CSU**

**ATHL 31E INTERCOLLEGIATE SOFTBALL (WOMEN)** 1 Unit  
**Formerly:** PHED 34E  
**Grade Type:** Letter Grade, the student may select Pass/No Pass  
**May be taken six times for credit.**  
**3 hours laboratory. (36 hours total per quarter)**  
 Competitive intercollegiate softball working toward personal and physical development, athletic scholarship, transfer, and career opportunities. Intended for participants of the women's softball team with previous high school, club or collegiate softball playing experience.  
**FHGE: Lifelong Learning Transferable: UC/CSU**

**ATHL 31F INTERCOLLEGIATE SOFTBALL II (WOMEN)** 2 Units  
**Grade Type:** Letter Grade, the student may select Pass/No Pass  
**May be taken six times for credit.**  
**6 hours laboratory. (72 hours total per quarter)**  
 Competitive intercollegiate softball emphasizing athletic skill and strategy development and performance through conference and post-conference competition. Intended for participants of the women's softball team with previous high school, club or collegiate softball playing experience.  
**FHGE: Lifelong Learning Transferable: UC/CSU**

**ATHL 32 INTERCOLLEGIATE SWIMMING I (MEN & WOMEN)** 3 Units  
**Grade Type:** Letter Grade, the student may select Pass/No Pass  
**May be taken six times for credit.**  
**9 hours laboratory. (108 hours total per quarter)**  
 Competitive intercollegiate swimming emphasizing early season conditioning, development of skills and strategy, and team building through pre-conference and conference competition. Intended for participants of the men's/women's swimming team.  
**FHGE: Lifelong Learning Transferable: UC/CSU**

**ATHL 32A PRESEASON CONDITIONING FOR SWIMMING** 2 Units  
**Grade Type:** Letter Grade, the student may select Pass/No Pass  
**May be taken six times for credit.**  
**6 hours laboratory. (72 hours total per quarter)**  
 The development of athletic skills and mental conditioning which is required to be successful in the intercollegiate sport of swimming.  
**FHGE: Lifelong Learning Transferable: UC/CSU**

**ATHL 32B SPORT TECHNIQUES & CONDITIONING FOR SWIMMING** 2 Units  
**Grade Type:** Letter Grade, the student may select Pass/No Pass  
**May be taken six times for credit.**  
**6 hours laboratory. (72 hours total per quarter)**  
 This course teaches and provides practice specific techniques and conditioning for the sport of swimming. This includes drills, weight and flexibility training, and cardio-respiratory development.  
**FHGE: Lifelong Learning Transferable: UC/CSU**

**ATHL 32C FUNCTIONAL FITNESS FOR SWIMMING** 1 Unit  
**Grade Type:** Letter Grade, the student may select Pass/No Pass  
**May be taken six times for credit.**  
**3 hours laboratory. (36 hours total per quarter)**  
 This course will provide advanced training and instruction in the use of weights for the sport of swimming.  
**FHGE: Lifelong Learning Transferable: UC/CSU**

**ATHL 32E INTERCOLLEGIATE SWIMMING (MEN & WOMEN)** 1 Unit  
**Formerly:** PHED 35F  
**Grade Type:** Letter Grade, the student may select Pass/No Pass  
**May be taken six times for credit.**  
**3 hours laboratory. (36 hours total per quarter)**  
 Competitive intercollegiate swimming working toward personal and physical development, athletic scholarship, transfer, and career opportunities. Intended for participants of the men's/women's swimming team.  
**FHGE: Lifelong Learning Transferable: UC/CSU**

**ATHL 32F INTERCOLLEGIATE SWIMMING II (MEN & WOMEN)** 2 Units  
**Grade Type:** Letter Grade, the student may select Pass/No Pass  
**May be taken six times for credit.**  
**6 hours laboratory. (72 hours total per quarter)**  
 Competitive intercollegiate swimming emphasizing athletic skill and strategy development and performance through conference and post-conference competition. Intended for participants of the men's/women's swimming team.  
**FHGE: Lifelong Learning Transferable: UC/CSU**

**ATHL 33 INTERCOLLEGIATE WATER POLO I (WOMEN) 2 Units**

**Grade Type:** Letter Grade, the student may select Pass/No Pass  
**May be taken six times for credit.**

**6 hours laboratory. (72 hours total per quarter)**

Competitive intercollegiate water polo emphasizing early season conditioning, development of skills and strategy, and team building through pre-conference and conference competition. Intended for participants of the women's water polo team.

**FHGE: Lifelong Learning Transferable: UC/CSU**

**ATHL 33A PRESEASON CONDITIONING FOR WOMEN'S WATER POLO 2 Units**

**Grade Type:** Letter Grade, the student may select Pass/No Pass  
**May be taken six times for credit.**

**6 hours laboratory. (72 hours total per quarter)**

The development of athletic skills and mental conditioning which is required to be successful in the intercollegiate sport of water polo.

**FHGE: Lifelong Learning Transferable: UC/CSU**

**ATHL 33B SPORT TECHNIQUES & CONDITIONING FOR WOMEN'S WATER POLO 2 Units**

**Grade Type:** Letter Grade, the student may select Pass/No Pass  
**May be taken six times for credit.**

**6 hours laboratory. (72 hours total per quarter)**

This course teaches and provides practice specific techniques and conditioning for the sport of water polo. This includes drills, weight and flexibility training, and cardio-respiratory development.

**FHGE: Lifelong Learning Transferable: UC/CSU**

**ATHL 33C FUNCTIONAL FITNESS FOR WOMEN'S WATER POLO 1 Unit**

**Grade Type:** Letter Grade, the student may select Pass/No Pass  
**May be taken six times for credit.**

**3 hours laboratory. (36 hours total per quarter)**

This course will provide advanced training and instruction in the use of weights for the sport of water polo.

**FHGE: Lifelong Learning Transferable: UC/CSU**

**ATHL 33E INTERCOLLEGIATE WATER POLO (WOMEN) 1 Unit**

Formerly: H P 40K, PHED 35G

**Grade Type:** Letter Grade, the student may select Pass/No Pass  
**May be taken six times for credit.**

**3 hours laboratory. (36 hours total per quarter)**

Competitive intercollegiate water polo working toward personal and physical development, athletic scholarship, transfer and career opportunities. Intended for participants of the women's water polo team.

**FHGE: Lifelong Learning Transferable: UC/CSU**

**ATHL 33F INTERCOLLEGIATE WATER POLO II (WOMEN) 3 Units**

**Grade Type:** Letter Grade, the student may select Pass/No Pass  
**May be taken six times for credit.**

**9 hours laboratory. (108 hours total per quarter)**

Competitive intercollegiate water polo emphasizing athletic skill and strategy development and performance through conference and post-conference competition. Intended for participants of the women's water polo team.

**FHGE: Lifelong Learning Transferable: UC/CSU**

**ATHL 41 PRESEASON CONDITIONING FOR WOMEN'S SAND VOLLEYBALL 2 Units**

**Grade Type:** Letter Grade, the student may select Pass/No Pass  
**May be taken six times for credit.**

**6 hours laboratory. (72 hours total per quarter)**

The development of athletic skills and mental conditioning which is required to be successful in the intercollegiate sport of sand volleyball.

**FHGE: Lifelong Learning Transferable: UC/CSU**

**ATHL 41A INTERCOLLEGIATE SAND VOLLEYBALL I (WOMEN) 2 Units**

**Grade Type:** Letter Grade, the student may select Pass/No Pass  
**May be taken six times for credit.**

**6 hours laboratory. (72 hours total per quarter)**

Competitive intercollegiate sand volleyball emphasizing early season conditioning, development of skills and strategy, and team building through pre-conference and conference competition. Intended for participants of the women's sand volleyball team.

**FHGE: Lifelong Learning Transferable: UC/CSU**

**ATHL 41B INTERCOLLEGIATE SAND VOLLEYBALL II (WOMEN) 3 Units**

**Grade Type:** Letter Grade, the student may select Pass/No Pass  
**May be taken six times for credit.**

**9 hours laboratory. (108 hours total per quarter)**

Competitive intercollegiate sand volleyball emphasizing athletic skill and strategy development and performance through conference and post-conference competition. Intended for participants of the women's sand volleyball team.

**FHGE: Lifelong Learning Transferable: UC/CSU**

**ATHL 41C SPORT TECHNIQUES & CONDITIONING FOR WOMEN'S SAND VOLLEYBALL 2 Units**

**Grade Type:** Letter Grade, the student may select Pass/No Pass  
**May be taken six times for credit.**

**6 hours laboratory. (72 hours total per quarter)**

This course teaches and provides practice specific techniques and conditioning for the sport of sand volleyball. This includes drills in the sand, weight and flexibility training, and cardio-respiratory development.

**FHGE: Lifelong Learning Transferable: UC/CSU**

**ATHL 41D FUNCTIONAL FITNESS FOR WOMEN'S SAND VOLLEYBALL 1 Unit**

**Grade Type:** Letter Grade, the student may select Pass/No Pass  
**May be taken six times for credit.**

**3 hours laboratory. (36 hours total per quarter)**

This course will provide advanced training and instruction in the use of weights for the sport of sand volleyball.

**FHGE: Lifelong Learning Transferable: UC/CSU**

**ATHL 42 INTERCOLLEGIATE VOLLEYBALL I (WOMEN) 2 Units**

**Grade Type:** Letter Grade, the student may select Pass/No Pass  
**May be taken six times for credit.**

**6 hours laboratory. (72 hours total per quarter)**

Competitive intercollegiate volleyball emphasizing early season conditioning, development of skills and strategy, and team building through pre-conference and conference competition. Intended for participants of the women's volleyball team.

**FHGE: Lifelong Learning Transferable: UC/CSU**



**ATHL 42A PRESEASON CONDITIONING FOR WOMEN'S VOLLEYBALL** 2 Units  
**Grade Type:** Letter Grade, the student may select Pass/No Pass  
**May be taken six times for credit.**  
**6 hours laboratory. (72 hours total per quarter)**  
 The development of athletic skills and mental conditioning which is required to be successful in the intercollegiate sport of volleyball.  
**FHGE: Lifelong Learning Transferable: UC/CSU**

**ATHL 42B SPORT TECHNIQUES & CONDITIONING FOR WOMEN'S VOLLEYBALL** 2 Units  
**Grade Type:** Letter Grade, the student may select Pass/No Pass  
**May be taken six times for credit.**  
**6 hours laboratory. (72 hours total per quarter)**  
 This course teaches and provides practice specific techniques and conditioning for the sport of volleyball. This includes drills, weight and flexibility training, and cardio-respiratory development.  
**FHGE: Lifelong Learning Transferable: UC/CSU**

**ATHL 42C FUNCTIONAL FITNESS FOR WOMEN'S VOLLEYBALL** 1 Unit  
**Grade Type:** Letter Grade, the student may select Pass/No Pass  
**May be taken six times for credit.**  
**3 hours laboratory. (36 hours total per quarter)**  
 This course will provide advanced training and instruction in the use of weights for the sport of volleyball.  
**FHGE: Lifelong Learning Transferable: UC/CSU**

**ATHL 42E INTERCOLLEGIATE VOLLEYBALL (WOMEN)** 1 Unit  
**Formerly:** PHED 34B  
**Grade Type:** Letter Grade, the student may select Pass/No Pass  
**May be taken six times for credit.**  
**3 hours laboratory. (36 hours total per quarter)**  
 Competitive intercollegiate volleyball working toward personal and physical development, athletic scholarship, transfer, and career opportunities. Intended for participants of the women's volleyball team.  
**FHGE: Lifelong Learning Transferable: UC/CSU**

**ATHL 42F INTERCOLLEGIATE VOLLEYBALL II (WOMEN)** 3 Units  
**Grade Type:** Letter Grade, the student may select Pass/No Pass  
**May be taken six times for credit.**  
**9 hours laboratory. (108 hours total per quarter)**  
 Competitive intercollegiate volleyball emphasizing athletic skill and strategy development and performance through conference and post-conference competition. Intended for participants of the women's volleyball team.  
**FHGE: Lifelong Learning Transferable: UC/CSU**

**ATHL 44 INTERCOLLEGIATE TENNIS I (MEN)** 3 Units  
**Grade Type:** Letter Grade, the student may select Pass/No Pass  
**May be taken three times for credit.**  
**9 hours laboratory. (108 hours total per quarter)**  
 Competitive intercollegiate tennis emphasizing preseason conditioning, development of skills and strategies and team building through pre conference and conference competition. Intended for participants of the men's tennis team.  
**FHGE: Lifelong Learning Transferable: UC/CSU**

**ATHL 44A PRESEASON CONDITIONING FOR MEN'S TENNIS** 2 Units  
**Grade Type:** Letter Grade, the student may select Pass/No Pass  
**May be taken six times for credit.**  
**6 hours laboratory. (72 hours total per quarter)**  
 The development of athletic skills and mental conditioning which is required to be successful in the intercollegiate sport of tennis.  
**FHGE: Lifelong Learning Transferable: UC/CSU**

**ATHL 44B SPORT TECHNIQUES & CONDITIONING FOR MEN'S TENNIS** 2 Units  
**Grade Type:** Letter Grade, the student may select Pass/No Pass  
**May be taken six times for credit.**  
**6 hours laboratory. (72 hours total per quarter)**  
 This course teaches and provides practice specific techniques and conditioning for the sport of tennis. This includes drills, weight and flexibility training, and cardio-respiratory development.  
**FHGE: Lifelong Learning Transferable: UC/CSU**

**ATHL 44C FUNCTIONAL FITNESS FOR MEN'S TENNIS** 1 Unit  
**Grade Type:** Letter Grade, the student may select Pass/No Pass  
**May be taken six times for credit.**  
**3 hours laboratory. (36 hours total per quarter)**  
 This course will provide advanced training and instruction in the use of weights for the sport of tennis.  
**FHGE: Lifelong Learning Transferable: UC/CSU**

**ATHL 44E INTERCOLLEGIATE TENNIS (MEN)** 1 Unit  
**Formerly:** H P 40E, PHED 35D  
**Grade Type:** Letter Grade, the student may select Pass/No Pass  
**May be taken six times for credit.**  
**3 hours laboratory. (36 hours total per quarter)**  
 Competitive intercollegiate tennis working toward personal and physical development, athletic scholarship, transfer and career opportunities. Intended for participants of the men's tennis team.  
**FHGE: Lifelong Learning Transferable: UC/CSU**

**ATHL 44F INTERCOLLEGIATE TENNIS II (MEN)** 2 Units  
**Grade Type:** Letter Grade, the student may select Pass/No Pass  
**May be taken six times for credit.**  
**6 hours laboratory. (72 hours total per quarter)**  
 Competitive intercollegiate tennis emphasizing athletic skill, strategy development and performance through conference and post conference competition. Intended for participants of the men's tennis team.  
**FHGE: Lifelong Learning Transferable: UC/CSU**

**ATHL 45 INTERCOLLEGIATE TENNIS I (WOMEN)** 3 Units  
**Grade Type:** Letter Grade, the student may select Pass/No Pass  
**May be taken six times for credit.**  
**9 hours laboratory. (108 hours total per quarter)**  
 Competitive intercollegiate tennis emphasizing early season conditioning, development of skills and strategy, and team building through pre-conference and conference competition. Intended for participants on the women's tennis team.  
**FHGE: Lifelong Learning Transferable: UC/CSU**

**ATHL 45A PRESEASON CONDITIONING FOR WOMEN'S TENNIS** 2 Units  
**Grade Type:** Letter Grade, the student may select Pass/No Pass  
**May be taken six times for credit.**  
**6 hours laboratory. (72 hours total per quarter)**  
 The development of athletic skills and mental conditioning which is required to be successful in the intercollegiate sport of tennis.  
**FHGE: Lifelong Learning Transferable: UC/CSU**

**ATHL 45B SPORT TECHNIQUES & CONDITIONING FOR WOMEN'S TENNIS** 2 Units  
**Grade Type:** Letter Grade, the student may select Pass/No Pass  
**May be taken six times for credit.**  
**6 hours laboratory. (72 hours total per quarter)**  
 This course teaches and provides practice specific techniques and conditioning for the sport of tennis. This includes drills, weight and flexibility training, and cardio-respiratory development.  
**FHGE: Lifelong Learning Transferable: UC/CSU**

**ATHL 45C FUNCTIONAL FITNESS FOR WOMEN'S TENNIS** 1 Unit  
**Grade Type: Letter Grade, the student may select Pass/No Pass**  
**May be taken six times for credit.**  
**3 hours laboratory. (36 hours total per quarter)**  
 This course will provide advanced training and instruction in the use of weights for the sport of tennis.  
**FHGE: Lifelong Learning Transferable: UC/CSU**

**ATHL 45E INTERCOLLEGIATE TENNIS (WOMEN)** 1 Unit  
**Formerly: PHED 34D**  
**Grade Type: Letter Grade, the student may select Pass/No Pass**  
**May be taken six times for credit.**  
**3 hours laboratory. (36 hours total per quarter)**  
 Competitive intercollegiate tennis working toward personal and physical development, and athletic scholarship, transfer, and career opportunities. Intended for participants of the women's tennis team.  
**FHGE: Lifelong Learning Transferable: UC/CSU**

**ATHL 45F INTERCOLLEGIATE TENNIS II (WOMEN)** 2 Units  
**Grade Type: Letter Grade, the student may select Pass/No Pass**  
**May be taken six times for credit.**  
**6 hours laboratory. (72 hours total per quarter)**  
 Competitive intercollegiate tennis emphasizing athletic skill and strategy development and performance through conference and post-conference competition. Intended for participants on the women's tennis team.  
**FHGE: Lifelong Learning Transferable: UC/CSU**

**ATHL 70R INDEPENDENT STUDY IN ATHLETICS** 1 Unit  
**ATHL 71R** 2 Units  
**ATHL 72R** 3 Units  
**ATHL 73R** 4 Units  
**Grade Type: Letter Grade, the student may select Pass/No Pass**  
**Not Repeatable.**  
**3-12 hours laboratory per week. (36-144 hours total per quarter)**  
 Provides an opportunity for students to expand their studies in Athletics beyond the classroom by completing a project or an assignment arranged by agreement between the student and instructor. The student is required to contract with the instructor to determine the scope of assignment and the unit value assigned for successful completion. Students may take a maximum of 6 units of Independent Study per department.  
**FHGE: Non-GE Transferable: CSU**

## BIOLOGY

Biological and Health Sciences  
 650.949.7249 [foothill.edu/bio/programs/biosci](http://foothill.edu/bio/programs/biosci)

**BIOL 1A PRINCIPLES OF CELL BIOLOGY** 6 Units  
**Prerequisite: CHEM 1A or 1AH.**  
**Advisory: Students taking the biology majors' sequence (BIOL 1A, 1B, 1C, 1D) are strongly advised to take the sequence in its entirety.**  
**Grade Type: Letter Grade, the student may select Pass/No Pass**  
**Not Repeatable.**  
**4 hours lecture, 6 hours laboratory. (120 hours total per quarter)**  
 An introduction to biological molecules, cellular structure and function, bioenergetics, the genetics of both prokaryotic and eukaryotic organisms, cell communication and signaling, the cell cycle, and elements of molecular biology. Intended for biology majors.  
**FHGE: Non-GE Transferable: UC/CSU**

**BIOL 1B FORM & FUNCTION IN PLANTS & ANIMALS** 6 Units  
**Prerequisite: BIOL 1A.**  
**Advisory: Students taking the biology majors' sequence (BIOL 1A, 1B, 1C, 1D) are strongly advised to take the sequence in its entirety.**  
**Grade Type: Letter Grade, the student may select Pass/No Pass**  
**Not Repeatable.**  
**4 hours lecture, 6 hours laboratory. (120 hours total per quarter)**  
 An introduction to the structure and physiological processes of plants and animals. Transport systems, reproduction, digestion, gas exchange, regulation of the internal environment, responses to external stimuli, nervous systems, hormones, and locomotion. Intended for biology majors.  
**FHGE: Non-GE Transferable: UC/CSU**

**BIOL 1C EVOLUTION, SYSTEMATICS & ECOLOGY** 6 Units  
**Prerequisite: BIOL 1B.**  
**Advisory: Students taking the biology majors' sequence (BIOL 1A, 1B, 1C, 1D) are strongly advised to take the sequence in its entirety.**  
**Grade Type: Letter Grade, the student may select Pass/No Pass**  
**Not Repeatable.**  
**4 hours lecture, 6 hours laboratory. (120 hours total per quarter)**  
 Principles of evolutionary theory, classification of organisms, and basic ecology. Phylogenetic survey of the major groups of organisms (bacteria, archaea, protists, plants, animals and fungi) and their evolutionary history. Intended for biology majors.  
**FHGE: Non-GE Transferable: UC/CSU**

**BIOL 1D INTRODUCTION TO MOLECULAR GENETICS** 4 Units  
**Prerequisite: BIOL 1A.**  
**Advisory: Students taking the biology majors' sequence (BIOL 1A, 1B, 1C, 1D) are strongly advised to take the sequence in order and in its entirety.**  
**Grade Type: Letter Grade, the student may select Pass/No Pass**  
**Not Repeatable.**  
**4 hours lecture. (48 hours total per quarter)**  
 Intended for students wishing to transfer to a four year school with a major in molecular biology, biochemistry, or molecular genetics. An introduction to molecular genetics with an emphasis in genome organization, DNA replication and repair, mutation, transcription, translation and the regulation of gene expression.  
**FHGE: Non-GE Transferable: UC/CSU**

**BIOL 8 BASIC NUTRITION** 5 Units  
**Advisory: MATH 230; demonstrated proficiency in English by placement as determined by score on the English placement test OR through an equivalent placement process OR completion of ESLL 125 & ESLL 249.**  
**Grade Type: Letter Grade, the student may select Pass/No Pass**  
**Not Repeatable.**  
**5 hours lecture. (60 hours total per quarter)**  
 Introductory nutrition course intended for non-science/health-career majors, Not intended for students wishing to pursue a career in health care. Basic biological function of nutrients. Nutritional needs throughout the life span. Relationship between nutrition and disease. Current scientific, social, and psychological issues and controversies in nutrition.  
**FHGE: Lifelong Learning Transferable: UC/CSU**

**BIOL 9 ENVIRONMENTAL BIOLOGY** 4 Units  
**Grade Type: Letter Grade, the student may select Pass/No Pass**  
**Not Repeatable.**  
**4 hours lecture. (48 hours total per quarter)**  
 An introduction to environmental biology and a survey of the biological and ecological principles needed to understand environmental issues. Global, national and local perspectives on current issues such as resource use, pollution, biodiversity and impacts of human population growth.  
**FHGE: Lifelong, NatSci Transferable: UC/CSU**

**BIOL 9L ENVIRONMENTAL BIOLOGY LABORATORY 1 Unit**

**Corequisite:** BIOL 9.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**3 hours laboratory, in-class field trips. (36 hours total per quarter)**

An introduction to environmental biology through laboratory and field experiments, examination of local examples illustrating ecological concepts, use of sampling techniques to assess environmental quality, and student research of environmental topics.

**FHGE:** Natural Sciences **Transferable:** UC/CSU

**BIOL 10 GENERAL BIOLOGY: BASIC PRINCIPLES 5 Units**

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**4 hours lecture, 3 hours laboratory. (84 hours total per quarter)**

Methods of science and basic principles of biology. Special emphasis on genetics, ecology, overpopulation, nutrition and disease prevention.

**FHGE:** Natural Sciences **Transferable:** UC/CSU

**BIOL 12 HUMAN GENETICS 4 Units**

**Grade Type:** Letter Grade Only Not Repeatable.

**4 hours lecture. (48 hours total per quarter)**

An introduction to the nature of human inheritance. The molecular basis of inheritance, Mendelian genetics, population genetics, common human genetic diseases, factors affecting human diversity and the social and moral implications of recent advances in genetics. Intended for both majors and GE students. Satisfies Lifelong Learning GE requirement at Foothill, CSU, and UC.

**FHGE:** Lifelong Learning **Transferable:** UC/CSU

**BIOL 13 MARINE BIOLOGY 5 Units**

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**4 hours lecture, 3 hours laboratory, three all-day field trips. (84 hours total per quarter)**

An introduction to biology using marine animals, plants and ecosystems. Major emphasis given to the ecology and conservation issues with examples drawn from California marine life. Conceptual development of seashore, estuaries, coral reefs, kelp forests, and pelagic life as interrelated ecosystems.

**FHGE:** Natural Sciences **Transferable:** UC/CSU

**BIOL 14 HUMAN BIOLOGY 5 Units**

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**4 hours lecture, 3 hours laboratory. (84 hours total per quarter)**

An introduction to biology using human beings as the exemplary organism. The evolution and biological unity of the human species and of all life forms; American and global patterns of human biological diversity; reproduction and heredity; how human organ systems function; humans and their environment; the uses and misuses of the scientific method; the scientific and biological bases for human equality.

**FHGE:** Natural Sciences **Transferable:** UC/CSU

**BIOL 15 CALIFORNIA ECOLOGY/ NATURAL HISTORY 5 Units**

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**4 hours lecture, 3 hours laboratory, all-day field trips. (84 hours total per quarter)**

An introduction to ecology, natural history and field biology through the study, largely in an outdoor setting, of the plants and animals of the San Francisco Bay area.

**FHGE:** Natural Sciences **Transferable:** UC/CSU

**BIOL 40A HUMAN ANATOMY & PHYSIOLOGY I 5 Units**

**Prerequisites:** BIOL 1A, 10, 14 or equivalent; CHEM 1A, 1AH, 30A, 30B or equivalent.

**Advisory:** One of the following: ENGL 1A, 1AH, 1S & 1T or ESLL 26 or equivalent; completion of this course with a grade of "C" or higher is highly recommended.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**4 hours lecture, 3 hours laboratory. (84 hours total per quarter)**

Basic human anatomy and physiology. Emphasis on integration of systems and homeostatic mechanisms. Physical and chemical basis of life, histology and integumentary, skeletal and muscular systems. Designed for majors that require fundamental background in human anatomy and physiology.

**FHGE:** Non-GE **Transferable:** UC/CSU

**BIOL 40B HUMAN ANATOMY & PHYSIOLOGY II 5 Units**

**Prerequisite:** BIOL 40A or equivalent.

**Advisory:** Completion of this course with a grade of "C" or higher is highly recommended.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**4 hours lecture, 3 hours laboratory. (84 hours total per quarter)**

Anatomy and physiology of the nervous system, cardiovascular system and respiratory system.

**FHGE:** Non-GE **Transferable:** UC/CSU

**BIOL 40C HUMAN ANATOMY & PHYSIOLOGY III 5 Units**

**Prerequisite:** BIOL 40B or equivalent.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**4 hours lecture, 3 hours laboratory. (84 hours total per quarter)**

Anatomy and physiology of the digestive system; metabolism; urinary system; fluid, electrolyte and acid/base balance; lymphatic system; endocrine system; and reproductive system.

**FHGE:** Non-GE **Transferable:** UC/CSU

**BIOL 41 MICROBIOLOGY 6 Units**

**Prerequisite:** CHEM 12A or 30A or equivalent.

**Advisory:** ESLL 125 and 235; critical reading skills and knowledge of English sentence structure; ability to comprehend spoken English in academic context.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**4 hours lecture, 6 hours laboratory. (120 hours total per quarter)**

Morphology and physiology of bacteria, fungi and viruses. Mechanisms of pathogenicity, host-parasite relationships, the immune response and principles of disease transmission. Techniques of microbial control including sterilization, aseptic procedures, use of disinfectants, antiseptics and chemotherapy.

**FHGE:** Natural Sciences **Transferable:** UC/CSU

**BIOL 45 INTRODUCTION TO HUMAN NUTRITION 4 Units**

**Prerequisite:** CHEM 12A or 30A or equivalent.

**Corequisite:** Completion of or concurrent enrollment in BIOL 40C. **Advisory:** One of the following: ENGL 1A, 1AH, 1S & 1T or ESLL 26.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**4 hours lecture. (48 hours total per quarter)**

Introduction to the medical aspects of nutrition, intended for students wishing to pursue a career in health care. Biological function and chemical classification of nutrients. Nutritional needs throughout the lifespan. Effects of nutritional deficiencies and excesses. Recommended nutrient intakes and the role of diet in the development of chronic disease.

**FHGE:** Non-GE **Transferable:** UC/CSU

**BIOL 54H HONORS INSTITUTE SEMINAR IN BIOLOGY** 1 Unit  
**Prerequisite:** Honors Institute participant.  
**Advisory:** Not open to students with credit in BIOL 34 or 34H.  
**Grade Type:** Letter Grade Only  
**Not Repeatable.**  
**1 hour lecture. (12 hours total per quarter)**  
A seminar in directed readings, discussions and projects in biology. Specific topic to be determined by the instructor. This advanced honors course is open to all majors. This course satisfies one of the two honors seminar requirements for the Honors Scholar program.  
**FHGE: Non-GE Transferable: CSU**

**BIOL 58 FUNDAMENTALS OF PHARMACOLOGY** 4 Units  
**Prerequisites:** BIOL 40A, 40B and 40C or equivalent.  
**Advisory:** One of the following: ENGL 1A, 1AH, 1S & 1T or ESLL 26; not open to students with credit in BIOL 46.  
**Grade Type:** Letter Grade, the student may select Pass/No Pass  
**Not Repeatable.**  
**4 hours lecture. (48 hours total per quarter)**  
General principles of pharmacology. Emphasis on drug-receptor interactions, second messenger systems, determinants of drug response, pharmacokinetics, bio transformation and excretion, pharmacogenetics, drug development and legal aspects of drug distribution. Application of pharmacological principles and concepts with emphasis on the various pharmacological classes of drugs in diverse patient populations.  
**FHGE: Non-GE Transferable: CSU**

**BIOL 300 HUMAN PATHOPHYSIOLOGY & PHARMACOLOGY** 4 Units  
**Grade Type:** Letter Grade Only  
**Not Repeatable.**  
**4 hours lecture. (48 hours total per quarter)**  
The basis of human disease and its management relevant to the practice of health care professionals. The etiology and pathogenesis of diseases are discussed along with the application of diagnostic procedures and patient care. The pathology and underlying principles of the human systems are presented, along with characteristics of typical drugs, side effects, cautions, and interactions. This is an upper division General Education course, intended for students in the Dental Hygiene Baccalaureate Degree Program; enrollment is limited to students accepted in the program.  
**FHGE: Upper Division Transferable: CSU**

## BUSINESS

Business and Social Sciences  
650.949.7322 [foothill.edu/bss](http://foothill.edu/bss)

**BUSI 11 INTRODUCTION TO INFORMATION SYSTEMS** 5 Units  
**Advisory:** MATH 220 or equivalent; demonstrated proficiency in English by placement as determined by score on the English placement test OR through an equivalent placement process OR completion of ESLL 125 & ESLL 249; knowledge of Excel; not open to students with credit in CIS 10 or 60.  
**Grade Type:** Letter Grade, the student may select Pass/No Pass  
**Not Repeatable.**  
**5 hours lecture. (60 hours total per quarter)**  
Introduction to the concepts of management and information systems especially as used in business and similar organizations. Covers the need for information, how computers are used in business and other organizations to provide information, elements of computer hardware and software, software development, data storage and communication, and the social impact of computers. Hands-on introduction to personal productivity software such as word processing, spreadsheet, database, and presentation applications.  
**FHGE: Upper Division Transferable: UC/CSU**

**BUSI 18 BUSINESS LAW I** 5 Units  
**Advisory:** Demonstrated proficiency in English by placement as determined by score on the English placement test OR through an equivalent placement process OR completion of ESLL 125 & ESLL 249; UC will award transfer credit for either BUSI 18 or BUSI 19, not both.  
**Grade Type:** Letter Grade, the student may select Pass/No Pass  
**Not Repeatable.**  
**5 hours lecture. (60 hours total per quarter)**  
Introduction to law applicable to business. Social forces and the law; source of law; agencies for enforcement; and court systems and procedures. California law applicable to contracts, tort negligence, agency, and the Uniform Commercial Code. Contemporary Legal Issues.  
**FHGE: Non-GE Transferable: UC/CSU**

**BUSI 19 BUSINESS LAW II** 4 Units  
**Advisory:** BUSI 18; UC will award transfer credit for either BUSI 18 or BUSI 19, not both.  
**Grade Type:** Letter Grade, the student may select Pass/No Pass  
**Not Repeatable.**  
**4 hours lecture. (48 hours total per quarter)**  
Law of sales, warranty and product liability, partnerships, corporations, personal property, and bailments. The Uniform Commercial Code as related to negotiable instruments and secured transactions, and creditor-debtor rights.  
**FHGE: Non-GE Transferable: UC/CSU**

**BUSI 22 PRINCIPLES OF BUSINESS** 5 Units  
**Advisory:** Not open to students with credit in BUSI 22H or 52.  
**Grade Type:** Letter Grade, the student may select Pass/No Pass  
**Not Repeatable.**  
**5 hours lecture. (60 hours total per quarter)**  
Examination of the principles and functions of business and the objectives and operations of the corporate and small business managerial decision-making process. The course examines the relationship between businesses and consumers, internal and external stakeholders and how those relationships impact business operations. The course topics include the impact of globalization on business operations, and how economic, political, legal, and social issues impact business operations. In addition, the course covers basic business and corporate ethics and social responsibility topics.  
**FHGE: Social & Behavioral Sciences Transferable: UC/CSU**

**BUSI 22H HONORS PRINCIPLES OF BUSINESS** 5 Units  
**Prerequisite:** Honors Institute Participant.  
**Advisory:** Not open to students with credit in BUSI 22 or 52.  
**Grade Type:** Letter Grade, the student may select Pass/No Pass  
**Not Repeatable.**  
**5 hours lecture. (60 hours total per quarter)**  
Examination of the principles and functions of business and the objectives and operations of the corporate and small business managerial decision-making process. The course examines the relationship between businesses and consumers, internal and external stakeholders and how those relationships impact business operations. The course topics include the impact of globalization on business operations, and how economic, political, legal, and social issues impact business operations. In addition, the course covers basic business and corporate ethics and social responsibility topics. As an honors course, this course will use advanced teaching methods and current real-world business situations to enhance and deepen student learning of critical business concepts and frameworks. With an emphasis on research and analysis, students will apply critical thinking skills and business concepts to develop their knowledge of how businesses succeed within today's global business environment.  
**FHGE: Social & Behavioral Sciences Transferable: UC/CSU**

**BUSI 53 SURVEY OF INTERNATIONAL BUSINESS 4 Units**

**Advisory:** Not open to students with credit in BIS 53 or BUSI 20.  
**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**4 hours lecture. (48 hours total per quarter)**

Introduction to the global commercial community, theory and practice. Exploration of trade and development with the Pacific Rim, Eastern/Western Europe, Third World and developing nations. Major economic, social, political, cultural forces directing the competitive business environment. Examination of the full range of international commercial activities, marketing, logistics, research, risk analysis, and global corporate ethics and social responsibility.

**FHGE:** Social & Behavioral Sciences **Transferable:** CSU

**BUSI 53A BUSINESS COMMUNICATIONS & TECHNOLOGIES 5 Units**

**Prerequisite:** One of the following: ENGL 1A, 1AH, 1S & 1T or ESLL 26.

**Advisory:** BUSI 11 or 91L.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**5 hours lecture. (60 hours total per quarter)**

Theory of written and oral communication. Messages are broken into their component parts for a critical analysis of organization and content, style, tone, grammar, format, and appearance. Students analyze business situations and plan, organize, write, and revise letters, memos, emails, and reports. This course focuses on applying appropriate format, styles, content and technologies to communicate within and between business organizations.

**FHGE:** Non-GE **Transferable:** CSU

**BUSI 54H HONORS INSTITUTE SEMINAR IN BUSINESS 1 Unit**

**Prerequisite:** Honors Institute participant.

**Advisory:** Not open to students with credit in BUSI 34 or 34H.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**1 hour lecture. (12 hours total per quarter)**

A seminar in directed readings, discussions, and projects in business. Specific topics to be determined by the instructor.

**FHGE:** Non-GE **Transferable:** CSU

**BUSI 57 PRINCIPLES OF ADVERTISING 4 Units**

**Advisory:** Not open to students with credit in ADVT 57 or BUSI 81.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**4 hours lecture. (48 hours total per quarter)**

Introduction to the relationship between advertising and society, and consumer and business. Analysis of markets and direction of advertising campaigns toward them. Selection of media. Evaluation and proper use of the creative aspects of advertising. Actual creation of an advertising campaign and pro-forma budget.

**FHGE:** Non-GE **Transferable:** CSU

**BUSI 59 PRINCIPLES OF MARKETING 4 Units**

**Advisory:** Not open to students with credit in BUSI 90.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**4 hours lecture. (48 hours total per quarter)**

Contemporary marketing developments and applications relative to business activities that determine customer demand for products and services. Focus on market planning strategy, determining the right product, price, distribution and promotion elements and evaluating the results of effective marketing decision-making from both a marketer's and a consumer's perspective.

**FHGE:** Non-GE **Transferable:** CSU

**BUSI 59A WEB MARKETING 5 Units**

**Advisory:** BUSI 59B or equivalent coursework or experience.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**5 hours lecture. (60 hours total per quarter)**

Introduction to Internet marketing. Primary focus of this course will be on marketing strategies and techniques to help e-businesses reach potential customers, drive traffic to generate customer to e-business interaction, convert leads to sales, and to maintain customer relationships over time. Students will develop and launch a robust Internet Marketing Plan that relies on solid business practices and employs leading technologies to achieve increased product awareness and social influence, generate higher site traffic and sales, and establish long-term customer engagement.

**FHGE:** Non-GE **Transferable:** CSU

**BUSI 59B E-BUSINESS 5 Units**

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**5 hours lecture. (60 hours total per quarter)**

Foundations and principles of electronic commerce and doing business on the Internet. Topics include e-commerce models, value and supply chains, business strategy, electronic data interchange (EDI), electronic payments & digital currency, integrating channels of business (walk-in, mail, phone, Internet), e-marketing, intranets and extranets, security risks and legal issues in e-commerce, and Electronic Document Management Systems (EDMS). Current topics about latest e-business trends will be discussed, including peer-to-peer commerce, public and private exchanges, e-hubs and e-marketplaces, technology trends in enterprise computing including Web services and knowledge management, and global e-commerce infrastructure.

**FHGE:** Non-GE **Transferable:** CSU

**BUSI 60 FUNDAMENTALS OF FINANCE 5 Units**

**Advisory:** MATH 105.

**Grade Type:** Letter Grade Only

**Not Repeatable.**

**5 hours lecture. (60 hours total per quarter)**

This course provides an introduction to the fundamentals of financial analysis and applications to business challenges in valuation, risk analysis, corporate investment decisions, and basic security analysis and investment management. The four major sections of the course are: (A) an introduction to the financial system, financial statement analysis; (B) Interest Rates and Valuing Cash Flows: time value of money; interest rates; valuation of stocks, bonds; (C) Valuation of the Firm: Investment Decision Rules, Fundamentals of Capital Budgeting, Stock Valuation (NPV); and (D) Introduction to Risk and Return: risk and return; systemic risk; Portfolio Theory, CAPM, WACC.

**FHGE:** Non-GE **Transferable:** CSU

**BUSI 61 INVESTMENT FUNDAMENTALS 3 Units**

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**3 hours lecture. (36 hours total per quarter)**

Introduction to securities investment characteristics and rights. Investment vehicles (stock, bonds, derivatives (options)). Markets and exchanges. Stock and Bond valuation analyses (fundamental and technical analysis). Portfolio evaluation and stock trading. Personal financial management. After-tax returns.

**FHGE:** Non-GE **Transferable:** CSU

**BUSI 62 PRINCIPLES OF SALESMANSHIP 3 Units**

**Advisory:** Not open to students with credit in BUSI 91.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**3 hours lecture. (36 hours total per quarter)**

The principles and techniques of selling ideas, products, services. Focus on persuasive activities, buying behavior, communication, ethics. Combines an emphasis on the art of selling with providing effective customer service.

**FHGE:** Non-GE **Transferable:** CSU

**BUSI 70 BUSINESS & PROFESSIONAL ETHICS 4 Units**

**Advisory:** Demonstrated proficiency in English by placement as determined by score on the English placement test OR through an equivalent placement process OR completion of ESLL 125 & ESLL 249.

**Grade Type:** Letter Grade, the student may select Pass/No Pass  
**Not Repeatable.**

**4 hours lecture. (48 hours total per quarter)**

Social and moral dilemmas encountered in business and professional lives. Exploration and analysis of the ongoing conflicts between personal value systems, expected codes of behavior, evolving technology and government regulations and international issues, and standard operating procedure in the work place. Examples of major philosophical schools of ethics and how their specific theories may be applied to concrete business cases and contemporary management issues.

**FHGE: Non-GE Transferable: CSU**

**BUSI 70R INDEPENDENT STUDY IN BUSINESS 1 Unit**

**BUSI 71R 2 Units**

**BUSI 72R 3 Units**

**BUSI 73R 4 Units**

**Grade Type:** Letter Grade, the student may select Pass/No Pass  
**Not Repeatable.**

**3-12 hours laboratory per week. (36-144 hours total per quarter)**

Provides an opportunity for the student to expand their studies in Business beyond the classroom by completing a project or an assignment arranged by agreement between the student and instructor. The student is required to contract with the instructor to determine the scope of assignment and the unit value assigned for successful completion. Students may take a maximum of 6 units of Independent Study per department.

**FHGE: Non-GE Transferable: CSU**

**BUSI 87 HUMAN RESOURCES MANAGEMENT 5 Units**

**Advisory:** Demonstrated proficiency in English by placement as determined by score on the English placement test OR through an equivalent placement process OR completion of ESLL 125 & ESLL 249.

**Grade Type:** Letter Grade Only  
**Not Repeatable.**

**5 hours lecture. (60 hours total per quarter)**

This course is a comprehensive study of human resource management in organizations, including human resource planning; employment legislation; recruitment and selection; training and development; compensation and benefits; performance appraisal and career management; managing labor relations; safety, health, and well-being; and motivation and enhancing performance. The course will explore topics including values, ethical issues, leadership and communication, conflict, work design, and organizational culture.

**FHGE: Non-GE Transferable: CSU**

**BUSI 90A PRINCIPLES OF MANAGEMENT 4 Units**

**Advisory:** Demonstrated proficiency in English by placement as determined by score on the English placement test OR through an equivalent placement process OR completion of ESLL 125 & ESLL 249.

**Grade Type:** Letter Grade, the student may select Pass/No Pass  
**Not Repeatable.**

**4 hours lecture. (48 hours total per quarter)**

Introduction to the study of the principles and functions of business management as an important part of the social, political and economic environment. The following functional areas of management include: planning and organizing, control and monitoring, strategy and leadership, legal and ethical issues affecting business today.

**FHGE: Non-GE Transferable: CSU**

**BUSI 91L INTRODUCTION TO BUSINESS INFORMATION PROCESSING 4 Units**

**Advisory:** Not open to students with credit in BUSI 10.

**Grade Type:** Letter Grade, the student may select Pass/No Pass  
**Not Repeatable.**

**4 hours lecture. (48 hours total per quarter)**

Knowledge and understanding of business uses of computer and information processing. Introduction to computer hardware and software and popular operating systems. Hands-on experience in the use of word processing software, spreadsheet software, presentation graphics software, database software and communications software.

**FHGE: Non-GE Transferable: CSU**

**BUSI 95 ENTREPRENEURSHIP-THE BUSINESS PLAN 4 Units**

**Advisory:** Demonstrated proficiency in English by placement as determined by score on the English placement test OR through an equivalent placement process OR completion of ESLL 125 & ESLL 249.

**Grade Type:** Letter Grade, the student may select Pass/No Pass  
**Not Repeatable.**

**4 hours lecture. (48 hours total per quarter)**

This course focuses on the business plan as a necessary component of starting a small business. The course discusses the phases and components in the development of the business plan, including determining actual content, reviewing examples, creating a comprehensive plan, and pitching to potential investors.

**FHGE: Non-GE Transferable: CSU**

**BUSI 95E SMALL BUSINESS EXPORT & IMPORT 3 Units**

**Advisory:** Not open to students with credit in BIS 95E.

**Grade Type:** Letter Grade, the student may select Pass/No Pass  
**Not Repeatable.**

**3 hours lecture. (36 hours total per quarter)**

Challenges and opportunities of world trade through small business exporting and importing. The basic mechanics, market analysis, pricing, financing, marketing, insurance, transportation and distribution of exports/imports. Expert assistance and resources.

**FHGE: Non-GE Transferable: CSU**

**BUSI 96 ENTREPRENEURSHIP-STARTING & MANAGING A SMALL BUSINESS 3 Units**

**Advisory:** BUSI 95; demonstrated proficiency in English by placement as determined by score on the English placement test OR through an equivalent placement process OR completion of ESLL 125 & ESLL 249.

**Grade Type:** Letter Grade, the student may select Pass/No Pass  
**Not Repeatable.**

**3 hours lecture. (36 hours total per quarter)**

Hands-on course introducing the broad range of skills needed to start-up and maintain a small business, an intrapreneurial venture, or a social entrepreneurship project. In this class, students begin with a well-planned business concept (business plan or business model) and apply fundamental entrepreneurial techniques to successfully initiate their business, and ultimately identify critical actions required to succeed. Areas of discussion will include legal, financial, marketing, operational, personnel, with a specific focus on bringing students' business plans to life.

**FHGE: Non-GE Transferable: CSU**

## CAREER LIFE PLANNING

Counseling and Student Services  
650.949.7423 foothill.edu/counseling

### CRLP 7 SELF-ASSESSMENT 4 Units

Formerly: CRLP 70

**Advisory:** May not be concurrently enrolled in CRLP 71; not open to students with credit in CRLP 70.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**4 hours lecture. (48 hours total per quarter)**

Comprehensive approach to career and life planning. Students will explore their individual skills, interests, values, and personality style as they relate to career choice. This intensive career investigation will also encompass lifestyle assessment like the influence of career choice on the family unit, decision making, goal-setting, job search strategies, resume writing and interviewing skills. This course is helpful to people considering a career change or undecided about a college major.

**FHGE: Lifelong Learning Transferable: UC/CSU**

### CRLP 55 LIFELONG LEARNING STRATEGIES 3 Units

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**3 hours lecture. (36 hours total per quarter)**

Interactive, applied course to teach learning strategies and skills necessary to successfully reach educational, career and personal objectives. Topics include time management, memory techniques, study reading, note taking, test preparation, other learning strategies and the techniques to apply them in college and throughout life.

**FHGE: Lifelong Learning Transferable: CSU**

### CRLP 71 EXPLORING CAREER FIELDS 1 Unit

**Advisory:** May not be concurrently enrolled in CRLP 7.

**Grade Type:** Pass/No Pass Only Not Repeatable.

**1 hour lecture. (12 hours total per quarter)**

Explore career options compatible with student's strengths and interests. Using resources on the campus as well as on the Internet and in communities to investigate specific career choices, researching job descriptions, desired employee characteristics, training/education requirements, salary ranges and employment trends.

**FHGE: Non-GE Transferable: CSU**

### CRLP 73 EFFECTIVE RESUME WRITING 1 Unit

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**1 hour lecture. (12 hours total per quarter)**

Development of successful resume writing skills including understanding of the hidden job market, types of resumes and tips that will create resumes that result in interviews.

**FHGE: Non-GE Transferable: CSU**

### CRLP 74 SUCCESSFUL INTERVIEWING TECHNIQUES 1 Unit

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**1 hour lecture. (12 hours total per quarter)**

Development of successful interviewing skills, including techniques for pre-interview preparation, dynamics of an interview, salary negotiations and follow-up.

**FHGE: Non-GE Transferable: CSU**

## CHEMISTRY

Physical Sciences, Mathematics & Engineering  
650.949.7259 foothill.edu/psme

### CHEM 1A GENERAL CHEMISTRY 5 Units

**Prerequisites:** Satisfactory score on the chemistry placement test or CHEM 20 or 25; satisfactory score on the mathematics placement test or MATH 105 or 108.

**Advisory:** Concurrent enrollment in ESLL 125 or ENGL 209, not open to students with credit in CHEM 1AH.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**3 hours lecture, 6 hours laboratory. (108 hours total per quarter)**

Fundamental chemical principles with an emphasis on physical and chemical properties, stoichiometry, chemical reaction types, kinetic molecular theory, thermochemistry, modern atomic theory and atomic structure, chemical bonding and bonding theory, and molecular shapes. Laboratory component parallels lecture topics and also includes chemical nomenclature, basic chemical equations, stoichiometry, unknown analysis, and fundamentals of oxidation and reduction.

**FHGE: Natural Sciences Transferable: UC/CSU**

### CHEM 1AH HONORS GENERAL CHEMISTRY 5 Units

**Prerequisites:** MATH 105, 108 or equivalent; satisfactory score on the chemistry placement test or an AP chemistry score of 4 or 5; Foothill College Honors Institute Participant.

**Advisory:** Familiarity with calculus topics including derivatives and integration either in high school or college; not open to students with credit in CHEM 1A.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**3 hours lecture, 6 hours laboratory. (108 hours total per quarter)**

Fundamental chemical principles with an emphasis on physical properties and their mathematical modeling and interpretation. As an honors course, the treatment of the chemical topics will be at a higher level mathematically and conceptually. Students are expected to have a high degree of competency in mathematics and advanced reasoning skills. Topics include: The atom in modern chemistry; Chemical formulas, equations, stoichiometry and theoretical yields; Classical models of atomic bonding, electron shells, and molecular shapes; The behavior of gases, gas laws, kinetic molecular theory, molecular collisions; Solids, liquids and phase transitions, intermolecular forces, phase diagrams; Thermodynamic processes and thermochemistry, heat capacity and calorimetry, reversible processes in ideal gases; Spontaneous processes and thermodynamic systems.

**FHGE: Natural Sciences Transferable: UC/CSU**

### CHEM 1B GENERAL CHEMISTRY 5 Units

**Prerequisite:** CHEM 1A or 1AH.

**Advisory:** Not open to students with credit in CHEM 1BH.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**3 hours lecture, 6 hours laboratory. (108 hours total per quarter)**

Kinetic molecular theory and gas laws, intermolecular forces, chemical kinetics, equilibria, behavior of acids and bases, acid/base equilibrium, and classical thermodynamics. Laboratory parallels lecture topics and includes computer graphing techniques, chemical kinetics, equilibrium measurements, heat transfer experiments, thermodynamics of an equilibrium system, vapor pressure of liquids.

**FHGE: Non-GE Transferable: UC/CSU**

**CHEM 1BH HONORS GENERAL CHEMISTRY 5 Units**

**Prerequisites:** CHEM 1AH; Foothill College Honors Institute Participant.

**Advisory:** Familiarity with calculus topics including derivatives and integration either in high school or college; not open to students with credit in CHEM 1B.

**Grade Type:** Letter Grade, the student may select Pass/No Pass  
**Not Repeatable.**

**3 hours lecture, 6 hours laboratory. (108 hours total per quarter)**

Designed for physical science majors, the fundamental chemical principles are explored with an emphasis on physical properties and their mathematical modeling and interpretation. As an honors course, the treatment of the chemical topics will be at a higher level mathematically and conceptually. Students are expected to have a high degree of competency in mathematics and advanced reasoning skills. Topics include: Chemical equilibrium with a mass action and thermodynamic description; Solutions including acid-base titrations, oxidation reduction titrations, nonvolatile and volatile solutes; Advanced acid-base equilibrium including strengths, weak acid/base reactions, and polyprotic acids; Introduction to quantum mechanics including the wave nature of light, Bohr model, wave-particle duality and particle in a box models; Quantum mechanics and atomic structure including the hydrogen atom, the shell model, Aufbau principle, periodic table interpretation and periodic properties; Valence bond theory and orbital hybridization; Chemical kinetics including mechanisms Arrhenius equation, catalysts and solution kinetics.

**FHGE: Non-GE Transferable: UC/CSU**

**CHEM 1C GENERAL CHEMISTRY & QUALITATIVE ANALYSIS 5 Units**

**Prerequisite:** CHEM 1B or 1BH.

**Grade Type:** Letter Grade, the student may select Pass/No Pass  
**Not Repeatable.**

**3 hours lecture, 6 hours laboratory. (108 hours total per quarter)**

Aqueous ionic equilibria of buffers, solubility product constants and formation constants; properties of solutions including factors affecting solubility, energy changes in the solution process and colligative properties; electrochemistry including the thermodynamics of voltaic cells; introduction to coordination chemistry and bonding theory; nuclear chemistry with emphasis on applications; and, time permitting, an introduction to modern materials. Laboratory parallels lecture topics with an introduction to qualitative inorganic analysis.

**FHGE: Non-GE Transferable: UC/CSU**

**CHEM 9 CHEMISTRY OF COOKING 5 Units**

**Prerequisite:** Satisfactory score on the mathematics placement test or MATH 220.

**Grade Type:** Letter Grade, the student may select Pass/No Pass  
**Not Repeatable.**

**4 hours lecture, 3 hours laboratory. (84 hours total per quarter)**

This course will use kitchen science and cooking to introduce fundamental principles of chemistry. Concepts include atomic theory; stoichiometry; acid-base reactions; the molecular structure of food compounds; heat transfer and cooking methods; egg foams, protein structure and denaturation; gas laws; pressure cooking and the Maillard reaction for meats; the molecular basis of aroma and flavor; sauces and viscosity; chemical reactions involved in baking; caramelization of sugars and crystallization in chocolate. Laboratory experiments will utilize both common chemistry instrumentation and kitchen equipment.

**FHGE: Natural Sciences Transferable: UC/CSU**

**CHEM 12A ORGANIC CHEMISTRY 4 Units**

**Prerequisite:** CHEM 1C.

**Corequisite:** Concurrent enrollment or prior completion of laboratory component to course (CHEM 12AL or 13AH).

**Grade Type:** Letter Grade, the student may select Pass/No Pass  
**Not Repeatable.**

**4 hours lecture. (48 hours total per quarter)**

This course is the first of a three quarter course describing the chemistry of organic (carbon containing) compounds. Emphasis on structure-reactivity relationships and mechanisms of functional group transformations. For science majors and students pursuing professional careers in dentistry, medicine, pharmacy, or veterinary medicine. Generally not appropriate for nursing majors (see CHEM 30B).

**FHGE: Non-GE Transferable: UC/CSU**

**CHEM 12AL ORGANIC CHEMISTRY LABORATORY 2 Units**

**Corequisite:** CHEM 12A.

**Advisory:** Not open to students with credit in CHEM 13AH.

**Grade Type:** Letter Grade Only

**Not Repeatable.**

**6 hours laboratory. (72 hours total per quarter)**

Laboratory course to accompany CHEM 12A. Intended to introduce students to laboratory techniques common in modern synthetic organic chemistry. Introduces laboratory techniques common in synthetic Organic Chemistry. Students will work on both standard preparatory scale and microscale to prepare, isolate, purify and characterize organic compounds.

**FHGE: Non-GE Transferable: UC/CSU**

**CHEM 12B ORGANIC CHEMISTRY 4 Units**

**Prerequisites:** CHEM 12A and CHEM 12AL or 13AH.

**Corequisite:** Concurrent enrollment or prior completion of laboratory component to course (CHEM 12BL or 13BH).

**Grade Type:** Letter Grade, the student may select Pass/No Pass  
**Not Repeatable.**

**4 hours lecture. (48 hours total per quarter)**

This course is the continuation of CHEM 12A. Emphasis is on structure-reactivity relationships of organic compounds, mechanisms of functional group transformations, and synthesis of organic target compounds from simple precursors. For chemistry, biological science, environmental science majors, and for pre-professional students in dentistry, medicine, pharmacy, veterinary medicine or any other interested students who have mastered the prerequisites.

**FHGE: Non-GE Transferable: UC/CSU**

**CHEM 12BL ORGANIC CHEMISTRY LABORATORY 2 Units**

**Corequisite:** CHEM 12B.

**Advisory:** Not open to students with credit in CHEM 13BH.

**Grade Type:** Letter Grade Only

**Not Repeatable.**

**6 hours laboratory. (72 hours total per quarter)**

Laboratory course to accompany CHEM 12B. Emphasis is on Spectroscopic methods for the structure elucidation of organic compounds. Provides extensive practice in the synthesis, purification, isolation and characterization of organic target molecules. For Chemistry and other STEM majors, and for pre-professional students in dentistry, medicine, pharmacy, veterinary medicine or any other interested students who have mastered the prerequisites.

**FHGE: Non-GE Transferable: UC/CSU**



**CHEM 12C ORGANIC CHEMISTRY 4 Units****Prerequisites:** CHEM 12B and CHEM 12BL or 13BH.**Corequisite:** Concurrent enrollment or prior completion of laboratory component to course (CHEM 12CL or 13CH).**Grade Type:** Letter Grade, the student may select Pass/No Pass  
**Not Repeatable.****4 hours lecture. (48 hours total per quarter)**

The third and final quarter of Organic Chemistry expands the study of functional groups to include ketones, aldehydes, carboxylic acids and its derivatives, and amines. Also introduces the chemistry of poly-functional, biologically active molecules such as proteins and carbohydrates. Continued emphasis on structure-reactivity relationships, mechanisms of reaction and multi-step syntheses. For chemistry and other STEM majors as well as any pre-professional students studying for careers in dentistry, medicine, pharmacy, veterinary medicine and for any other interested students who have mastered the prerequisites.

**FHGE: Non-GE Transferable: UC/CSU****CHEM 12CL ORGANIC CHEMISTRY LABORATORY 2 Units****Corequisite:** CHEM 12C.**Advisory:** Not open to students with credit in CHEM 13CH.**Grade Type:** Letter Grade Only**Not Repeatable.****6 hours laboratory. (72 hours total per quarter)**

Laboratory course to accompany CHEM 12C. Intended to strengthen skill in application of laboratory techniques, and to encourage independent work. Emphasis is on chemical reactions relevant to CHEM 12C, Multi-step syntheses, and identification of unknowns.

**FHGE: Non-GE Transferable: UC/CSU****CHEM 13AH HONORS ORGANIC CHEMISTRY LABORATORY 3 Units****Prerequisites:** CHEM 1C or equivalent; Honors Institute participant.**Corequisite:** CHEM 12A.**Advisory:** Not open to students with credit in CHEM 12AL.**Grade Type:** Letter Grade Only**Not Repeatable.****1 hour lecture, 6 hours laboratory. (84 hours total per quarter)**

Honors laboratory course to accompany CHEM 12A. Intended to introduce students to laboratory techniques common in modern synthetic organic chemistry. Emphasis is on chemical reactions relevant to CHEM 12A content. Similar to CHEM 12AL, this honors course adds critical analysis of primary literature, and requires additional writing assignments and group presentations.

**FHGE: Non-GE Transferable: UC/CSU****CHEM 13BH HONORS ORGANIC CHEMISTRY LABORATORY 3 Units****Prerequisites:** CHEM 12A and CHEM 12AL or 13AH; Honors Institute participant.**Corequisite:** CHEM 12B.**Advisory:** Not open to students with credit in CHEM 12BL.**Grade Type:** Letter Grade Only**Not Repeatable.****1 hour lecture, 6 hours laboratory. (84 hours total per quarter)**

Honors laboratory course to accompany CHEM 12B. Intended to introduce students to laboratory techniques common in modern synthetic organic chemistry. Emphasis is on chemical reactions relevant to CHEM 12B content. Similar to CHEM 12BL, this honors course adds critical analysis of primary literature, and requires additional writing assignments and group presentations.

**FHGE: Non-GE Transferable: UC/CSU****CHEM 13CH HONORS ORGANIC CHEMISTRY LABORATORY 3 Units****Prerequisites:** CHEM 12B and CHEM 12BL or 13BH; Honors Institute Participant.**Corequisite:** CHEM 12C.**Advisory:** Not open to students with credit in CHEM 12CL.**Grade Type:** Letter Grade Only**Not Repeatable.****1 hour lecture, 6 hours laboratory. (84 hours total per quarter)**

Honors laboratory course to accompany CHEM 12C. Intended to introduce students to research methods, improve skill in application of laboratory techniques, and strengthen quantitative reasoning. Students work on challenging projects taken from the primary literature. Emphasis is on Physical-Organic Chemistry, Multi-step synthesis, and chemical reactions relevant to CHEM 12C.

**FHGE: Non-GE Transferable: UC/CSU****CHEM 20 I MATTER: INTRODUCTION TO GREEN CHEMISTRY & THE ENVIRONMENT 5 Units****Prerequisite:** Satisfactory score on the mathematics placement test or MATH 105 or 108.**Advisory:** Concurrent enrollment in ESLL 125 or ENGL 209.**Grade Type:** Letter Grade, the student may select Pass/No Pass**Not Repeatable.****4 hours lecture, 3 hours laboratory. (84 hours total per quarter)**

This course introduces one of the most significant emerging fields in modern chemistry, green chemistry, which connects the optimum use of chemistry to the well-being of humanity and the environment. Fundamental principles of chemistry necessary to understand the source and fate of man-made chemical substances in the environment and potential impacts on human health. Chemical concepts such as atomic structure, bonding, thermodynamics, and chemical reactivity are introduced as they pertain to particular environmental issues. Basic chemical laboratory techniques and methods are included as well as a survey of important green chemical principles with an emphasis on inquiry and problem solving. Intended for students who wish to meet general education requirements in physical science or those planning to complete the General Chemistry sequence (CHEM 1A - 1C). CHEM 20 qualifies as a prerequisite for CHEM 1A and is accepted for General Education Natural Science transfer credit by both the California State University and University of California systems.

**FHGE: Natural Sciences Transferable: UC/CSU****CHEM 25 FUNDAMENTALS OF CHEMISTRY 5 Units****Prerequisite:** Satisfactory score on the mathematics placement test or MATH 105 or 108.**Advisory:** Concurrent enrollment in ESLL 125 or ENGL 209; UC will grant transfer credit for a maximum of one course from the following: CHEM 25, 30A or 30B.**Grade Type:** Letter Grade, the student may select Pass/No Pass  
**Not Repeatable.****4 hours lecture, 3 hours laboratory. (84 hours total per quarter)**

The course includes basic chemical laboratory techniques and methods, a survey of important chemical principles with emphasis on problem solving, and a description of the elements and their compounds. Intended for students who wish to meet general education requirements in physical science or need background preparation for CHEM 1A.

**FHGE: Natural Sciences Transferable: UC/CSU**

**CHEM 30A SURVEY OF INORGANIC & ORGANIC CHEMISTRY** 5 Units

**Prerequisite:** Satisfactory score on the mathematics placement test or MATH 217 or 220.

**Advisory:** UC will grant transfer credit for a maximum of one course from the following: CHEM 25, 30A or 30B.

**Grade Type:** Letter Grade, the student may select Pass/No Pass  
**Not Repeatable.**

**4 hours lecture, 3 hours laboratory. (84 hours total per quarter)**

An introductory course covering basic principles of chemistry more descriptive than quantitative in emphasis. Topics include atomic structure, the periodic table, the three states of matter, energy, chemical bonding in ionic and molecular compounds, nomenclature, measurement and the metric system, chemical reactions and equations, solutions, acids, bases, salts and electrolyte systems. Primarily intended for students entering the allied health field including: nursing, veterinary technology, dental assistant, dental hygiene, biotechnology, primary care associate, radiation therapy technology, radiological technology, respiratory therapy, and pharmaceutical technology.

**FHGE:** Natural Sciences **Transferable:** UC/CSU

**CHEM 30B SURVEY OF ORGANIC & BIOCHEMISTRY** 5 Units

**Prerequisite:** CHEM 30A.

**Advisory:** UC will grant transfer credit for a maximum of one course from the following: CHEM 25, 30A or 30B.

**Grade Type:** Letter Grade, the student may select Pass/No Pass  
**Not Repeatable.**

**4 hours lecture, 3 hours laboratory. (84 hours total per quarter)**

Basic principles of organic chemistry and biological chemistry. Topics include organic chemistry nomenclature, functional groups, and an introduction to structure and properties of carbohydrates, lipids, nucleic acids, proteins and enzymes. An overview of metabolism will also be given. Primarily intended for students entering the allied health field including: nursing, dental hygiene, and biotechnology.

**FHGE:** Non-GE **Transferable:** UC/CSU

**CHEM 70 STUDY SKILLS & PROBLEM-SOLVING STRATEGIES FOR CHEM 1A** 2 Units

**Corequisite:** CHEM 1A.

**Grade Type:** Pass/No Pass Only  
**Not Repeatable.**

**2 hours lecture. (24 hours total per quarter)**

This course focuses on two objectives: (1) Development of study skills and strategies needed to succeed in a college level science course including listening and note taking skills, time management, use of textbooks, management of effective study sessions and study groups, managing lecture and laboratory work, analyzing figures and graphs, test preparation and test taking strategies. (2) Development of analytical reasoning strategies, critical thinking skills and problem-solving abilities with a focus on topics the student must master in CHEM 1A in order to succeed in subsequent courses, CHEM 1B and 1C.

**FHGE:** Non-GE **Transferable:** CSU

**CHILD DEVELOPMENT**

Business and Social Sciences

650.949.7322 foothill.edu/bss

**CHLD 1 CHILD GROWTH & DEVELOPMENT: PRENATAL THROUGH EARLY CHILDHOOD** 4 Units

**Advisory:** Not open to students with credit in CHLD 55.

**Grade Type:** Letter Grade Only

**Not Repeatable.**

**4 hours lecture. (48 hours total per quarter)**

Development of the child from prenatal life through early childhood. This introductory course examines the major physical, psychosocial, and cognitive/language developmental milestones for children, both typical and atypical, from conception through early childhood. Emphasis on interactions between maturational processes and environmental factors. While studying developmental theory and investigative research methodologies, students will observe children, evaluate individual differences and analyze characteristics of development at various stages.

**FHGE:** Social & Behavioral Sciences **Transferable:** UC/CSU

**CHLD 2 CHILD GROWTH & DEVELOPMENT II: MIDDLE CHILDHOOD THROUGH ADOLESCENCE** 4 Units

**Grade Type:** Letter Grade Only

**Not Repeatable.**

**4 hours lecture. (48 hours total per quarter)**

Development of the child from middle childhood through adolescence. This introductory course examines the major physical, psychosocial, and cognitive/language developmental milestones for children, both typical and atypical, from middle childhood through adolescence. Emphasis on interactions between maturational processes and environmental factors. While studying developmental theory and investigative research methodologies, students will observe children, evaluate individual differences and analyze characteristics of development at various stages.

**FHGE:** Social & Behavioral Sciences **Transferable:** UC/CSU

**CHLD 50A INFANT/TODDLER DEVELOPMENT** 3 Units

**Grade Type:** Letter Grade, the student may select Pass/No Pass

**Not Repeatable.**

**3 hours lecture. (36 hours total per quarter)**

Human growth and development from birth to three years within the context of the young child's family, culture and community. Examination of developmental theory within the three distinct ages of infancy. Integration of physical, cognitive, language, social and emotional domains emphasizing the importance of relationships.

**FHGE:** Non-GE **Transferable:** CSU

**CHLD 51A AFFIRMING DIVERSITY IN EDUCATION** 4 Units

**Advisory:** Demonstrated proficiency in English by placement as determined by score on the English placement test OR through an equivalent placement process OR completion of ESLL 125 & ESLL 249; not open to students with credit in CHLD 11.

**Grade Type:** Letter Grade, the student may select Pass/No Pass

**Not Repeatable.**

**4 hours lecture. (48 hours total per quarter)**

This course will examine the development of social identities in diverse societies including theoretical and practical implications affecting young children, families, programs, teaching, education and schooling. Culturally relevant and linguistically appropriate anti-bias approaches supporting all children in becoming competent members of a diverse society. Course involves self-reflection of one's own understanding of educational principles in integrating anti-goals in order to better inform teaching practices and/or program development.

**FHGE:** American Cultures & Communities **Transferable:** CSU

**CHLD 53NC SUPPORTING CHILDREN WITH SPECIAL NEEDS IN CHILDREN'S PROGRAMS** 3 Units

**Grade Type: Letter Grade Only  
Not Repeatable.**

**3 hours lecture. (36 hours total per quarter)**

Strategies to work effectively with all children in early childhood programs. Focus on infants, toddlers and preschoolers with disabilities, developmental delays or special health care needs. Best practices from early childhood education and early childhood special education/early intervention will be embedded throughout. Making adaptations, modifications and accommodations in the environment, with materials and to teaching strategies, for individual children in group settings. Working in collaboration with additional support professionals, community resources, IFSP and IEP teams and family members.

**FHGE: Non-GE Transferable: CSU**

**CHLD 53NP DEVELOPMENT OF CHILDREN WITH SPECIAL NEEDS** 3 Units

**Grade Type: Letter Grade Only  
Not Repeatable.**

**3 hours lecture. (36 hours total per quarter)**

Introduction to a variety of diagnosed disabilities and other special needs conditions that cause children, birth through age 8, to show atypical development. Laws and service provisions, social and educational implications, culture and family dynamics in the context of the larger community will be discussed.

**FHGE: Non-GE Transferable: CSU**

**CHLD 54A DEVELOPING A HEALTHY ORGANIZATIONAL CLIMATE IN EDUCATION** 1 Unit

**Grade Type: Letter Grade Only  
Not Repeatable.**

**1 hour lecture. (12 hours total per quarter)**

Investigation and analysis of the ten dimensions of organizational climate which help shape the quality of work life for educators. Students will assess the organizational climate of their own education programs and develop specific strategies to create an excellent workplace. Discussion of unique role perspective plays in shaping work attitudes and behavior.

**FHGE: Non-GE Transferable: CSU**

**CHLD 54B THE RIGHT FIT: RECRUITING, SELECTING & ORIENTING STAFF** 1 Unit

**Grade Type: Letter Grade Only  
Not Repeatable.**

**1 hour lecture. (12 hours total per quarter)**

Students will determine the criteria to maximize the fit between individuals, the job and the program. Course breaks down the teacher recruitment, interviewing, screening, selection, and employee orientation processes into manageable components. Practical and effective techniques to find teaching staff will be discussed. Students will design a continuous recruitment plan to implement in their own workplace in order to be well prepared when future employee turnover occurs.

**FHGE: Non-GE Transferable: CSU**

**CHLD 54C LEADERSHIP IN ACTION: HOW EFFECTIVE DIRECTORS GET THINGS DONE** 1 Unit

**Grade Type: Letter Grade Only  
Not Repeatable.**

**1 hour lecture. (12 hours total per quarter)**

Course provides an overview of educational leadership from five perspectives: leadership as a role, leadership tasks and functions, leadership as a repertoire of skills and competencies, leadership traits and dispositions, and leadership style. Course examines the link between effective leadership and program quality.

**FHGE: Non-GE Transferable: CSU**

**CHLD 54D FROM THE INSIDE OUT: THE POWER OF REFLECTION & SELF-AWARENESS** 1 Unit

**Grade Type: Letter Grade Only  
Not Repeatable.**

**1 hour lecture. (12 hours total per quarter)**

Course will help educators learn the value of reflective practice and how to become a self-mentor. Participants will reflect on how their past experiences shape present perceptions and future aspirations. Topics discussed will include identifying one's preferred perceptual modality, learning style, psychological type, practical strategies for reducing stress and avoiding burnout in the education field. Intended for directors, principals, leaders, teachers, board members and parent volunteers.

**FHGE: Non-GE Transferable: CSU**

**CHLD 56 OBSERVATION & ASSESSMENT** 4 Units

**Advisory: CHLD 1 and 56N.**

**Grade Type: Letter Grade Only**

**Not Repeatable.**

**4 hours lecture. (48 hours total per quarter)**

Focus on training in observation and assessment techniques in natural settings using a range of tools. Conducting formal observations and assessments that will guide development of curriculum. Child portfolio development and preparation for teacher-parent conferences. Recording strategies, rating systems, and multiple assessment methods are explored.

**FHGE: Non-GE Transferable: CSU**

**CHLD 56N PRINCIPLES & PRACTICES OF TEACHING YOUNG CHILDREN** 4 Units

**Grade Type: Letter Grade Only**

**Not Repeatable.**

**4 hours lecture. (48 hours total per quarter)**

An examination of the underlying theoretical principles of developmentally appropriate practices applied to early childhood programs and environments. Emphasizing the key role of relationships, constructive adult-child interactions, and teaching strategies in supporting physical, social, creative and intellectual development of the child. Includes a review of the historical roots of early childhood programs and the evolution of the professional practices promoting advocacy, ethics and professional identity.

**FHGE: Non-GE Transferable: CSU**

**CHLD 59 WORKING WITH SCHOOL-AGE CHILDREN** 4 Units

**Grade Type: Letter Grade Only**

**Not Repeatable.**

**4 hours lecture. (48 hours total per quarter)**

Review of developmental characteristics of children ages five to twelve years. Role of adult in high quality school-age care. Planning and implementing developmentally appropriate curriculum and behavior management. Creating environment program standards and using quality standards guides for evaluation. Specifically intended for those who work or desire to work with school-age children in a variety of after-school, recreation and summer day camps.

**FHGE: Non-GE Transferable: CSU**

**CHLD 63N ARTISTIC & CREATIVE DEVELOPMENT** 3 Units

**Grade Type: Letter Grade Only**

**Not Repeatable.**

**3 hours lecture. (36 hours total per quarter)**

Artistic awareness and creativity in young children. Uses a variety of media to promote children's sensitivity to, and use of, various tactile arts, visual arts and performing arts. Role of the family and teacher in encouraging children's explorations. Emphasis on developmentally appropriate curriculum that encourages children's imagination, creative thinking and self-expression.

**FHGE: Non-GE Transferable: CSU**

**CHLD 71 PLANNING CREATIVE ART ACTIVITIES FOR CHILDREN 1 Unit**

**Grade Type: Letter Grade, the student may select Pass/No Pass Not Repeatable.**

**1 hour lecture. (12 hours total per quarter)**

Introduction to a variety of creative art activities for the young child. Exploration of a variety of tactile arts including paint, chalk, play dough, collage and crayons. Emphasis on developmentally appropriate curriculum development that encourages children's imagination, creative thinking and self-expression.

**FHGE: Non-GE Transferable: CSU**

**CHLD 72 LANGUAGE, LITERACY & THE DEVELOPING CHILD 3 Units**

**Grade Type: Letter Grade Only Not Repeatable.**

**3 hours lecture. (36 hours total per quarter)**

Development of language and speech, language acquisition theories, and emergent literacy in monolingual and young English language learners. Discussion of experiences and activities which promote oral and written language abilities. Focus on the developmental stages of receptive and expressive language, conversations, print awareness, phonemic awareness, reading and writing, bilingual development, and speech and language delays, children's literature and poetry. Students gain experience in using language art materials and planning language experiences for young children.

**FHGE: Non-GE Transferable: CSU**

**CHLD 73 MUSIC & MOVEMENT IN THE EARLY YEARS 2 Units**

**Grade Type: Letter Grade Only Not Repeatable.**

**2 hours lecture. (24 hours total per quarter)**

Music and movement activities and experiences that facilitate non-musician teachers to express ideas and implement expanded curriculum ideas for infants/toddlers, preschoolers and school aged children. Elements of presentation and basic concepts of teaching music and movement to promote the growth and development of the young children.

**FHGE: Non-GE Transferable: CSU**

**CHLD 74 SCIENCE & NATURE 1 Unit**

**Grade Type: Letter Grade, the student may select Pass/No Pass Not Repeatable.**

**1 hour lecture. (12 hours total per quarter)**

Developing science experiences for children. Activities involving plants, animals, and the physical properties of the environment. Emphasis on making science part of the everyday experience in early childhood program curriculum.

**FHGE: Non-GE Transferable: CSU**

**CHLD 79 CARING FOR INFANTS & TODDLERS IN GROUPS 3 Units**

**Grade Type: Letter Grade, the student may select Pass/No Pass Not Repeatable.**

**3 hours lecture. (36 hours total per quarter)**

Overview of infant and toddler development as it relates to caregiving practices in group settings. Observation and analysis of infant/toddler classrooms. Influence of responsive and culturally sensitive relationships with children and their parents on children's development. Effects of social and physical environments on program practices, child learning and behavior.

**FHGE: Non-GE Transferable: CSU**

**CHLD 82 PLANNING CREATIVE DRAMATICS 1 Unit**

**Grade Type: Letter Grade, the student may select Pass/No Pass Not Repeatable.**

**1 hour lecture. (12 hours total per quarter)**

Introduction to creative dramatics for the child; dramatic play, puppetry, role playing, acting out stories; how to implement creative dramatics. The emergence of creativity, imagining, and empathizing with others. Techniques for promoting children's sensitivity to, and use of, various dramatic art forms. Role of the parent and teacher in facilitating children's explorations.

**FHGE: Non-GE Transferable: CSU**

**CHLD 86A MENTORING THE EARLY CARE & EDUCATION PROFESSIONAL 4 Units**

**Advisory: CHLD 1, 88; a minimum of one other three-unit course in Child Development.**

**Grade Type: Letter Grade Only**

**Not Repeatable.**

**4 hours lecture. (48 hours total per quarter)**

Prepares the student for the role of mentoring student teachers, assistant teachers, parents, and volunteers in early care and education settings. Emphasis on the role of teachers supervising other adults while simultaneously addressing the classroom needs of the early care and education program. Development of the mentor in supporting the professional growth of the teaching adult. Fulfills the Child Development permit adult supervision course requirement.

**FHGE: Non-GE Transferable: CSU**

**CHLD 86B PRACTICUM STUDENT TEACHING IN AN EARLY CHILDHOOD PROGRAM 5 Units**

**Prerequisites: CHLD 1, 56N, 88 and 89.**

**Grade Type: Letter Grade, the student may select Pass/No Pass**

**Not Repeatable.**

**2 hours lecture, 10 hours laboratory. (144 hours total per quarter)**

A demonstration of developmentally appropriate early childhood teaching competencies under guided supervision. Students will utilize practical classroom experiences to make connections between theory and practice, develop professional behaviors, and build a comprehensive understanding of children and families. Child centered, play-oriented approaches to teaching, learning, and assessment; and knowledge of curriculum content areas will be emphasized as student teachers design, implement and evaluate experiences that promote positive development and learning for all young children.

**FHGE: Non-GE Transferable: CSU**

**CHLD 88 CHILD, FAMILY & COMMUNITY 4 Units**

**Grade Type: Letter Grade Only**

**Not Repeatable.**

**4 hours lecture. (48 hours total per quarter)**

An examination of the developing child in a societal context focusing on interrelationship of family, school, and community and emphasizes historical and sociocultural factors. The processes of socialization and identity development will be highlighted, showing the importance of respectful, reciprocal relationships that support and empower families.

**FHGE: Non-GE Transferable: CSU**

**CHLD 88B POSITIVE BEHAVIOR MANAGEMENT 2 Units**

**Grade Type: Letter Grade, the student may select Pass/No Pass Not Repeatable.**

**2 hours lecture. (24 hours total per quarter)**

Introduction to a range of positive guidance techniques that can be used with infants, toddlers, pre-school, and school-aged children. Emphasis on selection of appropriate positive guidance strategies to meet the needs of each individual child.

**FHGE: Non-GE Transferable: CSU**

**CHLD 89 CURRICULUM FOR EARLY CARE & EDUCATION PROGRAMS 4 Units**

**Advisory:** CHLD 1 or 2.  
**Grade Type:** Letter Grade, the student may select Pass/No Pass  
**Not Repeatable.**

**4 hours lecture. (48 hours total per quarter)**

An overview of knowledge and skills related to providing appropriate curriculum and environments for infants and young children. Students will examine the teacher's role in supporting development by using observation and assessment strategies and emphasizing the essential role of play. An overview of content areas will include but not be limited to: language and literacy, social and emotional learning, sensory learning, art and creativity, math and science.

**FHGE:** Non-GE **Transferable:** CSU

**CHLD 90B ADMINISTRATION & SUPERVISION OF CHILDREN'S PROGRAMS PART I 4 Units**

**Advisory:** Completion of 9 units of child development courses.  
**Grade Type:** Letter Grade Only  
**Not Repeatable.**

**4 hours lecture. (48 hours total per quarter)**

A study of the development of the components of a quality early care and education program including roles and responsibilities of the director, types of programs, philosophy development, organizational structure, licensing regulations, advisory boards, facility design and set up, budgets and funding.

**FHGE:** Non-GE **Transferable:** CSU

**CHLD 90C ADMINISTRATION & SUPERVISION OF CHILDREN'S PROGRAMS PART II 4 Units**

**Advisory:** Completion of 9 units of child development courses.  
**Grade Type:** Letter Grade Only  
**Not Repeatable.**

**4 hours lecture. (48 hours total per quarter)**

Study of the development of the components of a quality early care and education program including the administrator's responsibilities in equipping the program, staffing, marketing the program, selecting, grouping and enrolling the children. Also included are the administrative responsibilities of food management, health and safety programs, evaluating center components, staff professional development, working with families, volunteers and the community.

**FHGE:** Non-GE **Transferable:** CSU

**CHLD 91 ADMINISTRATION & SUPERVISION: ADULT SUPERVISION & LEADERSHIP 4 Units**

**Advisory:** Completion of 9 units of child development courses.  
**Grade Type:** Letter Grade Only  
**Not Repeatable.**

**4 hours lecture. (48 hours total per quarter)**

Methods and principles of supervising adults in early care and education programs. Study of the supervisory process, professional conduct, communication, assessment, organizational climate, leadership styles, ethics and career development. Fulfills requirement of CA Child Development Permit Matrix and Mentor Teacher course.

**FHGE:** Non-GE **Transferable:** CSU

**CHLD 95 HEALTH, SAFETY & NUTRITION IN CHILDREN'S PROGRAMS 4 Units**

**Grade Type:** Letter Grade Only  
**Not Repeatable.**

**4 hours lecture. (48 hours total per quarter)**

Introduction to the laws, regulations, standards, policies and procedures and early childhood curriculum related to child health safety and nutrition. The key components that ensure physical health, mental health and safety for both children and staff will be identified along with the importance of collaboration with families and health professionals. Focus on integrating the concepts into everyday planning and program development.

**FHGE:** Non-GE **Transferable:** CSU

**COMMUNICATION STUDIES**

Fine Arts and Communication  
650.949.7262 foothill.edu/fa

**COMM 1A PUBLIC SPEAKING 5 Units**

**Advisory:** Demonstrated proficiency in English by placement as determined by score on the English placement test OR through an equivalent placement process OR completion of ESLL 125 & ESLL 249; not open to students with credit in COMM 1AH or SPCH 1A.  
**Grade Type:** Letter Grade, the student may select Pass/No Pass  
**Not Repeatable.**

**5 hours lecture. (60 hours total per quarter)**

Introduction to the analysis, theory and history of rhetoric and public address; application of principles of public address to the preparation and delivery of public speeches.

**FHGE:** Communication & Analytical Thinking **Transferable:** UC/CSU

**COMM 1AH HONORS PUBLIC SPEAKING 5 Units**

**Prerequisite:** Honors Institute participant.  
**Advisory:** Not open to students with credit in COMM 1A or SPCH 1A.

**Grade Type:** Letter Grade, the student may select Pass/No Pass  
**Not Repeatable.**

**5 hours lecture. (60 hours total per quarter)**

Introduction to the analysis of the history of rhetoric and public address; application of principles of public address to the preparation and delivery of public speeches in front of a live audience. Particular attention is paid to development of oral communication and listening skills. The honors section provides accelerated students with additional academic challenge in the areas of research, discussion, and intellectual exploration of ideas. Expanded opportunities include, but are not limited to, in-depth examination of speech text within historical context, self-reflection speeches and papers, creative individual and group projects, historical oral interpretation, and enrichment activities.

**FHGE:** Communication & Analytical Thinking **Transferable:** UC/CSU

**COMM 1B ARGUMENTATION & PERSUASION 5 Units**

**Advisory:** Demonstrated proficiency in English by placement as determined by score on the English placement test OR through an equivalent placement process OR completion of ESLL 125 & ESLL 249; not open to students with credit in COMM 1BH or SPCH 1B.  
**Grade Type:** Letter Grade, the student may select Pass/No Pass  
**Not Repeatable.**

**5 hours lecture. (60 hours total per quarter)**

The study and practice of argumentation and persuasion. Analysis of rhetorical theory and application of methods of effective persuasion. Knowledge of the structure and format of various types of disputation and participation in in-class speech activities.

**FHGE:** Communication & Analytical Thinking **Transferable:** UC/CSU

**COMM 1BH HONORS ARGUMENTATION & PERSUASION 5 Units**

**Prerequisite:** Honors Institute participant.  
**Advisory:** Not open to students with credit in COMM 1B or SPCH 1B.

**Grade Type:** Letter Grade, the student may select Pass/No Pass  
**Not Repeatable.**

**5 hours lecture. (60 hours total per quarter)**

The study and practice of argumentation and persuasion. Analysis of rhetorical theory and application of methods of effective persuasion. Knowledge of the structure and format of various types of disputation and participation in in-class speech activities. The honors section provides accelerated students with academic enrichment emphasizing rhetorical analysis and critical thinking. Expanded opportunities include, but are not limited to, examination of political speech in historical context, student-initiated and student-led discussion, self-reflection paper, and creative group project.

**FHGE:** Communication & Analytical Thinking **Transferable:** UC/CSU

**COMM 2 INTERPERSONAL COMMUNICATION 5 Units**

**Advisory:** Demonstrated proficiency in English by placement as determined by score on the English placement test OR through an equivalent placement process OR completion of ESLL 125 & ESLL 249; not open to students with credit in SPCH 2.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**5 hours lecture. (60 hours total per quarter)**

Experience in interpersonal communication, including discussion, the perception process, critical thinking and reasoning, verbal and nonverbal modes of communication, intercultural communication, and the effect of communication on individuals and society. Faculty and peer feedback on critically evaluated exercises.

**FHGE: Comm, Lifelong Transferable: UC/CSU**

**COMM 3 INTRODUCTION TO COMMUNICATION STUDIES 5 Units**

**Advisory:** Demonstrated proficiency in English by placement as determined by score on the English placement test OR through an equivalent placement process OR completion of ESLL 125 & ESLL 249; not open to students with credit in SPCH 3.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**5 hours lecture. (60 hours total per quarter)**

Exploration of the nature and history of human communication in multiple forms and contexts. Critical examination of human communication theories, methods, and processes. Overview of research methods for the evaluation of human communication phenomena. Discussion of ethical perspectives and intercultural aspects of communication. Application of communication theory through critically evaluated exercises and oral presentations.

**FHGE: Communication & Analytical Thinking Transferable: UC/CSU**

**COMM 4 GROUP DISCUSSION 5 Units**

**Advisory:** Demonstrated proficiency in English by placement as determined by score on the English placement test OR through an equivalent placement process OR completion of ESLL 125 & ESLL 249; not open to students with credit in SPCH 4.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**5 hours lecture. (60 hours total per quarter)**

Analysis of the principles of group interaction and decision making. Participation in discussion groups designed to share information, solve problems and reach consensus.

**FHGE: Communication & Analytical Thinking Transferable: UC/CSU**

**COMM 10 GENDER, COMMUNICATION & CULTURE 5 Units**

**Advisory:** Demonstrated proficiency in English by placement as determined by score on the English placement test OR through an equivalent placement process OR completion of ESLL 125 & ESLL 249; not open to students with credit in SPCH 10.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**5 hours lecture. (60 hours total per quarter)**

A comparative and integrative study of the interactive relationship between communication, gender, and culture in American society. Emphasis on the multiple ways communication in interpersonal relationships, educational institutions, organizations, media, and society in general creates and perpetuates gender roles. Analysis of gendered histories, traditions, and practices which normalize certain expectations, values, meanings and patterns of behavior across cultural/racial lines (Asian Americans, African Americans, European Americans, Latino Americans, Native Americans, Gays, Lesbians, Bi-sexual and Transgendered peoples).

**FHGE: Amer, Lifelong Transferable: UC/CSU**

**COMM 12 INTERCULTURAL COMMUNICATION 5 Units**

**Advisory:** Demonstrated proficiency in English by placement as determined by score on the English placement test OR through an equivalent placement process OR completion of ESLL 125 & ESLL 249; not open to students with credit in SPCH 12.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**5 hours lecture. (60 hours total per quarter)**

A comparative and integrative study of intercultural communication in American society. Analysis of cultural histories, cultural concepts, language, ethnic perspectives, perceptions, symbols and roles as they facilitate or hinder effective verbal and nonverbal interaction across cultural lines. Examination of cultural identities which influence thinking and behavior, such as race, class, gender, ethnicity, sexual orientation, nationality, age, appearance and physical ability.

**FHGE: Amer, Lifelong Transferable: UC/CSU**

**COMM 54A FORENSIC SPEECH 5 Units**

**Advisory:** Demonstrated proficiency in English by placement as determined by score on the English placement test OR through an equivalent placement process OR completion of ESLL 125 & ESLL 249; not open to students with credit in SPCH 54.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**5 hours lecture. (60 hours total per quarter)**

Training in principles of forensic speech, focusing on both individual prepared and individual extemporaneous oratory. Speech formats include impromptu, informative and persuasive speech. Study of the history of various speech formats and instruction in speech criticism.

**FHGE: Communication & Analytical Thinking Transferable: CSU**

**COMM 54B FORENSIC DEBATE 5 Units**

**Advisory:** Demonstrated proficiency in English by placement as determined by score on the English placement test OR through an equivalent placement process OR completion of ESLL 125 & ESLL 249; not open to students with credit in COMM 54X.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**5 hours lecture. (60 hours total per quarter)**

Training in principles of debate; preparation for extemporaneous speaking and competitive debate. Students will receive instruction in speech delivery, teamwork, case preparation, rebuttal strategy and proper oral citation of sources. Includes historical study of forensic debate in a variety of formats.

**FHGE: Non-GE Transferable: CSU**

**COMM 55 CAREER & LEADERSHIP COMMUNICATION IN THE GLOBAL WORKPLACE 5 Units**

**Advisory:** Demonstrated proficiency in English by placement as determined by score on the English placement test OR through an equivalent placement process OR completion of ESLL 125 & ESLL 249; not open to students with credit in SPCH 55.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**5 hours lecture. (60 hours total per quarter)**

Introduction to communication in organizational, career, leadership and global contexts. Interviewing, interpersonal and intercultural communication, group interactions, professional presentations and leadership development. Application of theories and skills through critically evaluated exercises.

**FHGE: Comm, Lifelong Transferable: CSU**

**COMM 60 COMMUNICATION THEORY & PRACTICE WITH AGING POPULATIONS** 5 Units

Advisory: Demonstrated proficiency in English by placement as determined by score on the English placement test OR through an equivalent placement process OR completion of ESLL 125 & ESLL 249.

Grade Type: Letter Grade Only  
Not Repeatable.

5 hours lecture. (60 hours total per quarter)

Introduction to communication in family and older adult contexts. Family communication theories, intergenerational communication, communication with older adults, and communication with disoriented older adults. Application of theories and skills through critically evaluated exercises.

FHGE: Comm, Lifelong Transferable: CSU

**COMM 70R INDEPENDENT STUDY IN** 1 Unit  
**COMM 71R COMMUNICATION STUDIES** 2 Units  
**COMM 72R** 3 Units  
**COMM 73R** 4 Units

Grade Type: Letter Grade, the student may select Pass/No Pass  
Not Repeatable.

3-12 hours laboratory per week. (36-144 hours total per quarter)

Provides an opportunity for the student to expand their studies in Communication Studies beyond the classroom by completing a project or an assignment arranged by agreement between the student and instructor. The student is required to contract with the instructor to determine the scope of assignment and the unit value assigned for successful completion. Students may take a maximum of 6 units of Independent Study per department.

FHGE: Non-GE Transferable: CSU

**C S 1B INTERMEDIATE SOFTWARE DESIGN IN JAVA** 4.5 Units

Prerequisite: C S 1A or 1AH.

Advisory: Demonstrated proficiency in English by placement as determined by score on the English placement test OR through an equivalent placement process OR completion of ESLL 125 & ESLL 249.

Grade Type: Letter Grade, the student may select Pass/No Pass  
Not Repeatable.

4 hours lecture, 2 hours laboratory. (72 hours total per quarter)

Systematic treatment of intermediate concepts in computer science through the study of Java object-oriented programming (OOP). Coding topics include Java interfaces, class extension, generics, the Java collections framework, multi-dimensional arrays and file I/O. Concept topics include OOP project design, inheritance, polymorphism, method chaining, functional programming, linked-lists, FIFOs, LIFOs, event-driven programming and guarded code.

FHGE: Communication & Analytical Thinking Transferable: UC/CSU

**C S 1C ADVANCED DATA STRUCTURES & ALGORITHMS IN JAVA** 4.5 Units

Prerequisite: C S 1B.

Advisory: One of the following: ENGL 1A, 1AH, 1S & 1T or ESLL 26.

Grade Type: Letter Grade, the student may select Pass/No Pass  
Not Repeatable.

4 hours lecture, 2 hours laboratory. (72 hours total per quarter)

Systematic treatment of advanced data structures, algorithm analysis and abstract data types in the Java programming language. Coding topics include the development of ADTs from scratch, building ADTs on top of the java.util collections, array lists, linked lists, trees, maps, hashing functions and graphs. Concept topics include searching, big-O time complexity, analysis of all major sorting techniques, top down splaying, AVL tree balancing, shortest path algorithms, minimum spanning trees and maximum flow graphs.

FHGE: Communication & Analytical Thinking Transferable: UC/CSU

**C S 1M INTERMEDIATE ALGORITHM & DATA STRUCTURE METHODOLOGIES IN JAVA** 4.5 Units

Prerequisite: C S 1A or 1AH.

Grade Type: Letter Grade, the student may select Pass/No Pass  
Not Repeatable.

4 hours lecture, 2 hours laboratory. (72 hours total per quarter)

Systematic treatment of intermediate data structures, algorithm analysis and abstract data types in the Java programming language intended for Computer Science transfer majors. Coding topics include large program software engineering design, multi-dimensional arrays, string processing, primitives, compound types, and allocation of instance and static data. Concept topics include dynamic memory, inheritance, polymorphism, hierarchies, recursion, linked-lists, stacks, queues, trees and hash tables.

FHGE: Non-GE Transferable: UC/CSU

**C S 2A OBJECT-ORIENTED PROGRAMMING METHODOLOGIES IN C++** 4.5 Units

Advisory: Satisfactory score on the mathematics placement test or MATH 105 or 108; not open to students with credit in C S 2AH.

Grade Type: Letter Grade, the student may select Pass/No Pass  
Not Repeatable.

4 hours lecture, 2 hours laboratory. (72 hours total per quarter)

Systematic introduction to fundamental concepts of computer science through the study of the C++ programming language. Coding topics include C++ control structures, objects, global-scope functions, class methods, arrays and elementary data structures. Concept topics include algorithms, recursion, data abstraction, problem solving strategies, code style, documentation, debugging techniques and testing.

FHGE: Communication & Analytical Thinking Transferable: UC/CSU

**COMPUTER SCIENCE**

Physical Sciences, Mathematics & Engineering  
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**C S 1A OBJECT-ORIENTED PROGRAMMING METHODOLOGIES IN JAVA** 4.5 Units

Advisory: Satisfactory score on the mathematics placement test or MATH 105 or 108; not open to students with credit in C S 1AH.

Grade Type: Letter Grade, the student may select Pass/No Pass  
Not Repeatable.

4 hours lecture, 2 hours laboratory. (72 hours total per quarter)

Systematic introduction to fundamental concepts of computer science through the study of the Java programming language. Coding topics include Java control structures, classes, methods, arrays, graphical user interfaces and elementary data structures. Concept topics include algorithms, recursion, data abstraction, problem solving strategies, code style, documentation, debugging techniques and testing.

FHGE: Communication & Analytical Thinking Transferable: UC/CSU

**C S 1AH HONORS OBJECT-ORIENTED PROGRAMMING METHODOLOGIES IN JAVA** 4.5 Units

Prerequisite: Honors Institute participant.

Advisory: Satisfactory score on the mathematics placement test or MATH 105 or 108; not open to students with credit in C S 1A.

Grade Type: Letter Grade, the student may select Pass/No Pass  
Not Repeatable.

4 hours lecture, 2 hours laboratory. (72 hours total per quarter)

Systematic introduction to fundamental concepts of computer science through the study of the Java programming language. Coding topics include Java control structures, classes, methods, arrays, graphical user interfaces and elementary data structures. Concept topics include algorithms, recursion, data abstraction, problem solving strategies, code style, documentation, debugging techniques and testing. Honors work emphasizes a deeper study of computer science via discourse, projects and techniques that exercise the powerful tools available to the computer scientist in general, and Java programmers in particular.

FHGE: Communication & Analytical Thinking Transferable: UC/CSU

**C S 2AH HONORS OBJECT-ORIENTED PROGRAMMING METHODOLOGIES IN C++ 4.5 Units**

**Prerequisite:** Honors Institute participant.

**Advisory:** Satisfactory score on the mathematics placement test or MATH 105 or 108; not open to students with credit in C S 2A.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**4 hours lecture, 2 hours laboratory. (72 hours total per quarter)**

Systematic introduction to fundamental concepts of computer science through the study of the C++ programming language. Coding topics include C++ control structures, objects, global-scope functions, class methods, arrays and elementary data structures. Concept topics include algorithms, recursion, data abstraction, problem solving strategies, code style, documentation, debugging techniques and testing. Honors work emphasizes a deeper study of computer science via discourse, projects and techniques that exercise the powerful tools available to the computer scientist in general, and C++ programmers in particular.

**FHGE: Communication & Analytical Thinking Transferable: UC/CSU**

**C S 2B INTERMEDIATE SOFTWARE DESIGN IN C++ 4.5 Units**

**Prerequisite:** C S 2A or 2AH.

**Advisory:** Demonstrated proficiency in English by placement as determined by score on the English placement test OR through an equivalent placement process OR completion of ESLL 125 & ESLL 249.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**4 hours lecture, 2 hours laboratory. (72 hours total per quarter)**

Systematic treatment of intermediate concepts in computer science through the study of C++ object-oriented programming (OOP). Coding topics include C++ derived classes, class templates, function templates, virtual functions, operator overloading, an introduction to the Standard Template Library, multiple inheritance, pointers, dynamic memory allocation and file I/O. Concept topics include OOP project design, inheritance, polymorphism, method chaining, functional programming, linked-lists, FIFOs, LIFOs, events in GUIs and guarded code.

**FHGE: Communication & Analytical Thinking Transferable: UC/CSU**

**C S 2C ADVANCED DATA STRUCTURES & ALGORITHMS IN C++ 4.5 Units**

**Prerequisite:** C S 2B.

**Advisory:** One of the following: ENGL 1A, 1AH, 1S & 1T or ESLL 26.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**4 hours lecture, 2 hours laboratory. (72 hours total per quarter)**

Systematic treatment of advanced data structures, algorithm analysis and abstract data types in the C++ programming language. Coding topics include the development of ADTs from scratch, building ADTs on top of the STL templates, vectors, lists, trees, maps, hashing functions and graphs. Concept topics include searching, big-O time complexity, analysis of all major sorting techniques, top down splaying, AVL tree balancing, shortest path algorithms, minimum spanning trees and maximum flow graphs.

**FHGE: Communication & Analytical Thinking Transferable: UC/CSU**

**C S 2M INTERMEDIATE ALGORITHM & DATA STRUCTURE METHODOLOGIES IN C++ 4.5 Units**

**Prerequisite:** C S 2A or 2AH.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**4 hours lecture, 2 hours laboratory. (72 hours total per quarter)**

Systematic treatment of intermediate data structures, algorithm analysis and abstract data types in the C++ programming language intended for Computer Science transfer majors. Coding topics include large program software engineering design, multi-dimensional arrays, string processing, primitives, compound types, and allocation of instance and static data. Concept topics include dynamic memory, inheritance, polymorphism, hierarchies, recursion, linked-lists, stacks, queues, trees and hash tables.

**FHGE: Non-GE Transferable: UC/CSU**

**C S 3A OBJECT-ORIENTED PROGRAMMING METHODOLOGIES IN PYTHON 4.5 Units**

**Advisory:** Satisfactory score on the mathematics placement test or MATH 105 or 108.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**4 hours lecture, 2 hours laboratory. (72 hours total per quarter)**

Systematic introduction to fundamental concepts of computer science through the study of the Python programming language. Coding topics include control structures, functions, classes, string processing, lists, tuples, dictionaries, working with files, and elementary graphics. Concept topics include algorithms, recursion, data abstraction, problem solving strategies, code style, documentation, debugging techniques and testing.

**FHGE: Communication & Analytical Thinking Transferable: UC/CSU**

**C S 10 COMPUTER ARCHITECTURE & ORGANIZATION 4.5 Units**

**Prerequisite:** One of the following: C S 1A, 1AH, 2A or 2AH.

**Advisory:** C S 1C or 2C.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**4 hours lecture, 2 hours laboratory. (72 hours total per quarter)**

Introduction to the organization, architecture and machine-level programming of computer systems. Topics include mapping of high-level language constructs into assembly code, internal data representations, numerical computation, virtual memory, pipelines, caching, multitasking, MIPS architecture, MIPA assembly language code, interrupts, input/output, peripheral storage processing, and comparison of CISC (Intel) and RISC (MIPS) instruction sets.

**FHGE: Non-GE Transferable: UC/CSU**

**C S 18 DISCRETE MATHEMATICS 5 Units**

**Prerequisites:** C S 1A or 1AH; satisfactory score on the mathematics placement test or MATH 48C.

**Advisory:** One of the following: ENGL 1A, 1AH, 1S & 1T or ESLL 26; not open to students with credit in CIS 18 or MATH 22.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**5 hours lecture. (60 hours total per quarter)**

Discrete mathematics: set theory, logic, Boolean algebra, methods of proof, mathematical induction, number theory, discrete probability, combinatorics, functions, relations, recursion, algorithm efficiencies, graphs, trees.

**FHGE: Communication & Analytical Thinking Transferable: UC/CSU**

**C S 19A THEORY OF QUANTUM COMPUTING I 5 Units**

**Formerly:** C S 83A

**Advisory:** C S 1B, 18 and MATH 1B; not open to students with credit in C S 83A.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**5 hours lecture. (60 hours total per quarter)**

Mathematical tools of quantum information theory and provides understanding and design elementary quantum circuits and algorithms. The first of a sequence, it develops the quantum mechanical foundation needed to understand how quantum computers can beat ordinary computers in certain problem classes by using quantum entanglement and teleportation under the ideal condition of a noiseless channel. The endpoint of the course is a working knowledge of the quantum Fourier transform and Shor algorithm, which can be used to break RSA encryption, the basis of current Internet security. No prior knowledge of quantum mechanics is required.

**FHGE: Non-GE Transferable: UC/CSU**



**C S 19B THEORY OF QUANTUM COMPUTING II** 5 Units

Formerly: C S 83B

**Advisory:** A prior course in quantum computing such as C S 19A; not open to students with credit in C S 83B.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**5 hours lecture. (60 hours total per quarter)**

Establishes the basic results of Turing machines, algorithm complexity and non-orthogonal measurements as applied to quantum entanglement. The density-operator formulation of quantum mechanics is developed to provide a tool for modeling entangled states in noisy quantum channels. The course introduces quantum search algorithms, distance measures, bounds for fidelity and topological quantum computers.

**FHGE: Non-GE Transferable: UC/CSU**

**C S 20A PROGRAMMING IN C#** 4.5 Units

**Advisory:** One of the following: C S 1A, 1AH, 2A, 2AH or equivalent.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**4 hours lecture, 2 hours laboratory. (72 hours total per quarter)**

Introduction to the C# programming language and the .NET platform. Topics include object oriented programming, graphical user interfaces, elementary data structures, algorithms, recursion, data abstraction, code style, documentation, debugging techniques and testing.

**FHGE: Non-GE Transferable: UC/CSU**

**C S 21A PYTHON FOR PROGRAMMERS** 4.5 Units

**Advisory:** One of the following: C S 1A, 1AH, 2A, 2AH, 3A or equivalent.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**4 hours lecture, 2 hours laboratory. (72 hours total per quarter)**

Introduction to the Python language and environment. Covers topics including object oriented programming, elementary data structures, modules, algorithms, recursion, data abstraction, code style, documentation, debugging techniques and testing.

**FHGE: Non-GE Transferable: UC/CSU**

**C S 21B INTERMEDIATE PYTHON PROGRAMMING** 4.5 Units

**Advisory:** C S 3A or 21A or relevant experience.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**4 hours lecture, 2 hours laboratory. (72 hours total per quarter)**

This course builds on the student's prior knowledge of the Python programming language by offering a more in-depth and advanced approach to building effective Python applications. Specific topics include user interfaces, networked applications, databases, multithreading and regular expressions. The course reinforces object oriented design, thorough documentation, testing and conventional programming style.

**FHGE: Non-GE Transferable: UC/CSU**

**C S 22A JAVASCRIPT FOR PROGRAMMERS** 4.5 Units

**Advisory:** One of the following: C S 1A, 1AH, 2A, 2AH or equivalent; knowledge of HTML and CSS.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**4 hours lecture, 2 hours laboratory. (72 hours total per quarter)**

Introduction to object oriented programming in JavaScript. Topics include: client and server side programming, Model/View/Controller architecture, current tools and testing methods, interaction with HTML and CSS, Document Object Model, XML and JSON. Students will have practice writing programs for mobile web browsers and creating dynamic web pages including animation.

**FHGE: Non-GE Transferable: UC/CSU**

**C S 26A RUBY & FUNCTIONAL PROGRAMMING** 4.5 Units

Formerly: C S 85A

**Advisory:** One of the following: C S 1A, 1AH, 2A, 2AH; not open to students with credit in C S 85A.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**4 hours lecture, 2 hours laboratory. (72 hours total per quarter)**

Introduction to functional programming languages using Ruby as an educational and practical development environment. Students will learn how to create programs that use the functional paradigm while obeying the object-oriented structure inherent in the language. Many examples and topics will be covered including database-driven web applications using the Rails framework.

**FHGE: Non-GE Transferable: UC/CSU**

**C S 30A INTRODUCTION TO LINUX** 4.5 Units

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**4 hours lecture, 2 hours laboratory. (72 hours total per quarter)**

Introduction to the Linux operating system primarily focused on command line usage. Covers the history, kernel, file systems, shells and user utilities. Also introduces students to the fundamentals of shell programming, processes, communications, and basic security.

**FHGE: Non-GE Transferable: UC/CSU**

**C S 30B LINUX SHELL PROGRAMMING** 4.5 Units

**Advisory:** C S 30A or equivalent.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**4 hours lecture, 2 hours laboratory. (72 hours total per quarter)**

Linux shell script programming using the Bourne Again shell programming language (bash) and Linux utilities to create practical shell scripts. Topics covered include customizing the environment, running and writing scripts, variables, loops, functions, text processing and debugging.

**FHGE: Non-GE Transferable: UC/CSU**

**C S 30C LINUX SYSTEM ADMINISTRATION** 4.5 Units

**Advisory:** C S 30A and 30B.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**4 hours lecture, 2 hours laboratory. (72 hours total per quarter)**

Introduction to basic system administration of Linux systems. Overview of basic PC hardware, system boot process, administration utilities, and management of user accounts, file systems, basic networking, printing, security, accounting and logging. Software install and removal using source code and package managers. Kernel updating and boot managers.

**FHGE: Non-GE Transferable: UC/CSU**

**C S 31A INTRODUCTION TO DATABASE MANAGEMENT SYSTEMS** 4.5 Units

**Advisory:** One of the following: C S 1A, 1AH, 2A, 2AH or equivalent.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**4 hours lecture, 2 hours laboratory. (72 hours total per quarter)**

Introduction to database design and use of database management systems for applications. Topics include database architecture, comparison to file-based systems, historical data models, conceptual model; integrity constraints and triggers; functional dependencies and normal forms; relational model, algebra, database processing and Structured Query Language (SQL), database access from Applications-Embedded SQL, JDBC, Cursors, Dynamic SQL, Stored Procedures. Emerging trends will be studied, such as NoSQL databases, Internet & Databases and On-Line Analytical Processing (OLAP). A team project that builds a database application for a real-world scenario is an important element of the course.

**FHGE: Non-GE Transferable: UC/CSU**

**C S 40A SOFTWARE ENGINEERING  
METHODOLOGIES 4.5 Units**

**Advisory:** C S 1B or 2B.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**4 hours lecture, 2 hours laboratory. (72 hours total per quarter)**

A collaboration-oriented course that trains students in the techniques currently used by software engineers to develop reliable products in an efficient manner. The course emphasizes Agile methods and a variety of tools used during the software development lifecycle.

**FHGE: Non-GE Transferable: UC/CSU**

**C S 49 FOUNDATIONS OF COMPUTER  
PROGRAMMING 2 Units**

**Advisory:** Satisfactory score on the mathematics placement test or MATH 105 or 108; concurrent enrollment in ESLL 125 or ENGL 209.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**2 hours lecture, 1 hour laboratory. (36 hours total per quarter)**

Introduction to basic computer programming concepts using an object-oriented language. Intended for students interested in C S 1A or 2A, but would like a more gradual entry to computing foundations. Coding topics include hands-on practice with software engineering tools, simple programs, variables, control structures, functions, and input / output. Concept topics include the comprehension of specifications, adherence to style guidelines, and the importance of testing to ensure that programs are usable, robust and modifiable.

**FHGE: Non-GE Transferable: UC/CSU**

**C S 50A NETWORK BASICS (CCNA) 4.5 Units**

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**4 hours lecture, 2 hours laboratory. (72 hours total per quarter)**

Introduction to the architecture, structure, functions, components, and models of the Internet and other computer networks. The principles and structure of IP addressing and the fundamentals of Ethernet concepts, media, and operations are introduced to provide a foundation for the curriculum. Students will be able to build simple LANs, perform basic configurations for routers and switches, and implement IP addressing schemes.

**FHGE: Non-GE Transferable: CSU**

**C S 50B ROUTING & SWITCHING  
ESSENTIALS (CCNA) 4.5 Units**

**Advisory:** C S 50A.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**4 hours lecture, 2 hours laboratory. (72 hours total per quarter)**

This course describes the architecture, components, and operations of routers and switches in a small network. Students learn how to configure a router and a switch for basic functionality. By the end of this course students will be able to configure and troubleshoot routers and switches and resolve common issues with RIPv1, RIPv2, single-area and multi-area OSPF, virtual LANs, and inter-VLAN routing in both IPv4 and IPv6 networks. This course is preparation for the CCENT and CCNA certification exams. This course describes the architecture, components, and operations of routers, and explains the principles of routing and routing protocols. Students will be given the opportunity to configure a router for basic and advanced functionality. Students will be able to configure and troubleshoot routers and resolve common issues with RIPv1, RIPv2, EIGRP, and OSPF in both IPv4 and IPv6 network.

**FHGE: Non-GE Transferable: CSU**

**C S 50C SCALING LOCAL AREA  
NETWORKS (CCNA) 4.5 Units**

**Advisory:** C S 50A.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**4 hours lecture, 2 hours laboratory. (72 hours total per quarter)**

This course describes the architecture, components, and operations of routers and switches in larger and more complex networks. Students learn how to configure routers and switches for advanced functionality. By the end of this course, students will be able to configure and troubleshoot routers and switches and resolve common issues with OSPF, EIGRP, and STP in both IPv4 and IPv6 networks. Students will also develop the knowledge and skills needed to implement a WLAN in a small-to-medium network.

**FHGE: Non-GE Transferable: CSU**

**C S 50D CONNECTING NETWORKS-  
WANS (CCNA) 4.5 Units**

**Advisory:** C S 50A, 50B and 50C.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**4 hours lecture, 2 hours laboratory. (72 hours total per quarter)**

This course discusses the WAN technologies and network services required by converged applications in a complex network. The course enables students to understand the selection criteria of network devices and WAN technologies to meet network requirements. Students learn how to configure and troubleshoot network devices and resolve common issues with data link protocols. Students will also develop the knowledge and skills needed to implement IPsec and virtual private network (VPN) operations in a complex network.

**FHGE: Non-GE Transferable: CSU**

**C S 50E INTRODUCTION TO IP  
NETWORK SECURITY 4.5 Units**

**Advisory:** C S 50A, 50B, 50C and 50D or equivalent knowledge and skills.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**4 hours lecture, 2 hours laboratory. (72 hours total per quarter)**

Next step for students who want to enhance their CCNA-level skill set and help meet the growing demand for network security professionals. Provides an introduction to the core security concepts and skills needed for the installation, troubleshooting, and monitoring of network devices to maintain the integrity, confidentiality, and availability of data and devices. Prepares students for entry-level security career opportunities and the globally recognized Cisco CCNA Security certification.

**FHGE: Non-GE Transferable: CSU**

**C S 52A ADVANCED IP ROUTING  
PROTOCOLS & SERVICES (CCNP) 4.5 Units**

**Advisory:** C S 50B or equivalent experience.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**4 hours lecture, 2 hours laboratory. (72 hours total per quarter)**

The ROUTE course is designed to help students advance their knowledge and skills and work independently on complex network solutions. Students will plan, configure and verify the implementation of secure enterprise LAN and WAN routing solutions using a range of routing protocols. Configuration of solutions to support branch offices and mobile workers will be presented. This course uses the official Cisco Academy CCNP ROUTE curriculum and is designed to provide preparation for the CCNP ROUTE certification exam.

**FHGE: Non-GE Transferable: CSU**

**C S 52B      ADVANCED SWITCHING & CAMPUS LAN DESIGN (CCNP)      4.5 Units**

**Advisory:** C S 50C or equivalent experience.  
**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**4 hours lecture, 2 hours laboratory. (72 hours total per quarter)**  
The course provides the knowledge and skills necessary to plan, configure and verify the implementation of complex enterprise switching solutions using Cisco's Campus Enterprise Architecture. Secure integration of VLANs, WLANs, voice and video into campus networks is also provided. The material is presented in a lecture and discussion format supplemented by comprehensive laboratory exercises. This course uses the official Cisco Academy CCNP SWITCH curriculum and is designed to provide preparation for the CCNP SWITCH certification exam.  
**FHGE: Non-GE    Transferable: CSU**

**C S 52C      ADVANCED NETWORK TROUBLESHOOTING (CCNP)      4.5 Units**

**Advisory:** C S 52A, 52B or equivalent experience.  
**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**4 hours lecture, 2 hours laboratory. (72 hours total per quarter)**  
This course provides the knowledge and teaches the skills necessary to plan and perform regular maintenance on complex enterprise routed and switched networks and use technology-based practices and a systematic ITIL-compliant approach to perform network troubleshooting. This course uses the official Cisco Academy CCNP TSHOOT curriculum and is designed to provide preparation for the CCNP ROUTE certification exam.  
**FHGE: Non-GE    Transferable: CSU**

**C S 53A      CYBERSECURITY FUNDAMENTALS      4.5 Units**

**Advisory:** C S 50A.  
**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**4 hours lecture, 2 hours laboratory. (72 hours total per quarter)**  
The fundamental aspects of computer and network security as it pertains to policy deployment and network defense. Core topics include cryptography, public key infrastructure, standards and protocols, physical security, infrastructure security, remote access, messaging, intrusion detection and system baselines. Industry-specific topics include certifications for CompTIA's Security+, ISC2, SSCP.  
**FHGE: Non-GE    Transferable: CSU**

**C S 53B      FIREWALLS & THREAT MANAGEMENT      4.5 Units**

**Advisory:** C S 53A.  
**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**4 hours lecture, 2 hours laboratory. (72 hours total per quarter)**  
Survey of topics in field of firewall, advanced threats and their characteristics. Students will learn how to manage firewalls and advanced threats using security policies, profiles and signatures to protect networks against emerging threats.  
**FHGE: Non-GE    Transferable: CSU**

**C S 53C      ETHICAL HACKING      4.5 Units**

**Advisory:** C S 53A.  
**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**4 hours lecture, 2 hours laboratory. (72 hours total per quarter)**  
Survey current techniques used by malicious hackers to attack computers and networks, and it develops the defenses that security professionals use to defend Windows and Linux systems from such attacks. Topics will be presented in the context of legal restrictions and ethical guidelines. Hands-on labs, playing the role of both attacker and defender, using port scans, footprinting, buffer overflow exploits, SQL injection, privilege escalation, Trojans, and backdoors.  
**FHGE: Non-GE    Transferable: CSU**

**C S 53D      INTRODUCTION TO COMPUTER FORENSICS      4.5 Units**

**Advisory:** C S 53A.  
**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**4 hours lecture, 2 hours laboratory. (72 hours total per quarter)**  
Provides an overview of the forensic rules-of-evidence, evidence integrity, factual reporting, and the role of expert opinion in legal proceedings. The course is appropriate for students from information technology-related field. No previous experience in computer forensics is required. All students must agree with and sign the CyberSecurity Institute Code of Ethics and Conduct.  
**FHGE: Non-GE    Transferable: CSU**

**C S 54A      STORAGE AREA NETWORKS      4.5 Units**

**Advisory:** C S 50A, 50B, and 50C.  
**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**4 hours lecture, 2 hours laboratory. (72 hours total per quarter)**  
This course provides a broad and in-depth knowledge of Storage and Storage networking concepts, applications, and technologies. Storage Fundamentals including storage attachment architectures, the SCSI protocol, disk and tape drive concepts, RAID and JBOD, IP-based SANs, and Storage Networking Issues. Discusses the applications driving SAN adoption. This course is offered as part of the EMC Academic Alliance Program by an EMC trained instructor. This course assists in the preparation for the Information Storage and Management certification exam (E20-001). Students who pass the exam receive the Information Storage Associate (EMCISA) credential.  
**FHGE: Non-GE    Transferable: CSU**

**C S 54B      VMWARE VSPHERE INSTALL, CONFIGURE & MANAGE      4.5 Units**

**Advisory:** C S 50A, 50B, 50C, 54A.  
**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**4 hours lecture, 2 hours laboratory. (72 hours total per quarter)**  
This course covers all aspects of server virtualization and draws its examples from VMware vSphere. This hands-on training course explores installation, configuration, and management of VMware vSphere, which consists of VMware ESXi and VMware vCenter Server. The course is based on ESXi and vCenter Server. Completion of this course satisfies the prerequisite for taking the VMware Certified Professional exam. Course is taught by a VMware certified instructor.  
**FHGE: Non-GE    Transferable: CSU**

**C S 54C      VMWARE VIEW      4.5 Units**

**Advisory:** C S 54A, 54B.  
**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**4 hours lecture, 2 hours laboratory. (72 hours total per quarter)**  
This hands-on training course presents skills in the VMware View suite: VMware View Manager, VMware View Composer, and VMware ThinApp. Provides applications oriented administrators with the knowledge and skills to virtualize Windows applications with ThinApp and to choose the best deployment and updating processes for their environment. A methodology for analyzing and designing a View solution for the VMware vSphere infrastructure is included.  
**FHGE: Non-GE    Transferable: CSU**

**C S 54D CLOUD INFRASTRUCTURE & SERVICES 4.5 Units**

**Advisory:** C S 50A.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**4 hours lecture, 2 hours laboratory. (72 hours total per quarter)**

Presents the transition from a Classic Data Center environment to a Virtual Data Center. The student will understand Cloud virtualization at each layer - compute, storage, network, desktop, and application - along with business continuity in a Virtual Data Center (VDC) environment. Explanation and discussion of Cloud computing basics, infrastructure components, service management activities, security concerns, and considerations for Cloud adoption.

**FHGE: Non-GE Transferable: CSU**

**C S 56A ENTERPRISE WIRELESS LOCAL AREA NETWORKS 4.5 Units**

**Advisory:** C S 50A.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**4 hours lecture, 2 hours laboratory. (72 hours total per quarter)**

A broad and in-depth knowledge of Enterprise Wireless LAN Administration. Provides a complete foundation of knowledge for entering into or advancing in the wireless networking industry. From basic RF theory to 802.11 frame exchange processes, this course delivers hands-on training that will benefit the novice as well as the experienced network professional. It provides preparation for the CWNA Certification examination.

**FHGE: Non-GE Transferable: CSU**

**C S 56B IT ESSENTIALS 4.5 Units**

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**4 hours lecture, 2 hours laboratory. (72 hours total per quarter)**

The course presents a working knowledge of computer internals and provide practical skills in computer hardware assembly and software installation. Emphasis is placed on troubleshooting problems, throughout the process Activities includes hands-on labs and virtual learning tools which encourage critical thinking and complex problem-solving skills.

**FHGE: Non-GE Transferable: CSU**

**C S 60A INSTALLING & CONFIGURING WINDOWS SERVER 2012 4.5 Units**

**Advisory:** C S 50A.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**4 hours lecture, 2 hours laboratory. (72 hours total per quarter)**

Introduction to installing, configuring and troubleshooting Windows Server 2012 in an enterprise. It provides both lecture and laboratory exercises to enable the student to plan and build a scalable Active Directory infrastructure, configure folder security, file filtering and disaster recovery backups, administer and maintain servers with graphical and PowerShell tools, set up servers with Group Policies and delegate administrative tasks, and virtualize servers with Hyper-V and build fault tolerant replica servers.

**FHGE: Non-GE Transferable: CSU**

**C S 60B ADMINISTERING WINDOWS SERVER 2012 4.5 Units**

**Advisory:** C S 60A.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**4 hours lecture, 2 hours laboratory. (72 hours total per quarter)**

Introduction to administering Windows Server 2012 in an enterprise. It provides both lecture and laboratory exercises to enable the student to deploy, manage, and maintain servers, configure file and print services, configure network services and access, configure a network policy server infrastructure, and configure and manage group policy.

**FHGE: Non-GE Transferable: CSU**

**C S 60C CONFIGURING ADVANCED WINDOWS SERVER 2012 SERVICES 4.5 Units**

**Advisory:** C S 60A, 60B.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**4 hours lecture, 2 hours laboratory. (72 hours total per quarter)**

Introduction to configuring advanced services on Windows Server 2012. It provides both lecture and laboratory exercises to enable the student to deploy, manage, and maintain servers, configure file and print services, configure network services and access, configure a network policy server infrastructure, and configure and manage group policy.

**FHGE: Non-GE Transferable: CSU**

**C S 61A WINDOWS 8 CONFIGURATION 4.5 Units**

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**4 hours lecture, 2 hours laboratory. (72 hours total per quarter)**

Introduction to configuring and troubleshooting Windows 8 in an enterprise. It provides both lecture and laboratory exercises to enable the student to plan and perform the installation of Windows 8; install Windows 8 on computers that are running an existing operating system; configure disks, partitions, volumes, and device drivers in a Windows 8 system and configure network connectivity; implement Windows 8 technologies to desktops and network connections; share files and printers; optimize and maintain Windows 8 based computers; configure mobile computer settings and to enable remote access; create and configure virtual machines in Hyper-V for Windows 8 and describe how to use it to support legacy applications.

**FHGE: Non-GE Transferable: CSU**

**C S 63A DEVELOPING APPLICATIONS FOR IOS 4.5 Units**

**Advisory:** C S 1B or 2B.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**4 hours lecture, 2 hours laboratory. (72 hours total per quarter)**

An introduction to programming the iPhone, iPad and iPod Touch. Covers Objective-C, Cocoa Touch, and the Model/View/Controller architecture. Students will develop useful applications that include common user interface elements, web services, the device's GPS and camera.

**FHGE: Non-GE Transferable: CSU**

**C S 64A WRITING APPS FOR THE ANDROID IN JAVA 4.5 Units**

**Advisory:** C S 1B or 2B.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**4 hours lecture, 2 hours laboratory. (72 hours total per quarter)**

Introduction to mobile apps programming in Java for the Android. Coding topics include the Android SDK for Eclipse, the ADT Plugin, XML fundamentals and a survey of API methods and objects used to control the Android user interface. Concept topics include layouts, activity lifecycles, runtime binding, intents, location awareness, audio, video, OpenGL ES, and monetizing apps.

**FHGE: Non-GE Transferable: CSU**

**C S 71A DATA ANALYTICS & MANAGEMENT 4.5 Units****Advisory:** MATH 10, C S 31A, C S 21A or 21B.**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.**4 hours lecture, 2 hours laboratory. (72 hours total per quarter)**

Introduction of Big Data ecosystems, tool infrastructure and industrial applications. Overview of the evolution, characteristics and significance of Big Data and the analytics process model. Hands-on exploration of Big Data solutions for specific industries. Concept topics include data management such as acquiring, cleansing and normalizing Big Data; application to log analytics, fraud detection, social media patterns, call centers, etc.; review of traditional SQL based Relational Database Management and issues with scaling when datasets are too big; methodology of NoSQL; big data technology infrastructures, such as the Hadoop framework and ecosystem components including Hadoop Distributed File Systems (HDFS), Hbase, MapReduce, Oozie, Pig and functionality used in Big Data; survey of tools in analytics and data visualization (DVT); survey of deployment patterns used in various industries.

**FHGE: Non-GE Transferable: CSU****C S 80A OPEN SOURCE CONTRIBUTION 4.5 Units****Advisory:** C S 40A; C S 1A (or 1AH) and 1B (or 1M), or 2A (or 2AH) and 2B.**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.**4 hours lecture, 2 hours laboratory. (72 hours total per quarter)**

Introduction to the tools for, and culture of, contributing to open source software projects. Tool-based topics include Git repositories, pull requests, forks, logs, merges, tagging, rebasing and server configuration. Concept topics include commit guidelines, branching workflows, small-team vs. large-team workflows, project maintenance, iterative staging, selecting viable source communities, joining public projects, setting up accurate dev environments, testing and prepping patch merges, and becoming a committer.

**FHGE: Non-GE Transferable: CSU****C S 81A 3-D GRAPHICS PROGRAMMING 4.5 Units****Advisory:** One of the following: C S 1B, 2B, 20A, 21B.**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.**4 hours lecture, 2 hours laboratory. (72 hours total per quarter)**

Introduction to 3-D graphics programming using OpenGL, intended for anyone interested in gaining 3-D expertise for games, scientific visualization, desktop and mobile apps. Coding topics include a systematic study of the OpenGL API in conjunction with any of these programming languages: Java, C++, C# or Objective C (student's choice). Concept topics include viewports, graphics primitives, 3-D motion matrices, normal vectors, shaders, fragment and pixel buffers, light simulation, polygons, virtual cameras, image pipelines, texture mapping and alpha blending.

**FHGE: Non-GE Transferable: CSU****C S 82A INTRODUCTION TO SOFTWARE QUALITY ASSURANCE 4.5 Units****Advisory:** Knowledge of an object-oriented programming language.**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.**4 hours lecture, 2 hours laboratory. (72 hours total per quarter)**

Introduction to Software Quality Assurance principles, techniques, processes and tools. A team project takes students through the planning and implementation of the test and release of a software product using a current toolset.

**FHGE: Non-GE Transferable: CSU****C S 84A DATABASE-DRIVEN WEB APPLICATION DEVELOPMENT 4.5 Units****Advisory:** C S 31A, 49 and GID 57 or equivalent.**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.**4 hours lecture, 2 hours laboratory. (72 hours total per quarter)**

Students evolve simple static websites into dynamic, database-driven web applications. Students will use the popular LAMP framework (Linux, Apache, MySQL, and PHP), in combination with JavaScript, CSS, and HTML5.

**FHGE: Non-GE Transferable: CSU****C S 84B DISTRIBUTED DATABASES 4.5 Units****Advisory:** C S 31A or equivalent.**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.**4 hours lecture, 2 hours laboratory. (72 hours total per quarter)**

An introduction to distributed data management including distributed database design, implementation techniques including concurrency control, query processing and optimization, data replication, integration and peer-to-peer systems. Distributed database solutions are also presented, including data management systems for cloud computing.

**FHGE: Non-GE Transferable: CSU****COUNSELING****Counseling and Student Services****650.949.7423 foothill.edu/counseling****CNSL 1 COLLEGE SUCCESS 3 Units****Advisory:** Maximum UC credit awarded for completion of CNSL 1 and CNSL 5 is 4.5 quarter units.**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.**3 hours lecture. (36 hours total per quarter)**

Examination of factors that contribute to college success, including responsibility/control; competition; task-precision; expectations; wellness; time management; college involvement; family/support systems involvement. Activities include: testing and individualized evaluations; group processing and practicum.

**FHGE: Lifelong Learning Transferable: UC/CSU****CNSL 5 INTRODUCTION TO COLLEGE 1.5 Units****Formerly: CNSL 50****Advisory:** ESLL 236 & 237; maximum UC credit awarded for completion of CNSL 1 and CNSL 5 is 4.5 quarter units; not open to students with credit in CNSL 50.**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.**1.5 hours lecture. (18 hours total per quarter)**

Introduction to Foothill College academic policies, resources, programs and services; tools for career exploration, determination and decision making; choosing the right classes based on career/academic goals, the transfer process; study skills; time management and formulation of computer based educational plans.

**FHGE: Non-GE Transferable: UC/CSU**

**CNSL 8 TRANSFER READINESS 1 Unit**

Formerly: CNSL 85A

**Advisory: One of the following: ENGL 1A, 1AH, 1S & 1T or ESLL 26; not open to students with credit in CNSL 8H, 85A, or 85H.****Grade Type: Pass/No Pass Only****Not Repeatable.****1 hour lecture. (12 hours total per quarter)**

Provides a global perspective about the transfer process from a California community college to a four-year university, including transfer exploration, transfer policies, academic requirements, transfer planning and process, and available tools and services in support of transfer goals. Students have the opportunity to broaden their perspectives by examining the role of higher education in society. Guides students to examine their life plan and achievements, and to develop a strong personal statement. Students will complete a university cost analysis as well as explore resources to help fund their education.

**FHGE: Non-GE Transferable: UC/CSU****CNSL 8H HONORS TRANSFER READINESS 1 Unit****Advisory: One of the following: ENGL 1A, 1AH, 1S & 1T or ESLL 26; not open to students with credit in CNSL 8, 85A, or 85H.****Grade Type: Pass/No Pass Only****Not Repeatable.****1 hour lecture. (12 hours total per quarter)**

Provides a global perspective about the transfer process from a California community college to a four-year university, including transfer exploration, transfer policies, academic requirements, transfer planning and process, and available tools and services in support of transfer goals. Students have the opportunity to broaden their perspectives by examining the role of higher education in society. Guides students to examine their life plan and achievements, and to develop a strong personal statement. Students will complete a university cost analysis as well as explore resources to help fund their education. This honors course includes digging deeper into the pedagogy of higher education, exploring additional highly selective colleges and universities, and requires application of higher-level critical thinking, reading and writing skills.

**FHGE: Non-GE Transferable: UC/CSU****CNSL 52 COLLEGE & LIFE MANAGEMENT 4 Units****Advisory: Not open to students with credit in CNSL 2.****Grade Type: Letter Grade, the student may select Pass/No Pass****Not Repeatable.****4 hours lecture. (48 hours total per quarter)**

Examination of psycho-social and wellness issues related to personal and academic success. Explores theories and practice for effective goal-setting, communication, health and wellness, learning and social growth.

**FHGE: Lifelong Learning Transferable: CSU****CNSL 61 EXPLORING LEADERSHIP 4 Units****Advisory: Demonstrated proficiency in English by placement as determined by score on the English placement test OR through an equivalent placement process OR completion of ESLL 125 & ESLL 249.****Grade Type: Letter Grade, the student may select Pass/No Pass****Not Repeatable.****4 hours lecture. (48 hours total per quarter)**

This course is designed to introduce students to the fundamental elements of leadership. Students will explore leadership theories and models as well as their own values and beliefs to develop a personal philosophy of leadership that includes an understanding of self, others and community. Students will learn how to apply theory into practice as they prepare for leadership roles in college and community settings.

**FHGE: Non-GE Transferable: CSU****CNSL 72 STRESS, WELLNESS & COPING 3 Units****Advisory: Not open to students with credit in SPED 72.****Grade Type: Letter Grade, the student may select Pass/No Pass Not Repeatable.****3 hours lecture. (36 hours total per quarter)**

Explore and become familiar with symptoms of stress, depression, and anxiety. Examine the social and psychological factors that contribute to these problems and the patterns of behavior which result. Learn, utilize, and understand effective coping strategies to promote self awareness, personal wellness, and academic success and model these strategies for members of the community. Emphasis placed on mental health and application of self-help skills.

**FHGE: Lifelong Learning Transferable: CSU****CNSL 86 INTRODUCTION TO LEADERSHIP 1 Unit****Advisory: Eligibility for ENGL 110 or ESLL 125.****Grade Type: Letter Grade, the student may select Pass/No Pass****Not Repeatable.****1 hour lecture. (12 hours total per quarter)**

Introduction to the dynamics of working groups and the impact of leadership on the effectiveness of groups; examination of the linkage between concepts and theories of leadership to the everyday functioning of student organizations.

**FHGE: Non-GE Transferable: CSU****CNSL 87 LEADERSHIP: THEORIES & PRACTICES 1 Unit****Advisory: Eligibility for ENGL 110 or ESLL 125.****Grade Type: Letter Grade, the student may select Pass/No Pass****Not Repeatable.****1 hour lecture. (12 hours total per quarter)**

Further exploration of leadership application to the everyday functioning of student organizations; understand the role played by structure and governance models in organizational effectiveness. Understand and apply the concepts of team building and communication in groups. Advanced development of leadership goals and application of group goal setting strategies. Affiliation with student government or other campus leadership position required.

**FHGE: Non-GE Transferable: CSU****CNSL 88 LEADERSHIP: THEORIES, STYLES & REALITIES 1 Unit****Advisory: Eligibility for ENGL 110 or ESLL 125.****Grade Type: Letter Grade, the student may select Pass/No Pass****Not Repeatable.****1 hour lecture. (12 hours total per quarter)**

Continued development and further study in the dynamics of working groups with a focus on community advocacy, leadership ethics training, and program planning.

**FHGE: Non-GE Transferable: CSU****CNSL 89 ADVANCED LEADERSHIP REALITIES 1 Unit****Advisory: Eligibility for ENGL 110 or ESLL 125.****Grade Type: Letter Grade, the student may select Pass/No Pass****Not Repeatable.****1 hour lecture. (12 hours total per quarter)**

Advanced study in the dynamics of working groups and the impact of leadership on the effectiveness of groups; advanced practical application of group and individual leadership techniques.

**FHGE: Non-GE Transferable: CSU**

**CNSL 90 INTRODUCTION TO ONLINE LEARNING 1.5 Units**

**Advisory:** Familiarity with the Internet; ESLL 125 or higher.  
**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.  
**1 hour lecture, 1.5 hours laboratory. (30 hours total per quarter)**  
Concepts, tools and techniques for success in online learning. Through self-assessment, online interaction, and use of the various tools and resources of the Internet the student will develop an understanding of the skills needed to be successful when engaging in online instruction.  
**FHGE: Lifelong Learning Transferable: CSU**

**CNSL 90A INTRODUCTORY LEADERSHIP INDEPENDENT STUDY 1 Unit**

**Advisory:** Not open to students with credit in CNSL 86LX.  
**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.  
**3 hours laboratory. (36 hours total per quarter)**  
Practical field experience for students in campus leadership positions. Intended for beginning student government leaders, student ambassador program, club members, heritage month committee members and agents to student government. Requires contract with instructor to determine scope of assignment.  
**FHGE: Non-GE Transferable: CSU**

**CNSL 90B LEADERSHIP INDEPENDENT STUDY II 1 Unit**

**Advisory:** Not open to students with credit in CNSL 86LY.  
**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.  
**3 hours laboratory. (36 hours total per quarter)**  
Practical field experience for students in campus leadership positions. This course is intended for continuing student leaders in leadership roles in campus clubs and cultural Heritage month committees. Requires contract with instructor to determine scope of assignment.  
**FHGE: Non-GE Transferable: CSU**

**CNSL 90C LEADERSHIP INDEPENDENT STUDY III 1 Unit**

**Advisory:** Not open to students with credit in CNSL 86LZ.  
**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.  
**3 hours laboratory. (36 hours total per quarter)**  
Practical field experience for students in campus leadership positions. Intended for elected and appointed officers of student government with significant leadership roles. Requires contract with instructor to determine scope of assignment.  
**FHGE: Non-GE Transferable: CSU**

**CNSL 275 EOPS: THE ROAD TO COLLEGE SUCCESS-MORE THAN JUST BOOKS 1 Unit**

**Non-degree applicable credit course.**  
**Advisory:** Not open to students with credit in CNSL 175.  
**Grade Type:** Pass/No Pass Only Not Repeatable.  
**1 hour lecture. (12 hours total per quarter)**  
Course will introduce EOPS/CARE students to various EOPS services, policies and requirements governing programs. Course encourages collaborative learning, educational attainment, promotes student retention, persistence, success. Topics included: financial aid/scholarship applications, identifying campus resources, budgeting and managing money, cultural identity and experiences, goal-setting, self-esteem, career options, managing time.  
**FHGE: Non-GE**

**CREATIVE WRITING**

Language Arts  
650.949.7678 foothill.edu/la

**CRWR 6 INTRODUCTION TO CREATIVE WRITING 5 Units**

**Prerequisite:** Demonstrated proficiency in English by placement as determined by score on the English placement test OR through an equivalent placement process OR completion of ESLL 125 & ESLL 249.  
**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.  
**5 hours lecture. (60 hours total per quarter)**  
Explicit instruction and practice in writing poetry and short fiction. Assignments include reading, analyzing and responding to published and student work and writing original work. Analysis of public readings and/or interviews with writers.  
**FHGE: Humanities Transferable: UC/CSU**

**CRWR 39A INTRODUCTION TO SHORT FICTION WRITING 5 Units**

**Prerequisite:** Demonstrated proficiency in English by placement as determined by score on the English placement test OR through an equivalent placement process OR completion of ESLL 125 & ESLL 249.  
**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.  
**5 hours lecture. (60 hours total per quarter)**  
Explicit instruction and practice in writing a variety of short fiction forms, including short narratives, flash fiction and traditional short stories. Assignments include reading, analyzing and responding to published works and student work, as well as writing original work. Analysis of public readings and/or interviews with writers.  
**FHGE: Humanities Transferable: UC/CSU**

**CRWR 39B ADVANCED SHORT FICTION WRITING 5 Units**

**Prerequisite:** CRWR 39A.  
**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.  
**5 hours lecture. (60 hours total per quarter)**  
Explicit instruction and practice in writing a variety of short fiction forms, including short narratives, flash fiction and traditional short stories. Assignments include reading, analyzing and responding to published works and student work, as well as writing original work. Class presentations and workshop leadership. Analysis of public readings and/or interviews with writers.  
**FHGE: Non-GE Transferable: UC/CSU**

**CRWR 41A POETRY WRITING 5 Units**

**Advisory:** Demonstrated proficiency in English by placement as determined by score on the English placement test OR through an equivalent placement process OR completion of ESLL 125 & ESLL 249.  
**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.  
**5 hours lecture. (60 hours total per quarter)**  
Explicit instruction and practice in writing poetry. Assignments include reading, analyzing and responding to published and student work and writing original work.  
**FHGE: Humanities Transferable: UC/CSU**

**CRWR 41B ADVANCED POETRY WRITING 5 Units**

**Advisory:** CRWR 41A.  
**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.  
**5 hours lecture. (60 hours total per quarter)**  
Explicit instruction and practice in reading and writing poetry at an advanced level. Assignments include reading, analyzing and responding to published and student work and writing original work. Class presentation and workshop leadership required.  
**FHGE: Non-GE Transferable: UC/CSU**

## DANCE

Kinesiology and Athletics  
650.949.7741 foothill.edu/dance

Foothill offers dance activity courses in four different family categories. No single course may be repeated. Enrollment is limited to six courses per family within the Foothill-De Anza Community College District. Please refer to the De Anza College Catalog for the corresponding families and courses.

Ballet & Conditioning Family: DANC 1A, 1B, 1C & 14

Dance Performance Family: DANC 7, 8, 11A, 11B, 11C, 12A, 12B & 12C

Social & Cultural Dance Family: DANC 4A, 4B, 4C, 5, 6, 18A & 18B

Dance Technique Family: DANC 2A, 2B, 3A, 3B, 13A & 13B

### DANC 1A BEGINNING BALLET 1 Unit

**Advisory:** This course is included in the Ballet & Conditioning family of activity courses.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**3 hours laboratory. (36 hours total per quarter)**

Introduction to the elementary fundamentals of classical ballet technique and training. Course includes the basic vocabulary and practice of beginning barre and center floor exercises.

**FHGE: Lifelong Learning Transferable: UC/CSU**

### DANC 1B INTERMEDIATE BALLET 1 Unit

**Prerequisite:** DANC 1A.

**Advisory:** This course is included in the Ballet & Conditioning family of activity courses.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**3 hours laboratory. (36 hours total per quarter)**

Continuation into the intermediate fundamentals of ballet technique and training. Includes the intermediate vocabulary and practice of barre and center floor exercises.

**FHGE: Lifelong Learning Transferable: UC/CSU**

### DANC 1C ADVANCED BALLET 1 Unit

**Prerequisite:** DANC 1B.

**Advisory:** This course is included in the Ballet & Conditioning family of activity courses.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**3 hours laboratory. (36 hours total per quarter)**

Continuation into the advanced fundamentals of ballet technique and training. Includes the advanced vocabulary and practice of barre and center floor exercises.

**FHGE: Lifelong Learning Transferable: UC/CSU**

### DANC 2A BEGINNING MODERN DANCE 1 Unit

**Advisory:** This course is included in the Dance Technique family of activity courses; not open to students with credit in DANC 2.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**3 hours laboratory. (36 hours total per quarter)**

Introduction to the elementary fundamentals of modern dance technique and training. Course includes the basic vocabulary and practice of beginning modern center barre and floor exercises.

**FHGE: Lifelong Learning Transferable: UC/CSU**

### DANC 2B INTERMEDIATE MODERN DANCE 1 Unit

**Prerequisite:** DANC 2A.

**Advisory:** This course is included in the Dance Technique family of activity courses.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**3 hours laboratory. (36 hours total per quarter)**

Continuation into the intermediate fundamentals of modern technique and training. Includes the intermediate vocabulary and practice of center floor and across the floor exercises.

**FHGE: Lifelong Learning Transferable: UC/CSU**

### DANC 3A BEGINNING JAZZ DANCE 1 Unit

**Advisory:** This course is included in the Dance Technique family of activity courses.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**3 hours laboratory. (36 hours total per quarter)**

Introduction to the fundamental technique of jazz dance. Emphasis is placed on class participation so that students may develop their knowledge and understanding of the basic principles of jazz dancing, including warm-up, stretch, isolations and choreography.

**FHGE: Lifelong Learning Transferable: UC/CSU**

### DANC 3B INTERMEDIATE JAZZ DANCE 1 Unit

**Prerequisite:** DANC 3A.

**Advisory:** This course is included in the Dance Technique family of activity courses.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**3 hours laboratory. (36 hours total per quarter)**

Opportunity to practice and develop intermediate jazz techniques. Emphasis on techniques presented as well as information on historical and stylistic perspectives of this dance form.

**FHGE: Lifelong Learning Transferable: UC/CSU**

### DANC 4A BEGINNING BALLROOM & SOCIAL DANCE 1 Unit

**Advisory:** This course is included in the Social & Cultural Dance family of activity courses; not open to students with credit in DANC 4.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**3 hours laboratory. (36 hours total per quarter)**

Introduction to beginning ballroom and social dance techniques. Instruction and practice in beginning Swing, Cha-Cha, Waltz, Fox Trot, Rhumba and Tango dances.

**FHGE: Lifelong Learning Transferable: UC/CSU**

### DANC 4B INTERMEDIATE BALLROOM & SOCIAL DANCE 1 Unit

**Prerequisite:** DANC 4A.

**Advisory:** This course is included in the Social & Cultural Dance family of activity courses.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**3 hours laboratory. (36 hours total per quarter)**

Introduction to intermediate ballroom and social dance techniques. Instruction and practice in beginning Swing, Cha-Cha, Waltz, Fox Trot, Rhumba and Tango dances.

**FHGE: Lifelong Learning Transferable: UC/CSU**



**DANC 4C    ADVANCED BALLROOM & SOCIAL DANCE    1 Unit**

**Prerequisite:** DANC 4B.

**Advisory:** This course is included in the Social & Cultural Dance family of activity courses.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**3 hours laboratory. (36 hours total per quarter)**

Introduction to advanced ballroom and social dance techniques. Instruction and practice in advanced Swing, Cha-Cha, Waltz, Fox Trot, Rhumba and Tango dances.

**FHGE:** Lifelong Learning    **Transferable:** UC/CSU

**DANC 5    WORLD DANCE    1 Unit**

**Advisory:** This course is included in the Social & Cultural Dance family of activity courses.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**3 hours laboratory. (36 hours total per quarter)**

Introduction to the history and origins of multicultural dance forms. Students will learn the basic steps, combinations, and finished dances of many traditional world dance forms.

**FHGE:** Lifelong Learning    **Transferable:** UC/CSU

**DANC 6    BEGINNING COUNTRY- WESTERN LINE DANCING    1 Unit**

**Advisory:** This course is included in the Social & Cultural Dance family of activity courses.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**3 hours laboratory. (36 hours total per quarter)**

Introduction to the fundamental skills for Country and Western Line Dancing. Students will participate in a variety of dance steps designed to develop the coordination, skill, choreography and timing necessary for social line dancing.

**FHGE:** Lifelong Learning    **Transferable:** UC/CSU

**DANC 7    CHOREOGRAPHY    1 Unit**

**Advisory:** This course is included in the Dance Performance family of activity courses.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**3 hours laboratory. (36 hours total per quarter)**

Introduction to the exploration of the basic principles and theories of choreography and composition and the tools for defining the creative process.

**FHGE:** Lifelong Learning    **Transferable:** UC/CSU

**DANC 8    DANCE PRODUCTION: REHEARSAL & PERFORMANCE    2 Units**

**Advisory:** This course is included in the Dance Performance family of activity courses.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**6 hours laboratory. (72 hours total per quarter)**

Rehearsal and performance class designed to develop choreography for live performance.

**FHGE:** Lifelong Learning    **Transferable:** UC/CSU

**DANC 10    TOPICS IN DANCE HISTORY    5 Units**

**Advisory:** Not open to students with credit in H P 70.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**5 hours lecture. (60 hours total per quarter)**

A comprehensive study of the evolution of theatrical dance in the western world from the 16th century through the present day. Includes the eras of French court ballet, ballet d'action, romantic and classical ballet, modern, post-modern and contemporary dance styles. Examines topics in dance as an art form, including origin and history of major styles, traditions, trends; outstanding artists and works; practice in observing and understanding dance in a historical and cultural context. Analysis of dance as an expression of social order, power, classical art, a medium of cultural fusion, and as an expression of individual artists.

**FHGE:** Humanities    **Transferable:** UC/CSU

**DANC 11A    REPERTORY DANCE I    4 Units**

**Advisory:** This course is included in the Dance Performance family of activity courses; not open to students with credit in DANC 11.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**2 hours lecture, 6 hours laboratory. (96 hours total per quarter)**

Introduction to the basic concepts of dance performance. Includes beginning experience with the rehearsal process, learning dance works and preparation for a performance. Students will be given the opportunity to perform for a live audience and to collaborate with and perform for area colleges and universities, civic, local, or charity organizations.

**FHGE:** Non-GE    **Transferable:** UC/CSU

**DANC 11B    CHOREOGRAPHY FOR PERFORMANCE I    4 Units**

**Advisory:** This course is included in the Dance Performance family of activity courses.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**2 hours lecture, 6 hours laboratory. (96 hours total per quarter)**

Introduction to the basic concepts of choreography and dance composition. Students will be given the opportunity to create original beginning dance works for individuals and groups to be performed in front of a live audience. Includes beginning dance technique and practice of basic choreographic skills.

**FHGE:** Non-GE    **Transferable:** UC/CSU

**DANC 11C    DANCE PRODUCTION I    4 Units**

**Advisory:** This course is included in the Dance Performance family of activity courses.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**2 hours lecture, 6 hours laboratory. (96 hours total per quarter)**

Introduction to the fundamentals of dance production and performance. Includes instruction on how to produce and mount a full-scale theatrical production for public performance, make-up techniques, lighting design and stagecraft. Students will also have the opportunity to perform, choreograph and stagecrew at the beginning dance production skill level.

**FHGE:** Non-GE    **Transferable:** UC/CSU

**DANC 12A    REPERTORY DANCE II    4 Units**

**Prerequisite:** DANC 11A.

**Advisory:** This course is included in the Dance Performance family of activity courses.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**2 hours lecture, 6 hours laboratory. (96 hours total per quarter)**

Continuation into the intermediate level concepts of dance performance. Includes intermediate experience with the rehearsal process, learning dance works and preparation for a performance. Students will be given the opportunity to perform for a live audience and to collaborate with and perform for area colleges and universities, civic, local, or charity organizations.

**FHGE:** Non-GE    **Transferable:** UC/CSU

**DANC 12B CHOREOGRAPHY FOR PERFORMANCE II** 4 Units

**Prerequisite:** DANC 11B.

**Advisory:** This course is included in the Dance Performance family of activity courses.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**2 hours lecture, 6 hours laboratory. (96 hours total per quarter)**

Continuation into the intermediate level concepts of choreography and dance composition. Students will be given the opportunity to create intermediate original dance works for individuals and groups to be performed in front of a live audience. Includes intermediate dance technique and practice of complex choreography.

**FHGE: Non-GE Transferable: UC/CSU**

**DANC 12C DANCE PRODUCTION II** 4 Units

**Prerequisite:** DANC 11C.

**Advisory:** This course is included in the Dance Performance family of activity courses.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**2 hours lecture, 6 hours laboratory. (96 hours total per quarter)**

Continuation into the intermediate level of dance production and performance. Includes instruction on how to produce and mount a full-scale theatrical production for public performance, make-up techniques, lighting design and stagecraft. Students will also have the opportunity to perform, choreograph and stagecrew at the intermediate dance production skill level.

**FHGE: Non-GE Transferable: UC/CSU**

**DANC 13A INTRODUCTION TO CONTEMPORARY DANCE** 1 Unit

**Advisory:** This course is included in the Dance Technique family of activity courses.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**3 hours laboratory. (36 hours total per quarter)**

Introduction to the fundamental techniques of Contemporary Dance. Emphasis is placed on development of the knowledge and understanding the principles of Contemporary Dance including basic movement theory, technique and repertoire from global artists.

**FHGE: Lifelong Learning Transferable: UC/CSU**

**DANC 13B INTERMEDIATE CONTEMPORARY DANCE** 1 Unit

**Prerequisite:** DANC 13A.

**Advisory:** This course is included in the Dance Technique family of activity courses.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**3 hours laboratory. (36 hours total per quarter)**

Continuation into the intermediate Contemporary Dance technique and training. Includes the intermediate vocabulary and practice of barre, center floor exercises and across the floor combinations.

**FHGE: Lifelong Learning Transferable: UC/CSU**

**DANC 14 DANCE CONDITIONING** 1 Unit

**Advisory:** This course is included in the Ballet & Conditioning family of activity courses.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**3 hours laboratory. (36 hours total per quarter)**

Introduction to the principles of dance and conditioning through floor work derived from various dance disciplines including ballet, jazz, contemporary and other psycho-physical disciplines. Topics may include body mechanics, muscle groups critical to dance, flexibility, alignment, self-assessment, dance injury prevention, and strengthening the mind-body-spirit connection.

**FHGE: Lifelong Learning Transferable: UC/CSU**

**DANC 18A INTRODUCTION TO HIP-HOP DANCE** 1 Unit

**Advisory:** This course is included in the Social & Cultural Dance family of activity courses.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**3 hours laboratory. (36 hours total per quarter)**

An introduction to the technique of Hip Hop dance with an integrated fitness approach that focuses on developing the stabilization muscles of the center of the body. Concentration will be on isolations of the muscles of the torso, back, hips, inner and outer thighs, chest and abdominals in conjunction with breathing, postural alignment and body awareness.

**FHGE: Lifelong Learning Transferable: UC/CSU**

**DANC 18B INTERMEDIATE HIP-HOP DANCE** 1 Unit

**Prerequisite:** DANC 18A.

**Advisory:** This course is included in the Social & Cultural Dance family of activity courses.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**3 hours laboratory. (36 hours total per quarter)**

Continuation into the intermediate fundamentals of Hip Hop technique and training. Includes the intermediate vocabulary and practice of isolations and across the floor exercises.

**FHGE: Lifelong Learning Transferable: UC/CSU**

**DANC 70R INDEPENDENT STUDY IN DANCE** 1 Unit

**DANC 71R** 2 Units

**DANC 72R** 3 Units

**DANC 73R** 4 Units

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**3-12 hours laboratory per week. (36-144 hours total per quarter)**

Provides an opportunity for the student to expand their studies in Dance beyond the classroom by completing a project or an assignment arranged by agreement between the student and instructor. The student is required to contract with the instructor to determine the scope of assignment and the unit value assigned for successful completion. Students may take a maximum of 6 units of Independent Study per department.

**FHGE: Non-GE Transferable: CSU**

**DENTAL ASSISTING**

Biological and Health Sciences

650.949.7351 [foothill.edu/bio/programs/dentala](http://foothill.edu/bio/programs/dentala)

**D A 50 ORIENTATION TO DENTAL ASSISTING** 2.5 Units

**Grade Type:** Letter Grade Only

**Not Repeatable.**

**2.5 hours lecture. (30 hours total per quarter)**

Introduction to Foothill College Dental Assisting Program for the incoming student. Preview of dental practice, including specialties, history, professional and legal responsibilities and the role of the dental auxiliary; HIPAA, patient privacy, Academic Honor Code, student rights and responsibilities, strategies for student success, stress and time management, record keeping, patient communication and office personnel relations. Intended for students in the Dental Assisting Program; enrollment is limited to students accepted in the program.

**FHGE: Non-GE Transferable: CSU**

**D A 51A INTRODUCTION TO CHAIRSIDE DENTAL ASSISTING 9 Units**

**Grade Type: Letter Grade Only**

**Not Repeatable.**

**4 hours lecture, 11 hours laboratory, 4 hours clinic. (228 hours total per quarter)**

Introduction to chairside assisting; use and care of dental equipment, patient management, instrument identification; overview of common dental procedures such as composite, amalgam, partials, dentures, root canals, crown and bridge appointments; manipulation of dental materials commonly prepared or used by the dental assistant including temporary dressings, impression materials, cement bases and liners, topical agents, composites, resins and amalgams. Intended for students in the Dental Assisting Program; enrollment is limited to students accepted in the program.

**FHGE: Non-GE Transferable: CSU**

**D A 51B INTERMEDIATE CLINICAL DENTAL ASSISTING 2 Units**

**Grade Type: Letter Grade, the student may select Pass/No Pass**

**Not Repeatable.**

**1.5 hours lecture, 2 hours laboratory. (42 hours total per quarter)**

Periodontal and oral surgery procedures, equipment, and instruments. Registered Dental Assistant orthodontic function. Intended for students in the Dental Assisting Program; enrollment is limited to students accepted in the program.

**FHGE: Non-GE Transferable: CSU**

**D A 51C ADVANCED DENTAL ASSISTING SKILLS 3.5 Units**

**Grade Type: Letter Grade Only**

**Not Repeatable.**

**2.5 hours lecture, 4 hours laboratory. (78 hours total per quarter)**

Continuation of techniques introduced in D A 51A and 51B to include pulp vitality testing, fluoride administration, intraoral/extraoral exam, polishing removable partial and full dentures, dental implants, and pedodontic procedures. Theory and practice of coronal polishing. Intended for students in the Dental Assisting Program; enrollment is limited to students accepted in the program.

**FHGE: Non-GE Transferable: CSU**

**D A 53A INTRODUCTION TO RADIOGRAPHY I 3 Units**

**Grade Type: Letter Grade Only**

**Not Repeatable.**

**2 hours lecture, 3 hours laboratory. (60 hours total per quarter)**

Introduction to dental radiology. Emphasis on production, characteristics, biologic effects, radiation safety and protection. Introduction to intraoral long-cone radiographic techniques, film processing and mounting. Intended for students in the Dental Assisting Program; enrollment is limited to students accepted in the program.

**FHGE: Non-GE Transferable: CSU**

**D A 53B DENTAL RADIOGRAPHY II 2 Units**

**Grade Type: Letter Grade Only**

**Not Repeatable.**

**1 hour lecture, 3 hours laboratory. (48 hours total per quarter)**

Intraoral radiographic technique continued with evaluation of film quality, proficient parallelism with the XCP film holders, proper patient management, and a reduction in film errors. Introduction to direct digital panoramic radiographs and indirect intraoral images using PSP plates. Further identification of radiolucent and radiopaque landmarks of the head and neck using the panoramic image. Intended for students in the Dental Assisting Program; enrollment is limited to students accepted in the program.

**FHGE: Non-GE Transferable: CSU**

**D A 53C DENTAL RADIOGRAPHY III 1 Unit**

**Grade Type: Letter Grade Only**

**Not Repeatable.**

**3 hours laboratory. (36 hours total per quarter)**

Last in the three quarter series of dental radiography. Intraoral technique and film evaluation skills practiced on mannequins and performed on patients. Greater emphasis on time efficiency and patient management. Digital radiography is encouraged to be used for patient care. Intended for students in the Dental Assisting Program; enrollment is limited to students accepted in the program.

**FHGE: Non-GE Transferable: CSU**

**D A 56 DENTAL HEALTH EDUCATION 1 Unit**

**Grade Type: Letter Grade Only**

**Not Repeatable.**

**1 hour lecture. (12 hours total per quarter)**

Principles of patient motivation and education; etiology, process and prevention of dental decay and periodontal disease; design and management of a plaque control program, brushing, flossing, adjunctive aids; dietary counseling for caries risk. Intended for students in the Dental Assisting Program; enrollment is limited to students accepted in the program.

**FHGE: Non-GE Transferable: CSU**

**D A 57 OFFICE EMERGENCY PROCEDURES 2 Units**

**Grade Type: Letter Grade Only**

**Not Repeatable.**

**2 hours lecture. (24 hours total per quarter)**

Overview of psychological or common medical problems which could lead to an emergency situation in a dental office. Emphasis placed on prevention, management, and legal issues of an emergency response. Intended for students in the Dental Assisting Program; enrollment is limited to students accepted in the program.

**FHGE: Non-GE Transferable: CSU**

**D A 58 SPECIALTY PRACTICE PROCEDURES 1 Unit**

**Grade Type: Letter Grade Only**

**Not Repeatable.**

**1 hour lecture. (12 hours total per quarter)**

Familiarization with the scope of practice in both general and specialty dental office settings. The emphasis of this survey class will be on the role of the auxiliary personnel in each of the different types of dental practices. Intended for students in the Dental Assisting Program; enrollment is limited to students accepted in the program.

**FHGE: Non-GE Transferable: CSU**

**D A 60A DENTAL OFFICE BUSINESS PRACTICES I 2 Units**

**Grade Type: Letter Grade Only**

**Not Repeatable.**

**2 hours lecture. (24 hours total per quarter)**

Introduction to appointment management, telephone techniques, communication and patient management, dental and office records management; written correspondence, treatment plan and case presentation; accounts receivables. Intended for students in the Dental Assisting Program; enrollment is limited to students accepted in the program.

**FHGE: Non-GE Transferable: CSU**

**D A 60B DENTAL OFFICE BUSINESS PRACTICES II 3 Units**

**Grade Type: Letter Grade Only**

**Not Repeatable.**

**3 hours lecture, 1 hour laboratory. (48 hours total per quarter)**

Introduction to purchasing, inventory and cost control; banking, payroll and tax procedures; resume writing and interviewing techniques. Includes billing procedures, collection of accounts, treatment plans and case presentations, dental insurance procedures. Instruction in both manual and computer applications. Intended for students in the Dental Assisting Program; enrollment is limited to students accepted in the program.

**FHGE: Non-GE Transferable: CSU**

**D A 62A DENTAL SCIENCES I 2 Units****Grade Type: Letter Grade Only  
Not Repeatable.****2 hours lecture, 1 hour laboratory. (36 hours total per quarter)**

Discussion of anatomy and morphology of the teeth, the eruption sequence and process; normal occlusion, development and class of malocclusions; anatomy of the skull, arteries and veins, musculature and nervous structures of the head and neck. Intended for students in the Dental Assisting Program; enrollment is limited to students accepted in the program.

**FHGE: Non-GE Transferable: CSU****D A 62B DENTAL SCIENCES II 2 Units****Grade Type: Letter Grade Only  
Not Repeatable.****2 hours lecture. (24 hours total per quarter)**

An overview of the embryologic development of the structures and tissues of the head, neck, teeth and oral cavity, histology of the hard and soft tissues of the oral cavity. Developmental and structural defects involving the oral cavity and the teeth. Periodontal diseases, caries process and oral pathology. Intended for students in the Dental Assisting Program; enrollment is limited to students accepted in the program.

**FHGE: Non-GE Transferable: CSU****D A 62C DENTAL SCIENCES III 2 Units****Grade Type: Letter Grade Only  
Not Repeatable.****2 hours lecture. (24 hours total per quarter)**

Microbiologic and nutritional conditions related to dentistry; etiology, symptoms, transmission and control of infective and contagious diseases, nutritional physiology, and counseling, effect of nutrition on general dental health. Pharmacology of local anesthetic solutions, analgesic gases, and psychosedatives, and antibiotic agents. Use of nitrous oxide equipment. Intended for students in the Dental Assisting Program; enrollment is limited to students accepted in the program.

**FHGE: Non-GE Transferable: CSU****D A 63 SPECIAL PATIENT POPULATIONS 1 Unit****Grade Type: Letter Grade Only  
Not Repeatable.****1 hour lecture. (12 hours total per quarter)**

Discussion and development of techniques and/or equipment needed to meet the needs of special patient populations. Intended for students in the Dental Assisting Program; enrollment is limited to students accepted in the program.

**FHGE: Non-GE Transferable: CSU****D A 71 INFECTION CONTROL & HAZARDOUS WASTE MANAGEMENT 1.5 Units****Grade Type: Letter Grade Only  
Not Repeatable.****1.5 hours lecture. (18 hours total per quarter)**

Introduction to infectious diseases important to dentistry. Instruction on disinfection, instrument decontamination, sterilization procedures and tray set-up preparation. Regulatory compliance agencies such as OSHA, CDC and ADA recommendations. Hazardous materials management and waste management. Protocols and emergency procedures for hazardous and biohazardous waste or materials. Intended for students in the Dental Assisting Program; enrollment is limited to students accepted in the program.

**FHGE: Non-GE Transferable: CSU****D A 73 DENTAL ASSISTING SUPERVISED CLINIC 5.5 Units****Prerequisite: D A 51A.****Grade Type: Letter Grade, the student may select Pass/No Pass  
Not Repeatable.****17 hours clinic. (204 hours total per quarter)**

Continuation of techniques introduced in D A 51A; supervised clinical experience in externship environment, chairside dental assisting in general practice and specialty clinics at the UCSF School of Dentistry. Intended for students in the Dental Assisting Program; enrollment is limited to students accepted in the program.

**FHGE: Non-GE Transferable: CSU****D A 74 DENTAL ASSISTING CLINICAL PRACTICE 5.5 Units****Grade Type: Letter Grade, the student may select Pass/No Pass  
Not Repeatable.****17 hours clinic. (204 hours total per quarter)**

Continuation of techniques introduced in D A 51A, 51B and 73; supervised clinical experience in externship environment; advanced and specialty chair side procedures. Intended for students in the Dental Assisting Program; enrollment is limited to students accepted in the program.

**FHGE: Non-GE Transferable: CSU****D A 85 RDA REVIEW 2 Units****Grade Type: Letter Grade Only  
Not Repeatable.****1 hour lecture, 3 hours laboratory. (48 hours total per quarter)**

Fabrication, seating, temporary cementation and removal of excess cement for temporary crowns. Information necessary for completion of requirements for national certification and Registered Dental Assisting (RDA) licensure in the State of California. Review of chairside dental assisting procedures to prepare for written and practical examinations. Intended for students in the Dental Assisting Program; enrollment is limited to students accepted in the program.

**FHGE: Non-GE Transferable: CSU****D A 88 PIT & FISSURE SEALANTS 1.5 Units****Grade Type: Letter Grade Only  
Not Repeatable.****1 hour lecture, 2 hours laboratory. (36 hours total per quarter)**

Theory and practice for placement of sealants by the Registered Dental Assistant to prevent decay in the pit and fissure areas of the dentition. Intended for students in the Dental Assisting Program; enrollment is limited to students accepted in the program.

**FHGE: Non-GE Transferable: CSU****DENTAL HYGIENE****Biological and Health Sciences****650.949.7538 [foothill.edu/bio/programs/dentalh](http://foothill.edu/bio/programs/dentalh)****DH 50 ORIENTATION TO DENTAL HYGIENE 1 Unit****Prerequisites: AHS 200 & D H 200L.****Grade Type: Letter Grade Only  
Not Repeatable.****1 hour lecture, 1 hour laboratory. (24 hours total per quarter)**

Overview of dental hygiene as a career. Dental terminology, introduction to instrumentation skills, including: modified pen grasp, fulcrums, adaptation, insertion and activation of the explorer. The course will involve some online homework, observation in clinic, and instrumentation on typodonts. Introduces infectious diseases, control strategies, hazardous materials management and waste management in the dental environment. Strategies & skills for student success in the dental hygiene program. Introduction to evidence-based literature in dental hygiene. Intended for students in the Dental Hygiene Baccalaureate Degree Program; enrollment is limited to students accepted in the program.

**FHGE: Non-GE Transferable: CSU**

**D H 70R INDEPENDENT STUDY IN 1 Unit**  
**D H 71R DENTAL HYGIENE 2 Units**  
**D H 72R 3 Units**  
**D H 73R 4 Units**

**Grade Type: Letter Grade, the student may select Pass/No Pass Not Repeatable.**

**3-12 hours laboratory per week. (36-144 hours total per quarter)**

Provides an opportunity for the student to expand their studies in Dental Hygiene beyond the classroom by completing a project or an assignment arranged by agreement between the student and instructor. The student is required to contract with the instructor to determine the scope of assignment and the unit value assigned for successful completion. Students may take a maximum of 6 units of Independent Study per department.

**FHGE: Non-GE Transferable: CSU**

**D H 200L INTRODUCTION TO 1.5 Units**  
**DENTAL HYGIENE**

**Grade Type: Letter Grade Only Not Repeatable.**

**1.5 hours lecture, 1 hour laboratory. (30 hours total per quarter)**

Introduction to the profession of dental hygiene. Emphasis on dental terminology, communication skills, legal and ethical aspects of dental hygiene practice and licensing requirements. An overview of dental hygiene clinical and lab technique including infection control and examination of the head and neck. This course is a prerequisite for the BS degree in Dental Hygiene and is intended for students in that program.

**FHGE: Non-GE**

**D H 300A ORAL BIOLOGY I 3 Units**

**Formerly: D H 52A**

**Advisory: Not open to students with credit in D H 52A.**

**Grade Type: Letter Grade Only Not Repeatable.**

**3 hours lecture. (36 hours total per quarter)**

Comprehensive overview of anatomy of the skull, arteries, veins, and lymphatics, musculature and nervous structures of the head and neck. Identification of the teeth, the eruption sequence, normal occlusion, and classification of occlusion used in the dental profession. Intended for students in the Dental Hygiene Baccalaureate Degree Program; enrollment is limited to students accepted in the program.

**FHGE: Non-GE Transferable: CSU**

**D H 300B ORAL BIOLOGY II 3 Units**

**Formerly: D H 52B**

**Advisory: Not open to students with credit in D H 52B.**

**Grade Type: Letter Grade Only Not Repeatable.**

**3 hours lecture. (36 hours total per quarter)**

The embryologic development of the structures and tissues of the head, neck, teeth and oral cavity; histology of the hard and soft tissues of the oral cavity. Anatomy of the tooth crown, root and pulp; development and structural defects involving the oral cavity and the teeth. The normal periodontal tissues, oral mucous membranes, and salivary glands. Intended for students in the Dental Hygiene Baccalaureate Degree Program; enrollment is limited to students accepted in the program.

**FHGE: Non-GE Transferable: CSU**

**D H 302 ASSESSMENT PROCEDURES 3 Units**  
**IN DENTAL HYGIENE**

**Formerly: D H 53**

**Advisory: Not open to students with credit in D H 53.**

**Grade Type: Letter Grade Only Not Repeatable.**

**3 hours lecture. (36 hours total per quarter)**

The first in a three course series in dental hygiene theory and practice. Focus on the principles of assessment techniques as the first phase of the dental hygiene process of care. The rationale for collection of assessment data, and associated clinical procedures will be discussed. Analysis of current evidence based literature related to the dental hygiene patient assessment procedures. Intended for students in the Dental Hygiene Baccalaureate Degree Program; enrollment is limited to students accepted in the program.

**FHGE: Non-GE Transferable: CSU**

**D H 304 PRE-CLINICAL DENTAL HYGIENE 5 Units**

**Formerly: D H 54**

**Advisory: Not open to students with credit in D H 54.**

**Grade Type: Letter Grade, the student may select Pass/No Pass Not Repeatable.**

**1 hour lecture, 12 hours laboratory. (156 hours total per quarter)**

The first in a series in dental hygiene clinical courses. Integrates the scientific and clinical principles underlying the practice of dental hygiene. Performance of clinical procedures and techniques for patient assessment, including prevention of disease transmission, health history, extra-intraoral examination, gingival evaluation and periodontal examination are taught in a pre-clinical setting. Students will practice on typodonts and classmates. The course requires evaluation of clinical performance through demonstration of skill acquisition and level of competency. Field experiences reinforce and amplify the knowledge and skills needed to perform dental hygiene procedures in the clinical setting. Intended for students in the Dental Hygiene Baccalaureate Degree Program; enrollment is limited to students accepted in the program.

**FHGE: Non-GE Transferable: CSU**

**D H 305A INTRODUCTION TO DENTAL 2 Units**  
**RADIOGRAPHY I**

**Formerly: D H 60A**

**Advisory: Not open to students with credit in D H 60A.**

**Grade Type: Letter Grade Only Not Repeatable.**

**2 hours lecture. (24 hours total per quarter)**

The first in a series of four dental radiology courses for the dental hygiene student. Component parts, functions, operations of the dental x-ray unit and radiation safety is emphasized. Relationships between anatomical and radiographic landmarks are analyzed. Intended for students in the Dental Hygiene Baccalaureate Degree Program; enrollment is limited to students accepted in the program.

**FHGE: Non-GE Transferable: CSU**

**D H 305B DENTAL RADIOGRAPHY II 1 Unit**

**Formerly: D H 60B**

**Advisory: Not open to students with credit in D H 60B.**

**Grade Type: Letter Grade Only Not Repeatable.**

**3 hours laboratory. (36 hours total per quarter)**

The second in a series of dental radiology courses. Introduction to the radiology laboratory. Emphasis on dental x-ray techniques, film development and mounting, digital radiography and scanning. Radiation safety protection is practiced for all laboratory procedures. All films will be viewed for self-critique and instructor evaluation. Intended for students in the Dental Hygiene Baccalaureate Degree Program; enrollment is limited to students accepted in the program.

**FHGE: Non-GE Transferable: CSU**

**D H 305C DENTAL RADIOGRAPHY III 2 Units**

Formerly: D H 68A

Advisory: Not open to students with credit in D H 68A.

Grade Type: Letter Grade Only

Not Repeatable.

2 hours lecture. (24 hours total per quarter)

The third in a series of dental radiology courses. Interpretation of intraoral and panoramic radiographs. Emphasis on normal, atypical and pathological structures. Identification of dental anomalies, dental materials and the interpretation of disease. Analysis of the progression of dental caries, periodontal disease, and periapical lesions. Intended for students in the Dental Hygiene Baccalaureate Degree Program; enrollment is limited to students accepted in the program.

FHGE: Non-GE Transferable: CSU

**D H 305D DENTAL RADIOGRAPHY IV 1 Unit**

Formerly: D H 60D

Advisory: Not open to students with credit in D H 60D.

Grade Type: Letter Grade Only

Not Repeatable.

1 hour lecture. (12 hours total per quarter)

This is the fourth and last in the series of dental radiology courses intended for second year dental hygiene students in the program. Emphasis is on the understanding of radiographic localization techniques and common technical, operator, processing errors. Continued application of digital radiography with use of sensors and scanners and alternative imaging techniques. Intended for students in the Dental Hygiene Baccalaureate Degree Program; enrollment is limited to students accepted in the program.

FHGE: Non-GE Transferable: CSU

**D H 308 CLINICAL TECHNIQUE 6 Units**

Formerly: D H 61A

Advisory: Not open to students with credit in D H 61A.

Grade Type: Letter Grade Only

Not Repeatable.

3 hours lecture, 9 hours laboratory. (144 hours total per quarter)

Continuation of dental hygiene clinical practice and instrumentation techniques including: instrumentation for scaling and root debridement and instrument sharpening. Adjunctive dental hygiene procedures taught include: fluorides, selective coronal polishing. Clinical activities utilize typodonts and student partners. The course requires evaluation of clinical performance through demonstration. Evaluation of best practices through evidence based research. Supportive labs and observation to reinforce and amplify the knowledge and skills needed to perform dental hygiene procedures in the clinical setting for D H 308. Intended for students in the Dental Hygiene Baccalaureate Degree Program; enrollment is limited to students accepted in the program.

FHGE: Non-GE Transferable: CSU

**D H 310 DENTAL MATERIALS 3 Units**

Formerly: D H 72

Advisory: Not open to students with credit in D H 72.

Grade Type: Letter Grade, the student may select Pass/No Pass

Not Repeatable.

2 hours lecture, 3 hours laboratory. (60 hours total per quarter)

Properties of dental materials, characteristics and manipulation of dental materials and the equipment used in the manipulation of these materials with an emphasis on dental hygiene care. Course also covers caries risk assessment, hazardous waste management, MSDS and regulations related to dental materials. Intended for students in the Dental Hygiene Baccalaureate Degree Program; enrollment is limited to students accepted in the program.

FHGE: Non-GE Transferable: CSU

**D H 312 EMERGENCY PROCEDURES 2 Units**

Formerly: D H 71

Advisory: Not open to students with credit in D H 71.

Grade Type: Letter Grade Only

Not Repeatable.

2 hours lecture. (24 hours total per quarter)

This course is a study of common medical emergencies that may occur during delivery of dental care. Emphasis is placed on methods to prevent emergencies from occurring and procedures to manage emergency situations. Ethical and legal aspects in assisting during emergencies are also discussed. Intended for students in the Dental Hygiene Baccalaureate Degree Program; enrollment is limited to students accepted in the program.

FHGE: Non-GE Transferable: CSU

**D H 314 DENTAL HEALTH EDUCATION 2 Units**

Formerly: D H 73

Advisory: PSYC 1 or 1H; not open to students with credit in D H 73.

Grade Type: Letter Grade Only

Not Repeatable.

2 hours lecture. (24 hours total per quarter)

Health communication and learning theories applied to patient education. Topics include: communication theory, health literacy, working with interpreters, development of client/clinician relationships, patient motivation with particular attention to psychological, social, and economic, cultural and life stage factors. Emphasis on prevention of dental diseases through effective patient education, such as: mechanical plaque removal techniques, antimicrobial therapies, nutritional counseling for dental hygiene, and smoking cessation counseling. Preventive dental products will be reviewed and analyzed using current evidence based literature. Intended for students in the Dental Hygiene Baccalaureate Degree Program; enrollment is limited to students accepted in the program.

FHGE: Non-GE Transferable: CSU

**D H 316A PERIODONTICS I 3 Units**

Formerly: D H 57A

Advisory: Not open to students with credit in D H 57A.

Grade Type: Letter Grade Only

Not Repeatable.

3 hours lecture. (36 hours total per quarter)

The first in a series of two courses in periodontics for the dental hygiene student. Examination of anatomy and physiology of periodontium, correlating of basic sciences with the clinical aspects of periodontal diseases. American Academy of Periodontics classification system, etiology and pathogenesis of periodontal diseases. Intended for students in the Dental Hygiene Baccalaureate Degree Program; enrollment is limited to students accepted in the program.

FHGE: Non-GE Transferable: CSU

**D H 316B PERIODONTICS II 2 Units**

Formerly: D H 57B

Advisory: Not open to students with credit in D H 57B.

Grade Type: Letter Grade Only

Not Repeatable.

2 hours lecture. (24 hours total per quarter)

The second in a series of two periodontics courses for the dental hygiene student. Focus on best practices in periodontics, decision making and treatment planning, implementation of nonsurgical periodontal therapy, interviewing and education to enhance patient motivation, and evidence based therapy for the treatment and care of periodontal disease. The course also covers periodontal surgical procedures, dental implants, periodontal emergencies, legal issues in documentation and reporting. Intended for students in the Dental Hygiene Baccalaureate Degree Program; enrollment is limited to students accepted in the program.

FHGE: Non-GE Transferable: CSU

**D H 318 INTRODUCTION TO CLINIC 5 Units****Formerly: D H 61B****Advisory: D H 300B and 308 with a grade of "C" or better; possession of a current CPR certificate; not open to students with credit in D H 61B.****Grade Type: Letter Grade Only****Not Repeatable.****3 hours lecture, 6 hours clinical laboratory. (108 hours total per quarter)**

First course a year long series of clinical dental hygiene practice. Emphasis on assessing, planning, and implementing comprehensive dental hygiene care for diverse patient populations and management of patients with special needs in a clinical setting. Students apply knowledge, critical thinking, and clinical skills acquired in previous completed dental hygiene courses. Development of progress in clinical performance with each successive academic period. Intended for students in the Dental Hygiene Baccalaureate Degree Program; enrollment is limited to students accepted in the program.

**FHGE: Non-GE Transferable: CSU****D H 320A CLINICAL DENTAL HYGIENE I 3 Units****Formerly: D H 62A****Advisory: Not open to students with credit in D H 62A.****Grade Type: Letter Grade Only****Not Repeatable.****9 hours clinic. (108 hours total per quarter)**

Continuation of dental hygiene clinical practice. Emphasis on assessing, planning, and implementing comprehensive dental hygiene care for diverse patient populations and management of patients with special needs in a clinical setting. Students apply knowledge, critical thinking, and clinical skills acquired in previous completed dental hygiene courses. Additional procedures include fluoride varnish application, placement of dental sealants and individualized oral hygiene instructions. Progress of development in clinical performance will be evaluated with each successive academic period including evaluation of periodontal probing with a passing grade of 75%. Intended for students in the Dental Hygiene Baccalaureate Degree Program; enrollment is limited to students accepted in the program.

**FHGE: Non-GE Transferable: CSU****D H 320B CLINICAL DENTAL HYGIENE II 8.5 Units****Formerly: D H 62B****Advisory: Not open to students with credit in D H 62B.****Grade Type: Letter Grade Only****Not Repeatable.****1 hour lecture, 23 hours clinic. (288 hours total per quarter)**

Continuation of clinical dental hygiene practice providing comprehensive dental hygiene care in a clinic setting on patients. Emphasis on assessing, planning, and implementing comprehensive dental hygiene care for diverse patient populations and management of patients with special needs in a clinical setting. Students apply knowledge, critical thinking, and clinical skills acquired in previous completed dental hygiene courses. Additional procedures include local anesthesia, advanced instrumentation techniques, and locally delivered antimicrobials. Progress of development in clinical performance will be evaluated with each successive academic period including evaluation of periodontal probing with a passing grade of 80%. Intended for students in the Dental Hygiene Baccalaureate Degree Program; enrollment is limited to students accepted in the program.

**FHGE: Non-GE Transferable: CSU****D H 320C CLINICAL DENTAL HYGIENE III 8.5 Units****Formerly: D H 62C****Advisory: Not open to students with credit in D H 62C.****Grade Type: Letter Grade Only****Not Repeatable.****1 hour lecture, 23 hours clinic. (288 hours total per quarter)**

Continuation of clinical dental hygiene practice providing comprehensive dental hygiene care in a clinic setting on patients. Emphasis on assessing, planning, and implementing comprehensive dental hygiene care for diverse patient populations and management of patients with special needs in a clinical setting. Students apply knowledge, critical thinking, and clinical skills acquired in previous completed dental hygiene courses. Additional procedures include soft tissue curettage, alternative fulcrums and operator positioning and interim therapeutic restorations. Progress of development in clinical performance will be evaluated with each successive academic period including evaluation of periodontal probing with a passing grade of 84%. Intended for students in the Dental Hygiene Baccalaureate Degree Program; enrollment is limited to students accepted in the program.

**FHGE: Non-GE Transferable: CSU****D H 320D CLINICAL DENTAL HYGIENE IV 8.5 Units****Formerly: D H 62D****Advisory: Not open to students with credit in D H 62D.****Grade Type: Letter Grade Only****Not Repeatable.****1 hour lecture, 23 hours clinic. (288 hours total per quarter)**

Final course in the series of clinical dental hygiene practice providing comprehensive dental hygiene care in a clinic setting on patients. Emphasis on assessing, planning, and implementing comprehensive dental hygiene care for diverse patient populations and management of patients with special needs in a clinical setting. Students apply knowledge, critical thinking, and clinical skills acquired in previous completed dental hygiene courses. Additional procedures include administration of nitrous oxide/oxygen analgesia. Progress of development in clinical performance will be evaluated with each successive academic period including evaluation of periodontal probing with a passing grade of 92%. Intended for students in the Dental Hygiene Baccalaureate Degree Program; enrollment is limited to students accepted in the program.

**FHGE: Non-GE Transferable: CSU****D H 322 LOCAL ANESTHESIA 2.5 Units****Formerly: D H 65****Advisory: Not open to students with credit in D H 65.****Grade Type: Letter Grade Only****Not Repeatable.****2 hours lecture, 1.5 hours laboratory. (42 hours total per quarter)**

The study of local anesthesia administration in dental procedures, including the pharmacology, anatomy, physiology, patient management and emergency procedures associated with local anesthetic procedures. Laboratory and clinical experience in administration techniques for local infiltration, field block and nerve block. Intended for students in the Dental Hygiene Baccalaureate Degree Program; enrollment is limited to students accepted in the program.

**FHGE: Non-GE Transferable: CSU****D H 324 ORAL PATHOLOGY 2 Units****Formerly: D H 55B****Advisory: Not open to students with credit in D H 55B.****Grade Type: Letter Grade Only****Not Repeatable.****2 hours lecture. (24 hours total per quarter)**

The study of pathology of the head, neck, and oral structures. Developmental conditions and diseases of bacterial and viral origin, neoplasms of the oral cavity. Clinical aspects of recognizing deviations from normal, documentation, differential diagnosis and referral. The role of the dental hygienist in education and prevention, early detection and referral of lesions of the head and neck regions. Intended for students in the Dental Hygiene Baccalaureate Degree Program; enrollment is limited to students accepted in the program.

**FHGE: Non-GE Transferable: CSU**

**D H 326A COMMUNITY DENTAL HEALTH I 2 Units**

Formerly: D H 58A, 63C

**Advisory: Not open to students with credit in D H 58A or 63C.****Grade Type: Letter Grade Only****Not Repeatable.****2 hours lecture, 1 hour laboratory. (36 hours total per quarter)**

The first course in a year long series in the study of community dental health problems and disparities that exist in health care. The science of epidemiology, research and writing skills, and statistics will be discussed. An analysis of current dental health issues and initial development of a community dental health program. Evaluation of scientific literature will be developed. Intended for students in the Dental Hygiene Baccalaureate Degree Program; enrollment is limited to students accepted in the program.

**FHGE: Non-GE Transferable: CSU****D H 326B COMMUNITY DENTAL HEALTH II 2 Units**

Formerly: D H 58B, 63D

**Advisory: Not open to students with credit in D H 58B or 63D.****Grade Type: Letter Grade Only****Not Repeatable.****2 hours lecture, 1 hour laboratory. (36 hours total per quarter)**

Continuation of D H 326A. Emphasis on the steps to developing community dental health programs, including health promotion programs. Local, state, and federal departments of public health services, types of fluoridation, and school-based dental health programs and screenings. Evidence-based decision making will be applied to the dental public health setting. Intended for students in the Dental Hygiene Baccalaureate Degree Program; enrollment is limited to students accepted in the program.

**FHGE: Non-GE Transferable: CSU****D H 326C COMMUNITY DENTAL HEALTH III 2 Units**

Formerly: D H 58C

**Advisory: Not open to students with credit in D H 58C.****Grade Type: Letter Grade Only****Not Repeatable.****2 hours lecture, 1 hour laboratory. (36 hours total per quarter)**

Continuation of D H 326B. Course includes 4 weeks of outside field work to assess and analyze a target group, design lesson plans/program activities and present to target group, and evaluation of program outcomes. Career options for registered dental hygienists and scientific communication formats will also be discussed. Intended for students in the Dental Hygiene Baccalaureate Degree Program; enrollment is limited to students accepted in the program.

**FHGE: Non-GE Transferable: CSU****D H 328A CLINICAL DENTAL HYGIENE THEORY I 2 Units**

Formerly: D H 75A

**Advisory: Not open to students with credit in D H 75A.****Grade Type: Letter Grade Only****Not Repeatable.****1 hour lecture, 3 hours laboratory. (48 hours total per quarter)**

Discussion and demonstration of advanced and supplemental dental hygiene functions: digital intraoral photography, dental hygiene instrumentation, ultrasonic scaling techniques, soft tissue curettage and locally delivered antimicrobials. Supportive course to reinforce and amplify the knowledge and skills needed to perform dental hygiene procedures in the clinical setting for D H 320B. Intended for students in the Dental Hygiene Baccalaureate Degree Program; enrollment is limited to students accepted in the program.

**FHGE: Non-GE Transferable: CSU****D H 328B CLINICAL DENTAL HYGIENE THEORY II 2 Units**

Formerly: D H 75B

**Advisory: Not open to students with credit in D H 75B.****Grade Type: Letter Grade Only****Not Repeatable.****1 hour lecture, 3 hours laboratory. (48 hours total per quarter)**

Discussion and demonstration of advanced and supplemental dental hygiene functions, interim therapeutic restorations, advanced instrumentation techniques, advanced local anesthesia techniques, dental desensitization, air polishing, implants in dentistry, orthodontic therapy and new technologies in dental hygiene. Supportive course to reinforce and amplify the knowledge and skills needed to perform dental hygiene procedures in the clinical setting for D H 320C. Intended for students in the Dental Hygiene Baccalaureate Degree Program; enrollment is limited to students accepted in the program.

**FHGE: Non-GE Transferable: CSU****D H 328C CLINICAL DENTAL HYGIENE THEORY III 2 Units**

Formerly: D H 75C

**Advisory: Not open to students with credit in D H 75C.****Grade Type: Letter Grade Only****Not Repeatable.****1 hour lecture, 3 hours laboratory. (48 hours total per quarter)**

Preparation for clinical licensing board examinations. Overview of exam criteria, identification an appropriate patient for clinical state and/or regional board licensing exam for Dental Hygienists. Strategies for exam preparation and anticipating methods which will influence a successful board experience. Supportive course to reinforce and amplify the knowledge and skills needed to perform dental hygiene procedures. Intended for students in the Dental Hygiene Baccalaureate Degree Program; enrollment is limited to students accepted in the program.

**FHGE: Non-GE Transferable: CSU****D H 330 NITROUS OXIDE/OXYGEN ANALGESIA 1 Unit**

Formerly: D H 67

**Advisory: Not open to students with credit in D H 67.****Grade Type: Letter Grade Only****Not Repeatable.****1 hour lecture, 1 hour laboratory. (24 hours total per quarter)**

The study of nitrous oxide/oxygen analgesia used in the dental practice. Emphasis will be placed on understanding the mechanism of sedation, risks and benefits associated with nitrous oxide sedation, how to administer and properly document the use of nitrous oxide. Intended for students in the Dental Hygiene Baccalaureate Degree Program; enrollment is limited to students accepted in the program.

**FHGE: Non-GE Transferable: CSU****D H 332 ETHICS, LAW & BUSINESS PRACTICES 3 Units**

Formerly: D H 64

**Advisory: Not open to students with credit in D H 64.****Grade Type: Letter Grade Only****Not Repeatable.****3 hours lecture. (36 hours total per quarter)**

The study of ethics, jurisprudence, business practices, finance, management, and policy creation for oral health care professionals, programs and businesses. This course examines current societal and professional issues and their impact on dental hygiene business practices and management. The course will cover the following areas: planning, strategy and leadership, legal and ethical issues affecting businesses in the oral health care sector, financial statements, and personnel considerations. The course will prepare students to take the California Dental Hygiene Law & Ethics exam, required for licensing as a Registered Dental Hygienist. Intended for students in the Dental Hygiene Baccalaureate Degree Program; enrollment is limited to students accepted in the program.

**FHGE: Non-GE Transferable: CSU**



**D H 350A DENTAL HYGIENE RESEARCH & CAPSTONE PROJECT I** 5 Units**Grade Type: Letter Grade Only**  
**Not Repeatable.****5 hours lecture. (60 hours total per quarter)**

First in a series of three capstone courses. Introduction to the capstone project and evaluation of scientific evidence-based literature. Basic research design components and writing skills will be discussed. Analysis of career options for dental hygienists including public health, research, education, corporate sales and marketing, administration and advocacy. Dental workforce models will be explored. Intended for students in the Dental Hygiene Baccalaureate Degree Program; enrollment is limited to students accepted in the program.

**FHGE: Non-GE Transferable: CSU****D H 350B DENTAL HYGIENE RESEARCH & CAPSTONE PROJECT II** 5 Units**Grade Type: Letter Grade Only**  
**Not Repeatable.****5 hours lecture. (60 hours total per quarter)**

The second in a series of three capstone courses, continuation of D H 350A. Emphasis on development of capstone project proposal and implementation, including project description, assessment tools, project goals and objectives and activities. Field work to implement capstone project will be completed. Interprofessional practice within the health care profession will be discussed. Evidence-based research in health care decision making, the oral-systemic link and the importance of lifelong learning will be explored. Intended for students in the Dental Hygiene Baccalaureate Degree Program; enrollment is limited to students accepted in the program.

**FHGE: Non-GE Transferable: CSU****D H 350C DENTAL HYGIENE RESEARCH & CAPSTONE PROJECT III** 5 Units**Grade Type: Letter Grade Only**  
**Not Repeatable.****5 hours lecture. (60 hours total per quarter)**

The third course in a series of three capstone courses. Completion of capstone project including final field work to evaluate project outcomes and statistical analysis. The final version of the written literature review and project plan will be completed. Scientific communication methods with an emphasis on poster presentation techniques will be addressed. Contemporary issues in dental hygiene including aging populations, health care reform and access to care will be discussed. Intended for students in the Dental Hygiene Baccalaureate Degree Program; enrollment is limited to students accepted in the program.

**FHGE: Non-GE Transferable: CSU****D H 352 HEALTH COMMUNICATION & CULTURAL ISSUES** 4 Units**Grade Type: Letter Grade Only**  
**Not Repeatable.****4 hours lecture. (48 hours total per quarter)**

Health communication and multicultural issues unique to the dental and medical fields. Topics include intercultural communication; health literacy; interpersonal, small group, electronic, and nonverbal communication; listening; persuasion, caring for limited English proficient people; and working with interpreters. Intended for students in the Dental Hygiene Baccalaureate Degree Program; enrollment is limited to students accepted in the completion degree track.

**FHGE: Non-GE Transferable: CSU****D H 354 HEALTH CARE MANAGEMENT** 4 Units**Grade Type: Letter Grade Only**  
**Not Repeatable.****4 hours lecture. (48 hours total per quarter)**

An introduction to business practices, finance, management, and policy creation for oral health care programs and businesses. This course examines current societal and professional issues and their impact on dental hygiene business practices and management. The course will cover the following areas: planning, strategy and leadership, legal and ethical issues affecting businesses in the oral health care sector, financial statements, and personnel considerations. Intended for students in the Dental Hygiene Baccalaureate Degree Program; enrollment is limited to students accepted in the completion degree track.

**FHGE: Non-GE Transferable: CSU****D H 356 EDUCATION THEORY, PRACTICE & ADMINISTRATION** 4 Units**Grade Type: Letter Grade Only**  
**Not Repeatable.****4 hours lecture. (48 hours total per quarter)**

The study of education theories and principles for didactic, lab and clinical courses. The faculty role in active teaching and learning, development of critical thinking and reflective writing, development of curriculum, outcomes and competencies, and course delivery methods. Theory and practices of clinical instruction and supervision, related to psychomotor skill development, competency-based evaluation, student mentoring and remediation. Examination of organizational and administrative philosophy and practice in curriculum planning, implementation and evaluation based on accreditation standards. Intended for students in the Dental Hygiene Baccalaureate Degree Program; enrollment is limited to students accepted in the completion degree track.

**FHGE: Non-GE Transferable: CSU****DIAGNOSTIC MEDICAL SONOGRAPHY**

Biological and Health Sciences

650.949.7538 [foothill.edu/bio/programs/ultra](http://foothill.edu/bio/programs/ultra)**DMS 50A DIAGNOSTIC MEDICAL SONOGRAPHY PRINCIPLES & PROTOCOLS** 4 Units**Prerequisites: BIOL 40A, 40B and 40C.****Corequisites: DMS 50B, 60A and 72A.****Grade Type: Letter Grade Only**  
**Not Repeatable.****4 hours lecture, 1 hour laboratory. (60 hours total per quarter)**

An intensive course about fundamentals of ultrasound principles, protocols, and scanning involving the major abdominal organ structures, gynecology, obstetrics, and vessels. Sonographic terminology, orientation and descriptions of normal and abnormal structures. It is assumed the student has a thorough knowledge of gross and sectional anatomy. Intended for students in the Diagnostic Medical Sonography Program; enrollment is limited to students accepted in the program.

**FHGE: Non-GE Transferable: CSU****DMS 50B SONOGRAPHY & PATIENT CARE** 2 Units**Prerequisite: AHS 200 or equivalent.****Corequisites: DMS 50A, 60A and 72A.****Grade Type: Letter Grade Only**  
**Not Repeatable.****2 hours lecture. (24 hours total per quarter)**

Defines the student sonographer's role on the medical team. It prepares the student to enter the clinical environment including instruction in sonographer safety and ergonomics. Legal, ethical, legislative and regulatory issues including scope of practice and standards. Patient care techniques, clinical assessment, diagnosis and treatment. Interacting with cultural, age, and the special needs populations. Professionalism, competency-based education and leadership. Intended for students in the Diagnostic Medical Sonography Program; enrollment is limited to students accepted in the program.

**FHGE: Non-GE Transferable: CSU**

**DMS 51A SECTIONAL ANATOMY 3 Units**  
**Prerequisites:** BIOL 40A, 40B and 40C or equivalent.  
**Grade Type:** Letter Grade Only  
**Not Repeatable.**  
**3 hours lecture. (36 hours total per quarter)**  
Sectional human anatomy for health care professionals, students of Allied Health and nursing professions. Emphasis on transverse, coronal and sagittal planes and correlation to other imaging modalities. Discussions include pathology-related alterations to sectional anatomy images. Intended for students in the Diagnostic Medical Sonography Program; enrollment is limited to students accepted in the program.  
**FHGE: Non-GE Transferable: CSU**

**DMS 52A PHYSICAL PRINCIPLES OF DIAGNOSTIC MEDICAL SONOGRAPHY I 2 Units**  
**Prerequisite:** DMS 50A.  
**Grade Type:** Letter Grade Only  
**Not Repeatable.**  
**2 hours lecture. (24 hours total per quarter)**  
Principles of diagnostic ultrasound, wave characteristics, artifacts, propagation, acoustic variables, and review of mathematical skills. Intended for students in the Diagnostic Medical Sonography Program; enrollment is limited to students accepted in the program.  
**FHGE: Non-GE Transferable: CSU**

**DMS 52B PHYSICAL PRINCIPLES OF DIAGNOSTIC MEDICAL SONOGRAPHY II 2 Units**  
**Prerequisite:** DMS 52A.  
**Grade Type:** Letter Grade Only  
**Not Repeatable.**  
**2 hours lecture. (24 hours total per quarter)**  
A continuation of DMS 52A with an emphasis on transducers, pulsed waves, real-time imaging and image display. Intended for students in the Diagnostic Medical Sonography Program; enrollment is limited to students accepted in the program.  
**FHGE: Non-GE Transferable: CSU**

**DMS 52C PHYSICAL PRINCIPLES OF DIAGNOSTIC MEDICAL SONOGRAPHY III 2 Units**  
**Prerequisite:** DMS 52B.  
**Grade Type:** Letter Grade Only  
**Not Repeatable.**  
**2 hours lecture. (24 hours total per quarter)**  
A continuation of DMS 52B with an emphasis on advanced principles in medical ultrasound instrumentation, harmonic imaging, volume rendering, hemodynamics, use of doppler imaging and sonographic quality control procedures. Preparation for national examinations. Intended for students in the Diagnostic Medical Sonography Program; enrollment is limited to students accepted in the program.  
**FHGE: Non-GE Transferable: CSU**

**DMS 53A DIAGNOSTIC MEDICAL SONOGRAPHY I 2 Units**  
**Prerequisite:** DMS 50A.  
**Grade Type:** Letter Grade Only  
**Not Repeatable.**  
**2 hours lecture, 1 hour laboratory. (36 hours total per quarter)**  
Anatomy and physiology related to the major abdominal organs and major abdominal vessels. Assessment including physical, clinical symptoms, and laboratory findings. Related pathology and its sonographic appearance involving these structures. Scanning protocols, technical factors and image quality. One hour per week will be spent in completing online exams and working on patient case studies. Intended for students in the Diagnostic Medical Sonography Program; enrollment is limited to students accepted in the program.  
**FHGE: Non-GE Transferable: CSU**

**DMS 53B DIAGNOSTIC MEDICAL SONOGRAPHY II 2 Units**  
**Prerequisite:** DMS 53A.  
**Grade Type:** Letter Grade Only  
**Not Repeatable.**  
**2 hours lecture, 1 hour laboratory. (36 hours total per quarter)**  
Anatomy and physiology related to major and superficial structures and organs including sonography of abdominal organs and superficial structures. Assessment including physical, clinical symptoms, laboratory findings, and pathology including the sonographic appearances. Scanning protocols, technical factors and image quality. One hour per week will be spent in completing online exams and working on patient case studies. Intended for students in the Diagnostic Medical Sonography Program; enrollment is limited to students accepted in the program.  
**FHGE: Non-GE Transferable: CSU**

**DMS 53C DIAGNOSTIC MEDICAL SONOGRAPHY III 2 Units**  
**Prerequisite:** DMS 53B.  
**Grade Type:** Letter Grade Only  
**Not Repeatable.**  
**2 hours lecture, 1 hour laboratory. (36 hours total per quarter)**  
Anatomy, physiology and pathology of abdominal organs not yet covered, neurosonography, superficial structures, transplant, and the pediatric patient. Use of sonography in the operating room with a review of aseptic technique. Discussion of related medical ethics and legal issues. One hour per week will be spent in completing online exams and working on patient case studies. Intended for students in the Diagnostic Medical Sonography Program; enrollment is limited to students accepted in the program.  
**FHGE: Non-GE Transferable: CSU**

**DMS 54A GYNECOLOGY 2 Units**  
**Prerequisite:** DMS 50A.  
**Grade Type:** Letter Grade Only  
**Not Repeatable.**  
**2 hours lecture, 1 hour laboratory (laboratory meets every other week). (30 hours total per quarter)**  
Anatomy and physiology of the nongravid pelvis. Pathology, sonographic appearance, and clinical symptoms of the female patient. Sonographic protocols and measurements with correlations to accepted standards. One hour per week will be spent in completing online exams and working on patient case studies. Intended for students in the Diagnostic Medical Sonography Program; enrollment is limited to students accepted in the program.  
**FHGE: Non-GE Transferable: CSU**

**DMS 54B GYNECOLOGY & OBSTETRICS 2 Units**  
**Prerequisite:** DMS 54A.  
**Grade Type:** Letter Grade Only  
**Not Repeatable.**  
**2 hours lecture, 1 hour laboratory (laboratory meets every other week). (30 hours total per quarter)**  
Anatomy and physiology of the nongravid pelvis and first trimester pregnancy. Pathology, sonographic appearance, and clinical symptoms of the female patient. Sonographic protocols and measurements with correlations to accepted standards. One-half hour per week will be spent in completing online exams and working on patient case studies. Intended for students in the Diagnostic Medical Sonography Program; enrollment is limited to students accepted in the program.  
**FHGE: Non-GE Transferable: CSU**

**DMS 55A OBSTETRICS I** 2 Units  
**Prerequisite:** DMS 54B.  
**Grade Type:** Letter Grade Only  
**Not Repeatable.**  
**2 hours lecture, 1 hour laboratory (laboratory meets every other week). (30 hours total per quarter)**  
 Normal fetal growth and sonographic measurements with correlation to accepted standards. Development of the placenta, amniotic fluid and cord. Abnormalities, pathology and maternal complications. One-half hour per week will be spent in completing online exams and working on patient case studies. Intended for students in the Diagnostic Medical Sonography Program; enrollment is limited to students accepted in the program.  
**FHGE: Non-GE Transferable: CSU**

**DMS 55B OBSTETRICS II** 2 Units  
**Prerequisite:** DMS 55A.  
**Grade Type:** Letter Grade Only  
**Not Repeatable.**  
**2 hours lecture, 1 hour laboratory (laboratory meets every other week). (30 hours total per quarter)**  
 Advanced obstetrical sonography. Abnormal 2nd and 3rd trimester fetal growth and sonographic measurements with correlations to accepted standards. Abnormalities, pathology and maternal complications. One-half hour per week will be spent in completing online exams and working on patient case studies. Intended for students in the Diagnostic Medical Sonography Program; enrollment is limited to students accepted in the program.  
**FHGE: Non-GE Transferable: CSU**

**DMS 56A VASCULAR SONOGRAPHY** 3 Units  
**Prerequisite:** DMS 50A.  
**Grade Type:** Letter Grade Only  
**Not Repeatable.**  
**3 hours lecture. (36 hours total per quarter)**  
 Vascular terminology, principles including doppler physics. Interpretation of frequency spectral analysis. Intracranial, cerebrovascular and peripheral venous applications related to vascular technology. Normal, abnormal and pathologic states of the human vascular system. Intended for students in the Diagnostic Medical Sonography Program; enrollment is limited to students accepted in the program.  
**FHGE: Non-GE Transferable: CSU**

**DMS 56B ADVANCED APPLICATIONS OF VASCULAR TECHNOLOGY** 2 Units  
**Prerequisite:** DMS 56A.  
**Grade Type:** Letter Grade Only  
**Not Repeatable.**  
**2 hours lecture. (24 hours total per quarter)**  
 A continuation of DMS 56A for the advanced principles & theory of noninvasive vascular technology. Comprehensive study of arterial and venous applications including peripheral arterial, abdominal vascular, and assessment of the reproductive tract. Designed to help prepare individuals for the National Board for credentialing as a Registered Vascular Technologist. Intended for students in the Diagnostic Medical Sonography Program; enrollment is limited to students accepted in the program.  
**FHGE: Non-GE Transferable: CSU**

**DMS 60A CRITIQUE & PATHOLOGY I** 2 Units  
**Prerequisites:** BIOL 40A, 40B and 40C.  
**Corequisites:** DMS 50A, 50B and 72A.  
**Grade Type:** Letter Grade Only  
**Not Repeatable.**  
**2 hours lecture. (24 hours total per quarter)**  
 Interpretation and critique of normal and abnormal anatomy with correlation of didactic, clinical and image information. Emphasis on communication skills via written and oral case presentations and critiques. Intended for students in the Diagnostic Medical Sonography Program; enrollment is limited to students accepted in the program.  
**FHGE: Non-GE Transferable: CSU**

**DMS 60B CRITIQUE & PATHOLOGY II** 2 Units  
**Prerequisite:** DMS 60A.  
**Grade Type:** Letter Grade Only  
**Not Repeatable.**  
**2 hours lecture. (24 hours total per quarter)**  
 Interpretation and critique of normal and abnormal anatomy with correlation of didactic, clinical and image information. Written and oral case presentations with emphasis on abdominal subjects. Intended for students in the Diagnostic Medical Sonography Program; enrollment is limited to students accepted in the program.  
**FHGE: Non-GE Transferable: CSU**

**DMS 60C CRITIQUE & PATHOLOGY III** 2 Units  
**Prerequisite:** DMS 60B.  
**Grade Type:** Letter Grade Only  
**Not Repeatable.**  
**2 hours lecture. (24 hours total per quarter)**  
 Interpretation and critique of normal and abnormal anatomy with correlation of didactic, clinical and image information. Written and oral case presentations with emphasis on gynecological and abdominal subjects. Intended for students in the Diagnostic Medical Sonography Program; enrollment is limited to students accepted in the program.  
**FHGE: Non-GE Transferable: CSU**

**DMS 60D CRITIQUE & PATHOLOGY IV** 2 Units  
**Prerequisite:** DMS 60C.  
**Grade Type:** Letter Grade Only  
**Not Repeatable.**  
**2 hours lecture. (24 hours total per quarter)**  
 Interpretation and critique of normal and abnormal anatomy with correlation of didactic, clinical and image information. Written and oral case presentations with emphasis on obstetrical subjects. Intended for students in the Diagnostic Medical Sonography Program; enrollment is limited to students accepted in the program.  
**FHGE: Non-GE Transferable: CSU**

**DMS 60E CRITIQUE & PATHOLOGY V** 2 Units  
**Prerequisite:** DMS 60D.  
**Grade Type:** Letter Grade Only  
**Not Repeatable.**  
**2 hours lecture. (24 hours total per quarter)**  
 Interpretation and critique of normal and abnormal anatomy with correlation of didactic, clinical and image information. Written and oral case presentations with emphasis on superficial parts, pediatric, neonatal and vascular subjects. Intended for students in the Diagnostic Medical Sonography Program; enrollment is limited to students accepted in the program.  
**FHGE: Non-GE Transferable: CSU**

**DMS 60F CRITIQUE & PATHOLOGY VI** 2 Units  
**Prerequisite:** DMS 60E.  
**Grade Type:** Letter Grade Only  
**Not Repeatable.**  
**2 hours lecture. (24 hours total per quarter)**  
 Interpretation and critique of normal and abnormal anatomy with correlation of didactic, clinical and image information. Written and oral case presentations with emphasis on superficial parts, pediatric, neonatal and vascular subjects. Intended for students in the Diagnostic Medical Sonography Program; enrollment is limited to students accepted in the program.  
**FHGE: Non-GE Transferable: CSU**

**DMS 70A CLINICAL PRECEPTORSHIP I** 11.5 Units  
**Prerequisites:** DMS 72A.  
**Grade Type:** Letter Grade Only  
**Not Repeatable.**  
**32 hours laboratory. This is a 13 week course. (416 hours total per quarter)**  
 A continuation of DMS 72A. Preceptorship to obtain the technical expertise with emphasis on mastery of knowledge, skills, and abilities required performing sonographic studies and procedures. Emphasis is on elementary level for abdominal and gynecological examinations as to delineate complete anatomic and functional information for interpretation. Intended for students in the Diagnostic Medical Sonography Program; enrollment is limited to students accepted in the program.  
**FHGE: Non-GE Transferable: CSU**

**DMS 70B CLINICAL PRECEPTORSHIP II** 10.5 Units  
**Prerequisite:** DMS 70A.  
**Grade Type:** Letter Grade Only  
**Not Repeatable.**  
**32 hours laboratory. (384 hours total per quarter)**  
 Preceptorship in a medical setting allows the student to obtain the technical expertise with emphasis on mastery of knowledge, skills, and abilities required performing sonographic studies and procedures. The student is exposed to varied methodologies and practice philosophies in a variety of clinical settings. Major emphasis is on the knowledge and performance for abdominal, obstetrics, and gynecology examinations. Intended for students in the Diagnostic Medical Sonography Program; enrollment is limited to students accepted in the program.  
**FHGE: Non-GE Transferable: CSU**

**DMS 70C CLINICAL PRECEPTORSHIP III** 9.5 Units  
**Prerequisite:** DMS 70B.  
**Grade Type:** Letter Grade Only  
**Not Repeatable.**  
**32 hours laboratory. This is an 11 week course. (352 hours total per quarter)**  
 Preceptorship in a medical setting that allows the student to obtain the technical expertise with emphasis on mastery of knowledge, skills, and abilities required performing sonographic studies and procedures. Major emphasis is on intermediate-advanced level of knowledge and competency for abdominal, gynecology, obstetrics, and vascular sonography. Intended for students in the Diagnostic Medical Sonography Program; enrollment is limited to students accepted in the program.  
**FHGE: Non-GE Transferable: CSU**

**DMS 70D CLINICAL PRECEPTORSHIP IV** 11.5 Units  
**Prerequisite:** DMS 70C.  
**Grade Type:** Letter Grade, the student may select Pass/No Pass  
**Not Repeatable.**  
**32 hours laboratory. This is a 13 week course. (416 hours total per quarter)**  
 Preceptorship in a medical setting that allows students to obtain the technical expertise with emphasis on the advanced mastery of knowledge, skills, and abilities required performing all types of sonographic studies and procedures. Intended for students in the Diagnostic Medical Sonography Program; enrollment is limited to students accepted in the program.  
**FHGE: Non-GE Transferable: CSU**

**DMS 70E CLINICAL PRECEPTORSHIP V** 10.5 Units  
**Prerequisite:** DMS 70D.  
**Grade Type:** Letter Grade Only  
**Not Repeatable.**  
**32 hours laboratory. (384 hours total per quarter)**  
 Preceptorship in a medical setting that allows students to obtain the technical expertise with emphasis on the advanced-graduate mastery of knowledge, skills, and abilities required performing all types of sonographic studies and procedures. Major emphasis is on terminal competencies leading to program completion. Intended for students in the Diagnostic Medical Sonography Program; enrollment is limited to students accepted in the program.  
**FHGE: Non-GE Transferable: CSU**

**DMS 70R INDEPENDENT STUDY IN** 1 Unit  
**DMS 71R DIAGNOSTIC MEDICAL** 2 Units  
**DMS 72R SONOGRAPHY** 3 Units  
**DMS 73R** 4 Units  
**Grade Type:** Letter Grade, the student may select Pass/No Pass  
**Not Repeatable.**  
**3-12 hours laboratory per week. (36-144 hours total per quarter)**  
 Provides an opportunity for the student to expand their studies in Diagnostic Medical Sonography beyond the classroom by completing a project or an assignment arranged by agreement between the student and instructor. The student is required to contract with the instructor to determine the scope of assignment and the unit value assigned for successful completion. Students may take a maximum of 6 units of Independent Study per department.  
**FHGE: Non-GE Transferable: CSU**

**DMS 72A DIAGNOSTIC MEDICAL SONOGRAPHY PROCEDURES & APPLICATIONS** 11.5 Units  
**Prerequisites:** BIOL 40A, 40B and 40C.  
**Corequisites:** DMS 50A, 50B and 60A.  
**Grade Type:** Letter Grade Only  
**Not Repeatable.**  
**1 hour lecture, 32 hours laboratory. (396 hours total per quarter)**  
 Instruction to develop the fundamental skills, procedures and applications for sonographic image acquisition. Includes instruction in establishing technical quality, interpretation, analysis, and case presentation. Includes hands-on participation in a structured lab setting with emphasis on simulation and live scanning exercises plus clinical preceptorship. Intended for students in the Diagnostic Medical Sonography Program; enrollment is limited to students accepted in the program.  
**FHGE: Non-GE Transferable: CSU**

**DMS 80A ADVANCED SONOGRAPHIC PRINCIPLES** 4 Units  
**Prerequisite:** DMS 60D.  
**Grade Type:** Letter Grade Only  
**Not Repeatable.**  
**3 hours lecture, 3 hours laboratory. (72 hours total per quarter)**  
 Continuation of all courses as well as new developments with advanced analysis of current sonographic practice. Final preparation for completion and participation of national registry examinations. Student presentation and critique of neoplastic cases. Intended for students in the Diagnostic Medical Sonography Program; enrollment is limited to students accepted in the program.  
**FHGE: Non-GE Transferable: CSU**

## ECONOMICS

Business and Social Sciences  
 650.949.7322 foothill.edu/bss

**ECON 1A PRINCIPLES OF MACROECONOMICS** 5 Units  
**Prerequisite:** MATH 220.  
**Advisory:** Demonstrated proficiency in English by placement as determined by score on the English placement test OR through an equivalent placement process OR completion of ESLL 125 & ESLL 249; MATH 105.  
**Grade Type:** Letter Grade, the student may select Pass/No Pass  
**Not Repeatable.**  
**5 hours lecture. (60 hours total per quarter)**  
 Fundamental economic concepts; determination of national income and employment; income fluctuation; money and the banking system; government monetary and fiscal policies; current economic problems; economic development; international trade. ECON 1A and 1B may be taken in either order.  
**FHGE: Social & Behavioral Sciences Transferable: UC/CSU**

**ECON 1B PRINCIPLES OF MICROECONOMICS 5 Units****Prerequisite:** MATH 220.**Advisory:** Demonstrated proficiency in English by placement as determined by score on the English placement test OR through an equivalent placement process OR completion of ESLL 125 & ESLL 249; MATH 105.**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.**5 hours lecture. (60 hours total per quarter)**

Micro analysis of economic life. Allocation of resources. Consumer behavior. Pricing and output decisions. Distribution of wealth and income. Nature and characteristics of business enterprises. International trade. Comparative economic systems. ECON 1A and 1B may be taken in either order.

**FHGE:** Social & Behavioral Sciences **Transferable:** UC/CSU**ECON 9 POLITICAL ECONOMY 4 Units****Advisory:** Demonstrated proficiency in English by placement as determined by score on the English placement test OR through an equivalent placement process OR completion of ESLL 125 & ESLL 249; not open to students with credit in ECON 9H, POLI 9 or POLI 9H.**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.**4 hours lecture. (48 hours total per quarter)**

Analysis of the contending theoretical formulations of International Political Economy (IPE) emphasizing the interconnection between economics and politics in the broad context of a global economy and the formulation of national public policy. Economic and political policy issues of current national and international significance are emphasized.

**FHGE:** Social & Behavioral Sciences **Transferable:** UC/CSU**ECON 9H HONORS POLITICAL ECONOMY 4 Units****Prerequisite:** Honors Institute participant.**Advisory:** Not open to students with credit in ECON 9, POLI 9 or 9H.**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.**4 hours lecture. (48 hours total per quarter)**

Analysis of the contending theoretical formulations of International Political Economy (IPE) emphasizing the interconnection between economics and politics in the broad context of a global economy and the formulation of national public policy. Economic and political policy issues of current national and international significance are emphasized. As an honors course, it is a full thematic seminar with advanced teaching methods focusing on extensive writing, reading, and research assignments, student lectures, group discussions and interactions. Distinguishing features include: heightened focus on and evaluation of global objectives and components of developed and developing nations, increased depth of analysis and breadth of examination, higher level of student critical thinking. Expanded learning outcomes and fuller description of these focused elements.

**FHGE:** Social & Behavioral Sciences **Transferable:** UC/CSU**ECON 25 THE GLOBAL ECONOMY 4 Units****Advisory:** ECON 1A and 1B.**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.**4 hours lecture. (48 hours total per quarter)**

Analysis of increasing economic integration in the post-WW II era with a focus on international trade and investment. Introduction to international economic organizations such as the WTO and IMF.

**FHGE:** Social & Behavioral Sciences **Transferable:** UC/CSU**ECON 54H HONORS INSTITUTE SEMINAR IN ECONOMICS 1 Unit****Prerequisite:** Honors Institute participant.**Advisory:** Not open to students with credit in ECON 34 or 34H.**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.**1 hour lecture. (12 hours total per quarter)**

A seminar in directed readings, discussions and projects in economics. Specific topics to be determined by the instructor.

**FHGE:** Non-GE **Transferable:** CSU**ECON 70R INDEPENDENT STUDY 1 Unit****ECON 71R IN ECONOMICS 2 Units****ECON 72R 3 Units****ECON 73R 4 Units****Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.**3-12 hours laboratory per week. (36-144 hours total per quarter)**

Provides an opportunity for the student to expand their studies in Economics beyond the classroom by completing a project or an assignment arranged by agreement between the student and instructor. The student is required to contract with the instructor to determine the scope of assignment and the unit value assigned for successful completion. Students may take a maximum of 6 units of Independent Study per department.

**FHGE:** Non-GE **Transferable:** CSU**EMERGENCY MEDICAL SERVICES****Biological and Health Sciences****408.745.8022** [foothill.edu/ems](http://foothill.edu/ems)**EMS 50 EMERGENCY MEDICAL RESPONSE 5 Units****Formerly:** EMR 50, HLTH 55**Advisory:** Not open to students with credit in EMR 50, HLTH 5 or 55.**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.**4 hours lecture, 4 hours laboratory. (96 hours total per quarter)**

Provides the student with the knowledge and skills necessary to work as an emergency medical responder (EMR) to help sustain life, reduce pain and minimize the consequences of injury or sudden illness until more advanced medical help takes over. The course meets or exceeds the 2008 Emergency Medical Services Educational Standards for Emergency Medical Response and meets Guidelines 2010 for First Aid and 2010 Consensus on Science for Cardiopulmonary Resuscitation and Emergency Cardiovascular Care.

**FHGE:** Non-GE **Transferable:** CSU**EMS 52 EMERGENCY MEDICAL TECHNICIAN: BASIC PART A 5 Units****Formerly:** EMT 50, 304**Prerequisite:** EMS 50 or 400, or First Responder Course, or equivalent work experience as determined by the instructor.**Corequisite:** EMS 52A.**Advisory:** EMS 52 and 53 may not be taken concurrently; not open to students with credit in EMT 50 or 304.**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.**4 hours lecture, 3 hours laboratory. (84 hours total per quarter)**

Intended to instruct a student to the level of Emergency Medical Technician-1 who serves as a vital link in the chain of the health care team. It is recognized that the majority of prehospital emergency medical care will be provided by the EMT-1. Includes all skills necessary for the individual to provide emergency medical care at a basic life support level with a fire department, or other specialized service. First of two courses required to be eligible to take the California written and practical exam for certification as an Emergency Medical Technician-1.

**FHGE:** Non-GE **Transferable:** CSU

**EMS 52A      EMERGENCY MEDICAL TECHNICIAN 0.5 Units**  
**SIMULATION LABORATORY I**

**Corequisite:** EMS 52.

**Advisory:** EMS 52A and 53A may not be taken concurrently.

**Grade Type:** Letter Grade Only

**Not Repeatable.**

**1.5 hours laboratory. (18 hours total per quarter)**

First in a two course series, which provides the student with hands on application of skills necessary to work as an emergency medical technician (EMT). Students will participate in patient assessment scenarios focused on medical complaints and treatments of various diseases, to build competence and prepare to sit for the state certification exam and enter into the EMT workforce.

**FHGE: Non-GE    Transferable: CSU**

**EMS 53                      EMERGENCY MEDICAL                      5.5 Units**  
**TECHNICIAN: BASIC PART B**

**Formerly:** EMT 51, 305

**Prerequisite:** EMS 52.

**Corequisite:** EMS 53A.

**Advisory:** EMS 53 is part two of two courses required to be eligible to take the California State written and practical exam for certification as an Emergency Medical Technician-1; EMS 52 and 53 may not be taken concurrently; not open to students with credit in EMT 51 or 305.

**Grade Type:** Letter Grade, the student may select Pass/No Pass

**Not Repeatable.**

**4 hours lecture, 3 hours laboratory, 2 hours clinic. (108 hours total per quarter)**

Second of two courses required to be eligible to take the California State written and practical exam for certification as an Emergency Medical Technician-1. Intended to instruct a student to the level of Emergency Medical Technician-Basic who serves as a vital link in the chain of the health care team. Includes all skills necessary for the individual to provide emergency medical care at a basic life support level with a fire department, ambulance, or other specialized service.

**FHGE: Non-GE    Transferable: CSU**

**EMS 53A                      EMERGENCY MEDICAL TECHNICIAN 0.5 Units**  
**SIMULATION LABORATORY II**

**Corequisite:** EMS 53.

**Advisory:** EMS 53A is part two of two courses required to be eligible to take the California State written and practical exam for certification as an Emergency Medical Technician-1; EMS 52A and 53A may not be taken concurrently.

**Grade Type:** Letter Grade Only

**Not Repeatable.**

**1.5 hours laboratory. (18 hours total per quarter)**

Second in a two course series, which provides the student with hands on application of skills necessary to work as an emergency medical technician (EMT). Students will participate in patient assessment scenarios focused on trauma and treatment of various mechanisms of injuries, to build competence and prepare to sit for the state certification exam and enter into the EMT workforce.

**FHGE: Non-GE    Transferable: CSU**

**EMS 60A                      PARAMEDIC COGNITIVE                      9 Units**  
**& AFFECTIVE IA**

**Formerly:** EMTP 60A

**Prerequisite:** BIOL 40A or equivalent (with laboratory).

**Corequisite:** EMS 60B.

**Advisory:** Not open to students with credit in EMTP 60A or 100A.

**Grade Type:** Letter Grade Only

**Not Repeatable.**

**9 hours lecture. (108 hours total per quarter)**

First of three modularized lecture series in which paramedic students will learn and discuss the EMS System, understand the relationship of anatomy and physiology of the human body, life span of the patient, cellular function and disease, medical terminology, and pharmacology related to patient care. Intended for students in the Paramedic Program; enrollment is limited to students accepted in the program.

**FHGE: Non-GE    Transferable: CSU**

**EMS 60B                      PARAMEDIC COGNITIVE,                      3 Units**  
**PSYCHOMOTOR & AFFECTIVE IB**

**Formerly:** EMTP 60B

**Corequisite:** EMS 60A.

**Advisory:** Not open to students with credit in EMTP 60B.

**Grade Type:** Letter Grade, the student may select Pass/No Pass

**Not Repeatable.**

**1 hour lecture, 6.5 hours laboratory. (90 hours total per quarter)**

Paramedic skills presented: proper hand washing; personal protective equipment; patient assessment; intravenous access; intraosseous infusion; pharmacology; medication administration; airway management: endotracheal intubation, oropharyngeal airway, nasopharyngeal airway, suctioning, dual lumen airways; advanced cardiac life support ambulance 911 call simulations and case studies; synchronized cardioversion; transcutaneous pacing; defibrillation; cardiovascular/chest pain emergency 911 call simulations; end tidal carbon dioxide monitoring; capnography; 12 lead ECG interpretation. Intended for students in the Paramedic Program; enrollment is limited to students accepted in the program.

**FHGE: Non-GE    Transferable: CSU**

**EMS 61A                      PARAMEDIC COGNITIVE                      9 Units**  
**& AFFECTIVE IIA**

**Formerly:** EMTP 61A

**Prerequisites:** EMS 60A and 60B.

**Corequisite:** EMS 61B.

**Advisory:** Not open to students with credit in EMTP 61A or 100B.

**Grade Type:** Letter Grade Only

**Not Repeatable.**

**9 hours lecture. (108 hours total per quarter)**

Continuation of EMS 60A, the second of three modularized lecture series. Discusses airway anatomy and management, EKG, 12 leads and discuss various respiratory emergencies. In addition students will learn and discuss neurological disorders, cardiovascular emergencies, musculoskeletal injuries and treatment, and GI, and GU anatomy and disorders. Intended for students in the Paramedic Program; enrollment is limited to students accepted in the program.

**FHGE: Non-GE    Transferable: CSU**

**EMS 61B                      PARAMEDIC COGNITIVE,                      3 Units**  
**AFFECTIVE & PSYCHOMOTOR IIB**

**Formerly:** EMTP 61B

**Prerequisites:** EMS 60A and 60B.

**Corequisite:** EMS 61A.

**Advisory:** Not open to students with credit in EMTP 61B or 100B.

**Grade Type:** Letter Grade Only

**Not Repeatable.**

**1 hour lecture, 6.5 hours laboratory. (90 hours total per quarter)**

The cognitive, psychomotor, and affective basis for EMT students wishing to become EMT paramedics. The paramedic: anatomy and physiology; patient assessment; respiratory ambulance 911 call simulations and case studies; nebulizer/BVM set-up; pleural decompression; digital intubation; foreign body airway obstruction; neurological ambulance 911 call simulations and case studies; 12 lead ECG interpretation; diabetic ambulance 911 call simulations and case studies; blood glucose analysis; medication administration; pharmacology; pediatric advanced life support ambulance 911 call simulations and case studies; non-traumatic abdominal ambulance 911 call simulations and case studies; bleeding control & shock management; pressure infusers; intubation with spinal immobilization; intravenous access; overdose and poisoning ambulance 911 call simulations and case studies. Intended for students in the Paramedic Program; enrollment is limited to students accepted in the program.

**FHGE: Non-GE    Transferable: CSU**

**EMS 62A PARAMEDIC COGNITIVE & AFFECTIVE IIIA 9 Units**

Formerly: EMTP 62A

Prerequisites: EMS 61A and 61B.

Advisory: Not open to students with credit in EMTP 62A or 100C.

Grade Type: Letter Grade Only

Not Repeatable.

9 hours lecture. (108 hours total per quarter)

Continuation of EMS 61A, and the third of three modularized lecture series. Discusses various toxicological emergencies, psychiatric emergencies, OB, pediatric anatomy and emergencies, command and control, triage, and the geriatric patient. Intended for students in the Paramedic Program; enrollment is limited to students accepted in the program.

FHGE: Non-GE Transferable: CSU

**EMS 62B PARAMEDIC COGNITIVE, AFFECTIVE & PSYCHOMOTOR IIIB 3 Units**

Formerly: EMTP 62B

Prerequisites: EMS 61A and 61B.

Advisory: Not open to students with credit in EMTP 62B.

Grade Type: Letter Grade Only

Not Repeatable.

1 hour lecture, 6.5 hours laboratory. (90 hours total per quarter)

Paramedic skills presented: proper hand washing; personal protective equipment; patient assessment; intravenous access; intraosseous infusion; pharmacology; medication administration; airway management: endotracheal intubation, oropharyngeal airway, nasopharyngeal airway, suctioning, dual lumen airways; advanced cardiac life support ambulance 911 call simulations and case studies; synchronized cardioversion; transcutaneous pacing; defibrillation; cardiovascular/chest pain emergency 911 call simulations; end tidal carbon dioxide monitoring; capnography; 12 lead ECG interpretation. Intended for students in the Paramedic Program; enrollment is limited to students accepted in the program.

FHGE: Non-GE Transferable: CSU

**EMS 63A PARAMEDIC HOSPITAL SPECIALTY ROTATIONS 2 Units**

Formerly: EMTP 63A

Prerequisites: EMS 60A and 60B.

Corequisites: EMS 61A and 61B.

Advisory: Not open to students with credit in EMTP 63A or 102.

Grade Type: Letter Grade Only

Not Repeatable.

6 hours clinic. (72 hours total per quarter)

Application of skills that demonstrate principles and concepts of anatomy, physiology, pathophysiology, clinical symptoms and diagnosis as they pertain to pre-hospital emergency medical care of the sick and injured. The student will rotate through specialty areas of the hospital departments: pediatrics, pediatric intensive care unit, labor and delivery, surgery (airway management), respiratory therapy, other selected hospital areas, assisted living, Skills Nursing Facilities, and facilities for the mentally and physically challenged. Intended for students in the Paramedic Program; enrollment is limited to students accepted in the program.

FHGE: Non-GE Transferable: CSU

**EMS 63B PARAMEDIC HOSPITAL EMERGENCY DEPARTMENT ROTATIONS 4.5 Units**

Formerly: EMTP 63B

Prerequisites: EMS 60A and 60B.

Corequisite: Completion of or concurrent enrollment in EMS 63A.

Advisory: Not open to students with credit in EMTP 63B or 102.

Grade Type: Letter Grade Only

Not Repeatable.

14 hours clinic. (168 hours total per quarter)

Application of skills that demonstrate principles and concepts of anatomy, physiology, pathophysiology, clinical symptoms and diagnosis as they pertain to pre-hospital emergency medical care of the sick and injured. The student will rotate through specialty areas of the hospital departments: pediatrics, pediatric intensive care unit, labor and delivery, surgery (airway management), respiratory therapy, and other selected hospital areas. Intended for students in the Paramedic Program; enrollment is limited to students accepted in the program.

FHGE: Non-GE Transferable: CSU

**EMS 64A PARAMEDIC AMBULANCE FIELD INTERNSHIP I 13 Units**

Formerly: EMTP 64A

Advisory: Not open to students with credit in EMTP 64A or 103A.

Grade Type: Letter Grade Only

Not Repeatable.

40 hours clinic. (480 hours total per quarter)

Application of paramedic knowledge and skills in the clinical setting as an intern responding on a 911 ambulance to ill and injured patients while being instructed and evaluated by a field preceptor. The student has the task of initiating, providing, and directing entire emergency patient care while under the supervision of a preceptor. First of two ambulance field internships required for certification as an EMT-Paramedic in California. Intended for students in the Paramedic Program; enrollment is limited to students accepted in the program.

FHGE: Non-GE Transferable: CSU

**EMS 64B PARAMEDIC AMBULANCE FIELD INTERNSHIP II 13 Units**

Formerly: EMTP 64B

Advisory: Not open to students with credit in EMTP 64B or 103B.

Grade Type: Letter Grade Only

Not Repeatable.

40 hours clinic. (480 hours total per quarter)

Application of paramedic knowledge and skills in the clinical setting as an intern responding on a 911 ambulance to ill and injured patients while being instructed and evaluated by a field preceptor. The student has the task of initiating, providing, and directing entire emergency patient care while under the supervision of a preceptor. Second of two ambulance field internships required for certification as an EMT-Paramedic in California. Intended for students in the Paramedic Program; enrollment is limited to students accepted in the program.

FHGE: Non-GE Transferable: CSU

**EMS 120 EMERGENCY MEDICAL SERVICES ACADEMY 8 Units**

Formerly: EMT 120, 309

Prerequisite: EMS 53.

Advisory: Not open to students with credit in EMT 120 or 309.

Grade Type: Letter Grade Only

Not Repeatable.

6 hours lecture, 6 hours laboratory. (144 hours total per quarter)

Students will participate in physical training identical to that of EMTs employed by large private ambulance providers. Heavy emphasis is placed on training in patient moving and lifting, documentation, scenario practice, customer service and medical legal issues. Mock interviews will be conducted by job recruiters from local public and private agencies. Successful completion of the class will result in a stronger first time job applicant. Intended for students interested in a career as an Emergency Medical Technologist.

FHGE: Non-GE

**EMS 200 PARAMEDIC ACADEMY 1.5 Units**

Formerly: EMT 200

**Prerequisite:** Current CPR Card; current EMT license; at least 2 years of experience as an EMT.

**Advisory:** Not open to students with credit in EMT 200.

**Grade Type:** Letter Grade Only

**Not Repeatable.**

**6 hours lecture, 36 hours laboratory. This is a 1 week course.**

Introduction to the profession of paramedicine. Emphasis on paramedic terminology, communication skills, licensure, documentation, patient assessments, and skills proficiency. Discussion of the requirements for the paramedic program. Intended for students entering or considering to enter the paramedic program. This course is designed to prepare the student with the basic knowledge and skills necessary to succeed in the Paramedic Academy.

**FHGE: Non-GE**

**EMS 203 EMERGENCY MEDICAL TECHNICIAN: 2.5 Units  
BASIC CONTINUING EDUCATION**

Non-degree applicable credit course.

Formerly: EMT 203, 303

**Advisory:** Students must possess either a current EMT-1 certificate or a certification which has been expired for no more than 24 months (must complete before the end of that month); students who have not fulfilled NREMT requirements within one year of EMT course completion may enroll. Students must also possess current certification in American Red Cross CPR-BLS for the Professional Rescuer or American Heart Association CPR for the Health care Provider. Students may repeat this course without petition when necessary to meet a legally mandated training requirement as a condition of volunteer or paid employment.

**Grade Type:** Letter Grade, the student may select Pass/No Pass  
**Unlimited Repeatability.**

**2 hours lecture, 1.5 hours laboratory. (42 hours total per quarter)**

This course meets the education requirements as specified by the California Emergency Medical Services Authority, the Emergency Medical Authority of Santa Clara County and the National Registry of EMT (NREMT) of 40 hours. Intended for both pre-employed personnel and those persons currently employed by a fire department or ambulance service within the County of Santa Clara. Review and update the knowledge and skills required for basic certification. Students maintaining their National Registry of Emergency Technicians (NREMT) certification will meet the NREMT transition requirements with this course.

**FHGE: Non-GE**

**EMS 400 EMERGENCY MEDICAL  
RESPONSE NONCREDIT 0 Units**

Non-degree applicable non-credit course.

Formerly: EMR 400

**Grade Type:** Non-credit course that receives no grade  
**Unlimited Repeatability.**

**4 hours lecture, 4 hours laboratory. (96 hours total per quarter)**

Provides the student with the knowledge and skills necessary to work as an emergency medical responder (EMR) to help sustain life, reduce pain and minimize the consequences of injury or sudden illness until more advanced medical help takes over. The course meets or exceeds the 2008 Emergency Medical Services Educational Standards for Emergency Medical Response and meets Guidelines 2010 for First Aid and 2010 Consensus on Science for Cardiopulmonary Resuscitation and Emergency Cardiovascular Care. Students must successfully pass this course to enter in the EMT course.

**FHGE: Non-GE**

**EMS 401 EMERGENCY MEDICAL TECHNICIAN: 0 Units  
BASIC PART A NONCREDIT**

Non-degree applicable non-credit course.

Formerly: EMT 401

**Prerequisite:** EMS 50 or 400, or First Responder Course, or equivalent work experience as determined by the instructor.

**Corequisite:** EMS 401A.

**Advisory:** EMS 401 and 402 may not be taken concurrently.

**Grade Type:** Non-credit course that receives no grade

**Unlimited Repeatability.**

**4 hours lecture, 3 hours laboratory. (84 hours total per quarter)**

Intended to instruct a student to the level of Emergency Medical Technician-1 who serves as a vital link in the chain of the health care team. It is recognized that the majority of prehospital emergency medical care will be provided by the EMT-1. Includes all skills necessary for the individual to provide emergency medical care at a basic life support level with a fire department, or other specialized service. First of two courses required to be eligible to take the California written and practical exam for certification as an Emergency Medical Technician-1.

**FHGE: Non-GE**

**EMS 401A EMERGENCY MEDICAL  
TECHNICIAN SIMULATION  
LABORATORY I NONCREDIT 0 Units**

Non-degree applicable non-credit course.

**Corequisite:** EMS 401.

**Advisory:** EMS 401A and 402A may not be taken concurrently.

**Grade Type:** Non-credit course that receives no grade

**Unlimited Repeatability.**

**1.5 hours laboratory. (18 hours total per quarter)**

First in a two course series, which provides the student with hands on application of skills necessary to work as an emergency medical technician (EMT). Students will participate in patient assessment scenarios focused on medical complaints and treatments of various diseases, to build competence and prepare to sit for the state certification exam and enter into the EMT workforce.

**FHGE: Non-GE**

**EMS 402 EMERGENCY MEDICAL TECHNICIAN: 0 Units  
BASIC PART B NONCREDIT**

Non-degree applicable non-credit course.

Formerly: EMT 402

**Prerequisite:** EMS 401.

**Corequisite:** EMS 402A.

**Advisory:** EMS 402 is part two of two courses required to be eligible to take the California State written and practical exam for certification as an Emergency Medical Technician-1; EMS 401 and 402 may not be taken concurrently.

**Grade Type:** Non-credit course that receives no grade

**Unlimited Repeatability.**

**4 hours lecture, 3 hours laboratory, 2 hours clinic. (108 hours total per quarter)**

Second of two courses required to be eligible to take the California State written and practical exam for certification as an Emergency Medical Technician-1. Intended to instruct a student to the level of Emergency Medical Technician-Basic who serves as a vital link in the chain of the health care team. Includes all skills necessary for the individual to provide emergency medical care at a basic life support level with a fire department, ambulance, or other specialized service.

**FHGE: Non-GE**



**EMS 402A EMERGENCY MEDICAL  
TECHNICIAN SIMULATION  
LABORATORY II NONCREDIT** 0 Units

Non-degree applicable non-credit course.

Corequisite: EMS 402.

Advisory: EMS 402A is part two of two courses required to be eligible to take the California State written and practical exam for certification as an Emergency Medical Technician-1; EMS 401A and 402A may not be taken concurrently.

Grade Type: Non-credit course that receives no grade Unlimited Repeatability.

1.5 hours laboratory. (18 hours total per quarter)

Second in a two course series, which provides the student with hands on application of skills necessary to work as an emergency medical technician (EMT). Students will participate in patient assessment scenarios focused on trauma and treatment of various mechanisms of injuries, to build competence and prepare to sit for the state certification exam and enter into the EMT workforce.

FHGE: Non-GE Transferable: none

## ENGINEERING

Physical Sciences, Mathematics & Engineering

650.949.7259 foothill.edu/psme

**ENGR 6 ENGINEERING GRAPHICS** 4 Units

Advisory: ENGL 110 or ESLL 125; MATH 220.

Grade Type: Letter Grade, the student may select Pass/No Pass Not Repeatable.

3 hours lecture, 3 hours laboratory. (72 hours total per quarter)

The application of orthographic projection to detail and assembly drawings, with examples from various engineering fields. Geometric construction, sketching, dimensioning for interchangeable assembly and specification of materials. Graphical analysis, documentation and presentation of engineering information. Theory of orthographic projection and its application to graphical solution of the more advanced three-dimensional space problems. Investigation of relationships between points, lines, planes and solids. Use of solid modeling computer program in carrying out the above course components.

FHGE: Non-GE Transferable: UC/CSU

**ENGR 10 INTRODUCTION TO ENGINEERING** 5 Units

Prerequisite: MATH 220.

Advisory: ENGL 110 or ESLL 125; UC will accept for transfer credit either ENGR 10 or ENGR 49, not both; not open to students with credit in ENGR 20.

Grade Type: Letter Grade, the student may select Pass/No Pass Not Repeatable.

4 hours lecture, 3 hours laboratory. (84 hours total per quarter)

This is a first experience in engineering, this course is open to all students intending to major in engineering or wanting to try out engineering. Students will gain experience with project management and design, insights from discussions on ethics and environmental impact and skills in written and oral technical communication.

FHGE: Non-GE Transferable: UC/CSU

**ENGR 11 PROGRAMMING & PROBLEM-  
SOLVING IN MATLAB** 5 Units

Prerequisite: MATH 1B.

Advisory: ENGL 110.

Grade Type: Letter Grade, the student may select Pass/No Pass Not Repeatable.

4 hours lecture, 3 hours laboratory. (84 hours total per quarter)

This course utilizes the MATLAB environment to provide students with a working knowledge of computer-based problem-solving methods relevant to science and engineering. It introduces the fundamentals of procedural and object-oriented programming, numerical analysis, and data structures. Examples and assignments in the course are drawn from practical applications in engineering, physics, and mathematics.

FHGE: Non-GE Transferable: UC/CSU

**ENGR 12 COMPUTER ARCHITECTURE  
& ORGANIZATION** 5 Units

Prerequisite: One of the following: C S 1A, 1AH, 2A, 2AH.

Advisory: C S 1C or 2C; not open to students with credit in C S 10.

Grade Type: Letter Grade, the student may select Pass/No Pass Not Repeatable.

4 hours lecture, 3 hours laboratory. (84 hours total per quarter)

Introduction to the organization, architecture and machine-level programming of computer systems. Topics include mapping of high-level language constructs into assembly code, internal data representations, numerical computation, virtual memory, pipelines, caching, multitasking, MIPS architecture, MIPA assembly language code, interrupts, input/output, peripheral storage processing, and comparison of CISC (Intel) and RISC (MIPS) instruction sets.

FHGE: Non-GE Transferable: UC/CSU

**ENGR 35 STATICS** 5 Units

Prerequisites: MATH 1B and PHYS 4A.

Grade Type: Letter Grade, the student may select Pass/No Pass Not Repeatable.

5 hours lecture. (60 hours total per quarter)

Principles of statics as applied to particles and rigid bodies in two and three dimensions under concentrated and distributed force systems. Equilibrium conditions in structures, machines, beams and cables. Determination of centroids and moments of inertia. Dry friction and methods of virtual work.

FHGE: Non-GE Transferable: UC/CSU

**ENGR 37 INTRODUCTION TO  
CIRCUIT ANALYSIS** 5 Units

Prerequisites: MATH 1B and PHYS 4B.

Grade Type: Letter Grade, the student may select Pass/No Pass Not Repeatable.

5 hours lecture. (60 hours total per quarter)

Analysis of lumped, linear circuits in steady state DC and AC. Principals and Laws are used such as Ohm's Law and Kirchhoff's Law, Thevenin's and Norton's Theorem. Method of analyze circuit also include Linearity, Superposition, Source Transformation, and Maximum Power Transfer. First and second order circuits' complete response, AC power and steady-state analysis, frequency and transient response and circuits using op-amps.

FHGE: Non-GE Transferable: UC/CSU

**ENGR 37L CIRCUIT ANALYSIS LABORATORY** 2 Units

Corequisite: Completion of or concurrent enrollment in ENGR 37.

Grade Type: Letter Grade, the student may select Pass/No Pass Not Repeatable.

1 hour lecture, 3 hours laboratory. (48 hours total per quarter)

Practical verification of theorems and concepts learned in ENGR 37 through experimentation. Included will be experiments in DC and AC circuits involving the utilization of a variety of instruments such as DC/AC meters, regulated power supplies, signal generators, oscilloscopes and frequency counters.

FHGE: Non-GE Transferable: UC/CSU

**ENGR 39 ENERGY, SOCIETY & THE ENVIRONMENT** 5 Units

**Advisory:** MATH 10 or 17.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**4 hours lecture, 3 hours laboratory. (84 hours total per quarter)**

Guides the general education student without a science or technology background through humanity's efforts to harness and generate energy, for industry, work, habitat and recreation. Serves as a formal introduction to work, energy and efficiency, from human's earliest endeavors building pyramids to the development of railroads, the automobile and airplane, nuclear power, and alternative energy sources. Topics include energy, work, and power, steam and internal combustion engine, electricity, cars and transportation, and atomic energy. Emphasis on the environmental impact from acid rain, smog and the greenhouse effect, to pollution from coal, natural gas, and petroleum extraction, to nuclear accidents. Includes a comprehensive overview of sustainable energy systems, megacities, LEED and high efficiency buildings, and integrated food, water, and transportation services. Discussion and reflection on global population and consumption driven economic models.

**FHGE: Natural Sciences Transferable: UC/CSU**

**ENGR 40 INTRODUCTION TO CLEAN ENERGY TECHNOLOGY** 5 Units

**Advisory:** CHEM 25 or equivalent; ability to do basic engineering calculations, including use of spreadsheets.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**4 hours lecture, 3 hours laboratory. (84 hours total per quarter)**

Introduces the technical student to the field of clean energy technology, including modern energy systems and utility infrastructure, fossil fuel and renewable energy power generation, solar photovoltaic (PV) and wind technology, buildings as systems, green and LEED building, smart energy and active distribution (microgrid concept), transportation energy and advanced transportation solutions, and the future of sustainable energy systems. Overview of the energy industry, environmental and economic considerations, and key research and policy areas for clean and sustainable energy solutions. Provides students with a conceptual framework and foundation to proceed to more advanced study, as well as exploring emerging clean energy careers.

**FHGE: Non-GE Transferable: UC/CSU**

**ENGR 45 PROPERTIES OF MATERIALS** 5 Units

**Prerequisites:** CHEM 1B and MATH 1C.

**Corequisite:** Completion of or concurrent enrollment in PHYS 4B.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**4 hours lecture, 3 hours laboratory. (84 hours total per quarter)**

Properties of engineering materials related to basic structure; applications to the selection and use of engineering materials.

**FHGE: Non-GE Transferable: UC/CSU**

**ENGR 46 STRENGTH OF MATERIALS** 5 Units

**Prerequisite:** ENGR 35.

**Grade Type:** Letter Grade Only Not Repeatable.

**5 hours lecture. (60 hours total per quarter)**

This course is for engineering majors planning to transfer to four-year institutions. This course is a study of stresses, strains, and deformations associated with axial, torsional, and flexural loading of bars, shafts, and beams, as well as pressure loading of thin-walled pressure vessels. The course also covers stress and strain transformation, Mohr's Circle, ductile and brittle failure theories, and the buckling of columns. Statically indeterminate systems may also be studied.

**FHGE: Non-GE Transferable: UC/CSU**

**ENGR 47 DYNAMICS** 5 Units

**Prerequisite:** ENGR 35.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**5 hours lecture. (60 hours total per quarter)**

Intended for engineering majors planning to transfer to four-year institutions. It covers the fundamentals of kinematics and kinetics of particles and rigid bodies. Topics include general and relative motion, force and acceleration, work and energy, and impulse and momentum analyzed in two and three dimensions. Provides an introduction to vibrations and oscillations.

**FHGE: Non-GE Transferable: UC/CSU**

**ENGR 49 ENGINEERING PROFESSION** 1 Unit

**Advisory:** UC will accept for transfer credit either ENGR 10 or ENGR 49, not both.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**1 hour lecture. (12 hours total per quarter)**

A study of the engineering profession, its requirements, opportunities and responsibilities. Exposure to engineers and their educational, personal, and career paths. Review of engineering ethics. Students formulate a career plan.

**FHGE: Non-GE Transferable: UC/CSU**

**ENGR 62A INTRODUCTION TO 3-D PRINTING & RAPID PROTOTYPE DESIGN** 4 Units

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**4 hours lecture. (48 hours total per quarter)**

Introduction to career options and the fundamental processes used in the 3-D design and model-making industry. Guest speakers, company tours, and career guides in addition to lectures and group discussions will give students an overview of the job skills and technologies required for various disciplines within the industry.

**FHGE: Non-GE Transferable: CSU**

**ENGR 62B BASIC MODEL MAKING** 5 Units

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**4 hours lecture, 3 hours laboratory. (84 hours total per quarter)**

Students interested in careers in product design will learn the importance of iterative rapid prototyping in the Design process. Introduction to the principles of three-dimensional design as they relate to model making and rapid prototyping applications. Students will develop forms using a variety of materials and model-making techniques. Students will create a portfolio showcasing their rapid prototyping skills and understanding of the Design process.

**FHGE: Non-GE Transferable: CSU**

**ENGR 62C 3-D PRINTING: ADVANCED MODEL MAKING** 5 Units

**Prerequisite:** ENGR 62B.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**4 hours lecture, 3 hours laboratory. (84 hours total per quarter)**

Focus on more advanced and complex methods used throughout the model-making industry. Students will develop skills in using computer-aided design and manufacturing equipment and software to fabricate models. Designs will be created on three-dimensional solid modeling software and transferred to a three-dimensional computer aided manufacturing software for coding and post processing. Students will fabricate parts on a variety of equipment which may include CNC mills and lathes, laser cutters, and two and three-dimensional rapid modeling equipment.

**FHGE: Non-GE Transferable: CSU**

**ENGR 62D 3-D RAPID MODEL MAKING & PROTOTYPE DEVELOPMENT 5 Units**

**Prerequisite:** ENGR 62C.

**Grade Type:** Letter Grade, the student may select Pass/No Pass  
**Not Repeatable.**

**4 hours lecture, 3 hours laboratory. (84 hours total per quarter)**

In this project development course students focus upon fabrication of a variety of complex models using advanced model-making equipment and rapid prototyping. Students program, set-up, and operate 3-D modeling machines. Field trips may be required.

**FHGE: Non-GE Transferable: CSU**

**ENGR 70R INDEPENDENT STUDY 1 Unit**  
**ENGR 71R IN ENGINEERING 2 Units**  
**ENGR 72R 3 Units**  
**ENGR 73R 4 Units**

**Grade Type:** Letter Grade, the student may select Pass/No Pass  
**Not Repeatable.**

**3-12 hours laboratory per week. (36-144 hours total per quarter)**

Provides an opportunity for the student to expand their studies in Engineering beyond the classroom by completing a project or an assignment arranged by agreement between the student and instructor. The student is required to contract with the instructor to determine the scope of assignment and the unit value assigned for successful completion. Students may take a maximum of 6 units of Independent Study per department.

**FHGE: Non-GE Transferable: CSU**

**ENGR 83A INTRODUCTION TO BIOMEDICAL ENGINEERING 5 Units**

**Grade Type:** Letter Grade, the student may select Pass/No Pass  
**Not Repeatable.**

**5 hours lecture. (60 hours total per quarter)**

Introduction to the field of biomedical engineering. Due to the nature of this highly interdisciplinary field, the students will be introduced to a wide variety of problems that biomedical engineers work to solve. Covers a variety of applications, such as, implantable devices, bioinstrumentation, biomaterials, and bioelectric phenomena. Provides a general understanding of the biomedical device industry in terms of its size and scope, current trends and the wide range of products involved with emphasis on biomedical companies in California. Provides an overview of the development of a medical device from initial conception through development, testing, validation, manufacture, clinical trials and final approval by regulatory agencies. Strongly recommended as a first class for those with no previous biomedical device industry experience.

**FHGE: Non-GE Transferable: CSU**

**ENGR 83B DESIGN & MANUFACTURING IN THE BIOMEDICAL ENGINEERING FIELD 5 Units**

**Grade Type:** Letter Grade, the student may select Pass/No Pass  
**Not Repeatable.**

**5 hours lecture. (60 hours total per quarter)**

An introduction to the design and manufacturing of medical devices with special focus on the unique design manufacturing challenges that are necessary to achieve World Class Manufacturing excellence. Describes the fundamental systems used in the design, development, and manufacturing of medical devices and how these relate to industry regulations. Specific topics include: material and process selection considerations, aseptic processes, clean-room techniques, sterilization processes, clinical testing, lot traceability, introduction to automation and control systems, testing and instrumentation lab and manufacturing controls.

**FHGE: Non-GE Transferable: CSU**

**ENGR 83C INTRODUCTION TO MEDICAL DEVICE REGULATIONS 5 Units**

**Grade Type:** Letter Grade, the student may select Pass/No Pass  
**Not Repeatable.**

**5 hours lecture. (60 hours total per quarter)**

Introduction to certification standards and the agencies involved in the regulatory processes specific to the medical device industry. Topics include Food and Drug Administration regulations, international regulations and quality certification processes.

**FHGE: Non-GE Transferable: CSU**

**ENGR 83D INTRODUCTION TO QUALITY ASSURANCE 5 Units**

**Grade Type:** Letter Grade, the student may select Pass/No Pass  
**Not Repeatable.**

**5 hours lecture. (60 hours total per quarter)**

Provides students with an in-depth understanding of the role quality plays in an industrial environment regulated by the Food and Drug Administration (FDA). The responsibilities of quality assurance during the engineering, manufacturing, and production of a product. Topics will include management responsibilities, design control, production and process controls, continuous improvement, and methods and tools used to support quality assurance. The ISO standards, the regulatory requirements mandated by the FDA.

**FHGE: Non-GE Transferable: CSU**

**ENGR 83E INTRODUCTION TO DOCUMENTATION 5 Units**

**Grade Type:** Letter Grade Only  
**Not Repeatable.**

**5 hours lecture. (60 hours total per quarter)**

This course focuses on establishing and managing documentation and related systems in the area of medical device manufacturing. Fundamentals of governmental requirements that impact medical device documentation, the benefits and elements of a documented configuration management system, and the details to establish related systems, policies and tools.

**FHGE: Non-GE Transferable: CSU**

**ENGLISH**

**Language Arts**

**650.949.7250 foothill.edu/la**

**ENGL 1A COMPOSITION & READING 5 Units**

**Prerequisite:** Demonstrated proficiency in English by placement as determined by score on the English placement test OR through an equivalent placement process OR completion of ESLL 125 & ESLL 249.

**Advisory:** Not open to students with credit in ENGL 1AH; students may enroll in ENGL 1A or 1T, but not both, for credit.

**Grade Type:** Letter Grade, the student may select Pass/No Pass  
**Not Repeatable.**

**5 hours lecture. (60 hours total per quarter)**

Techniques and practice of expository and argumentative writing based on critical reading and thinking about texts. Reading focused primarily on works of non-fiction prose, chosen to represent a broad spectrum of opinions and ideas, writing styles, and cultural experiences. Fulfills the Foothill College reading and composition requirement for the AA/AS degree and the university-transfer general education requirement in English reading and written composition.

**FHGE: English Transferable: UC/CSU**

**ENGL 1AH HONORS COMPOSITION & READING 5 Units**

**Prerequisites:** Demonstrated proficiency in English by placement as determined by score on the English placement test OR through an equivalent placement process OR completion of ESLL 125 & ESLL 249; Honors Institute participant.

**Advisory:** Not open to students with credit in ENGL 1A or 1T.

**Grade Type:** Letter Grade, the student may select Pass/No Pass

**Not Repeatable.**

**5 hours lecture. (60 hours total per quarter)**

Techniques and practice of expository and argumentative writing based on critical reading and thinking about texts. Reading focused primarily on works of non-fiction prose, chosen to represent a broad spectrum of opinions and ideas, writing styles, and cultural experiences. Fulfills the Foothill College reading and composition requirement for the AA/AS degree and the university-transfer general education requirement in English reading and written composition. The honors section offers rigorous preparation in analytic reading and writing skills for students intending to transfer to a four-year college or university. Course provides opportunity to engage contemporary social and ethical issues through small group discussion, a structured sequence of papers requiring higher-level thinking tasks, and collaborative projects. Emphasis is placed on multiple drafts and substantive revision to produce articulate writing appropriate to academic disciplines. Research paper is required.

**FHGE: English Transferable: UC/CSU**

**ENGL 1B COMPOSITION, CRITICAL READING & THINKING THROUGH LITERATURE 5 Units**

**Prerequisite:** One of the following: ENGL 1A, 1AH, 1S & 1T or ESLL 26.

**Advisory:** Not open to students with credit in ENGL 1BH.

**Grade Type:** Letter Grade, the student may select Pass/No Pass

**Not Repeatable.**

**5 hours lecture. (60 hours total per quarter)**

Further development in the technique and practice of analytical, critical, and argumentative writing through critical reading of literature. Course focuses on literary works from major genres to promote appreciation of literature and represent a broad spectrum of opinions and ideas, writing styles, and cultural experiences. Formal instruction in composition and critical thinking.

**FHGE: Communication & Analytical Thinking Transferable: UC/CSU**

**ENGL 1BH HONORS COMPOSITION, CRITICAL READING & THINKING THROUGH LITERATURE 5 Units**

**Prerequisite:** Honors Institute participant.

**Advisory:** Not open to students with credit in ENGL 1B.

**Grade Type:** Letter Grade, the student may select Pass/No Pass

**Not Repeatable.**

**5 hours lecture. (60 hours total per quarter)**

Further development in the technique and practice of analytical, critical, and argumentative writing through critical reading of literature. Course focuses on literary works from major genres to promote appreciation of literature and represent a broad spectrum of opinions and ideas, writing styles, and cultural experiences. Formal instruction in composition and critical thinking. The honors section offers a challenging intellectual environment for students intending to transfer to a four-year college or university. Class discussion and assignments focus on literature as a reflection of multiple perspectives, social constructs, and cultural values. Course fosters an understanding and appreciation of various literary genres and includes logic and literary theory. Emphasis on rhetorical strategies and stylistic refinements for effective persuasive writing across the disciplines. Enrichment activities include attendance at plays, author readings, public lectures, and independent or collaborative study on a contemporary author.

**FHGE: Communication & Analytical Thinking Transferable: UC/CSU**

**ENGL 1C ARGUMENTATIVE WRITING & CRITICAL THINKING 5 Units**

**Prerequisite:** One of the following: ENGL 1A, 1AH, 1S & 1T or ESLL 26.

**Advisory:** Not open to students with credit in ENGL 1CH or 2.

**Grade Type:** Letter Grade, the student may select Pass/No Pass

**Not Repeatable.**

**5 hours lecture. (60 hours total per quarter)**

Advanced study and practice of argumentative writing with emphasis on critical analysis and evaluation of texts. Focus is on reading and writing assignments from across the disciplines to further improve and refine critical reading, writing, and thinking skills.

**FHGE: Non-GE Transferable: UC/CSU**

**ENGL 1CH HONORS ARGUMENTATIVE WRITING & CRITICAL THINKING 5 Units**

**Prerequisite:** Honors Institute participant.

**Advisory:** Not open to students with credit in ENGL 1C or 2.

**Grade Type:** Letter Grade, the student may select Pass/No Pass

**Not Repeatable.**

**5 hours lecture. (60 hours total per quarter)**

Advanced study and practice of argumentative writing with emphasis on critical analysis and evaluation of texts. Focus is on reading and writing assignments from across the disciplines to refine critical reading, writing, and thinking skills. The honors section is intensive in content, involving both writing and meta-analysis of complex texts. Includes collaborative evaluations of the content, evidence, organizing principles and style of a variety of texts. Course encourages students to examine assumptions, implications and unintended consequences of rhetorical and content choices. Includes focus on primary sources and the interpretations of these documents in contemporaneous writing. Course expands and enhances the student's ability to write with fluency, effectiveness, and intellectual rigor.

**FHGE: Non-GE Transferable: UC/CSU**

**ENGL 1S INTEGRATED COMPOSITION & READING 5 Units**

**Prerequisite:** Eligibility based on appropriate assessment information: CPT scores of at least 61 on the 1CRD Reading placement test AND at least 61 on 1CSS Sentence Skills placement test.

**Corequisite:** ENGL 242A.

**Advisory:** Faculty recommendation for enrollment; if the student intends to use ENGL 1S & 1T combination to satisfy the Foothill General Education Requirement for Area II, English, the student must complete ENGL 1S & 1T. Also, to receive UC transfer credit for ENGL 1A, the student must complete ENGL 1S & 1T, and UC will transfer 5 units maximum for the combination of these two courses; not open to students with credit in ENGL 42S.

**Grade Type:** Letter Grade Only

**Not Repeatable.**

**5 hours lecture. (60 hours total per quarter)**

Integrated reading and writing pathway that scaffolds instruction in freshman composition outcomes over two quarters, ENGL 1S and ENGL 1T respectively. Over this 2 quarter stretch, students read substantive quantities of college-level texts and write a total of 10,000 words, comprised of a minimum of 10 compositions (7 out-of-class and 3 in-class) to practice the techniques of critical reading, critical thinking, and written communication. Reading focused primarily on works of non-fiction prose, including published and student writing, chosen to represent a broad spectrum of opinions and ideas, writing styles, and cultural experiences.

**FHGE: Non-GE Transferable: UC/CSU**

**ENGL 1T INTEGRATED COMPOSITION & READING 5 Units**

**Prerequisite:** ENGL 1S.  
**Corequisite:** ENGL 242B.  
**Advisory:** Student should enroll with the same instructor as taken for ENGL 1S; if the student intends to use ENGL 1S & 1T combination to satisfy the Foothill General Education requirement for Area II, English, the student must complete ENGL 1S & 1T. To receive UC transfer credit for ENGL 1A, the student must complete ENGL 1S & 1T, and UC will transfer 5 units maximum for the combination of these two courses. Student may enroll in ENGL 1T or 1A, but not both, for credit; not open to students with credit in ENGL 42T.  
**Grade Type:** Letter Grade Only  
**Not Repeatable.**  
**5 hours lecture. (60 hours total per quarter)**  
Integrated reading and writing pathway that scaffolds instruction in freshman composition outcomes over two quarters, ENGL 1S & 1T, respectively. Over this two quarter stretch, students read substantive quantities of college-level texts and write a total of 10,000 words, comprised of a minimum of 10 compositions (7 out-of-class and 3 in-class) to practice the techniques of critical reading, critical thinking, and written communication. Reading focused primarily on works of non-fiction prose, including published and student writing, chosen to represent a broad spectrum of opinions and ideas, writing styles, and cultural experiences. ENGL 1T is the second half of ENGL 1S/T.  
**FHGE:** English Transferable: UC/CSU

**ENGL 5 LGBT LITERATURE 4 Units**

**Advisory:** Demonstrated proficiency in English by placement as determined by score on the English placement test OR through an equivalent placement process OR completion of ESLL 125 & ESLL 249.  
**Grade Type:** Letter Grade, the student may select Pass/No Pass  
**Not Repeatable.**  
**4 hours lecture. (48 hours total per quarter)**  
Introduction to the history and development of LGBT literature as a continuous theme in the development of mainstream literary traditions and, more recently, as a separate and distinct literary genre. Readings selected to represent a variety of historical periods and contrasting societal attitudes toward same-sex relationships and queer gender identities, ranging from ancient Greek and Roman texts to contemporary American poetry, fiction, drama, and non-fiction prose. Emphasis on the emergence of contemporary LGBT literatures and identities in the United States in the twentieth century within the broader context of on-going class, race, gender, religious, political, and aesthetic debates.  
**FHGE:** Humanities Transferable: UC/CSU

**ENGL 7 NATIVE AMERICAN LITERATURE 4 Units**

**Advisory:** Demonstrated proficiency in English by placement as determined by score on the English placement test OR through an equivalent placement process OR completion of ESLL 125 & ESLL 249; not open to students with credit in ENGL 7H.  
**Grade Type:** Letter Grade, the student may select Pass/No Pass  
**Not Repeatable.**  
**4 hours lecture. (48 hours total per quarter)**  
Introduction to the history, development, and diversity of Native American literatures from pre-contact civilizations to present-day tribal cultures. Readings in traditional creation myths, songs, and stories from a variety of tribal cultures; nineteenth and twentieth century autobiographical narratives; and significant works of fiction, poetry, and non-fiction prose by contemporary Native American authors. Emphasis on the specific religious, linguistic, historical, political and cultural context of Native American literary achievements.  
**FHGE:** Amer, Human Transferable: UC/CSU

**ENGL 8 CHILDREN'S LITERATURE 4 Units**

**Advisory:** Demonstrated proficiency in English by placement as determined by score on the English placement test OR through an equivalent placement process OR completion of ESLL 125 & ESLL 249.  
**Grade Type:** Letter Grade, the student may select Pass/No Pass  
**Not Repeatable.**  
**4 hours lecture. (48 hours total per quarter)**  
A survey of children's literature from many periods and cultures, including classics, picture books, folktales, fairy tales, biography, poetry, fantasy and fiction. Emphasis on the ideas, didactic and sociological, reflecting relationships among cultures in America included in books usually read by children. Special emphasis on books that explore the cross-cultural influences of our shared oral tradition and folklore as well as the issues arising from a diverse mix of cultures in the U.S.  
**FHGE:** Non-GE Transferable: UC/CSU

**ENGL 11 INTRODUCTION TO POETRY 4 Units**

**Advisory:** Demonstrated proficiency in English by placement as determined by score on the English placement test OR through an equivalent placement process OR completion of ESLL 125 & ESLL 249; not open to students with credit in ENGL 11H.  
**Grade Type:** Letter Grade, the student may select Pass/No Pass  
**Not Repeatable.**  
**4 hours lecture. (48 hours total per quarter)**  
Students will be introduced to the forms, techniques, meanings, and history of poetry. Because poetry, since the mid-nineteenth century has turned internationally toward a more communicative and social form of literary expression, emphasis relies on modern examples in English and translation to develop the student's ability to read, understand, and evaluate a poem in the context of the modern world.  
**FHGE:** Non-GE Transferable: UC/CSU

**ENGL 11H HONORS INTRODUCTION TO POETRY 4 Units**

**Prerequisite:** Honors Institute participant.  
**Advisory:** Not open to students with credit in ENGL 11.  
**Grade Type:** Letter Grade, the student may select Pass/No Pass  
**Not Repeatable.**  
**4 hours lecture. (48 hours total per quarter)**  
Analysis and discussion of forms, techniques and meanings of poetry, with emphasis on modern examples in English or translation to develop the student's ability to read, understand, and evaluate a poem. Honors work challenges students to be more analytical through expanded assignments including, but not limited to, research-driven literature reviews, reflection papers, and outside enrichment opportunities. The honors course offers accelerated students an enriching and demanding environment by means of a learner-centered pedagogy, student-generated and student led discussions, self-directed, yet supervised, creative projects, and the emphasis and application of higher-level thinking skills: analysis, synthesis and evaluation.  
**FHGE:** Non-GE Transferable: UC/CSU

**ENGL 12 AFRICAN AMERICAN LITERATURE 4 Units**

**Advisory:** Demonstrated proficiency in English by placement as determined by score on the English placement test OR through an equivalent placement process OR completion of ESLL 125 & ESLL 249.  
**Grade Type:** Letter Grade, the student may select Pass/No Pass  
**Not Repeatable.**  
**4 hours lecture. (48 hours total per quarter)**  
Literature by African Americans beginning in slavery and continuing on into the 20th and 21st centuries. Discovery of many of the current stereotypes in American cultural mythology about African Americans. Study of the complex and varying forms of resistance and creation African Americans have developed. Definition of issues and strategies in writings from the 19th, 20th and 21st centuries, including audience, identity (self), gender, family, culture, politics, spirituality and language. Intended for students wishing to transfer and/or students interested in African American literature.  
**FHGE:** Amer, Human Transferable: UC/CSU

**ENGL 14 TRAVELING THE WORLD THROUGH CONTEMPORARY LITERATURE 4 Units**

**Advisory:** Demonstrated proficiency in English by placement as determined by score on the English placement test OR through an equivalent placement process OR completion of ESLL 125 & ESLL 249.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**4 hours lecture. (48 hours total per quarter)**

Selected fiction written between 1950 and the present, with emphasis on English, Canadian, and international works in translation. Students are introduced to various thematic and stylistic trends in contemporary fiction; use of current scientific discoveries, historical theories, religious and cultural developments.

**FHGE:** Humanities **Transferable:** UC/CSU

**ENGL 16 INTRODUCTION TO LITERATURE 4 Units**

**Prerequisite:** One of the following: ENGL 1A, 1AH, 1S & 1T or ESLL 26.

**Grade Type:** Letter Grade Only Not Repeatable.

**4 hours lecture. (48 hours total per quarter)**

Introduction to literary study through texts from a wide range of genres, including poetry, drama, fiction, and creative nonfiction. Focus on analytical reading and literary analysis, including effective use of critical theory and secondary source research. Intended for students desiring further development of literary analytical skills and literary appreciation.

**FHGE:** Humanities **Transferable:** UC/CSU

**ENGL 17 INTRODUCTION TO SHAKESPEARE 4 Units**

**Advisory:** Demonstrated proficiency in English by placement as determined by score on the English placement test OR through an equivalent placement process OR completion of ESLL 125 & ESLL 249.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**4 hours lecture. (48 hours total per quarter)**

Introduction to selected plays and sonnets of Shakespeare. Focus on detailed analysis of representative tragic, comedic, romance, history plays, and sonnets of Shakespeare. Also includes critical theory and secondary source research. Intended as an introductory course for English majors and students across the curriculum.

**FHGE:** Humanities **Transferable:** UC/CSU

**ENGL 18A VAMPIRE LITERATURE: MULTICULTURAL REPRESENTATIONS OF THE BLOODSUCKER 4 Units**

**Advisory:** Demonstrated proficiency in English by placement as determined by score on the English placement test OR through an equivalent placement process OR completion of ESLL 125 & ESLL 249.

**Grade Type:** Letter Grade Only Not Repeatable.

**4 hours lecture. (48 hours total per quarter)**

Survey of vampire literature across a variety of cultures. Discussion and analysis (both written and oral) of vampiric literary texts within various theoretical and historical contexts, including the gothic, the psychoanalytic, gender and sexuality, race and the "other," cultural studies, theories of corporeality. Emphasis on historical and cross-cultural analyses.

**FHGE:** Humanities **Transferable:** UC/CSU

**ENGL 22 WOMEN WRITERS 4 Units**

**Advisory:** Demonstrated proficiency in English by placement as determined by score on the English placement test OR through an equivalent placement process OR completion of ESLL 125 & ESLL 249.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**4 hours lecture. (48 hours total per quarter)**

An examination of the works of multicultural women poets, novelists, dramatists, and essayists and their aesthetic and sociopolitical contribution to English and American literature. Literary discussions of gender as relevant to race, ethnicity, socioeconomic class, sexual orientation, and other constructs of identity and power.

**FHGE:** Humanities **Transferable:** UC/CSU

**ENGL 24 UNMASKING COMICS: THE DAWN OF THE GRAPHIC NOVEL 4 Units**

**Advisory:** Demonstrated proficiency in English by placement as determined by score on the English placement test OR through an equivalent placement process OR completion of ESLL 125 & ESLL 249.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**4 hours lecture. (48 hours total per quarter)**

Introduction to the history of graphic communication, emphasizing the burgeoning and dynamic form of contemporary graphic narrative: from memoir writing, to crime fiction, to the superhero, to socio-political writing. Explore how the history and evolution of this distinct literary genre has made it a relevant form of expression for artists and writers across the world and how reading comics challenges traditional modes of reading. Because this form of storytelling is used by artists all over the world to express the human condition and specific socio-cultural insight, the course inspires world-wide cross cultural awareness.

**FHGE:** Humanities **Transferable:** UC/CSU

**ENGL 31 LATINO/A LITERATURE 4 Units**

**Advisory:** Demonstrated proficiency in English by placement as determined by score on the English placement test OR through an equivalent placement process OR completion of ESLL 125 & ESLL 249.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**4 hours lecture. (48 hours total per quarter)**

Reading and discussion of Latino/a literature and its relationship to social issues and identity politics of Latinos/as. Critical examination of fiction, poetry, essays, and drama by and about the Latino/a communities, including those of Mexican, Puerto Rican, Cuban, Caribbean, and South and Central American descent.

**FHGE:** Humanities **Transferable:** UC/CSU

**ENGL 34C LITERATURE INTO FILM 4 Units**

**Advisory:** Demonstrated proficiency in English by placement as determined by score on the English placement test OR through an equivalent placement process OR completion of ESLL 125 & ESLL 249.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**4 hours lecture. (48 hours total per quarter)**

Examination of the ways great world literature throughout world history has been adapted for the modern day movie going audience, from one medium to the other - from text to film or television series. Consideration of: 1. how film makers adapt literature to film, considering the conventions of each medium; 2. how film and literature may evoke similar or different meanings, considering historical, cultural and other contexts for creation and reception; 3. how one medium may inform the other.

**FHGE:** Humanities **Transferable:** UC/CSU

**ENGL 40 ASIAN AMERICAN LITERATURE 4 Units**

**Advisory:** Demonstrated proficiency in English by placement as determined by score on the English placement test OR through an equivalent placement process OR completion of ESLL 125 & ESLL 249; not open to students with credit in ENGL 40H.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**4 hours lecture. (48 hours total per quarter)**

Introduction to Asian American literature. Readings in 20th Century works, with an emphasis on three relevant themes: problems of identity as they relate to class, gender, mixed heritages, and sexuality; politics and the history of Asian American activism and resistance; and diversity of cultures within the Asian American community.

**FHGE:** Amer, Human **Transferable:** UC/CSU

**ENGL 41 LITERATURE OF MULTICULTURAL AMERICA 4 Units**

**Advisory:** Demonstrated proficiency in English by placement as determined by score on the English placement test OR through an equivalent placement process OR completion of ESLL 125 & ESLL 249.

**Grade Type:** Letter Grade Only Not Repeatable.

**4 hours lecture. (48 hours total per quarter)**

An exploration of American identity, focusing on ethnic, cultural, and national affiliations. Analysis of literary works by (including among others) Native American, European American, African American, Latino/a, Arab American, Asian American, and mixed race writers. Readings selected represent a variety of historical periods and literary genres. Emphasis on issues of identity politics, immigration, internally and externally imposed borders, cultural and linguistic power, assimilation, acculturation, and cultural pluralism as expressed through diverse voices.

**FHGE:** Humanities **Transferable:** UC/CSU

**ENGL 43A SURVEY OF BRITISH LITERATURE I: BEOWULF TO THE LATE 18TH CENTURY 5 Units**

**Prerequisite:** One of the following: ENGL 1A, 1AH, 1S & 1T or ESLL 26.

**Advisory:** Not open to students with credit in ENGL 43AH, 46A or 46B.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**5 hours lecture. (60 hours total per quarter)**

A survey of canonical literature spanning the earliest Old English texts, Middle English period, Early Modern period, ending with Neoclassicism. Texts discussed and analyzed within historical, sociocultural, philosophical, and aesthetic contexts.

**FHGE:** Non-GE **Transferable:** UC/CSU

**ENGL 43AH HONORS SURVEY OF BRITISH LITERATURE I: BEOWULF TO THE LATE 18TH CENTURY 5 Units**

**Prerequisite:** One of the following: ENGL 1A, 1AH, 1S & 1T or ESLL 26; Honors Institute participant.

**Advisory:** Not open to students with credit in ENGL 43A, 46A or 46B.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**5 hours lecture. (60 hours total per quarter)**

A survey of canonical literature spanning the earliest Old English texts, Middle English period, Early Modern period, ending with Neoclassicism. Texts discussed and analyzed within historical, sociocultural, philosophical, and aesthetic contexts. Specific to this honors course: A higher level of sophisticated scholarship through extensive research and literature review, critical essays, and opportunities for scholarly presentation, student-generated discussions, and self-directed projects. Rigorous application and analysis of theoretical paradigms as applied across these contexts in analysis of canonical literary texts.

**FHGE:** Non-GE **Transferable:** UC/CSU

**ENGL 43B SURVEY OF BRITISH LITERATURE II: THE ROMANTIC PERIOD TO THE PRESENT 5 Units**

**Prerequisite:** One of the following: ENGL 1A, 1AH, 1S & 1T or ESLL 26.

**Advisory:** Not open to students with credit in ENGL 43BH, 46B or 46C.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**5 hours lecture. (60 hours total per quarter)**

A survey of canonical literature beginning with the 1798 publication of Lyrical Ballads, through the Romantic Period, Victorian Period, twentieth-century Modernism and Postmodernism, to the present. Texts discussed and analyzed within historical, sociocultural, philosophical, and aesthetic contexts.

**FHGE:** Non-GE **Transferable:** UC/CSU

**ENGL 43BH HONORS SURVEY OF BRITISH LITERATURE II: THE ROMANTIC PERIOD TO THE PRESENT 5 Units**

**Prerequisite:** One of the following: ENGL 1A, 1AH, 1S & 1T or ESLL 26; Honors Institute participant.

**Advisory:** Not open to students with credit in ENGL 43B, 46B or 46C.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**5 hours lecture. (60 hours total per quarter)**

A survey of canonical literature spanning the Romantic Period, Victorian Period, through Modernism and Postmodernism, to the present. Texts discussed and analyzed within historical, sociocultural, philosophical, and aesthetic contexts. Specific to this honors course: A higher level of sophisticated scholarship through extensive research and literature review, critical essays, and opportunities for scholarly presentation, student-generated discussions, and self-directed projects. Rigorous application and analysis of theoretical paradigms as applied across these contexts in analysis of canonical works.

**FHGE:** Non-GE **Transferable:** UC/CSU

**ENGL 45A SURVEY OF AMERICAN LITERATURE I: BEGINNINGS TO 1865 5 Units**

**Prerequisite:** One of the following: ENGL 1A, 1AH, 1S & 1T or ESLL 26.

**Advisory:** Not open to students with credit in ENGL 45AH, 48A or 48B.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**5 hours lecture. (60 hours total per quarter)**

The first in a two-course sequence that surveys the history of American literature from its beginnings to the present. ENGL 45A introduces students to works of American literature from its beginnings through the Civil War, focusing on the evolution of literary traditions, genres, cultural voices, and ecological landscapes within historical, philosophical, social, political, and aesthetic contexts. Special emphasis on the contributions of diverse cultures in forging a distinctively American literature, landscape, and identity.

**FHGE:** Amer, Human **Transferable:** UC/CSU

**ENGL 45AH HONORS SURVEY OF AMERICAN LITERATURE I: BEGINNINGS TO 1865** 5 Units

**Prerequisite:** One of the following: ENGL 1A, 1AH, 1S & 1T or ESLL 26; Honors Institute participant.

**Advisory:** Not open to students with credit in ENGL 45A, 48A or 48B.

**Grade Type:** Letter Grade Only

**Not Repeatable.**

**5 hours lecture. (60 hours total per quarter)**

The first in a two-course sequence that surveys the history of American literature from its beginnings to the present. ENGL 45AH introduces students to works of American literature from its beginnings through the Civil War, focusing on the evolution of literary traditions, genres, cultural voices, and ecological landscapes within historical, philosophical, social, political, and aesthetic contexts. Special emphasis on the contributions of diverse cultures in forging a distinctively American literature, landscape, and identity. Specific to this honors course: A higher level of sophisticated scholarship through extensive research and literature review, critical essays, and opportunities for scholarly presentation, student-generated discussions, and self-directed projects. Rigorous application and analysis of theoretical paradigms as applied across these contexts in analysis of canonical literary texts.

**FHGE: Amer, Human Transferable: UC/CSU**

**ENGL 45B SURVEY OF AMERICAN LITERATURE II: 1865 TO THE PRESENT** 5 Units

**Prerequisite:** One of the following: ENGL 1A, 1AH, 1S & 1T or ESLL 26.

**Advisory:** Not open to students with credit in ENGL 45BH, 48B or 48C.

**Grade Type:** Letter Grade, the student may select Pass/No Pass

**Not Repeatable.**

**5 hours lecture. (60 hours total per quarter)**

Introduces students to multicultural American Literature from the end of the Civil War in 1865 to the present, focusing on the evolution of literary traditions, genres, cultural voices, and ecological landscapes within historical, philosophical, social, political, and aesthetic contexts. Special emphasis on the role of diverse writers in redefining the nature of American literature from the late nineteenth century through the 21st century, and thereby reshaping American national identity as the United States becomes a global superpower.

**FHGE: Amer, Human Transferable: UC/CSU**

**ENGL 45BH HONORS SURVEY OF AMERICAN LITERATURE II: 1865 TO THE PRESENT** 5 Units

**Prerequisite:** One of the following: ENGL 1A, 1AH, 1S & 1T or ESLL 26; Honors Institute participant.

**Advisory:** Not open to students with credit in ENGL 45B, 48B or 48C.

**Grade Type:** Letter Grade Only

**Not Repeatable.**

**5 hours lecture. (60 hours total per quarter)**

Introduces students to multicultural American Literature from the end of the Civil War in 1865 to the present, focusing on the evolution of literary traditions, genres, cultural voices, and ecological landscapes within historical, philosophical, social, political, and aesthetic contexts. Special emphasis on the role of diverse writers in redefining the nature of American literature from the late nineteenth century through the 21st century, and thereby reshaping American national identity as the United States becomes a global superpower. Specific to this honors course: A higher level of sophisticated scholarship through extensive research and literature review, critical essays, and opportunities for scholarly presentation, student-generated discussions, and self-directed projects. Rigorous application and analysis of theoretical paradigms as applied across these contexts in analysis of canonical literary texts.

**FHGE: Amer, Human Transferable: UC/CSU**

**ENGL 47A WORLD LITERATURE I** 5 Units

**Prerequisite:** One of the following: ENGL 1A, 1AH, 1S & 1T or ESLL 26.

**Grade Type:** Letter Grade Only

**Not Repeatable.**

**5 hours lecture. (60 hours total per quarter)**

A comparative study of selected works, in translation and in English, of literature from around the world, including Europe, the Middle East, Africa, Asia, and other areas, from antiquity through the seventeenth century. A cross-cultural examination of global literatures within broader historical, cultural, political, and social frameworks, including the contexts of class, race and ethnicity, gender, religion, and aesthetics.

**FHGE: Humanities Transferable: UC/CSU**

**ENGL 47B WORLD LITERATURE II** 5 Units

**Prerequisite:** One of the following: ENGL 1A, 1AH, 1S & 1T or ESLL 26.

**Grade Type:** Letter Grade Only

**Not Repeatable.**

**5 hours lecture. (60 hours total per quarter)**

A comparative study of selected works, in translation and in English, of literature from around the world, including Europe, the Middle East, Africa, Asia, and other areas, from the seventeenth century to the present. A cross-cultural examination of global literatures within broader historical, cultural, political, and social frameworks, including the contexts of class, race and ethnicity, gender, religion, and aesthetics.

**FHGE: Humanities Transferable: UC/CSU**

**ENGL 50C TECHNICAL WRITING** 5 Units

**Advisory:** Demonstrated proficiency in English by placement as determined by score on the English placement test OR through an equivalent placement process OR completion of ESLL 125 & ESLL 249; not open to students with credit in ENGL 3.

**Grade Type:** Letter Grade, the student may select Pass/No Pass

**Not Repeatable.**

**5 hours lecture. (60 hours total per quarter)**

An introductory course in technical and workplace communication. Focus on the strategic implementation of technical writing process, including assessment of context, purpose, and audience; evaluation and production of effective verbal and visual communication, including sentence clarity, document design, and use of visuals; and production of written texts for business and industry, including correspondence, technical definitions and descriptions, instructions, proposals and applications, reports, and websites.

**FHGE: Communication & Analytical Thinking Transferable: CSU**

**ENGL 80 INTRODUCTION TO TRAVEL WRITING** 4 Units

**Advisory:** Demonstrated proficiency in English by placement as determined by score on the English placement test OR through an equivalent placement process OR completion of ESLL 125 & ESLL 249.

**Grade Type:** Letter Grade, the student may select Pass/No Pass

**Not Repeatable.**

**4 hours lecture. (48 hours total per quarter)**

An introductory course in travel writing. Focus on recognizing, evaluating, and producing the characteristics of travel writing in a range of travel writing genres. Practice in skills of observation, research, and reflection to understand aspects of place and draw meaning from travel experiences. Recognition and evaluation of publishing options.

**FHGE: Non-GE Transferable: CSU**



**ENGL 110 INTRODUCTION TO COLLEGE WRITING** 5 Units

**Prerequisite:** Eligibility based on assessment or successful completion of ENGL 209.

**Advisory:** Not open to students with credit in ENGL 108.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**5 hours lecture. (60 hours total per quarter)**

Intended for students requiring explicit instruction and practice in writing expository essays, emphasizing clear sentence structure and logical development. Assignments include summary and synthesis of texts, critical analysis, as well as personal writing. Instruction includes rules of and practice on punctuation skills. Lecture, discussion, collaborative, and individualized instruction.

**FHGE: Non-GE**

**ENGL 209 INTRODUCTION TO COLLEGE READING** 5 Units

**Non-degree applicable basic skills-2 course.**

**Advisory:** Not open to students with credit in ENGL 100 or 108.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**5 hours lecture. (60 hours total per quarter)**

Techniques of critical analysis for reading-college level prose, focusing primarily on expository/argumentative essays and textbook materials. Students learn to comprehend text holistically, identifying and expressing critical elements of comprehension. Practice and testing to be done on authentic text of one or more page length and with written responses. Lecture, discussion, group work, and individualized instruction.

**FHGE: Non-GE**

**ENGL 242A CRITICAL THINKING: STUDENT-MANAGED PORTFOLIO DEVELOPMENT** 2 Units

**Non-degree applicable basic skills course.**

**Corequisite:** ENGL 1S.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**2 hours lecture. (24 hours total per quarter)**

A survey of basic theory, design, and implementation strategies for the student-managed formative portfolio. Students write a total of at least 1000 words, with emphasis on the reflective and evaluative processes necessary for portfolio development. Practice in managing and maintaining the information and artifacts of a portfolio as a comprehensive analysis of the student learning experience. Use of portfolio development to increase meta-cognitive awareness of the integration between reading and writing processes; of the student's location within discourse communities, including the campus community; and of the behaviors necessary for college success.

**FHGE: Non-GE**

**ENGL 242B CRITICAL THINKING: PORTFOLIO MANAGEMENT & PUBLICATION** 2 Units

**Non-degree applicable basic skills course.**

**Prerequisite:** ENGL 242A.

**Corequisite:** ENGL 1T.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**2 hours lecture. (24 hours total per quarter)**

Application of basic theory, design, and implementation strategies for the student-managed summative portfolio. Students write a total of at least 1000 words, with emphasis on the reflective and evaluative processes necessary for portfolio development. Management and publication of the artifacts of a summative portfolio as a comprehensive demonstration of the student learning experience across the curriculum. Use of portfolio publication to demonstrate meta-cognitive awareness of the integration between reading and writing processes; of the student's location within discourse communities, including the campus community; and of the behaviors necessary for college success. Students will demonstrate ability to transfer knowledge and learning across disciplines.

**FHGE: Non-GE**

**ENGLISH FOR SECOND-LANGUAGE LEARNERS**

Language Arts  
650.949.7250

**ESLL 26 ADVANCED COMPOSITION & READING** 5 Units

**Prerequisite:** Appropriate placement test score or a grade of "C" or better in ESLL 125 and 249; designed for students whose native language is not English.

**Advisory:** Not open to students with credit in ESL 26.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**5 hours lecture. (60 hours total per quarter)**

The techniques and practice of expository and argumentative writing based on critical reading and thinking. Reading focused on essays and articles, chosen to represent a broad spectrum of opinions and ideas, writing styles, and cultural experiences and perspectives. Research paper synthesizing information from a range of current sources to form a persuasive argument. Fulfills the associate degree requirement for English composition.

**FHGE: English Transferable: UC/CSU**

**ESLL 125 COMPOSITION & READING** 5 Units

**Formerly:** ESLL 25

**Prerequisite:** Appropriate placement test score or a grade of "C" or better in ESLL 236 and 237.

**Advisory:** Concurrent enrollment in ESLL 249; if not taken concurrently, ESLL 249 should be taken prior to ESLL 125.

**Completion of or concurrent enrollment in ESLL 235 strongly recommended. Not open to students with credit in ESL 25, 257, or ESLL 25. Designed for students whose native language is not English.**

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**5 hours lecture. (60 hours total per quarter)**

Development of critical reading skills using selected readings which present a range of cultural experiences and perspectives. Practice in writing expository essays based on personal experience, observations, and class readings with a review of acceptable English sentence structure. Does not fulfill the associate degree requirement for English composition.

**FHGE: Non-GE**

**ESLL 226 HIGH-INTERMEDIATE GRAMMAR** 5 Units

**Non-degree applicable basic skills-3 course.**

**Advisory:** Concurrent enrollment in ESLL 227 recommended; designed for students whose native language is not English; not open to students with credit in ESL 156.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**5 hours lecture. (60 hours total per quarter)**

A high-intermediate English course focusing on verb tenses, gerunds, infinitives, modal verbs in present, past, real present and future conditionals.

**FHGE: Non-GE**

**ESLL 227 HIGH-INTERMEDIATE READING SKILLS** 5 Units

**Non-degree applicable basic skills-3 course.**

**Advisory:** Appropriate placement test score and concurrent enrollment in ESLL 226 recommended; intended for students whose native language is not English; not open to students with credit in ESL 157.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**5 hours lecture. (60 hours total per quarter)**

An upper intermediate-level reading course focusing on developing comprehension skills and strategies for processing pre-college-level readings. In addition to developing vocabulary, students will demonstrate understanding of main ideas of texts by composing single- and multi-sentence writings in response to questions about the given texts.

**FHGE: Non-GE**

**ESLL 228 DEVELOPING LANGUAGE SKILLS FOR INTERNATIONAL STUDENTS** 10 Units  
 Non-degree applicable basic skills-3 course.  
 Prerequisites: TOEFL score of 475 to 499; restricted to international students whose native language is not English.  
 Advisory: Not open to students with credit in ESL 158.  
 Grade Type: Letter Grade, the student may select Pass/No Pass Not Repeatable.  
 10 hours lecture. (120 hours total per quarter)  
 A high intermediate/low-advanced course in grammar, writing, reading, and speaking for international students who are about to enter a college academic program. Focus to improve students' language skills.  
 FHGE: Non-GE

**ESLL 235 LISTENING/SPEAKING FOR ACADEMIC PURPOSES** 5 Units  
 Non-degree applicable basic skills-2 course.  
 Prerequisite: Appropriate placement test score.  
 Advisory: Successful completion of ESLL 226 and 227 strongly recommended; intended for students whose native language is not English; not open to students with credit in ESL 165.  
 Grade Type: Letter Grade, the student may select Pass/No Pass Not Repeatable.  
 5 hours lecture. (60 hours total per quarter)  
 A listening/speaking course focusing on preparing students for listening to authentic lectures and participating in classroom discussions and presentations.  
 FHGE: Non-GE

**ESLL 236 ADVANCED GRAMMAR** 5 Units  
 Non-degree applicable basic skills-2 course.  
 Prerequisite: Appropriate placement test score or ESLL 226 and 227.  
 Advisory: Concurrent enrollment in ESLL 237 recommended; intended for students whose native language is not English; not open to students with credit in ESL 166.  
 Grade Type: Letter Grade, the student may select Pass/No Pass Not Repeatable.  
 5 hours lecture. (60 hours total per quarter)  
 Continuation of ESLL 226. An advanced English grammar course focusing on clause and phrase structures.  
 FHGE: Non-GE

**ESLL 237 BASIC COMPOSITION SKILLS** 5 Units  
 Non-degree applicable basic skills-2 course.  
 Prerequisite: Appropriate placement test score or a grade of "C" or better in ESLL 226 and 227.  
 Advisory: Concurrent enrollment in ESLL 236; designed for students whose native language is not English; not open to students with credit in ESL 167.  
 Grade Type: Letter Grade, the student may select Pass/No Pass Not Repeatable.  
 5 hours lecture. (60 hours total per quarter)  
 A basic course for non-native speakers focusing on college-level reading and writing skills. Development of readings skills through analysis of assigned readings. Production of short multi-paragraph compositions that develop focused main ideas using a variety of standard English sentences. Lecture, discussion, and individualized instruction. Does not meet the graduation requirement in composition.  
 FHGE: Non-GE

**ESLL 246 APPLIED GRAMMAR & EDITING SKILLS** 3 Units  
 Non-degree applicable basic skills course.  
 Prerequisite: ESLL 236 or an appropriate score on the ESL placement test.  
 Corequisite: Concurrent enrollment in ESLL 26, 125, ENGL 1A, 1B, or 110.  
 Advisory: Not open to students with credit in ESL 176.  
 Grade Type: Letter Grade, the student may select Pass/No Pass Not Repeatable.  
 3 hours lecture. (36 hours total per quarter)  
 Identify and edit for patterns of grammatical errors in original writing. Develop individual error profile. Address pertinent grammar issues through review of grammatical rules, various grammar exercises, and editing of sample papers and original work.  
 FHGE: Non-GE

**ESLL 247 ADVANCED VOCABULARY DEVELOPMENT FOR READING & WRITING** 3 Units  
 Non-degree applicable basic skills course.  
 Prerequisite: Appropriate placement test score or successful completion of ESLL 236 and 237.  
 Advisory: Intended for students whose native language is not English; not open to students with credit in ESL 177.  
 Grade Type: Letter Grade, the student may select Pass/No Pass Not Repeatable.  
 3 hours lecture. (36 hours total per quarter)  
 Expansion of academic vocabulary to meet the specific vocabulary needs for students in an academic setting. Multiple exposures to target words in meaningful contexts and rich information about each word. May be repeated one time as course content changes.  
 FHGE: Non-GE

**ESLL 248 ADVANCED GRAMMAR REVIEW** 3 Units  
 Non-degree applicable basic skills course.  
 Prerequisite: ESLL 236 or an appropriate score on the ESL placement test.  
 Advisory: Not open to students with credit in ESL 186.  
 Grade Type: Letter Grade, the student may select Pass/No Pass Not Repeatable.  
 3 hours lecture. (36 hours total per quarter)  
 A review of essential grammar and greater in-depth examination of grammatical and lexical structures used in academic and professional writing designed for nonnative speakers of English. This course is delivered entirely online.  
 FHGE: Non-GE

**ESLL 249 ADVANCED READING** 5 Units  
 Non-degree applicable basic skills course.  
 Prerequisites: ESLL 236 and 237 or appropriate placement test score.  
 Advisory: Concurrent enrollment in ESLL 125; if not taken concurrently, ESLL 249 should be taken prior to ESLL 125; designed for students whose native language is not English.  
 Grade Type: Letter Grade, the student may select Pass/No Pass Not Repeatable.  
 5 hours lecture. (60 hours total per quarter)  
 An advanced-level reading course to instruct ESLL students in techniques of critical analysis for reading college-level prose, focusing primarily on authentic expository/argumentative essays and textbook materials written for a native speaker audience. Students will learn to comprehend text holistically, identifying and expressing critical rhetorical elements. Practice and testing to be done on authentic, multi-page texts with written responses. Lecture, discussion, and group work.  
 FHGE: Non-GE

**ESLL 250 RHETORICAL GRAMMAR FOR SECOND-LANGUAGE LEARNERS** 4 Units  
 Non-degree applicable basic skills course.  
 Prerequisites: ESLL 236 and 237 or appropriate placement test score for ESLL 125.  
 Advisory: Concurrent enrollment in ESLL 26, 125, ENGL 1A, 1AH, 1B, 1C, or 1T.  
 Grade Type: Letter Grade, the student may select Pass/No Pass  
 Not Repeatable.  
 4 hours lecture. (48 hours total per quarter)  
 Instruction in grammar from a rhetorical perspective (within the context of constructing paragraphs and extended texts) as it pertains to personal, academic, and professional writing. Topics include review of grammar terminology (metalanguage); study of the possible uses of various sentence patterns to achieve rhetorically successful texts; sentence conciseness and focus; clause and phrase structures used for emphasis, economy, and paragraph development; coherence strategies to produce logical connections between and among ideas in texts.  
 FHGE: Non-GE

**ENVIRONMENTAL HORTICULTURE & DESIGN**

Biological and Health Sciences  
 650.949.7249 foothill.edu/bio/programs/hort

**HORT 10 ENVIRONMENTAL HORTICULTURE & THE URBAN LANDSCAPE** 5 Units  
 Grade Type: Letter Grade Only  
 Not Repeatable.  
 4 hours lecture, 3 hours laboratory. (84 hours total per quarter)  
 Environmental horticulture encompasses the planning, design, construction, and management of the urban landscape. Relevant topics include ecosystem restoration and management, landscape ecology, sustainable landscape management, sustainable use of natural resources, urban horticulture, and urban landscape design. This course is required for the Environmental Horticulture & Design degree and certificate, and is intended for students in the horticulture program but members of the public and professional community are invited to enroll. This course is approved for IGETC Area 5 and CSU GE Area B-2.  
 FHGE: Natural Sciences Transferable: UC/CSU

**HORT 15 ORIENTATION TO ENVIRONMENTAL HORTICULTURE** 4 Units  
 Advisory: Not open to students with credit in HORT 50A.  
 Grade Type: Letter Grade, the student may select Pass/No Pass  
 Not Repeatable.  
 3.5 hours lecture, 1.5 hours laboratory. (60 hours total per quarter)  
 Survey of the many facets and component sciences of environmental horticulture. Exploration of the multitude of career options available in the green industry. An introduction to the vocabulary of the environmental sciences including the terminology used in the identification of plants. Foundations of plant science such as plant structure, plant growth, and the environmental needs of plants.  
 FHGE: Non-GE Transferable: UC/CSU

**HORT 21 PLANT MATERIALS I** 3 Units  
 Advisory: Completion of or concurrent enrollment in HORT 15 strongly recommended; not open to students with credit in HORT 51A.  
 Grade Type: Letter Grade Only  
 Not Repeatable.  
 3 hours lecture. (36 hours total per quarter)  
 Identification, taxonomy, habits of growth, cultural and environmental requirements of woody plants grown in California. Emphasis on the use and maintenance of evergreen broadleaf trees in the landscape. Plants are observed on campus and at off-site locations.  
 FHGE: Non-GE Transferable: UC/CSU

**HORT 22 PLANT MATERIALS II** 3 Units  
 Advisory: Completion of or concurrent enrollment in HORT 15 strongly recommended; not open to students with credit in HORT 51B.  
 Grade Type: Letter Grade Only  
 Not Repeatable.  
 3 hours lecture. (36 hours total per quarter)  
 Identification, taxonomy, habits of growth, cultural and environmental requirements of woody plants grown in California. Emphasis on the use and maintenance of evergreen and deciduous shrubs in the landscape. Plants are on campus and at off-site locations.  
 FHGE: Non-GE Transferable: UC/CSU

**HORT 23 PLANT MATERIALS: CALIFORNIA NATIVE PLANTS** 2 Units  
 Advisory: Completion of or concurrent enrollment in HORT 15 strongly recommended; not open to students with credit in HORT 51D.  
 Grade Type: Letter Grade Only  
 Not Repeatable.  
 2 hours lecture. (24 hours total per quarter)  
 Identification, taxonomy, habits of growth, cultural and environmental requirements of plants native to California landscapes. Emphasis on a wide variety of native species including trees, shrubs, ground covers, and herbaceous plants. Plants are observed via media and physical observation.  
 FHGE: Non-GE Transferable: UC/CSU

**HORT 24 PLANT MATERIALS: GROUND COVERS & VINES** 2 Units  
 Advisory: Completion of or concurrent enrollment in HORT 15 strongly recommended; not open to students with credit in HORT 51E.  
 Grade Type: Letter Grade Only  
 Not Repeatable.  
 2 hours lecture. (24 hours total per quarter)  
 Identification, taxonomy, habits of growth, cultural and environmental requirements of woody and herbaceous ground covers and vines grown in California. Emphasis on the use and maintenance of evergreen and deciduous plants used as ground covers, vines, or espaliers in ornamental landscapes. Plants are observed in class, on campus, and at off-site locations.  
 FHGE: Non-GE Transferable: UC/CSU

**HORT 25 PLANT MATERIALS: BAMBOOS & PALMS** 2 Units  
 Advisory: Completion of or concurrent enrollment in HORT 15 strongly recommended; not open to students with credit in HORT 51F.  
 Grade Type: Letter Grade Only  
 Not Repeatable.  
 2 hours lecture. (24 hours total per quarter)  
 Identification, taxonomy, habits of growth, cultural and environmental requirements of bamboos and palms grown in California. Emphasis on the use and maintenance of these two categories of monocots, each with markedly different forms. Plants are observed via media and physical observation.  
 FHGE: Non-GE Transferable: UC/CSU

**HORT 26 PLANT MATERIALS: PERENNIALS & ANNUALS 2 Units**

**Advisory:** Completion of or concurrent enrollment in HORT 15 strongly recommended; not open to students with credit in HORT 51H.

**Grade Type: Letter Grade Only  
Not Repeatable.**

**2 hours lecture. (24 hours total per quarter)**

Identification, taxonomy, habits of growth, cultural and environmental requirements of herbaceous plants grown in California. Emphasis on the use and maintenance of significant perennial and annual species with significant features such as flower and foliage displays. Plants are observed via media and physical observation.

**FHGE: Non-GE Transferable: UC/CSU**

**HORT 30 HORTICULTURAL PRACTICES: SOILS 3 Units**

**Advisory:** Completion of or concurrent enrollment in HORT 15 recommended; not open to students with credit in HORT 52A.

**Grade Type: Letter Grade Only  
Not Repeatable.**

**2 hours lecture, 3 hours laboratory. (60 hours total per quarter)**

Fundamentals of soil science including examination of soil formation, physical and chemical properties of soil, relationships between soil, water and plants, and biological factors of soil. Examination of soil samples and interpretation of soil reports and surveys. Basics of plant fertility requirements and soil related topics such as composting, environmental issues, and soils in construction.

**FHGE: Non-GE Transferable: UC/CSU**

**HORT 31 HORTICULTURAL PRACTICES: PLANT PROPAGATION 3 Units**

**Advisory:** Completion of or concurrent enrollment in HORT 15 strongly recommended.

**Grade Type: Letter Grade Only  
Not Repeatable.**

**2 hours lecture, 3 hours laboratory. (60 hours total per quarter)**

Principles of plant propagation with an emphasis on techniques that are used in the nursery and greenhouse industries. Seeds, cuttings, grafting techniques, and the separation and division of specialized structures.

**FHGE: Non-GE Transferable: UC/CSU**

**HORT 40 LANDSCAPE DESIGN: GRAPHIC COMMUNICATION 4 Units**

**Advisory:** Not open to students with credit in HORT 60A.

**Grade Type: Letter Grade, the student may select Pass/No Pass  
Not Repeatable.**

**3 hours lecture, 3 hours laboratory. (72 hours total per quarter)**

An introductory survey of the basic principles of design communication, landscape graphics, and design process. Graphic mediums and tools, graphic vocabulary, graphic skills, reprographic techniques, plan reading, and presentation skill development. The application of lines, symbols, and lettering to create typical landscape drawings.

**FHGE: Non-GE Transferable: UC/CSU**

**HORT 43 THE TIMELESS GARDEN 3 Units**

**Grade Type: Letter Grade Only  
Not Repeatable.**

**3 hours lecture. (36 hours total per quarter)**

The history of gardens from the Hanging Gardens of Babylon to the romantic landscapes of England to contemporary garden design. Emphasis is on major historical landscapes in terms of their cultural, social, political, and economic impacts.

**FHGE: Non-GE Transferable: UC/CSU**

**HORT 45 VECTORWORKS FOR LANDSCAPE DESIGNERS 3 Units**

**Advisory:** HORT 40 and a basic understanding of the operation of computers is strongly recommended; not open to students with credit in HORT 60E.

**Grade Type: Letter Grade Only  
Not Repeatable.**

**2 hours lecture, 3 hours laboratory. (60 hours total per quarter)**

Introduction to the use of computer applications in landscape design. Overview of software for computer aided design and drafting (CADD), and related landscape graphic oriented software. Focus on development of basic command skills utilized in landscape design software applications, including 2-D drawing, editing, creation of layers, exporting to other programs and as a PDF for printing. Vectorworks software is utilized in this course.

**FHGE: Non-GE Transferable: UC/CSU**

**HORT 52C HORTICULTURE PRACTICES: PLANT INSTALLATION & MAINTENANCE 3 Units**

**Advisory:** Completion of or concurrent enrollment in HORT 15 strongly recommended.

**Grade Type: Letter Grade Only  
Not Repeatable.**

**2 hours lecture, 3 hours laboratory. (60 hours total per quarter)**

Horticultural principles and practices for management of plants and gardens. Proper selection and maintenance of trees, shrubs, and ground covers. Fine gardening techniques used by landscape gardeners. Transplanting and planting containerized and boxed plant material. Preparation of planting areas and post-planting care of landscape plants. Techniques for pruning of various species. Operation of equipment and tools used in gardening.

**FHGE: Non-GE Transferable: CSU**

**HORT 52E HORTICULTURAL PRACTICES: GREENHOUSE & NURSERY MANAGEMENT 3 Units**

**Advisory:** Completion of or concurrent enrollment in HORT 15.

**Grade Type: Letter Grade Only  
Not Repeatable.**

**2 hours lecture, 3 hours laboratory. (60 hours total per quarter)**

Commercial greenhouse and nursery management as related to the production of plants in California. Emphasis is on greenhouse and nursery operations. Class will focus on organization, management, and production practices used in large and small-scale commercial greenhouse plant production and nursery operations of all sizes. Retail outlets will be addressed as part of the nursery production sequence. Operations and the utilization of technology will be emphasized through use of on-campus facilities and observation of off-site operations.

**FHGE: Non-GE Transferable: CSU**

**HORT 52G HORTICULTURAL PRACTICES: TURFGRASS MANAGEMENT 3 Units**

**Advisory:** Completion of or concurrent enrollment in HORT 15 strongly recommended.

**Grade Type: Letter Grade Only  
Not Repeatable.**

**2 hours lecture, 3 hours laboratory. (60 hours total per quarter)**

Turf identification and planting techniques. Turf maintenance and management practices for golf courses, athletic fields, parks, and areas surrounding commercial buildings and private residences. Examination of soils, irrigation, weeds, diseases and pests as they pertain to turfgrass.

**FHGE: Non-GE Transferable: CSU**

**HORT 52H HORTICULTURE PRACTICES: 3 Units**  
**INTEGRATED PEST MANAGEMENT**

**Advisory:** Completion of or concurrent enrollment in HORT 15 strongly recommended.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**2 hours lecture, 3 hours laboratory. (60 hours total per quarter)**

Problems of and control solutions for diseases, insects, and weeds in landscapes and gardens. Ecologically based Integrated Pest Management (IPM) practices for handling plant pathogens, insect infestations, and unwanted vegetation. Emphasis on identification, life cycles, and symptoms of diseases, insects, and weeds.

**FHGE: Non-GE Transferable: CSU**

**HORT 54A LANDSCAPE CONSTRUCTION: 4 Units**  
**GENERAL PRACTICES**

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**3 hours lecture, 3 hours laboratory. (72 hours total per quarter)**

General practices of construction as applied to landscape projects. Basic tools and equipment, building materials and hardware, and installation techniques utilized in landscape construction. Focus is on hardscape applications including paving, walls, decks, and related wood structures. Review of safety practices, careers in landscape construction, and contractor licensing.

**FHGE: Non-GE Transferable: CSU**

**HORT 54B LANDSCAPE CONSTRUCTION: 3 Units**  
**TECHNICAL PRACTICES**

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**2.5 hours lecture, 1.5 hours laboratory. (48 hours total per quarter)**

Technical aspects of landscape construction projects. Landscape surveying & grading techniques, surface & subsurface hydraulics, landscape drainage systems, erosion control & soil conservation, fences & gates, and building codes. Estimating landscape materials, construction costs, and preparation of project bids and contracts.

**FHGE: Non-GE Transferable: CSU**

**HORT 54C LANDSCAPE CONSTRUCTION: 3 Units**  
**IRRIGATION PRACTICES**

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**2.5 hours lecture, 1.5 hours laboratory. (48 hours total per quarter)**

Methods and materials used in the irrigation of ornamental landscapes. Selection of materials and operational theory of irrigation equipment. Installation techniques for sprinkler and drip irrigation systems. Water conservation features and maintenance of irrigation systems.

**FHGE: Non-GE Transferable: CSU**

**HORT 54D LANDSCAPE CONSTRUCTION: 2 Units**  
**APPLIED PRACTICES**

**Advisory:** HORT 54A strongly recommended.

**Grade Type:** Letter Grade Only Not Repeatable.

**1 hour lecture, 3 hours laboratory. (48 hours total per quarter)**

The practical application of landscape construction practices to actual projects. Emphasis on field work which may include the design and construction of landscape amenities, carpentry, paving, or wall projects. Training on motorized equipment, such as tractors and backhoes used in landscape construction.

**FHGE: Non-GE Transferable: CSU**

**HORT 54J HORTICULTURAL PRACTICES: 2 Units**  
**INSECT IDENTIFICATION**

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**2 hours lecture. (24 hours total per quarter)**

Identification, morphology, physiology and management of common agricultural and horticultural insects. Course will review the impacts of common insects on the plant production and landscape industries and review their identification throughout the life cycle of the insect.

**FHGE: Non-GE Transferable: CSU**

**HORT 54K HORTICULTURAL PRACTICES: 2 Units**  
**WEED IDENTIFICATION**

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**2 hours lecture. (24 hours total per quarter)**

Identification, morphology, physiology and management of common agricultural and horticultural weedy plants. Course will review the impacts of common weeds on the plant production and landscape industries and review their identification throughout the life cycle of the plant.

**FHGE: Non-GE Transferable: CSU**

**HORT 55A GREEN INDUSTRY MANAGEMENT: 3 Units**  
**BUSINESS PRACTICES**

**Grade Type:** Letter Grade Only Not Repeatable.

**3 hours lecture. (36 hours total per quarter)**

Introductory survey of green industry management and business practices. Geared to people in such fields as landscape construction, nursery management, and landscape design, this course focuses on helping individuals successfully organize, manage, and/or market their agency or small business. The class utilizes both a theoretical and hands-on approach to the application of common business principles.

**FHGE: Non-GE Transferable: CSU**

**HORT 60B LANDSCAPE DESIGN: THEORY 3 Units**

**Advisory:** HORT 40 and/or drafting skills strongly recommended.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**2 hours lecture, 3 hours laboratory. (60 hours total per quarter)**

Principles of landscape design theory. Intermediate studies in and applications of graphic communication, creative problem solving, design theory, and presentation skills. Residential site analysis and landscape design case studies.

**FHGE: Non-GE Transferable: CSU**

**HORT 60C LANDSCAPE DESIGN: IRRIGATION 3 Units**

**Advisory:** HORT 54C strongly recommended.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**2.5 hours lecture, 1.5 hours laboratory. (48 hours total per quarter)**

Principles of irrigation design for ornamental landscapes. Includes history of irrigation, advanced site analysis, irrigation design theory, equipment selection and layout, controller scheduling, long-term maintenance, and water conservation issues. Process of producing irrigation plans, details, and specifications.

**FHGE: Non-GE Transferable: CSU**

**HORT 60D LANDSCAPE DESIGN: PLANTING 3 Units**

**Advisory:** HORT 40 & 60B or equivalent; HORT 21, 22 & 26 strongly recommended.

**Grade Type:** Letter Grade Only Not Repeatable.

**2 hours lecture, 3 hours laboratory. (60 hours total per quarter)**

The use of ornamental and native plant materials to express basic design principles in the landscape. Planting design theory as it applies to the aesthetic, cultural, ecological, and functional use of plant materials in the landscape. Graphics used for presenting planting designs. Special focus on the use of plants in garden designs.

**FHGE: Non-GE Transferable: CSU**

**HORT 60F LANDSCAPE DESIGN: PROCESS 3 Units****Advisory:** HORT 40 & 60B.**Grade Type:** Letter Grade, the student may select Pass/No Pass  
**Not Repeatable.****2 hours lecture, 3 hours laboratory. (60 hours total per quarter)**Principles of landscape design process. Application of residential site analysis, program development, and landscape design theory to one or more residential scale projects. Project planning and budgeting. Landscape designer, client, and green industry professional interactions.  
**FHGE: Non-GE Transferable: CSU****HORT 60G LANDSCAPE DESIGN: INTERMEDIATE COMPUTER APPLICATIONS 3 Units****Advisory:** HORT 40 & 45 strongly recommended; CADD experience or training and knowledge of computer operation strongly recommended.**Grade Type:** Letter Grade Only**Not Repeatable.****2 hours lecture, 3 hours laboratory. (60 hours total per quarter)**Advanced use of Vectorworks as a landscape design and drafting tool. Topics covered include structuring of drawings using layers, improving drawing skills using tool commands and shortcuts, importing and rescaling PDFs for basemaps, importing images, creating viewports and sheet layers. Also covered will be customizing tool bars, expanding plant database, and importing/exporting/printing drawings. Introduction to three-dimensional drawing using Vectorworks and related programs.  
**FHGE: Non-GE Transferable: CSU****HORT 60J SKETCHUP FOR LANDSCAPE DESIGNERS 3 Units****Advisory:** HORT 40.**Grade Type:** Letter Grade Only**Not Repeatable.****2.5 hours lecture, 1.5 hours laboratory. (48 hours total per quarter)**An overview and application of Google Sketchup to three-dimensional rendering for the landscape designer. Emphasizing the basics of drawing setup, creation and editing, this class will show the designers how to turn their 2-D drawings into a presentation drawing that illustrates their ideas in photo-like rendering techniques. Importing and use of the three-dimensional tools available in Sketchup Make and Sketchup Pro will be included in the instruction. Intended for students seeking a landscape design career or professionals upgrading their skills.  
**FHGE: Non-GE Transferable: CSU****HORT 80A ENVIRONMENTAL HORTICULTURE FALL SKILLS 2 Units****Advisory:** Not open to students with credit in HORT 80.**Grade Type:** Letter Grade Only**Not Repeatable.****1 hour lecture, 3 hours laboratory. (48 hours total per quarter)**Course provides skills development and internship opportunities in Environmental Horticulture for the Fall season. This is an extension of classroom instruction covering topics such as mulching, irrigation winterization, late season landscape construction practices, and protection for frost sensitive plantings. Offers students the opportunity through a combination of practical field experience, independent research, student internship, and industry related educational opportunities, to explore problems and required skills in the green industry.  
**FHGE: Non-GE Transferable: CSU****HORT 80B ENVIRONMENTAL HORTICULTURE WINTER SKILLS 2 Units****Grade Type:** Letter Grade Only**Not Repeatable.****1 hour lecture, 3 hours laboratory. (48 hours total per quarter)**Course provides skills development and internship opportunities in Environmental Horticulture for the Winter season. This is an extension of classroom instruction covering topics such as woody tree & shrub pruning, drainage practices, winter plant protection, and rainwater harvesting. Offers students the opportunity through a combination of practical field experience, independent research, student internship, and industry related educational opportunities, to explore problems and required skills in the green industry.  
**FHGE: Non-GE Transferable: CSU****HORT 80C ENVIRONMENTAL HORTICULTURE SPRING SKILLS 2 Units****Grade Type:** Letter Grade Only**Not Repeatable.****1 hour lecture, 3 hours laboratory. (48 hours total per quarter)**Course provides skills development and internship opportunities in Environmental Horticulture for the Spring season. This is an extension of classroom instruction covering topics such as the initiation of landscape construction projects, pest & diseases, vegetable crops, composting, and water management. Offers students the opportunity through a combination of practical field experience, independent research, student internship, and industry related educational opportunities, to explore problems and required skills in the green industry.  
**FHGE: Non-GE Transferable: CSU****HORT 80D ENVIRONMENTAL HORTICULTURE SUMMER SKILLS 2 Units****Grade Type:** Letter Grade Only**Not Repeatable.****1 hour lecture, 3 hours laboratory. (48 hours total per quarter)**Course provides skills development and internship opportunities in Environmental Horticulture for the Summer season. This is an extension of classroom instruction covering topics such as irrigation system maintenance, fruit tree pruning, water conservation practices, and summer landscape maintenance. Offers students the opportunity through a combination of practical field experience, independent research, student internship, and industry related educational opportunities, to explore problems and required skills in the green industry.  
**FHGE: Non-GE Transferable: CSU****HORT 90A CONTAINER PLANTINGS IN THE LANDSCAPE 1 Unit****Grade Type:** Letter Grade, the student may select Pass/No Pass**Not Repeatable.****12 hours lecture total per quarter.**Utilization of container plantings in both interior environments and exterior landscapes. Design theory, selection of containers, plant selection, and planting methods. Soil preparation and irrigation techniques.  
**FHGE: Non-GE Transferable: CSU****HORT 90C GARDEN PONDS & WATER FEATURES 1 Unit****Grade Type:** Letter Grade, the student may select Pass/No Pass**Not Repeatable.****12 hours lecture total per quarter.**Introduction to the aesthetics of garden water features and the techniques used in their design, construction, and maintenance. Use of fish, plants, and other natural systems in garden ponds and pools.  
**FHGE: Non-GE Transferable: CSU**

**HORT 90D HERBS: IDENTIFICATION, USE & FOLKLORE** 1 Unit  
**Grade Type: Letter Grade, the student may select Pass/No Pass Not Repeatable.**  
**12 hours lecture total per quarter.**  
 An introductory look at the use and folklore of herbs grown for specific cultural purposes. Herbs noted for their culinary, aromatic, or medicinal properties.  
**FHGE: Non-GE Transferable: CSU**

**HORT 90E HORTICULTURAL & LANDSCAPE PHOTOGRAPHY** 1 Unit  
**Grade Type: Letter Grade, the student may select Pass/No Pass Not Repeatable.**  
**12 hours lecture total per quarter.**  
 Introduction to basic photographic equipment and techniques utilized in photographing landscapes and horticulturally related elements. Emphasis on assisting green industry professionals in photographing ornamental plants, landscape construction or business-related projects, and landscape designs.  
**FHGE: Non-GE Transferable: CSU**

**HORT 90F LANDSCAPE DESIGN: BASIC PRINCIPLES** 1 Unit  
**Grade Type: Letter Grade Only Not Repeatable.**  
**12 hours lecture total per quarter.**  
 An overview of the basic principles of landscape design. Presents basic graphic communication concepts. Also explores the concept of master planning residential landscapes, and designing with plant material and related landscape elements.  
**FHGE: Non-GE Transferable: CSU**

**HORT 90G LANDSCAPE DESIGN FORUM** 1 Unit  
**Grade Type: Letter Grade, the student may select Pass/No Pass Not Repeatable.**  
**12 hours lecture total per quarter.**  
 Design topics for residential landscapes. Covers current concepts and trends in the landscape design industry through topical presentations, guest speakers, and discussion groups. Explores methods for evaluating successful landscape designs and their implementation.  
**FHGE: Non-GE Transferable: CSU**

**HORT 90H LANDSCAPE LIGHTING** 1 Unit  
**Grade Type: Letter Grade, the student may select Pass/No Pass Not Repeatable.**  
**12 hours lecture total per quarter.**  
 Basic theory, design, and installation techniques for lighting residential landscapes. The effective use of conventional and low-voltage lighting for improving landscape aesthetics and the functional use of outdoor spaces.  
**FHGE: Non-GE Transferable: CSU**

**HORT 90I LANDSCAPE SUSTAINABILITY PRACTICES** 1 Unit  
**Grade Type: Letter Grade, the student may select Pass/No Pass Not Repeatable.**  
**12 hours lecture total per quarter.**  
 Principles and practices utilized in the design, implementation, and maintenance of sustainable landscapes and gardens. Reviews ecological principles of sustainability for efficient energy use in the environment.  
**FHGE: Non-GE Transferable: CSU**

**HORT 90K LANDSCAPING WITH EDIBLES** 1 Unit  
**Grade Type: Letter Grade, the student may select Pass/No Pass Not Repeatable.**  
**12 hours lecture total per quarter.**  
 The use of edible plants in residential landscapes. Practice and feasibility of integrating edible plants into landscape designs. Identification of ornamental plant materials which produce edible fruit, foliage, flowers or other edible parts.  
**FHGE: Non-GE Transferable: CSU**

**HORT 90L PLANT PROPAGATION: BASIC SKILLS** 1 Unit  
**Grade Type: Letter Grade, the student may select Pass/No Pass Not Repeatable.**  
**12 hours lecture total per quarter.**  
 Introduction to propagation of plants by sexual and asexual methods. Seeding, cutting, grafting, division of specialized structures, and micro-propagation discussed and demonstrated. Discussions include growing media, fertilizers, hormones, and other plant supplements.  
**FHGE: Non-GE Transferable: CSU**

**HORT 90M PLANT NUTRITION & FERTILIZATION** 1 Unit  
**Grade Type: Letter Grade Only Not Repeatable.**  
**12 hours lecture total per quarter.**  
 Introduction to plant nutrient requirements and methods for providing proper plant nutrition. Topics include review of basic nutrient requirements, forms of nutrients used by plants, nutrient deficiency identification, methods for delivering nutrients to plants, manufacture of fertilizers, fertilizer formulations, fertilizer delivery methods, and organic nutrient sources.  
**FHGE: Non-GE Transferable: CSU**

**HORT 90N PLANT MATERIALS: FALL COLOR** 1 Unit  
**Grade Type: Letter Grade, the student may select Pass/No Pass Not Repeatable.**  
**12 hours lecture total per quarter.**  
 Identification, taxonomy, habits of growth, cultural and environmental requirements of plants which exhibit noticeable fall color. Color characteristics include stems, foliage, flowers, and fruit. Plants are observed in class, on campus, and at off-site locations.  
**FHGE: Non-GE Transferable: CSU**

**HORT 90P PRUNING: BASIC SKILLS** 1 Unit  
**Grade Type: Letter Grade, the student may select Pass/No Pass Not Repeatable.**  
**12 hours lecture total per quarter.**  
 Methods of pruning deciduous and evergreen plant materials. Emphasis on pruning common landscape plants, fruit trees, and roses. Selection of suitable pruning tools, techniques for pruning safely, and use and maintenance of tools and equipment.  
**FHGE: Non-GE Transferable: CSU**

**HORT 90Q RESIDENTIAL IRRIGATION SYSTEMS** 1 Unit  
**Grade Type: Letter Grade, the student may select Pass/No Pass Not Repeatable.**  
**12 hours lecture total per quarter.**  
 Basic design and installation techniques for residential landscapes. Course takes a hands-on approach to understanding the materials and techniques used in installing both drip and spray irrigation systems. Examines methods for evaluating performance of existing irrigation systems.  
**FHGE: Non-GE Transferable: CSU**

**HORT 90S SUSTAINABLE INTEGRATED PEST MANAGEMENT (IMP) 1 Unit**

**Grade Type: Letter Grade, the student may select Pass/No Pass Not Repeatable.**

**12 hours lecture total per quarter.**

Advanced topics in sustainability build on core IPM practices. Class provides additional techniques for managing specific insects, diseases, and weeds using a multi-faceted approach to pest management. Theoretical and practical aspects of sustainability are presented within the framework of specific landscape situations.

**FHGE: Non-GE Transferable: CSU**

**HORT 90U LANDSCAPE DESIGN: PERSPECTIVE SKETCHING 1 Unit**

**Grade Type: Letter Grade Only Not Repeatable.**

**12 hours lecture total per quarter.**

Basic perspective sketching for landscape design presentations. Setup and rendering of one-point and two-point perspectives, including location of horizon lines and vanishing points, height determination, positioning of objects, and rendering techniques for plants, people, structures, and hardscape. Emphasis is on creating one point, quick sketch perspectives for presentation to clients.

**FHGE: Non-GE Transferable: CSU**

**HORT 90V SUSTAINABLE ORGANIC GARDENING 1 Unit**

**Grade Type: Letter Grade, the student may select Pass/No Pass Not Repeatable.**

**12 hours lecture total per quarter.**

Principles and practices utilized in the design, implementation, and maintenance of sustainable organic gardens. Sustainable gardening practices that produce successful, environmentally responsible produce and crops.

**FHGE: Non-GE Transferable: CSU**

**HORT 90X WATER CONSERVATION IN LANDSCAPE DESIGN 1 Unit**

**Grade Type: Letter Grade, the student may select Pass/No Pass Not Repeatable.**

**12 hours lecture total per quarter.**

Applies principles of water conservation to landscape design and construction projects. Landscape designs which incorporate water-conserving principles strive to limit the need for water and strike a balance between softscape and hardscape elements.

**FHGE: Non-GE Transferable: CSU**

**HORT 90Y CACTI & SUCCULENTS 1 Unit**

**Grade Type: Letter Grade Only Not Repeatable.**

**12 hours lecture total per quarter.**

Identification, taxonomy, habits of growth, cultural and environmental requirements of plants grown in California. Emphasis on the use and maintenance of cacti and succulents with significant design features and landscape uses. Plants are observed via media and physical observation.

**FHGE: Non-GE Transferable: CSU**

**HORT 90Z ORNAMENTAL GRASSES 1 Unit**

**Grade Type: Letter Grade Only Not Repeatable.**

**12 hours lecture total per quarter.**

Identification, taxonomy, habits of growth, cultural and environmental requirements of ornamental grasses grown in California. Emphasis on the use and maintenance of these monocots. Plants are observed via media and physical observation.

**FHGE: Non-GE Transferable: CSU**

**HORT 91A COMPOSTING THEORY & TECHNIQUES 1 Unit**

**Grade Type: Letter Grade Only Not Repeatable.**

**12 hours lecture total per quarter.**

Comprehensive introduction to the theory and practices utilized in composting of organic materials. Course provides a combination of classroom lectures, demonstrations, and activities geared to providing a clear understanding of various composting techniques including sustainable waste management practices, recycling of organics, backyard composting, and vermicomposting.

**FHGE: Non-GE Transferable: CSU**

**HORT 91C CONSTRUCTION COST ESTIMATING 1 Unit**

**Grade Type: Letter Grade Only Not Repeatable.**

**12 hours lecture total per quarter.**

Evaluation of project designs for the purpose of measuring material quantities, estimating labor requirements to install, and calculating overhead and related costs. Techniques for measuring, compiling, and interpreting data, and generating project cost estimates will be addressed.

**FHGE: Non-GE Transferable: CSU**

**FIRE SCIENCE**

**Biological and Health Sciences**

**650.949.7249**

**JFS 100 FIRE FIGHTER I ACADEMY 20 Units**

**Formerly: JFS 307**

**Advisory: The student will be required to pass a physical agility test.**

**Further information to be provided to the student upon enrollment.**

**Not open to students with credit in JFS 307.**

**Grade Type: Letter Grade Only**

**Not Repeatable.**

**480 hours total.**

Instruction on basic fire fighting skills, laws and regulations affecting the fire service. It will provide the student with knowledge and skills to safely perform, under minimal supervision, essential and advanced fire ground tasks, basic rescue, basic fire prevention and fire investigation task and to use, inspect, and maintain fire fighting and rescue equipment. Curriculum is intended to provide the minimum training required by the State of California Fire Marshal in the field of Fire technology as it relates to firefighters. Students will receive a Fire Fighter 1 Academy certificate at the completion of this course.

**FHGE: Non-GE**

**JFS 101A FIRE CONTINUED PROFESSIONAL TRAINING (CPT) 1.5 Units**

**Formerly: JFS 308A**

**Prerequisite: JFS 100 or equivalent.**

**Advisory: Not open to students with credit in JFS 308A.**

**Grade Type: Pass/No Pass Only**

**Not Repeatable.**

**44 hours total: 6 hours lecture, 38 hours laboratory.**

Provides training which is required by the California State Fire Marshall to keep firefighters current with new equipment, policies, laws, medical training and fire skills needed to be prepared in the line of duty. Curriculum is used by multiple agencies, all requiring different training hour requirements. This course has fewer laboratory hours than JFS 101B.

**FHGE: Non-GE**



**JFS 101B FIRE CONTINUED PROFESSIONAL TRAINING 2 (CPT) 2 Units**

Formerly: JFS 308B

Prerequisite: JFS 100 or equivalent.

Advisory: Not open to students with credit in JFS 308B.

Grade Type: Pass/No Pass Only

Not Repeatable.

54 hours total.

Intended for current fire personnel, and provides training which is required by the California State Fire Marshall to keep firefighters current with new equipment, policies, laws, medical training and fire skills needed to be prepared in the line of duty. Provides advanced hands on training for firefighters.

FHGE: Non-GE

**GEOG 10 WORLD REGIONAL GEOGRAPHY 4 Units**

Advisory: Demonstrated proficiency in English by placement as determined by score on the English placement test OR through an equivalent placement process OR completion of ESLL 125 & ESLL 249.

Grade Type: Letter Grade, the student may select Pass/No Pass Not Repeatable.

4 hours lecture. (48 hours total per quarter)

Survey of the world's major culture regions and major nations. Physical, cultural, economic features. Emphasis on historical influences on population growth, transportation networks, natural environment, potential and problems. Location, importance and impact of the foremost features of countries, states, major cities, rivers and landform regions.

FHGE: Social & Behavioral Sciences Transferable: UC/CSU

**GEOG 11 INTRODUCTION TO MAPPING & SPATIAL REASONING 4 Units**

Advisory: MATH 220; not open to students with credit in GIST 11.

Grade Type: Letter Grade, the student may select Pass/No Pass Not Repeatable.

4 hours lecture. (48 hours total per quarter)

Introduction to the fundamental concepts of GeoSpatial Technology, including Geographic Information Systems (GIS), Remote Sensing (RS) and Global Positioning Systems (GPS), map reading, and cartography. Exploration of how geospatial technologies are used in addressing human and environmental issues and can promote sustainability.

FHGE: Communication & Analytical Thinking Transferable: UC/CSU

**GEOG 12 INTRODUCTION TO GEOSPATIAL TECHNOLOGY 4 Units**

Advisory: GEOG 11 or GIST 11; not open to students with credit in GIST 12.

Grade Type: Letter Grade, the student may select Pass/No Pass Not Repeatable.

3 hours lecture, 3 hours laboratory. (72 hours total per quarter)

Study of Geospatial Technology including Geographic Information Systems (GIS), Global Positioning Systems (GPS), cartography, remote sensing, and spatial analysis. Application of Geographic Information Systems (GIS) science to spatial data management. Assessment of vector and raster systems, scale, resolution, map projection, coordinate systems and georeferencing. Identification and acquisition of spatial data.

FHGE: Non-GE Transferable: UC/CSU

**GEOG 70R INDEPENDENT STUDY 1 Unit**

**GEOG 71R IN GEOGRAPHY 2 Units**

**GEOG 72R 3 Units**

**GEOG 73R 4 Units**

Grade Type: Letter Grade, the student may select Pass/No Pass Not Repeatable.

3-12 hours laboratory per week. (36-144 hours total per quarter)

Provides an opportunity for the student to expand their studies in Geography beyond the classroom by completing a project or an assignment arranged by agreement between the student and instructor. The student is required to contract with the instructor to determine the scope of assignment and the unit value assigned for successful completion. Students may take a maximum of 6 units of Independent Study per department.

FHGE: Non-GE Transferable: CSU

**GEOGRAPHY**

Business and Social Sciences

650.949.7322 foothill.edu/bss

**GEOG 1 PHYSICAL GEOGRAPHY 5 Units**

Advisory: Demonstrated proficiency in English by placement as determined by score on the English placement test OR through an equivalent placement process OR completion of ESLL 125 & ESLL 249; MATH 220.

Grade Type: Letter Grade, the student may select Pass/No Pass Not Repeatable.

4 hours lecture, 3 hours laboratory. (84 hours total per quarter)

Study of the Earth's surface, including the earth's dimensions and systems; atmospheric processes; patterns of climate, vegetation and soils; and features, processes and interactions of land, water and various energy sources. Use of maps for interpretation.

FHGE: Natural Sciences Transferable: UC/CSU

**GEOG 2 HUMAN GEOGRAPHY 4 Units**

Advisory: Demonstrated proficiency in English by placement as determined by score on the English placement test OR through an equivalent placement process OR completion of ESLL 125 & ESLL 249.

Grade Type: Letter Grade, the student may select Pass/No Pass Not Repeatable.

4 hours lecture. (48 hours total per quarter)

The cultural geographic landscape. Study of the human population from origins to the present with an emphasis on the future. Examination of population densities, migrations and settlements; races, languages and religions; patterns of land use and major environmental perceptions and problems. Analysis of energy, mineral, and food resources and how cultures utilize them.

FHGE: Social & Behavioral Sciences Transferable: UC/CSU

**GEOG 5 INTRODUCTION TO ECONOMIC GEOGRAPHY 4 Units**

Advisory: Demonstrated proficiency in English by placement as determined by score on the English placement test OR through an equivalent placement process OR completion of ESLL 125 & ESLL 249.

Grade Type: Letter Grade, the student may select Pass/No Pass Not Repeatable.

4 hours lecture. (48 hours total per quarter)

Introduction to the geography of economic activity; the world wide distribution and characteristics of agriculture, forestry, fishing, mining, manufacturing, transportation, high technology and international trade.

FHGE: Social & Behavioral Sciences Transferable: UC/CSU

## GEOSPATIAL TECHNOLOGY

Business and Social Sciences  
650.949.7322

### GIST 11 INTRODUCTION TO MAPPING & SPATIAL REASONING 4 Units

**Advisory:** MATH 220; not open to students with credit in GEOG 11.  
**Grade Type:** Letter Grade, the student may select Pass/No Pass  
**Not Repeatable.**

**4 hours lecture. (48 hours total per quarter)**

Introduction to the fundamental concepts of GeoSpatial Technology, including Geographic Information Systems (GIS), Remote Sensing (RS) and Global Positioning Systems (GPS), map reading, and cartography. Exploration of how geospatial technologies are used in addressing human and environmental issues and can promote sustainability.

**FHGE:** Communication & Analytical Thinking **Transferable:** UC/CSU

### GIST 12 INTRODUCTION TO GEOSPATIAL TECHNOLOGY 4 Units

**Advisory:** GEOG 11 or GIST 11; not open to students with credit in GEOG 12.

**Grade Type:** Letter Grade, the student may select Pass/No Pass  
**Not Repeatable.**

**3 hours lecture, 3 hours laboratory. (72 hours total per quarter)**

Study of Geospatial Technology including Geographic Information Systems (GIS), Global Positioning Systems (GPS), cartography, remote sensing, and spatial analysis. Application of Geographic Information Systems (GIS) science to spatial data management. Assessment of vector and raster systems, scale, resolution, map projection, coordinate systems and georeferencing. Identification and acquisition of spatial data.

**FHGE:** Non-GE **Transferable:** UC/CSU

### GIST 52 GEOSPATIAL DATA ACQUISITION & MANAGEMENT 4 Units

**Advisory:** Successful completion of GEOG 11 or GIST 11 and GEOG 12 or GIST 12; not open to students with credit in GEOG 52.

**Grade Type:** Letter Grade, the student may select Pass/No Pass  
**Not Repeatable.**

**3 hours lecture, 3 hours laboratory. (72 hours total per quarter)**

Study of Geographic Information Systems (GIS) science and its applications to spatial data management. Data acquisition using GPS, digitizing and scanning techniques. Data management. Editing and verifying. Raster data manipulation and importing. Database management. Advanced queries and database manipulation.

**FHGE:** Non-GE **Transferable:** CSU

### GIST 53 ADVANCED GEOSPATIAL TECHNOLOGY & SPATIAL ANALYSIS 4 Units

**Prerequisite:** GEOG 12 or GIST 12.

**Advisory:** GEOG 11 or GIST 11; GIST 52.

**Grade Type:** Letter Grade, the student may select Pass/No Pass  
**Not Repeatable.**

**2 hours lecture, 6 hours laboratory. (96 hours total per quarter)**

Introduction to problem-solving and decision making using geospatial analysis techniques, applicable to a range of disciplines.

**FHGE:** Non-GE **Transferable:** CSU

### GIST 54A SEMINAR IN SPECIALIZED APPLICATIONS OF GEOGRAPHIC INFORMATION SYSTEMS I 2 Units

**Advisory:** Not open to students with credit in GEOG 54A.

**Grade Type:** Letter Grade, the student may select Pass/No Pass  
**Not Repeatable.**

**2 hours lecture. (24 hours total per quarter)**

Seminar on the diverse applications of Geographic Information Systems (GIS). Weekly presentations by guest speakers.

**FHGE:** Non-GE **Transferable:** CSU

### GIST 58 REMOTE SENSING & DIGITAL IMAGE PROCESSING 3 Units

**Advisory:** Not open to students with credit in GEOG 58.

**Grade Type:** Letter Grade, the student may select Pass/No Pass  
**Not Repeatable.**

**2 hours lecture, 3 hours laboratory. (60 hours total per quarter)**

Physical basis of remote sensing. Aerial photography and high resolution multi-band imaging. Satellite multi-band optical remote sensing. Other forms of remote sensing (RADAR, SAR, LIDAR). Applications of remote sensing.

**FHGE:** Non-GE **Transferable:** CSU

### GIST 59 CARTOGRAPHY, MAP PRESENTATION & DESIGN 2 Units

**Advisory:** Not open to students with credit in GEOG 59.

**Grade Type:** Letter Grade, the student may select Pass/No Pass  
**Not Repeatable.**

**1 hour lecture, 3 hours laboratory. (48 hours total per quarter)**

Map projections, geodes, coordinate systems. Map composition. Selection of colors and symbols.

**FHGE:** Non-GE **Transferable:** CSU

## GERONTOLOGY

Business and Social Sciences  
650.949.7322 [foothill.edu/aging](http://foothill.edu/aging)

### GERN 10 SOCIOLOGY OF AGING 3 Units

**Advisory:** Not open to students with credit in GERN 50.

**Grade Type:** Letter Grade Only  
**Not Repeatable.**

**3 hours lecture. (36 hours total per quarter)**

Introduction to the field of gerontology, the study of aging. It includes an examination of the history of the field and major theories in social gerontology. Explores myths and stereotypes of aging, demography of elders in the United States, patterns of work and retirement, family structures and issues, financial resources, housing options, ethnic and cultural diversity among elders, and federal policies affecting older Americans.

**FHGE:** Non-GE **Transferable:** UC/CSU

### GERN 11 PSYCHOLOGY OF AGING 3 Units

**Advisory:** Not open to students with credit in GERN 51.

**Grade Type:** Letter Grade Only  
**Not Repeatable.**

**3 hours lecture. (36 hours total per quarter)**

An introduction to normal emotional and psychological changes that typically occur in later life, including discussion of common mental health problems that elders can experience: how to recognize them, and what to do to assist the individual and the family. Ethnic and cultural differences in presentation, evaluation, and treatment of mental health problems in various culturally diverse groups will be highlighted.

**FHGE:** Non-GE **Transferable:** UC/CSU

### GERN 15 ISSUES IN DEATH, DYING & BEREAVEMENT ACROSS CULTURES 3 Units

**Advisory:** not open to students with credit in GERN 55.

**Grade Type:** Letter Grade Only  
**Not Repeatable.**

**3 hours lecture. (36 hours total per quarter)**

This course discusses the relationships with death, as an individual, as a health professional, and as a member of society. It explores the universal phenomena of dying, death, and bereavement with a special emphasis on academic and interpersonal skills that allow individuals to increase their understanding and appreciation of cultural differences and similarities, within, among, and between groups.

**FHGE:** Non-GE **Transferable:** UC/CSU

**GERN 52 HEALTH & AGING** 3 Units  
**Grade Type: Letter Grade Only**  
**Not Repeatable.**  
**3 hours lecture. (36 hours total per quarter)**  
An introduction to normal physical changes in older adults without significant disability, common diseases and disabilities that occur in old age, health promotion/disease prevention strategies, and health care policies and practices.  
**FHGE: Non-GE Transferable: CSU**

**GERN 54 CONTINUUM OF CARE OPTIONS** 3 Units  
**Grade Type: Letter Grade Only**  
**Not Repeatable.**  
**3 hours lecture. (36 hours total per quarter)**  
An overview of the types of care options available to serve independent and dependent elders; including senior centers, adult day care programs, assisted living and nursing homes. Regulations and management issues will be explored. Role of ombudsmen and advocacy organizations are discussed. A systematic exploration of the continuum of care.  
**FHGE: Non-GE Transferable: CSU**

**GERN 56 AGING & DIVERSITY** 3 Units  
**Grade Type: Letter Grade Only**  
**Not Repeatable.**  
**3 hours lecture. (36 hours total per quarter)**  
Introduction to the cross-cultural and diverse issues of aging, focusing on psychological and social aspects for diverse subgroups within the US. Students will learn to effectively communicate with aging clients of diverse ethnic, religious, gender, sexual orientation, and cultural backgrounds. Through readings, lectures, films, discussions, case studies, and other interactive learning tools, the course will help students to develop the necessary skills to engage and work with aging clients with diverse backgrounds and perspectives. Personal reflections, experiences, beliefs and behaviors will be explored.  
**FHGE: Non-GE Transferable: CSU**

## GRAPHICS & INTERACTIVE DESIGN

Fine Arts and Communication  
650.949.7262 [foothill.edu/graphicdesign](http://foothill.edu/graphicdesign)

Foothill offers art activity courses in seven different family categories. No single course may be repeated. Enrollment is limited to six courses per family within the Foothill-De Anza Community College District. Please refer to the De Anza College Catalog for the corresponding families and courses.

Printmaking Family: ART 39 or GID 46 & ART 40 or GID 38

Book Arts & Paper Family: ART 6

**GID 1 HISTORY OF GRAPHIC DESIGN** 4 Units  
**Advisory: Not open to students with credit in ART 36 or GRDS 36.**  
**Grade Type: Letter Grade, the student may select Pass/No Pass**  
**Not Repeatable.**  
**4 hours lecture. (48 hours total per quarter)**  
A study of the development of visual communication in art, graphic design, illustration and popular culture. Emphasis on the role, impact and interpretation of images, symbols, and typography used in informative and persuasive media.  
**FHGE: Humanities Transferable: UC/CSU**

**GID 2 THE HISTORY OF THE PRINTED BOOK** 4 Units  
**Grade Type: Letter Grade Only**  
**Not Repeatable.**  
**4 hours lecture. (48 hours total per quarter)**  
A study of the printed book covering the last 500 years before and after Gutenberg. Emphasis will be on significant milestones of published books from Incunabula (1400-1500) to present covering printing, papermaking, bookbinding and typography. Manuscripts, hand printed books, machine printed books, and fine press/artist books will be discussed. All major type designers, type-cutters and printers will be covered.  
**FHGE: Non-GE Transferable: UC/CSU**

**GID 31 GRAPHIC DESIGN DRAWING** 4 Units  
**Formerly: GID 70**  
**Advisory: Not open to students with credit in GID 70 or GRDS 60.**  
**Grade Type: Letter Grade, the student may select Pass/No Pass**  
**Not Repeatable.**  
**3 hours lecture, 3 hours laboratory. (72 hours total per quarter)**  
Developing drawing skills for communicating ideas. Learning to simplify complex realistic images to express design concepts rapidly and effectively.  
**FHGE: Non-GE Transferable: UC/CSU**

**GID 33 GRAPHIC DESIGN STUDIO I** 4 Units  
**Advisory: Not open to students with credit in GID 50 or GRDS 53.**  
**Grade Type: Letter Grade, the student may select Pass/No Pass**  
**Not Repeatable.**  
**3 hours lecture, 3 hours laboratory. (72 hours total per quarter)**  
Introduction to graphic design and visual communication. Projects include composition, typography, image editing and logo design. Design principles are explored through creative projects. Students practice fundamental software skills using Adobe Photoshop, Illustrator, and InDesign to complete the graphic design activities in this course.  
**FHGE: Non-GE Transferable: UC/CSU**

**GID 34 GRAPHIC DESIGN STUDIO II** 4 Units  
**Advisory: Not open to students with credit in GID 51.**  
**Grade Type: Letter Grade, the student may select Pass/No Pass**  
**Not Repeatable.**  
**3 hours lecture, 3 hours laboratory. (72 hours total per quarter)**  
Continuation of GID 33. Students engage in problem solving with real-world graphic design projects. Focus on creative solutions that effectively use type, image, and layout. Projects include brochure, advertisement, interface, and package design. Creative ideas are explored in sketches, rough layouts, and finished comps. Students learn software skills using Adobe InDesign, Illustrator, and Photoshop to complete the graphic design activities in this course.  
**FHGE: Non-GE Transferable: UC/CSU**

**GID 35 GRAPHIC DESIGN STUDIO III** 4 Units  
**Formerly: GID 52**  
**Advisory: Not open to students with credit in GID 52.**  
**Grade Type: Letter Grade, the student may select Pass/No Pass**  
**Not Repeatable.**  
**3 hours lecture, 3 hours laboratory. (72 hours total per quarter)**  
Continuation of GID 34. Students design and produce a real-world graphic design campaign. Focus on creative solutions that effectively use type, image, and layout. Projects include branding, identity, newsletter, website, and package design. Creative ideas are explored in sketches, rough layouts, comps, and final presentations. Students learn Adobe CC software and industry standard software to complete the graphic design activities in this course.  
**FHGE: Non-GE Transferable: UC/CSU**

**GID 36**      **TYPOGRAPHY**      4 Units

**Advisory:** ART 14D or GID 41, and GID 33, or proficiency using Illustrator software; not open to students with credit in GID 54 or GRDS 62.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**3 hours lecture, 3 hours laboratory. (72 hours total per quarter)**

Exploration and experimentation with letter forms and page layout for expressive communication. Fundamental typographic principles, font recognition, and analysis of both historical and post modern design theory. Emphasis on content, form, and technique for effective use of typography in ads, posters, newsletters and other visual communications.

**FHGE: Non-GE Transferable: UC/CSU**

**GID 37**      **CARTOONING**      4 Units

**Advisory:** Not open to students with credit in GID 72 or GRDS 73A.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**3 hours lecture, 3 hours laboratory. (72 hours total per quarter)**

Fundamentals of drawing cartoons for mass communication with a variety of styles and techniques. Emphasis on skills, concepts, humor, and design. Exploration of career opportunities.

**FHGE: Non-GE Transferable: UC/CSU**

**GID 38**      **INTRODUCTION TO PRINTMAKING**      4 Units

**Advisory:** ART 4A and 5A; this course is included in the Printmaking family of activity courses; not open to students with credit in ART 40, 69 or GRDS 69.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**3 hours lecture, 3 hours laboratory. (72 hours total per quarter)**

Introduction to the printmaking processes of relief, intaglio, screenprinting and monoprinting. Theory and practice making limited-edition and one-of-a-kind fine art prints.

**FHGE: Non-GE Transferable: UC/CSU**

**GID 40**      **DIGITAL PRINTMAKING**      4 Units

**Advisory:** ART 14D or GID 41; not open to students with credit in GRDS 71.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**3 hours lecture, 3 hours laboratory. (72 hours total per quarter)**

Introduction to the creative, expressive and experimental possibilities of using digital media to produce fine art prints. Emphasis on image creation, printing technologies and printing techniques.

**FHGE: Non-GE Transferable: UC/CSU**

**GID 41**      **DIGITAL ART & GRAPHICS**      4 Units

**Advisory:** Familiarity with computer operating systems; ART 4A or GID 31; ART 5A; PHOT 1; not open to students with credit in ART 14D, GID 74, or GRDS 56.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**3 hours lecture, 3 hours laboratory. (72 hours total per quarter)**

Introduction to using computers and software for painting, drawing, image processing, photo composites and typography. Emphasis on image making and creative problem solving.

**FHGE: Non-GE Transferable: UC/CSU**

**GID 43**      **ILLUSTRATION & DIGITAL IMAGING**      4 Units

**Advisory:** ART 4A or GID 31; ART 14D or GID 41 or familiarity with painting and drawing software; not open to students with credit in GID 76 or GRDS 90.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**3 hours lecture, 3 hours laboratory. (72 hours total per quarter)**

Creation of images to communicate ideas. Traditional and digital media. Emphasis on concept development and communication effectiveness. Development of personal visual vocabulary while learning art making techniques and media, reproduction processes and illustration business practice.

**FHGE: Non-GE Transferable: UC/CSU**

**GID 45**      **DIGITAL SOUND, VIDEO & ANIMATION**      4 Units

**Advisory:** Not open to students with credit in ART 88, DRAM 86, GID 80, GRDS 86, MUS 12 or VART 86.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**3 hours lecture, 3 hours laboratory. (72 hours total per quarter)**

Basic instruction using the computer for emerging media technologies; digital sound, video editing, and animation. Emphasis on time based media and creative problem solving.

**FHGE: Non-GE Transferable: UC/CSU**

**GID 46**      **SCREENPRINTING**      4 Units

**Advisory:** This course is included in the Printmaking family of activity courses; not open to students with credit in ART 39.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**3 hours lecture, 3 hours laboratory. (72 hours total per quarter)**

Introduction to screen printing processes, exploring the techniques of hand-cut stencils, direct-drawn stencils and photographic processes. Theory and practice making images for limited-edition and one-of-a-kind fine art prints.

**FHGE: Non-GE Transferable: UC/CSU**

**GID 47**      **MOTION GRAPHICS**      4 Units

**Advisory:** Not open to students with credit in GID 84, GRDS 87, MDIA 32 or VART 87.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**3 hours lecture, 3 hours laboratory. (72 hours total per quarter)**

Basic instruction using the computer for motion graphic design, animation, and composite digital video production. Emphasis on time based media and its application to creative problem solving and communication solutions.

**FHGE: Non-GE Transferable: UC/CSU**

**GID 53A**      **BEGINNING T-SHIRT DESIGN & GARMENT PRINTING**      4 Units

**Advisory:** Not open to students with credit in GID 53.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**3 hours lecture, 3 hours laboratory. (72 hours total per quarter)**

Basic instruction in design and printing for wearable art. Students learn techniques for image creation and preparation of artwork for screenprinting on t-shirts. Development of personal visual style while learning workflow of a professional printing studio.

**FHGE: Non-GE Transferable: CSU**

**GID 53B INTERMEDIATE T-SHIRT DESIGN & GARMENT PRINTING 4 Units**

**Grade Type:** Letter Grade, the student may select Pass/No Pass  
**Not Repeatable.**

**3 hours lecture, 3 hours laboratory. (72 hours total per quarter)**

Continuation of GID 53A. Intermediate instruction in design and printing for wearable art. Students learn digital skills for image creation and preparation of multi-color artwork for screenprinting on t-shirts, fabrics and wearable substrates. Focused development of personal visual style with emphasis on portfolio quality work. Basic business procedures of the garment printing industry are put into practice.

**FHGE: Non-GE Transferable: CSU**

**GID 53C ADVANCED T-SHIRT DESIGN & GARMENT PRINTING 4 Units**

**Grade Type:** Letter Grade, the student may select Pass/No Pass  
**Not Repeatable.**

**3 hours lecture, 3 hours laboratory. (72 hours total per quarter)**

Continuation of GID 53B. Advanced instruction in design, printing, management and business operations of a full-service garment printing business.

**FHGE: Non-GE Transferable: CSU**

**GID 56 WEBSITE DESIGN 4 Units**

**Advisory:** not open to students with credit in GRDS 94.

**Grade Type:** Letter Grade, the student may select Pass/No Pass  
**Not Repeatable.**

**3 hours lecture, 3 hours laboratory. (72 hours total per quarter)**

Basic instruction using the computer for website and interface design. Emphasis on interactive media and creative problem solving.

**FHGE: Non-GE Transferable: CSU**

**GID 57 WEBSITE DESIGN & DEVELOPMENT II 4 Units**

**Advisory:** GID 56.

**Grade Type:** Letter Grade, the student may select Pass/No Pass  
**Not Repeatable.**

**3 hours lecture, 3 hours laboratory. (72 hours total per quarter)**

Introduction to HTML/XHTML for coding fully functional Web pages and websites. Emphasis on writing well-formed markup using current Web standards and coding technologies, design concepts, usability, accessibility, and browser compatibility. Brief introduction to JavaScript, HTML5, and XML.

**FHGE: Non-GE Transferable: CSU**

**GID 58 WEB DESIGN & DEVELOPMENT III 4 Units**

**Advisory:** GID 56 and 57.

**Grade Type:** Letter Grade, the student may select Pass/No Pass  
**Not Repeatable.**

**3 hours lecture, 3 hours laboratory. (72 hours total per quarter)**

Website design and production using an HTML editor software, with an emphasis on application of current HTML/CSS coding technologies, design concepts, usability and accessibility, organizing page content, producing dynamic pages, incorporating rich media, and reusable elements. Large scale website development with emphasis on site management, and web page delivery to multiple platforms. Develop proficiency with web production software Adobe Dreamweaver.

**FHGE: Non-GE Transferable: CSU**

**GID 60 CAREERS IN THE VISUAL ARTS 2 Units**

**Advisory:** Not open to students with credit in GRDS 50 or VART 50.

**Grade Type:** Letter Grade, the student may select Pass/No Pass  
**Not Repeatable.**

**2 hours lecture. (24 hours total per quarter)**

Exploring the field of visual arts including commercial arts, graphic design, photography, video arts, website design, and illustration. Survey of career paths including art studios, company art departments, advertising agencies, freelance, and other job opportunities for creative services professionals.

**FHGE: Non-GE Transferable: CSU**

**GID 61 PORTFOLIO 4 Units**

**Advisory:** Not open to students with credit in GRDS 77.

**Grade Type:** Letter Grade, the student may select Pass/No Pass  
**Not Repeatable.**

**3 hours lecture, 3 hours laboratory. (72 hours total per quarter)**

Design and creation of digital and traditional portfolios for designers, illustrators, photographers. Planning and implementation of individual professional portfolios using a variety of delivery systems.

**FHGE: Non-GE Transferable: CSU**

**GID 71 STORYBOARDING 4 Units**

**Advisory:** GID 31; not open to students with credit in GRDS 76.

**Grade Type:** Letter Grade, the student may select Pass/No Pass  
**Not Repeatable.**

**3 hours lecture, 3 hours laboratory. (72 hours total per quarter)**

Fundamentals of creating storyboards and flowcharts for media projects. Emphasis on technique, concept development and design of storyboards. Exploration of storyboard applications for new media content.

**FHGE: Non-GE Transferable: CSU**

**GID 77 ADVANCED WEBSITE DESIGN & DEVELOPMENT 4 Units**

**Advisory:** GID 56 and 57.

**Grade Type:** Letter Grade, the student may select Pass/No Pass  
**Not Repeatable.**

**3 hours lecture, 3 hours laboratory. (72 hours total per quarter)**

Introduction to HTML5 and CSS3 for advanced Web development and design. Prepares students and working professionals to use advanced tags and layout. Emphasis on writing well-formed markup using current Web standards and coding technology, design concepts, usability, accessibility, and browser compatibility. Includes minor elements of JavaScript. Intended for students with a basic working knowledge of HTML/CSS and Web design.

**FHGE: Non-GE Transferable: CSU**

**GID 78 RAPID WEBSITE DEVELOPMENT 4 Units**

**Advisory:** GID 56, 57 and 58.

**Grade Type:** Letter Grade, the student may select Pass/No Pass  
**Not Repeatable.**

**3 hours lecture, 3 hours laboratory. (72 hours total per quarter)**

Introduction to Drupal and WordPress for rapid website development. Prepares students and working professionals to use rapid development tools to create and customize websites for small and large applications, from blogs to commercial development. Emphasis on authoring, modules and architecture, CMS (Content Management System), and administrative tools.

**FHGE: Non-GE Transferable: CSU**

**GID 92 LETTERPRESS PRINTING 4 Units**

**Advisory:** ART 14D or GID 41; GID 33; not open to students with credit in GRDS 40.

**Grade Type:** Letter Grade, the student may select Pass/No Pass  
**Not Repeatable.**

**3 hours lecture, 3 hours laboratory. (72 hours total per quarter)**

Studio practice in letterpress printing to create limited-edition prints and books. Introduction to handset type, hand-carved relief plates and photopolymer plates. Emphasis on technical skills with tools and media, visual communication, and aesthetics of print media.

**FHGE: Non-GE Transferable: CSU**

**GID 93 LETTERPRESS PROJECTS 4 Units**

**Advisory:** GID 92 or equivalent skills.

**Grade Type:** Letter Grade, the student may select Pass/No Pass  
**Not Repeatable.**

**3 hours lecture, 3 hours laboratory. (72 hours total per quarter)**

Application of principles and theories introduced in previously taken letterpress courses to student-motivated projects. Projects address information gathering, idea generation, concept development, production and distribution.

**FHGE: Non-GE Transferable: CSU**

## HEALTH

Biological and Health Sciences  
650.949.7249 foothill.edu/bio

### HLTH 20 INTRODUCTION TO PUBLIC HEALTH 5 Units

**Advisory:** One of the following: ENGL 1A, 1AH, 1S & 1T or ESLL 26.

**Grade Type:** Letter Grade, the student may select Pass/No Pass  
**Not Repeatable.**

**5 hours lecture. (60 hours total per quarter)**

Introduction to and an overview of public health. It covers: identifying and addressing population health challenges; determinants of health; and an overview of the health system. The basic concepts and terminologies of public health along with the history and accomplishments of public health officials and agencies will be reviewed. An overview of the functions of various public health professions and institutions, and an in-depth examination of the core public health disciplines is covered. Key topics include the epidemiology of infectious and chronic disease; prevention and control of diseases in the community including the analysis of the social determinants of health and strategies for eliminating disease, illness and health disparities among various populations; community organizing and health promotion programming; environmental health and safety; global health; and health care policy and management.

**FHGE: Lifelong Learning Transferable: UC/CSU**

### HLTH 21 CONTEMPORARY HEALTH CONCERNS 4 Units

**Advisory:** One of the following: ENGL 1A, 1AH, 1S & 1T or ESLL 26.

**Grade Type:** Letter Grade, the student may select Pass/No Pass  
**Not Repeatable.**

**4 hours lecture. (48 hours total per quarter)**

This course focuses on the exploration of major health issues and behaviors in the various dimensions of health. Emphasis is placed on individual responsibility for personal health and the promotion of informed, positive health behaviors. Topics include nutrition, exercise, weight control, mental health, stress management, violence, substance abuse, reproductive health, disease prevention, aging, health care, and environmental hazards and safety.

**FHGE: Lifelong Learning Transferable: UC/CSU**

### HLTH 60 HEALTH ASPECTS OF AGING 4 Units

**Advisory:** One of the following: ENGL 1A, 1AH, 1S & 1T or ESLL 26 or equivalent.

**Grade Type:** Letter Grade, the student may select Pass/No Pass  
**Not Repeatable.**

**4 hours lecture. (48 hours total per quarter)**

Introduction to the biology, physiology and pathology of aging. Each body system will be explored focusing on how age changes can relate to disorders and diseases in later life. The course will employ a multidisciplinary perspective to include information on the sociological and psychological aspects of aging. Health promotion and disease prevention strategies will be discussed.

**FHGE: Non-GE Transferable: CSU**

### HLTH 70 GERIATRIC HEALTH CARE 3 Units

**Grade Type:** Letter Grade, the student may select Pass/No Pass  
**Not Repeatable.**

**3 hours lecture. (36 hours total per quarter)**

Introduction to geriatric health care for all students interested in our increasing older population's health care. The course will examine the health issues in our aging population. Topics include demographics of aging, pharmacology, nutrition, dental health, and information on dementia, sleep disorders, and medication therapy management. Future concerns for an aging society that encourages all health care professionals to embrace patient advocacy will also be addressed.

**FHGE: Non-GE Transferable: CSU**

### HLTH 75 CLINICAL ROTATION IN GERIATRIC HEALTH CARE SETTINGS 3 Units

**Prerequisite:** HLTH 70.

**Grade Type:** Letter Grade, the student may select Pass/No Pass  
**Not Repeatable.**

**9 hours laboratory. (108 hours total per quarter)**

Supervised hands-on introductory training in age-related facilities. Clinical rotations in settings that include senior residences, assisted living programs, nursing homes, private residences, and senior day health centers.

**FHGE: Non-GE Transferable: CSU**

### HLTH 300 HEALTH ACROSS THE LIFESPAN 5 Units

**Grade Type:** Letter Grade Only

**Not Repeatable.**

**5 hours lecture. (60 hours total per quarter)**

Examines the basic principles that guide growth, development and the health of individuals across the lifespan, from the prenatal period through senescence. Presents methodological, conceptual and substantive issues necessary for understanding and evaluating empirically based information about growth, development and health at different stages of life and from a public health perspective. Course covers several themes, including contributions of biological and environmental factors to health and human development, measuring the health of individuals in communities, understanding determinants and consequences of health and development across the lifespan, measuring population health and assessing the implications of health disparities. This is an upper division General Education course, intended for students in the Dental Hygiene Baccalaureate Degree Program; enrollment is limited to students accepted in the program.

**FHGE: Upper Division Transferable: CSU**

## HISTORY

Business and Social Sciences  
650.949.7322 foothill.edu/bss

### HIST 4A HISTORY OF WESTERN CIVILIZATION TO 800 CE 4 Units

**Advisory:** Demonstrated proficiency in English by placement as determined by score on the English placement test OR through an equivalent placement process OR completion of ESLL 125 & ESLL 249.

**Grade Type:** Letter Grade, the student may select Pass/No Pass  
**Not Repeatable.**

**4 hours lecture. (48 hours total per quarter)**

Survey of the development of Western culture and civilization in the ancient world. From the Neolithic period to the early Middle Ages.

**FHGE: Social & Behavioral Sciences Transferable: UC/CSU**

### HIST 4B HISTORY OF WESTERN CIVILIZATION: 700-1800 4 Units

**Advisory:** Demonstrated proficiency in English by placement as determined by score on the English placement test OR through an equivalent placement process OR completion of ESLL 125 & ESLL 249.

**Grade Type:** Letter Grade, the student may select Pass/No Pass  
**Not Repeatable.**

**4 hours lecture. (48 hours total per quarter)**

Survey of the development of Western society and culture from the early Middle Ages through the Age of Enlightenment. Emphasis upon the cultural, social, intellectual, and institutional changes that led to the birth of the modern Western culture and its interchange with the peoples of the world's continents.

**FHGE: Social & Behavioral Sciences Transferable: UC/CSU**

**HIST 4C HISTORY OF WESTERN CIVILIZATION 1789-PRESENT 4 Units**

**Advisory:** Demonstrated proficiency in English by placement as determined by score on the English placement test OR through an equivalent placement process OR completion of ESLL 125 & ESLL 249; not open to students with credit in HIST 4CH.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**4 hours lecture. (48 hours total per quarter)**

Survey of the development of Western society and culture during the nineteenth and twentieth centuries. Emphasis upon the social, intellectual, and institutional changes that have led to the contemporary Western world and its interchange with the peoples and institutions of the world's continents.

**FHGE:** Social & Behavioral Sciences **Transferable:** UC/CSU

**HIST 4CH HONORS HISTORY OF WESTERN CIVILIZATION 1789-PRESENT 4 Units**

**Prerequisite:** Honors Institute participant.

**Advisory:** Not open to students with credit in HIST 4C.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**4 hours lecture. (48 hours total per quarter)**

Survey of the development of Western society and culture during the nineteenth and twentieth centuries. Emphasis upon the social, intellectual, and institutional changes that have led to the contemporary Western world and its interchange with the peoples and institutions of the world's continents. As an honors course, it is a full thematic seminar with advanced teaching methods focusing on major writing, reading, and research assignments, student class lectures, group discussions and interactions.

**FHGE:** Social & Behavioral Sciences **Transferable:** UC/CSU

**HIST 8 HISTORY OF LATIN AMERICA 4 Units**

**Advisory:** Demonstrated proficiency in English by placement as determined by score on the English placement test OR through an equivalent placement process OR completion of ESLL 125 & ESLL 249.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**4 hours lecture. (48 hours total per quarter)**

History of Latin America from Pre-Columbian times to the present. Emphasis upon Native and European contributions to present Latin American culture. Special emphasis on governmental systems and social and economic progress. Includes revolutionary movements and their present status.

**FHGE:** Social & Behavioral Sciences **Transferable:** UC/CSU

**HIST 9 HISTORY OF CONTEMPORARY EUROPE 4 Units**

**Advisory:** Demonstrated proficiency in English by placement as determined by score on the English placement test OR through an equivalent placement process OR completion of ESLL 125 & ESLL 249; not open to students with credit in HIST 9H.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**4 hours lecture. (48 hours total per quarter)**

Twentieth Century Europe. Political, social, and cultural developments in recent European history. World War I and the consequences of Versailles, Bolshevik Revolution and rise of Communism, Italian Fascism and German Nazism. The diplomacy of World War II, Cold War, and current developments in Western and Eastern Europe. Global impacts.

**FHGE:** Social & Behavioral Sciences **Transferable:** UC/CSU

**HIST 9H HONORS HISTORY OF CONTEMPORARY EUROPE 4 Units**

**Prerequisite:** Honors Institute participant.

**Advisory:** Not open to students with credit in HIST 9.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**4 hours lecture. (48 hours total per quarter)**

Twentieth Century Europe. Political, social, and cultural developments in recent European history. World War I and the consequences of Versailles, Bolshevik Revolution and rise of Communism, Italian Fascism and German Nazism. The diplomacy of World War II, Cold War, and current developments in Western and Eastern Europe. Global impacts. As an honors course, it is a full thematic seminar with advanced teaching methods focusing on major writing, reading, and research assignments, student class lectures, group discussions and interactions.

**FHGE:** Social & Behavioral Sciences **Transferable:** UC/CSU

**HIST 10 HISTORY OF CALIFORNIA: THE MULTICULTURAL STATE 4 Units**

**Advisory:** Demonstrated proficiency in English by placement as determined by score on the English placement test OR through an equivalent placement process OR completion of ESLL 125 & ESLL 249.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**4 hours lecture. (48 hours total per quarter)**

History of California emphasizing the interaction of peoples of different ethnicities from the Native period up to the present day. Emphasis on periods of significant cultural transition - the Spanish mission period, American conquest and dominance, and multicultural movements of the twentieth century. Analysis of class and gender as well as race and ethnicity in the development of California history and culture.

**FHGE:** Amer, SocBeh **Transferable:** UC/CSU

**HIST 16 INTRODUCTION TO ANCIENT ROME 4 Units**

**Advisory:** HIST 4A or equivalent; demonstrated proficiency in English by placement as determined by score on the English placement test OR through an equivalent placement process OR completion of ESLL 125 & ESLL 249; not open to students with credit in HIST 16H.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**4 hours lecture. (48 hours total per quarter)**

Chronological and topical survey of Roman history from the founding of Rome to the reign of Constantine. Emphasis upon the political, social, economic development in the Late Republic and Empire. Consideration of literature, art, architecture, texts in translation.

**FHGE:** Social & Behavioral Sciences **Transferable:** UC/CSU

**HIST 16H HONORS INTRODUCTION TO ANCIENT ROME 4 Units**

**Prerequisite:** Honors Institute participant.

**Advisory:** HIST 4A or equivalent; not open to students with credit in HIST 16.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**4 hours lecture. (48 hours total per quarter)**

Enhanced comprehensive study of Roman history from the founding of Rome to the reign of Constantine. Emphasis upon the political, social, economic development in the Late Republic and Empire. Consideration of literature, art, architecture, texts in translation. As an honors course, it is a full seminar with advanced teaching methods focusing on major writing, reading, and research assignments, student class lectures, group discussions and interactions.

**FHGE:** Social & Behavioral Sciences **Transferable:** UC/CSU

**HIST 17A HISTORY OF THE UNITED STATES TO 1815 4 Units**

**Advisory:** Demonstrated proficiency in English by placement as determined by score on the English placement test OR through an equivalent placement process OR completion of ESLL 125 & ESLL 249.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**4 hours lecture. (48 hours total per quarter)**

History of America and the United States up to 1815. Survey of the political, economic, intellectual and social antecedents of United States culture with emphasis on the interactions of peoples and ideas that led to the creation and evolution of the early United States.

**FHGE:** Social & Behavioral Sciences Transferable: UC/CSU

**HIST 17B HISTORY OF THE UNITED STATES FROM 1812 TO 1914 4 Units**

**Advisory:** Demonstrated proficiency in English by placement as determined by score on the English placement test OR through an equivalent placement process OR completion of ESLL 125 & ESLL 249.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**4 hours lecture. (48 hours total per quarter)**

History of the United States from 1812 to 1914. Survey of the political, economic, cultural and social development of the United States with emphasis on its contentious expansion into the North American west, its evolution as an economic world power, and the conflict over the application of the ideals of freedom and equality across race, class and gender lines.

**FHGE:** Social & Behavioral Sciences Transferable: UC/CSU

**HIST 17C HISTORY OF THE UNITED STATES FROM 1914 TO THE PRESENT 4 Units**

**Advisory:** Demonstrated proficiency in English by placement as determined by score on the English placement test OR through an equivalent placement process OR completion of ESLL 125 & ESLL 249.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**4 hours lecture. (48 hours total per quarter)**

History of the United States from 1914 to the present. Survey of the political, economic, social and cultural development of the United States with emphasis on the country's evolving involvement in world affairs and increasing struggle to achieve civil rights for all Americans.

**FHGE:** Social & Behavioral Sciences Transferable: UC/CSU

**HIST 18 INTRODUCTION TO MIDDLE EASTERN CIVILIZATION 4 Units**

**Advisory:** Demonstrated proficiency in English by placement as determined by score on the English placement test OR through an equivalent placement process OR completion of ESLL 125 & ESLL 249.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**4 hours lecture. (48 hours total per quarter)**

Civilization of the Middle East. History of the region, concentrating on the 19th, 20th and 21st centuries. European colonization, culture, institutions, and religion. Political, economic, and social development of the area.

**FHGE:** Social & Behavioral Sciences Transferable: UC/CSU

**HIST 19 HISTORY OF ASIA: CHINA/JAPAN 4 Units**

**Advisory:** Demonstrated proficiency in English by placement as determined by score on the English placement test OR through an equivalent placement process OR completion of ESLL 125 & ESLL 249.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**4 hours lecture. (48 hours total per quarter)**

Political, social and economic development of China and Japan. Emphasis on impact of Western culture and problems of political and economic modernization.

**FHGE:** Non-GE Transferable: UC/CSU

**HIST 20 HISTORY OF RUSSIA & THE SOVIET UNION 4 Units**

**Advisory:** Demonstrated proficiency in English by placement as determined by score on the English placement test OR through an equivalent placement process OR completion of ESLL 125 & ESLL 249.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**4 hours lecture. (48 hours total per quarter)**

Russian political and social development from the 10th Century to present. Emphasis on post-revolutionary Russia and problems of authoritarian modernization, independence, political and economic integration and industrialization.

**FHGE:** Social & Behavioral Sciences Transferable: UC/CSU

**HIST 54H HONORS INSTITUTE SEMINAR IN HISTORY 1 Unit**

**Prerequisite:** Honors Institute participant.

**Advisory:** Not open to students with credit in HIST 34 or 34H.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**1 hour lecture. (12 hours total per quarter)**

A seminar in directed readings, discussions and projects in history. Specific topics to be determined by the instructor in consultation with the individual student.

**FHGE:** Non-GE Transferable: CSU

**HUMANITIES**

**Business and Social Sciences**

650.949.7322 foothill.edu/bss

**HUMN 1 CULTURES, CIVILIZATIONS & IDEAS: THE ANCIENT WORLD 4 Units**

**Formerly:** HUMN 1A

**Advisory:** One of the following: ENGL 1A, 1AH, 1S & 1T or ESLL 26; not open to students with credit in HUMN 1A.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**4 hours lecture. (48 hours total per quarter)**

An interdisciplinary and thematic approach to the history of human culture and ideas. Major eras covered include Mesopotamia, Egypt, China's Han and Tang Dynasties, India's Gupta Empire, Japan's Nara Period, Ancient Greece, Ancient Rome and the Flowering of World Religions. Class discussions, projects and lectures address the development of worldviews, moral and ethical values and the arts in civilizations across the globe and throughout time.

**FHGE:** Humanities Transferable: UC/CSU



**HUMN 2 CULTURES, CIVILIZATIONS & IDEAS: OF EMPIRES & CONFLICT 4 Units**

Formerly: HUMN 1B

**Advisory: One of the following: ENGL 1A, 1AH, 1S & 1T or ESLL 26; not open to students with credit in HUMN 1B.**

**Grade Type: Letter Grade, the student may select Pass/No Pass Not Repeatable.**

**4 hours lecture. (48 hours total per quarter)**

An interdisciplinary and thematic approach to the history of human culture and ideas. Major eras covered include India's Pala Empire, China's Song and Ming Dynasty, the Mongol Empire, Japan's Muromachi Period, Culture, the people and empires of North, Central and South America, the Islamic Golden Age and the European Middle Ages. Class discussions, projects and lectures address the development of worldviews, moral and ethical values and the arts in civilizations across the globe and throughout time.

**FHGE: Humanities Transferable: UC/CSU**

**HUMN 3 WORLD MYTHS IN LITERATURE ARTS & FILM 4 Units**

**Advisory: One of the following: ENGL 1A, 1AH, 1S & 1T or ESLL 26 strongly recommended; not open to students with credit in HUMN 3H.**

**Grade Type: Letter Grade Only**

**Not Repeatable.**

**4 hours lecture. (48 hours total per quarter)**

An in-depth study of myths and legends, including, but not limited to, those from ancient Mesopotamia, classical Greece and Rome, Asia, India, Africa, Europe, and the indigenous Americas, and their adaptation in literature, art and film. The course traces both the function and influence of myths from diverse cultural contexts on our understanding of the past and our experience of modern/popular culture.

**FHGE: Humanities Transferable: UC/CSU**

**HUMN 3H HONORS WORLD MYTHS IN LITERATURE ARTS & FILM 4 Units**

**Prerequisite: Honors Institute participant.**

**Advisory: Not open to students with credit in HUMN 3.**

**Grade Type: Letter Grade Only**

**Not Repeatable.**

**4 hours lecture. (48 hours total per quarter)**

An in-depth study of myths and legends, including, but not limited to, those from ancient Mesopotamia, classical Greece and Rome, Asia, India, Africa, Europe, and the indigenous Americas, and their adaptation in literature, art and film. The course traces both the function and influence of myths from diverse cultural contexts on our understanding of the past and our experience of modern/popular culture. As an honors course, it is a full seminar with advanced teaching methods focusing on major writing, reading and research assignments, student class presentations, group discussions and interactions.

**FHGE: Humanities Transferable: UC/CSU**

**HUMN 4 TRAUMA & THE ARTS 4 Units**

**Advisory: One of the following: ENGL 1A, 1AH, 1S & 1T or ESLL 26 strongly recommended; not open to students with credit in HUMN 4H.**

**Grade Type: Letter Grade Only**

**Not Repeatable.**

**4 hours lecture. (48 hours total per quarter)**

This course applies theories of trauma to representations of trauma and violence in the visual arts, literature, film and music with an emphasis on the transformative potential of the creative process. Topics include the representation of war, genocide and racism. Students will gain acuity to identify, understand, empathize, and respond to traumatic subjectivity, its images and artistic as well as social intent.

**FHGE: Humanities Transferable: UC/CSU**

**HUMN 4H HONORS TRAUMA & THE ARTS 4 Units**

**Prerequisite: Honors Institute participant.**

**Advisory: Not open to students with credit in HUMN 4.**

**Grade Type: Letter Grade Only**

**Not Repeatable.**

**4 hours lecture. (48 hours total per quarter)**

Applies theories of trauma to representations of trauma and violence in the visual arts, literature, film and music with an emphasis on the transformative potential of the creative process. Topics include the representation of war, genocide and racism. Students will gain acuity to identify, understand, empathize, and respond to traumatic subjectivity, its images and artistic as well as social intent. As an honors course, it is a full seminar with advanced teaching methods focusing on major writing, reading and research assignments, student class presentations, group discussions and interactions.

**FHGE: Humanities Transferable: UC/CSU**

**HUMN 5 CULTURES, CIVILIZATIONS & IDEAS: THE MODERN WORLD 4 Units**

**Advisory: One of the following: ENGL 1A, 1AH, 1S & 1T, or ESLL 26.**

**Grade Type: Letter Grade, the student may select Pass/No Pass**

**Not Repeatable.**

**4 hours lecture. (48 hours total per quarter)**

An interdisciplinary and thematic approach to the history of human culture and ideas. Major eras covered include the Renaissance, the Age of Encounters, the Enlightenment, the Romantic Period, the Industrial Revolution and the dark legacy of Colonialism. Class discussions, projects and lectures address the development of worldviews, moral and ethical values and the arts in civilizations across the globe and throughout time.

**FHGE: Humanities Transferable: UC/CSU**

**HUMN 6 CULTURES, CIVILIZATIONS & IDEAS: THE CONTEMPORARY WORLD 4 Units**

**Advisory: One of the following: ENGL 1A, 1AH, 1S & 1T, or ESLL 26.**

**Grade Type: Letter Grade, the student may select Pass/No Pass**

**Not Repeatable.**

**4 hours lecture. (48 hours total per quarter)**

An interdisciplinary and thematic approach to the history of human culture and ideas. Major eras covered include: Modernity (from cubism and expressionism to jazz and film), the Soviet Union and Nazi Germany, the Atomic Age, Post-Colonialism (India, Africa, Latin America, the Middle East), Post Modernity, and the Digital Age. Class discussions, projects and lectures address the development of worldviews, moral and ethical values and the arts in Asia, Europe, the Americas and Africa throughout the 20th century and beyond.

**FHGE: Humanities Transferable: UC/CSU**

**HUMN 7 GLOBAL RELIGIONS: CONTEMPORARY PRACTICES & PERSPECTIVES 4 Units**

**Advisory: One of the following: ENGL 1A, 1AH, 1S & 1T, or ESLL 26.**

**Grade Type: Letter Grade, the student may select Pass/No Pass**

**Not Repeatable.**

**4 hours lecture. (48 hours total per quarter)**

Interdisciplinary course that explores how religions shape our understanding of diverse topics such as human rights, war, peace, globalization and science as well as music, sport, humor, film and the visual arts. Course eschews a focus on a specific tradition (i.e. Western or Eastern religions), and instead examines the inter-relationship between religion and human meaning creation through the specific lenses of ethics, aesthetics and politics.

**FHGE: Humanities Transferable: UC/CSU**

**HUMN 9 ONCE UPON A TIME? THE IMMORTAL LURE OF FAIRY TALES** 4 Units

**Advisory:** One of the following: ENGL 1A, 1AH, 1S & 1T or ESLL 26 strongly recommended.

**Grade Type:** Letter Grade Only  
**Not Repeatable.**

**4 hours lecture. (48 hours total per quarter)**

Interdisciplinary exploration of the origins, structure and function of fairy tales and their enduring influence on contemporary art, film, and gaming. Examines how the fairy tale and its multi-cultural variants dynamically give voice to the universally shared human experience. Interdisciplinary strategies are employed to trace the impact of fairy tales on science fiction, fantasy, dystopia, and horror.

**FHGE:** Humanities **Transferable:** UC/CSU

**HUMN 44H HONORS ART & TRANSGRESSION: THE HOLOCAUST IN THE LITERARY IMAGINATION** 2 Units

**Prerequisite:** Honors Institute participant.

**Grade Type:** Letter Grade Only  
**Not Repeatable.**

**2 hours lecture. (24 hours total per quarter)**

When Theodor Adorno claimed that "Writing Poetry after Auschwitz is barbaric", he challenged us to reflect upon the dangers that come with artistic representation. This course traces how art mediates our encounters with history by examining the role of art in shaping our understanding of the Holocaust. Specifically the course examines art's complicity in utilizing the Holocaust for national and political interests and art's ability to provide a space that affords us to behold a realm beyond reason.

**FHGE:** Non-GE **Transferable:** UC/CSU

**HUMN 54H HONORS INSTITUTE SEMINAR IN HUMANITIES** 1 Unit

**Prerequisite:** Honors Institute participant.

**Advisory:** Not open to students with credit in HUMN 34 or 34H.

**Grade Type:** Letter Grade Only  
**Not Repeatable.**

**1 hour lecture. (12 hours total per quarter)**

A seminar in directed readings, discussions, and projects in humanities. Specific topics to be determined by the instructor.

**FHGE:** Non-GE **Transferable:** CSU

**INTERDISCIPLINARY STUDIES**

**Biological and Health Sciences**

**IDS 300 RESEARCH METHODOLOGY FOR HEALTH PROFESSIONALS** 5 Units

**Grade Type:** Letter Grade Only  
**Not Repeatable.**

**5 hours lecture. (60 hours total per quarter)**

This course is designed to introduce students to the research process and how it applies to evidence-based patient care. Emphasis on research design and methods, scientific databases and evidence-based resources. Application of research methods and statistical techniques to the critical evaluation of current scientific literature. Evidence-based decision making and development of critical thinking skills will be discussed. This is an upper division General Education course, intended for students in the Dental Hygiene Baccalaureate Degree Program; enrollment is limited to students accepted in the program.

**FHGE:** Upper Division **Transferable:** CSU

**INTERNSHIP**

**Business and Social Sciences**  
650.949.7793

**ITRN 50 INTERNSHIP** 1 Unit

**Grade Type:** Letter Grade, the student may select Pass/No Pass  
**Not Repeatable.**

**3 hours laboratory. (36 hours total per quarter)**

The internship is a structured worked experience with an organization or company external to the classroom. This activity primarily involves the student and faculty working with a third party. The primary management of the student's activities and the majority of the evaluation score is done by the third party offsite supervisor. The internship will address professional workplace skills in addition to targeted technical skills as appropriate for the students' field of study. Faculty works with the offsite supervisor to create an internship that is targeted at the student's skill level. The student will meet with their faculty supervisor 2-3 times per quarter to discuss issues of discipline professionalism, application of technical skills and professional code of ethics. The student is required to contract with the Internship Office to determine the type and scope of the assignment.

**FHGE:** Non-GE **Transferable:** CSU

**ITRN 51 INTERNSHIP** 2 Units

**Grade Type:** Letter Grade, the student may select Pass/No Pass  
**Not Repeatable.**

**6 hours laboratory. (72 hours total per quarter)**

The internship is a structured worked experience with an organization or company external to the classroom. This activity primarily involves the student and faculty working with a third party. The primary management of the student's activities and the majority of the evaluation score is done by the third party offsite supervisor. The internship will address professional workplace skills in addition to targeted technical skills as appropriate for the students' field of study. Faculty works with the offsite supervisor to create an internship that is targeted at the student's skill level. The student will meet with their faculty supervisor 2-3 times per quarter to discuss issues of discipline professionalism, application of technical skills and professional code of ethics. The student is required to contract with the Internship Office to determine the type and scope of the assignment.

**FHGE:** Non-GE **Transferable:** CSU

**ITRN 52 INTERNSHIP** 3 Units

**Grade Type:** Letter Grade, the student may select Pass/No Pass  
**Not Repeatable.**

**9 hours laboratory. (108 hours total per quarter)**

The internship is a structured worked experience with an organization or company external to the classroom. This activity primarily involves the student and faculty working with a third party. The primary management of the student's activities and the majority of the evaluation score is done by the third party offsite supervisor. The internship will address professional workplace skills in addition to targeted technical skills as appropriate for the students' field of study. Faculty works with the offsite supervisor to create an internship that is targeted at the student's skill level. The student will meet with their faculty supervisor 2-3 times per quarter to discuss issues of discipline professionalism, application of technical skills and professional code of ethics. The student is required to contract with the Internship Office to determine the type and scope of the assignment.

**FHGE:** Non-GE **Transferable:** CSU

**ITRN 53      INTERNSHIP      4 Units****Grade Type: Letter Grade, the student may select Pass/No Pass Not Repeatable.****12 hours laboratory. (144 hours total per quarter)**

The internship is a structured worked experience with an organization or company external to the classroom. This activity primarily involves the student and faculty working with a third party. The primary management of the student's activities and the majority of the evaluation score is done by the third party offsite supervisor. The internship will address professional workplace skills in addition to targeted technical skills as appropriate for the students' field of study. Faculty works with the offsite supervisor to create an internship that is targeted at the student's skill level. The student will meet with their faculty supervisor 2-3 times per quarter to discuss issues of discipline professionalism, application of technical skills and professional code of ethics. The student is required to contract with the Internship Office to determine the type and scope of the assignment.

**FHGE: Non-GE    Transferable: CSU****ITRN 54      INTERNSHIP      5 Units****Grade Type: Letter Grade, the student may select Pass/No Pass Not Repeatable.****15 hours laboratory. (180 hours total per quarter)**

The internship is a structured worked experience with an organization or company external to the classroom. This activity primarily involves the student and faculty working with a third party. The primary management of the student's activities and the majority of the evaluation score is done by the third party offsite supervisor. The internship will address professional workplace skills in addition to targeted technical skills as appropriate for the students' field of study. Faculty works with the offsite supervisor to create an internship that is targeted at the student's skill level. The student will meet with their faculty supervisor 2-3 times per quarter to discuss issues of discipline professionalism, application of technical skills and professional code of ethics. The student is required to contract with the Internship Office to determine the type and scope of the assignment.

**FHGE: Non-GE    Transferable: CSU****JAPN 3      ELEMENTARY JAPANESE III      5 Units****Prerequisite: JAPN 2 or equivalent.****Grade Type: Letter Grade, the student may select Pass/No Pass Not Repeatable.****5 hours lecture. (60 hours total per quarter)**

Further development of material presented in JAPN 1 & 2. Oral and written practice in competencies in language functions: vocabulary essential to daily communicative situations, grammar necessary for carrying out various functions, signals for carrying out communicative tasks, and cultural skills in specific situations. Distinguishing formal and informal styles, and using honorifics. Making suppositions. Additional 120 Kanji pronunciation and recognition.

**FHGE: Non-GE    Transferable: UC/CSU****JAPN 4      INTERMEDIATE JAPANESE I      5 Units****Prerequisite: JAPN 3 or equivalent.****Grade Type: Letter Grade, the student may select Pass/No Pass Not Repeatable.****5 hours lecture. (60 hours total per quarter)**

Continuation of JAPN 3. Review of grammar and discussion of grammatical features beyond the elementary level. Introduction to intermediate-level grammar and communicative tasks. Intensive oral and written drills, including additional 110 Kanji, in idiomatic constructions. Composition, conversation and selected readings.

**FHGE: Non-GE    Transferable: UC/CSU****JAPN 5      INTERMEDIATE JAPANESE II      5 Units****Prerequisite: JAPN 4 or equivalent.****Grade Type: Letter Grade, the student may select Pass/No Pass Not Repeatable.****5 hours lecture. (60 hours total per quarter)**

Continuation of JAPN 4. Development of intermediate-level grammatical structures and communicative tasks. Further practice in intensive oral and written drills, including additional 150 Kanji, in idiomatic constructions. Composition, conversation and selected readings. Differentiating socio-linguistic features, such as honorifics, feminine and masculine styles. Cultural skills to carry out tasks.

**FHGE: Non-GE    Transferable: UC/CSU****JAPN 6      INTERMEDIATE JAPANESE III      5 Units****Prerequisite: JAPN 5.****Grade Type: Letter Grade, the student may select Pass/No Pass Not Repeatable.****5 hours lecture. (60 hours total per quarter)**

Continuation of JAPN 5. Further development of intermediate-level grammatical structures and communicative tasks. Intensive and extensive oral and written drills, including 230 more Kanji, in idiomatic constructions. Composition, conversation and selected readings. Further competency in correct language usage in different socio-linguistic features of speech. Stating and supporting opinions on both concrete and abstract topics. Cultural skills to carry out tasks.

**FHGE: Non-GE    Transferable: UC/CSU****JAPN 13A      INTERMEDIATE CONVERSATION I      4 Units****Prerequisite: JAPN 3.****Advisory: May be taken concurrently with JAPN 4.****Grade Type: Letter Grade, the student may select Pass/No Pass Not Repeatable.****4 hours lecture. (48 hours total per quarter)**

Speaking and listening experience in culturally appropriate ways. Special emphasis on correct perception and speaking, and familiarity with oral idioms and grammar as they differ from more formal written and literary uses. Development of critical thinking skills by comparing different viewpoints and different values of diverse cultures. Development of listening and speaking skills by exploring various forms of authentic materials, such as current news media, formal and informal conversations. Understanding ambiguities, vagaries, and value inherent in the target language.

**FHGE: Non-GE    Transferable: UC/CSU****JAPANESE**

Language Arts

650.949.7043    foothill.edu/la

For information on clearing a foreign language prerequisite, please contact the Language Arts division office at 650.949.7250.

**JAPN 1      ELEMENTARY JAPANESE I      5 Units****Grade Type: Letter Grade, the student may select Pass/No Pass Not Repeatable.****5 hours lecture. (60 hours total per quarter)**

Oral and written practice in the minimum competencies in language functions: vocabulary essential to basic communicative situations, grammar necessary for carrying out functions, signals for carrying out communicative tasks, and cultural skills in specific situations. Introduction to Hiragana, Katakana and about 80 Kanji.

**FHGE: Non-GE    Transferable: UC/CSU****JAPN 2      ELEMENTARY JAPANESE II      5 Units****Prerequisite: JAPN 1 or equivalent.****Grade Type: Letter Grade, the student may select Pass/No Pass Not Repeatable.****5 hours lecture. (60 hours total per quarter)**

Further development of material presented in JAPN 1. Oral and written practice in competencies in language functions: vocabulary essential to daily communicative situations, grammar necessary for carrying out functions, signals for carrying out communicative tasks, and cultural skills in specific situations. Distinguishing formal and informal styles. Additional 120 Kanji pronunciation and recognition.

**FHGE: Non-GE    Transferable: UC/CSU**

**JAPN 13B INTERMEDIATE CONVERSATION II 4 Units****Prerequisite:** JAPN 13A.**Advisory:** May be taken concurrently with JAPN 5.**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.**4 hours lecture. (48 hours total per quarter)**

Continuation of JAPN 13A. Speaking and listening experience in an environment of increasingly challenging language situation in culturally appropriate ways. Special emphasis on rapidity of correct perception and speaking, acquaintance with a variety of native dialects, and familiarity with oral idioms and grammar as they differ from more formal written and literary uses. Development of critical thinking skills by comparing different viewpoints and different values of diverse cultures. Development of listening and speaking skills by exploring various forms of authentic materials, such as current news media, political speech, and debates. Stating and supporting opinions on various topics. Understanding ambiguities, vagaries, and value inherent in the target language.

**FHGE: Non-GE Transferable: UC/CSU****JAPN 14A ADVANCED CONVERSATION I 4 Units****Prerequisite:** JAPN 13B.**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.**4 hours lecture. (48 hours total per quarter)**

Development of fluency in the oral/aural language, and cultural skills required in socio-linguistic functions, i.e., honorifics, in-group/out-group, male/female, and formal/informal expressions. Development of critical thinking skills by comparing different viewpoints and different values of diverse cultures. Development of listening and speaking skills by exploring various forms of authentic materials, such as current news media, political speech, debates, and drama. Stating and supporting opinions on various topics, including abstract concepts. Understanding and appreciating ambiguities, vagaries, and value inherent in the target language.

**FHGE: Humanities Transferable: UC/CSU****JAPN 14B ADVANCED CONVERSATION II 4 Units****Prerequisite:** JAPN 14A.**Advisory:** May be taken concurrently with JAPN 6.**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.**4 hours lecture. (48 hours total per quarter)**

Continuation of JAPN 14A. Development of advanced level of oral/aural fluency in the language, and cultural skills required in socio-linguistic functions. Stating and supporting opinions on complex, abstract topics. Analyzing and hypothesizing. Understanding cultural differences, persuading, negotiating, and giving speech in formal settings. Development of critical thinking skills by comparing different viewpoints and different values of diverse cultures. Development of listening and speaking skills by exploring various forms of authentic materials, such as current news media, debates on various issues, and drama.

**FHGE: Humanities Transferable: UC/CSU****JAPN 35 SURVEY OF CONTEMPORARY JAPANESE CULTURE 4 Units****Advisory:** Concurrent enrollment in JAPN 1, 2, 3 or higher.**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.**4 hours lecture. (48 hours total per quarter)**

Introduction to contemporary Japanese culture and society. Emphasis on the theme of continuity and change in Japanese culture and society. The class will consist of a series of lectures and discussions about contemporary Japanese culture and society on topics such as popular culture, subculture, lifestyle, class, geographical and generational variation, work, education, gender, minorities, and the establishment.

**FHGE: Non-GE Transferable: UC/CSU****JAPN 192 COMMUNITY SERVICE LEARNING FOR JAPANESE 1 Unit****Advisory:** Completion of JAPN 6 or equivalent.**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.**1 hour lecture. (12 hours total per quarter)**

For students who desire training in experiential learning as community volunteers in Japanese language courses. The students enrolled in this course will assist the instructor as in-class Japanese language tutors.

**FHGE: Non-GE****JOURNEYPersons****Apprenticeship****650.949.7142 foothill.edu/apprenticeships****JRYM 100 BUILDING TRADES TEACHER DEVELOPMENT 5 Units****Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.**60 hours lecture total.**

Basic principles and techniques of how to become a teacher in the local labor union trade. Actively develop communication, leadership, and presentation skills. The community learning environment will foster individuals to work individually, in partners, and groups, to comprehensively design and facilitate lecture instruction. Instruction provided to create a course syllabus, lesson plan, evaluation tools, and integrate multi-mode learning methods. Develop and demonstrate public speaking skills in an individual and group environment.

**FHGE: Non-GE****JRYM 101A BASIC ELECTRICITY FOR SHEET METAL AIR CONDITIONING SERVICE 3 Units****Prerequisite:** Completion of recognized sheet metal apprenticeship or equivalent and recent employment as a journeyman in the sheet metal industry.**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.**108 hours total: 6 hours lecture, 102 hours laboratory.**

Skill development for sheet metal workers to service air conditioning equipment. Special emphasis on the basics of electricity and refrigeration principles.

**FHGE: Non-GE****JRYM 101B ADVANCED ELECTRICITY FOR SHEET METAL AIR CONDITIONING SERVICE 3 Units****Prerequisite:** Completion of recognized sheet metal apprenticeship or equivalent and recent employment as a journeyman in the sheet metal industry.**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.**108 hours total: 6 hours lecture, 102 hours laboratory.**

Continued development of skills necessary for sheet metal workers to service air conditioning equipment. Special emphasis on the use of basic electrical testing instruments, principles, transformers, relays, contactors and safety around electrical equipment.

**FHGE: Non-GE****JRYM 102A BASIC REFRIGERATION FOR SHEET METAL AIR CONDITIONING SERVICE 3 Units****Prerequisite:** Completion of recognized sheet metal apprenticeship or equivalent and recent employment as a journeyman in the sheet metal industry.**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.**108 hours total: 6 hours lecture, 102 hours laboratory.**

Introduction to the use of refrigeration evacuation service equipment, charging refrigeration systems, and to the use of oxy-acetylene brazing equipment.

**FHGE: Non-GE**

**JRYM 102B    ADVANCED REFRIGERATION                    3 Units**  
**FOR SHEET METAL AIR**  
**CONDITIONING SERVICE**

**Prerequisite:** Completion of recognized sheet metal apprenticeship or equivalent and recent employment as a journeyman in the sheet metal industry.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**108 hours total: 6 hours lecture, 102 hours laboratory.**

Continued development of refrigeration skills with emphasis on the function of compressors, multiphase electric motors and piping systems.

**FHGE: Non-GE**

**JRYM 103A    PROPERTIES OF AIR DISTRIBUTION                    3 Units**  
**FOR SHEET METAL AIR**  
**CONDITIONING SERVICE**

**Prerequisite:** Completion of recognized sheet metal apprenticeship or equivalent and recent employment as a journeyman in the sheet metal industry.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**108 hours total: 6 hours lecture, 102 hours laboratory.**

Introduction to the different properties of air distribution with air volumes, pressures, humidity and temperature; basic air balance procedures.

**FHGE: Non-GE**

**JRYM 103B    REFRIGERATION THEORY                                    3 Units**  
**FOR SHEET METAL AIR**  
**CONDITIONING SERVICE**

**Prerequisite:** Completion of recognized sheet metal apprenticeship or equivalent and recent employment as a journeyman in the sheet metal industry.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**108 hours total: 6 hours lecture, 102 hours laboratory.**

Continuing refrigeration theory with emphasis on all the major parts of refrigeration systems. The explanation of the principles and function of the heat pump in a residential application.

**FHGE: Non-GE**

**JRYM 104    SHEET METAL JOURNEY-                                    1.5 Units**  
**LEVEL UPGRADE**

**Prerequisite:** Completion of recognized sheet metal apprenticeship or equivalent and recent employment as a journeyman in the sheet metal industry.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**54 hours total: 6 hours lecture, 48 hours laboratory.**

Introduction to the latest methods and technology required in the sheet metal industry. Topics will include plastics, layout, plasma (fitting input), new devices for the industry, fiberglass duct and architectural sheet metal innovations.

**FHGE: Non-GE**

**JRYM 152A    HVAC BASIC SYSTEMS FOR SHEET                    3 Units**  
**METAL JOURNEYPersonS**

**Prerequisite:** Completion of recognized sheet metal apprenticeship or equivalent and recent employment as a journeyman in the sheet metal industry.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**108 hours total: 6 hours lecture, 102 hours laboratory.**

Development of basic skills necessary for sheet metal workers to service HVAC building systems with special emphasis on pneumatic, electronic, and electric controls.

**FHGE: Non-GE**

**JRYM 153A    AIR BALANCE TEST EQUIPMENT                    1.5 Units**  
**& INSTRUMENTS FOR**  
**JOURNEYPersonS (FIRST YEAR)**

**Prerequisite:** Completion of recognized sheet metal apprenticeship or equivalent and recent employment as a journeyman in the sheet metal industry.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**54 hours total: 6 hours lecture, 48 hours laboratory.**

Development of skills necessary to use test and balance instruments and equipment for HVAC systems and automatic control systems. Use of practical mathematics and mathematical equations to measure air velocity and duct outlet, and to solve air and hydronic balancing problems.

**FHGE: Non-GE**

**JRYM 153B    TEMPERATURE MEASUREMENT                    1.5 Units**  
**INSTRUMENTS & DUCT SYSTEMS FOR**  
**JOURNEYPersonS (FIRST YEAR)**

**Prerequisite:** Completion of recognized sheet metal apprenticeship or equivalent and recent employment as a journeyman in the sheet metal industry.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**54 hours total: 6 hours lecture, 48 hours laboratory.**

Continuing study of skills necessary to test and balance instruments and equipment for HVAC systems and automatic control systems. Use of practical mathematics and mathematical equations to measure air velocity and duct outlet, and to solve air and hydronic balancing problems.

**FHGE: Non-GE**

**JRYM 154    RECIPROCATING REFRIGERATION                    3 Units**

**Prerequisite:** Completion of recognized sheet metal apprenticeship or equivalent and recent employment as a journeyman in the sheet metal industry.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**108 hours total: 6 hours lecture, 102 hours laboratory.**

Fundamentals of reciprocating refrigeration systems including refrigeration system control equipment. Development of basic skills necessary for sheet metal workers to service reciprocating refrigeration systems.

**FHGE: Non-GE**

**JRYM 155A    BASIC ELECTRICITY FOR                                    3 Units**  
**SHEET METAL A/C SERVICE**

**Prerequisite:** Completion of recognized sheet metal apprenticeship or equivalent and recent employment as a journeyman in the sheet metal industry.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**108 hours total: 6 hours lecture, 102 hours laboratory.**

Development of basic skills in electricity necessary for air conditioning service. Includes basic electrical theory, electrical components and symbols, wiring diagrams, voltage systems, refrigeration systems, and electric motors.

**FHGE: Non-GE**

**JRYM 157    HAZARDOUS MATERIALS                                    1 Unit**  
**TRAINING FOR THE TRADES**

**Prerequisite:** Completion of recognized sheet metal apprenticeship or equivalent and recent employment as a journeyman in the sheet metal industry.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**40 hours total: 4 hours lecture, 36 hours laboratory.**

This is a course leading to hazardous material awareness and certification. Students discuss identification, labeling, handling and hazard information. Students practice protocol for hazardous material situations, including use of personal protective equipment.

**FHGE: Non-GE**

**JRYM 158 HAZARDOUS MATERIALS RECERTIFICATION FOR THE TRADES .5 Units**

**Grade Type: Letter Grade, the student may select Pass/No Pass Not Repeatable.**

**8 hours total: 6 hours lecture, 2 hours laboratory.**

Updated information on the emergency response to hazardous materials incidents. Course will follow the requirements set forth in Publication 29 CFR 1910. Covers current changes in law and a brief overview of chemical hazards, gas hazards, electrical hazards, personal protective equipment, confined space rescue, monitoring equipment, and laws governing hazardous materials response.

**FHGE: Non-GE**

**JRYM 165 PRE-APPRENTICE INTRODUCTION TO SHEET METAL 1.5 Units**

**Grade Type: Letter Grade, the student may select Pass/No Pass Not Repeatable.**

**54 hours total: 6 hours lecture, 48 hours laboratory.**

Pre-entry level instruction to the Sheet Metal Apprenticeship Program. Basic instruction on the sheet metal industry, equipment, trade math, drafting, materials and equipment safety.

**FHGE: Non-GE**

**JRYM 166A MARINE SHEET METAL TRAINING FOR NON-APPRENTICES I 1.5 Units**

**Grade Type: Letter Grade, the student may select Pass/No Pass Not Repeatable.**

**54 hours total: 6 hours lecture, 48 hours laboratory.**

Working of metals in sheet form. Structural shapes, such as angle bar, channels, flat bar, rod and wire are also extensively used. Metals of varying thicknesses, from a few thousandths of an inch to 3/16ths of an inch, are used. Proper techniques and procedures are demonstrated for the different characteristics of each metal studied. Some of the metals used are copper, brass, bronze, lead, zinc, aluminum, black and galvanized iron, monel and stainless steel.

**FHGE: Non-GE**

**JRYM 166B MARINE SHEET METAL TRAINING FOR NON-APPRENTICES II 1.5 Units**

**Grade Type: Letter Grade, the student may select Pass/No Pass Not Repeatable.**

**54 hours total: 6 hours lecture, 48 hours laboratory.**

Continuation of working with metals in sheet form. Structural shapes, such as angle bar, channels, flat bar, rod and wire are also extensively used. Metals of varying thicknesses, from a few thousandths of an inch to 3/16ths of an inch, are used. Proper techniques and procedures are demonstrated for the different characteristics of each metal studied. Some of the metals used are copper, brass, bronze, lead, zinc, aluminum, black and galvanized iron, monel and stainless steel.

**FHGE: Non-GE**

**JRYM 168A JOURNEY-LEVEL DIGITAL SYSTEMS I 1.5 Units**

**Grade Type: Letter Grade, the student may select Pass/No Pass Not Repeatable.**

**54 hours total: 6 hours lecture, 48 hours laboratory.**

Provide training in the fundamentals of HVAC and hydronic system measurements and adjustments.

**FHGE: Non-GE**

**JRYM 168B JOURNEY-LEVEL DIGITAL SYSTEMS II 1.5 Units**

**Prerequisite: Completion of recognized sheet metal apprenticeship or equivalent and recent employment as a journeyman in the sheet metal industry.**

**Grade Type: Letter Grade, the student may select Pass/No Pass Not Repeatable.**

**54 hours total: 6 hours lecture, 48 hours laboratory.**

Continued training in the following domains-calibration, process control fundamentals, loop checking, troubleshooting, start-up, documentation; maintenance and repair; and using micro-processor-based instruments and controllers.

**FHGE: Non-GE**

**JRYM 169A FIELD MEASUREMENT & LAYOUT FOR SHEET METAL JOURNEYMEN I 1.5 Units**

**Prerequisite: Completion of recognized sheet metal apprenticeship or equivalent and recent employment as a journeyman in the sheet metal industry.**

**Grade Type: Letter Grade, the student may select Pass/No Pass Not Repeatable.**

**54 hours total: 6 hours lecture, 48 hours laboratory.**

Advanced methods of pattern development using the hand-held calculator. Will use the pythagorean theorem, parallel layout and radial line layout with applications, and triangulation. Intended for experienced sheet metal journeymen who wish to further their knowledge in methods of layout.

**FHGE: Non-GE**

**JRYM 170A ADVANCED SHEET METAL SERVICE I 3 Units**

**Prerequisite: Completion of recognized sheet metal apprenticeship or equivalent and recent employment as a journeyman in the sheet metal industry.**

**Grade Type: Letter Grade, the student may select Pass/No Pass Not Repeatable.**

**108 hours total: 6 hours lecture, 102 hours laboratory.**

In-depth study of HVAC systems, electricity, measurements; testing, adjusting and balancing for sheet metal service persons. Fluid flow, heat transfer, motors, starters and equations commonly used for testing will be covered.

**FHGE: Non-GE**

**JRYM 170B ADVANCED SHEET METAL SERVICE II 3 Units**

**Prerequisite: Completion of recognized sheet metal apprenticeship or equivalent and recent employment as a journeyman in the sheet metal industry.**

**Grade Type: Letter Grade, the student may select Pass/No Pass Not Repeatable.**

**108 hours total: 6 hours lecture, 102 hours laboratory.**

Continued in-depth study of HVAC systems. Air balancing, hydronic systems, pumps, U.S. and metric equivalents and conversions, heat and refrigeration will be covered.

**FHGE: Non-GE**

**JRYM 171A SPECIALIZED CAD FOR SHEET METAL JOURNEYPersons I 1.5 Units**

**Grade Type: Letter Grade, the student may select Pass/No Pass Not Repeatable.**

**54 hours total: 6 hours lecture, 48 hours laboratory.**

3-D duct detailing program with emphasis on electronic coordination. Focuses on file management and drawing protocol with the specialized industry CAD systems.

**FHGE: Non-GE**

**JRYM 171B SPECIALIZED CAD FOR SHEET METAL JOURNEYPersons II** 1.5 Units

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**54 hours total: 6 hours lecture, 48 hours laboratory.**

Continuation of 3-D duct detailing program for electronic coordination. Emphasis is on accessing, editing and recovering files with current CAD systems used by the industry. Students will use format standards, tag files and program utilities.

**FHGE: Non-GE**

**JRYM 171C SPECIALIZED CAD FOR SHEET METAL JOURNEYPersons III** 1.5 Units

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**54 hours total: 6 hours lecture, 48 hours laboratory.**

3-D duct detailing programs with emphasis on electronic coordination. Includes file management and drawing protocol with current CAD systems used by the industry. Students will set up and manage design conflict and coordination drawings.

**FHGE: Non-GE**

**JRYM 171D SPECIALIZED CAD FOR SHEET METAL JOURNEYPersons IV** 1.5 Units

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**54 hours total: 6 hours lecture, 48 hours laboratory.**

3-D duct detailing programs with emphasis on electronic coordination. It includes practice with current CAD and job coordination software systems used by the industry. Students will set up schedules, change orders and bulletins; develop protocol between detailer and design engineer.

**FHGE: Non-GE**

**JRYM 172A ELECTRICAL SYSTEM OPERATION, CONTROLS & DEVICES FOR JOURNEYPersons (SECOND YEAR)** 1.5 Units

**Prerequisite:** Completion of recognized sheet metal apprenticeship or equivalent and recent employment as a journeyman in the sheet metal industry.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**54 hours total: 6 hours lecture, 48 hours laboratory.**

Study of individual electrical components and devices of control systems, and understanding their operation and relationship to each other. Identify and use instruments in measuring air movement. Learn how to interpret, use and understand drawings relating to the construction of a building.

**FHGE: Non-GE**

**JRYM 172B HVAC TESTING & BALANCING PROCEDURES FOR JOURNEYPersons (SECOND YEAR)** 1.5 Units

**Prerequisite:** Completion of recognized sheet metal apprenticeship or equivalent and recent employment as a journeyman in the sheet metal industry.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**54 hours total: 6 hours lecture, 48 hours laboratory.**

Utilize skills and knowledge previously learned to apply methods of balancing HVAC systems. Balancing of systems will include both air and hydronic. Information gathered during the balancing will be used in completing reports required by the building engineer and owner.

**FHGE: Non-GE**

**JRYM 173A AIR DISTRIBUTION & MANUFACTURING SYSTEMS FOR JOURNEYPersons (THIRD YEAR)** 1.5 Units

**Prerequisite:** Completion of recognized sheet metal apprenticeship or equivalent and recent employment as a journeyman in the sheet metal industry.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**54 hours total: 6 hours lecture, 48 hours laboratory.**

The difference, advantages and disadvantages of pneumatic and direct digital control systems will be compared to electrical systems. Students will use laptop computers to access a control system from a remote location; take readings and make minor adjustments to the system. Clean room operation and protocol will be examined.

**FHGE: Non-GE**

**JRYM 173B SYSTEMS INSTALLATION & TROUBLESHOOTING FOR JOURNEYPersons (THIRD YEAR)** 1.5 Units

**Prerequisite:** Completion of recognized sheet metal apprenticeship or equivalent and recent employment as a journeyman in the sheet metal industry.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**54 hours total: 6 hours lecture, 48 hours laboratory.**

Proper layout and installation procedures on various control systems. This will include system programming, adjustment, testing, maintenance and repair of the installed system.

**FHGE: Non-GE**

**JRYM 174A ADVANCED WELDING** 3 Units

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**108 hours total: 6 hours lecture, 102 hours laboratory.**

Instruction and practice of advanced pipe welding techniques using three different weld processes: MIG, TIG, and Stick. Instruction and practice in preparation of 100% X-Ray pipe fitting techniques will also be covered.

**FHGE: Non-GE**

## KINESIOLOGY

Kinesiology and Athletics

650.949.7742

**KINS 1 INTRODUCTION TO KINESIOLOGY** 5 Units

**Advisory:** Not open to students with credit in PHED 1.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**5 hours lecture. (60 hours total per quarter)**

Introduction to the interdisciplinary approach to the study of human movement. An overview of the importance of the sub-disciplines in kinesiology will be discussed along with career opportunities in the areas of teaching, coaching, allied health, and fitness professions.

**FHGE: Non-GE Transferable: UC/CSU**

**KINS 2 SPORT IN SOCIETY** 5 Units

**Advisory:** Maximum UC credit awarded for any or all of the following courses combined is 12 units: KINS 2, 3, 8A & 8B; not open to students with credit in H P 1B or PHED 2.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**5 hours lecture. (60 hours total per quarter)**

Students examine the history of sports and its significance in economics, politics, and the role of race, ethnicity, culture and gender in sport and society. Students also examine specific issues such as the emergence of professional and collegiate sports in the United States, questions of ethics, commercialization, the relationship between sports and media, the internationalization of sports, and the Olympic movement. Students will also examine youth sport and the current status of youth sport in the United States.

**FHGE: Social & Behavioral Sciences Transferable: UC/CSU**

**KINS 3 THEORIES & TECHNIQUES OF COACHING SPORTS 4 Units**

**Advisory:** Maximum UC credit awarded for any or all of the following courses combined is 12 units: KINS 2, 3, 8A & 8B; not open to students with credit in H P 37 or PHED 3.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**4 hours lecture. (48 hours total per quarter)**

Instruction in the theories and techniques of coaching sport and its variables which contribute to team performance and success. Addresses developing a coaching philosophy, sport psychology, sport pedagogy, sport physiology and sport management.

**FHGE: Non-GE Transferable: UC/CSU**

**KINS 4 CONCEPTS OF PHYSICAL FITNESS & WELLNESS 4 Units**

**Advisory:** Not open to students with credit in PHED 4.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**4 hours lecture. (48 hours total per quarter)**

Study of physical fitness, training principles, nutrition and body composition, stress management, appropriate exercise and health practices with application to lifelong fitness and wellness habits.

**FHGE: Lifelong Learning Transferable: UC/CSU**

**KINS 8A THEORY & CONCEPTS OF EXERCISE PHYSIOLOGY I 5 Units**

**Advisory:** Maximum UC credit awarded for any or all of the following courses combined is 12 units: KINS 2, 3, 8A & 8B; not open to students with credit in PHED 8.

**Grade Type:** Letter Grade Only Not Repeatable.

**5 hours lecture. (60 hours total per quarter)**

Basic concepts and principles of exercise physiology and how the human body responds to the demands of physical activity. Emphasis on anatomy and physiology of human organ systems; cardiorespiratory function; neural and hormonal control; energy systems, expenditure, and fatigue; adaptations to resistance, aerobic and anaerobic training; body composition and nutrition; and principles of training for sport.

**FHGE: Non-GE Transferable: UC/CSU**

**KINS 8B THEORY & CONCEPTS OF EXERCISE PHYSIOLOGY II 4 Units**

**Prerequisite:** KINS 8A.

**Advisory:** Maximum UC credit awarded for any or all of the following courses combined is 12 units: KINS 2, 3, 8A & 8B.

**Grade Type:** Letter Grade Only Not Repeatable.

**4 hours lecture. (48 hours total per quarter)**

Applied concepts and principles of exercise physiology and how the human body responds to the demands of physical activity. Emphasis on the impact of environmental influences, optimizing performance in sport, body composition and nutrition, age and sex considerations, and the implications of physical activity for health and fitness.

**FHGE: Non-GE Transferable: UC/CSU**

**KINS 9 BASIC NUTRITION FOR SPORTS & FITNESS 5 Units**

**Advisory:** Not open to students with credit in PHED 9.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**5 hours lecture. (60 hours total per quarter)**

Practical application of the basic principles of nutrition and how food choices affect health and fitness. This course will provide the student with a basic understanding of how nutrition can be optimized to enhance physical performance potential and sport. 'Dietary Guidelines for Americans' will be utilized to inform selection of foods that would maximize individual health.

**FHGE: Non-GE Transferable: UC/CSU**

**KINS 10 WOMEN IN SPORTS 5 Units**

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**5 hours lecture. (60 hours total per quarter)**

This course provides students with a chronological history, analysis and interpretation of people, events, and issues that affect women in sport, in past and present day society. Physiological, sociological and psychological aspects of female athletes as related to sports, history, and education will be covered. Students will gain an understanding of the significant events of women in athletics from the past to the present and how their significance will determine the future of women in sports.

**FHGE: Non-GE Transferable: UC/CSU**

**KINS 15 FIRST AID & CPR/AED 1 Unit**

**Advisory:** UC transfer credit is limited for some KINS courses-please see ASSIST.org for details; not open to students with credit in PHED 15 or 66.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**1 hour lecture, 1 hour laboratory. (24 hours total per quarter)**

Provides the layperson with the knowledge and skills to respond to an emergency. Certification opportunity in first aid and CPR/AED as well as Professional Rescuer.

**FHGE: Non-GE Transferable: UC/CSU**

**KINS 16A PREVENTION OF ATHLETIC INJURIES 3 Units**

**Advisory:** Internet access to complete quizzes, discussions and assignments; not open to students with credit in H P 67A, PHED 16A or 67A.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**2 hours lecture, 3 hours laboratory. (60 hours total per quarter)**

Athletic injury prevention is emphasized through pre-participation physical exams, exercise programs, preventative taping, proper fitting of equipment, and protective braces.

**FHGE: Non-GE Transferable: UC/CSU**

**KINS 16B EMERGENCY ATHLETIC INJURY CARE 3 Units**

**Advisory:** Internet access to complete quizzes, discussions and assignments; not open to students with credit in H P 67B, PHED 16B or 67B.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**2 hours lecture, 3 hours laboratory. (60 hours total per quarter)**

American Red Cross Standard first aid/CPR certificates are available upon completion of the course. Basic injury recognition and emergency response of acute trauma. Practical hands-on skills are emphasized in laboratories.

**FHGE: Non-GE Transferable: UC/CSU**

**KINS 16C TREATMENT & REHABILITATION OF ATHLETIC INJURIES 3 Units**

**Advisory:** Internet access to complete quizzes, discussions and assignments; not open to students with credit in H P 67C, PHED 16C or 67C.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**2 hours lecture, 3 hours laboratory. (60 hours total per quarter)**

Follow-up injury treatment, phases of tissue healing, and stages of rehabilitation including therapeutic modalities.

**FHGE: Non-GE Transferable: UC/CSU**



**KINS 51 PERFORMANCE ENHANCING SUBSTANCES IN SPORT & EXERCISE 4 Units**

**Advisory:** Not open to students with credit in PHED 51.  
**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**4 hours lecture. (48 hours total per quarter)**

Current and historical issues as well as general social, biochemical, pharmacological and behavioral information related to performance enhancing substances in sport and exercise. Areas to be addressed include, but are not limited to: Theories of Addiction, Populations, Social Implications, Anabolics, Blood Doping, Diuretics, Nutritional Ergogenic Aids, Social and Recreational Drugs, Stimulants, Emerging Science and Technologies, and Drug Testing.

**FHGE:** Non-GE **Transferable:** CSU

**KINS 52 FITNESS ASSESSMENT TECHNIQUES FOR THE PERSONAL TRAINER 4 Units**

**Advisory:** This is a Physical Education activity course, so UC transfer credit is limited-please visit a counselor for details.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**4 hours lecture. (48 hours total per quarter)**

The mechanics of fitness training, including strength, endurance and flexibility as well as provides students the necessary knowledge base to select appropriate fitness assessments. Discussion regarding training techniques, optimal workout environments, safety, contraindications, equipment and existing certification programs will prepare the student to work in the fitness industry. Students will evaluate existing standardized assessment batteries for cardiorespiratory endurance, muscular strength, muscular endurance, flexibility and body composition, blood pressure and cholesterol.

**FHGE:** Non-GE **Transferable:** UC/CSU

**KINS 53 CURRENT TOPICS IN PERSONAL TRAINING 2 Units**

**Advisory:** KINS 8A and 9.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**2 hours lecture. (24 hours total per quarter)**

Discussion of current issues in the fitness field, insurance, liability, standard business practices and national certifications. Emphasis is placed on client assessment, program design, teaching strategies and professional responsibility. Students apply knowledge of basic anatomy, exercise physiology, kinesiology, personal information gathering and exercise testing.

**FHGE:** Non-GE **Transferable:** CSU

**KINS 54 INTRODUCTION TO SPORTS MANAGEMENT 4 Units**

**Grade Type:** Letter Grade Only Not Repeatable.

**4 hours lecture. (48 hours total per quarter)**

Introduction to the field of sports management. Career opportunities, human resources management, leadership, strategic planning, teamwork, ethics and values, marketing and advertising, finance, managing facilities, sports and the law, economics of sport and community impact.

**FHGE:** Non-GE **Transferable:** CSU

**KINS 55 INTRODUCTION TO AQUATIC EXERCISE 3 Units**

**Advisory:** Some laboratory hours will be spent in the pool; not open to students with credit in SPED 73.

**Grade Type:** Letter Grade Only

**Not Repeatable.**

**3 hours lecture, 1 hour laboratory. (48 hours total per quarter)**

Provides the fitness professional with the knowledge and practical skills to teach aquatic exercise class to all segments of the population. Applied exercise anatomy, applied aquatic exercise physiology, aquatic exercise physics, aquatic exercise choreography, programming for different forms of aquatic exercise, health risk appraisal, water safety concerns, special populations, exercise motivation and shallow and deep water design.

**FHGE:** Non-GE **Transferable:** CSU

**KINS 62A CLINICAL EXPERIENCES IN SPORTS MEDICINE I 3 Units**

**Advisory:** Not open to students with credit in H P 52A or PHED 62A.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**9 hours laboratory. (108 hours total per quarter)**

Hands-on experience in athletic emergency care, athletic injury prevention, therapeutic treatment, and rehabilitation of athletic injuries in the on-campus Athletic Treatment Center. Observation of orthopedic surgical procedures with the permission of the team physician is available.

**FHGE:** Non-GE **Transferable:** CSU

**KINS 62B CLINICAL EXPERIENCES IN SPORTS MEDICINE II 3 Units**

**Prerequisite:** KINS 62A.

**Advisory:** Not open to students with credit in H P 52A or PHED 62B.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**9 hours laboratory. (108 hours total per quarter)**

Hands-on experience in athletic emergency care, athletic injury prevention, therapeutic treatment, and rehabilitation of athletic injuries in the on-campus Athletic Treatment Center. Observation of orthopedic surgical procedures with the permission of the team physician is available.

**FHGE:** Non-GE **Transferable:** CSU

**KINS 62C CLINICAL EXPERIENCES IN SPORTS MEDICINE III 3 Units**

**Prerequisite:** KINS 62B.

**Advisory:** Not open to students with credit in H P 52B or PHED 62C.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**9 hours laboratory. (108 hours total per quarter)**

Hands-on experience in emergency care, injury prevention, treatment and rehabilitation of athletic injuries in the on-campus Athletic Treatment Center. Off-campus athletic training facilities and outpatient physical therapy clinics may also be utilized for the internship. Observation of orthopedic surgical procedures with the permission of the team physician is available.

**FHGE:** Non-GE **Transferable:** CSU

**KINS 62D CLINICAL EXPERIENCES IN SPORTS MEDICINE IV 3 Units**

**Prerequisite:** KINS 62C.

**Advisory:** Not open to students with credit in PHED 62D.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**9 hours laboratory. (108 hours total per quarter)**

Hands-on experience in emergency care, injury prevention, treatment and rehabilitation of athletic injuries in the on-campus Athletic Treatment Center. Off-campus athletic training facilities and outpatient physical therapy clinics may be utilized for the internship. Observation of orthopedic surgical procedures with the permission of the team physician is available.

**FHGE:** Non-GE **Transferable:** CSU

**KINS 62E CLINICAL EXPERIENCES IN SPORTS MEDICINE V 3 Units**

**Prerequisite:** KINS 62D.

**Advisory:** Not open to students with credit in PHED 62E.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**9 hours laboratory. (108 hours total per quarter)**

Advanced experience in athletic emergency care, athletic injury prevention, therapeutic treatment, and rehabilitation of athletic injuries. Observation of orthopedic surgeries, assisting in physical therapy clinics or other related allied health settings compliment the on-campus Athletic Treatment Center.

**FHGE:** Non-GE **Transferable:** CSU

**KINS 65A PNF: INTRODUCTION TO THE UPPER EXTREMITY 3 Units**

**Advisory:** Internet access to complete quizzes, discussions and assignments; not open to students with credit in H P 52F or PHED 65A.

**Grade Type:** Letter Grade, the student may select Pass/No Pass  
**Not Repeatable.**

**2 hours lecture, 3 hours laboratory. (60 hours total per quarter)**

Theory and hands on practice emphasizing the upper extremity: stretching, strengthening, stabilization and active/passive range of motion including goniometric measurements.

**FHGE: Non-GE Transferable: CSU**

**KINS 65B PNF: INTRODUCTION TO THE LOWER EXTREMITY 3 Units**

**Advisory:** Not open to students with credit in H P 52G or PHED 65B.

**Grade Type:** Letter Grade, the student may select Pass/No Pass  
**Not Repeatable.**

**2 hours lecture, 3 hours laboratory. (60 hours total per quarter)**

Theory and hands on practice emphasizing lower extremity stretching, strengthening, stabilization and active range of motion including goniometric measurement. Students must have reliable and ongoing Internet access to complete Quizzes, Discussions and Assignments.

**FHGE: Non-GE Transferable: CSU**

**KINS 70R INDEPENDENT STUDY 1 Unit**

**KINS 71R IN KINESIOLOGY 2 Units**

**KINS 72R 3 Units**

**KINS 73R 4 Units**

**Grade Type:** Letter Grade, the student may select Pass/No Pass  
**Not Repeatable.**

**3-12 hours laboratory per week. (36-144 hours total per quarter)**

Provides an opportunity for the student to expand their studies in Kinesiology beyond the classroom by completing a project or an assignment arranged by agreement between the student and instructor. The student is required to contract with the instructor to determine the scope of assignment and the unit value assigned for successful completion. Students may take a maximum of 6 units of Independent Study per department.

**FHGE: Non-GE Transferable: CSU**

**KINS 81 INTRODUCTION TO ADAPTIVE FITNESS 4 Units**

**Advisory:** Not open to students with credit in SPED 50.

**Grade Type:** Letter Grade Only  
**Not Repeatable.**

**4 hours lecture. (48 hours total per quarter)**

Introduce fitness professionals to the information and skills necessary to work with the disabled and/or older adult client in an adaptive fitness setting. Provides history and overview of adaptive fitness. Includes overview of specific disabilities. Addresses fundamentals and benefits of adaptive fitness, basic anatomy, muscles and movement, contraindicated exercises and assessment techniques. Will also include exercise program design.

**FHGE: Non-GE Transferable: CSU**

**KINS 82 APPLIED PRINCIPLES OF ADAPTIVE FITNESS 4 Units**

**Advisory:** Not open to students with credit in SPED 54.

**Grade Type:** Letter Grade Only  
**Not Repeatable.**

**4 hours lecture. (48 hours total per quarter)**

Focuses on skills necessary for adaptive fitness professionals to implement an adaptive exercise program for persons with chronic medical conditions. Covers a full range of chronic conditions seen in the adult population from orthopedic conditions to neurological. Addresses assessment of physical dysfunctions and appropriate corrective exercises as well as contraindicated movements.

**FHGE: Non-GE Transferable: CSU**

**KINS 83 PHYSICAL DIMENSIONS OF AGING 4 Units**

**Advisory:** Not open to students with credit in SPED 57B.

**Grade Type:** Letter Grade Only

**Not Repeatable.**

**4 hours lecture. (48 hours total per quarter)**

For the fitness professional to explore how quality of life and longevity are impacted by lifestyle, wellness and fitness. Investigate what is aging, contributing factors of aging, and how aging can be influenced from a fitness perspective. Explore the interaction of the physiological, psychological and sociological aspects of aging.

**FHGE: Non-GE Transferable: CSU**

**KINS 84 FUNCTIONAL FITNESS & ADAPTIVE MOVEMENT 3 Units**

**Advisory:** Not open to students with credit in SPED 56.

**Grade Type:** Letter Grade Only

**Not Repeatable.**

**3 hours lecture. (36 hours total per quarter)**

Explores the theories of functional fitness. Assists students to identify chronic conditions and then assess and formulate a functional exercise program. Role that functional exercise plays in improving daily living skills. Explanation of the different types of equipment used for functional exercise.

**FHGE: Non-GE Transferable: CSU**

**KINS 85 PRINCIPLES OF ADAPTIVE WATER EXERCISE 2 Units**

**Advisory:** Laboratory hours in pool; not open to students with credit in SPED 74.

**Grade Type:** Letter Grade Only

**Not Repeatable.**

**2 hours lecture, 1 hour laboratory. (36 hours total per quarter)**

Provides the essential information needed for adaptive aquatics exercise instruction. Student will develop an understanding of how water training principles can be used with individuals including with chronic conditions using adaptive teaching techniques. The applications of deep and shallow water fitness will be studied. Preferred safety techniques for assisting a disabled client with entry and exit from a pool will be demonstrated.

**FHGE: Non-GE Transferable: CSU**

## LANGUAGE ARTS

Language Arts

650.949.7250 foothill.edu/la

**L A 61A TUTOR TRAINING I 1 Unit**

Formerly: L A 111A

**Advisory:** An earned "A" or "B+" grade with instructor recommendation in one of the following courses: ENGL 1A, 1AH, 1B, 1BH, 1C, 1CH, 1S & 1T, ESLL 26, or 125; not open to students with credit in L A 111A.

**Grade Type:** Letter Grade, the student may select Pass/No Pass  
**Not Repeatable.**

**1 hour lecture. (12 hours total per quarter)**

Training in team leading skills necessary for tutoring, including study skills, college policies, professionalism, ethics, and role modeling of successful student behavior. Techniques of subject-specific tutoring skills. Practice of these skills through sample student work and, when applicable, content-specific suggestions from the tutee's instructor. Ideal for students intending to tutor the first time in English, ESLL, or other reading and/or composition based courses.

**FHGE: Non-GE Transferable: CSU**

**L A 61B TUTOR TRAINING II 1 Unit**

Formerly: L A 111B

Prerequisite: L A 61A.

**Advisory:** An earned "A" or "B+" grade with instructor recommendation in one of the following courses: ENGL 1A, 1AH, 1B, 1BH, 1C, 1CH, 1S & 1T, ESLL 26, or 125; not open to students with credit in L A 111B.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**1 hour lecture. (12 hours total per quarter)**

Advanced training in team leading skills necessary for tutoring. Students will be asked to engage in advanced reflections on tutoring and advanced level critique of one's own and other tutoring processes. Techniques of subject specific tutoring skills with attention given to diverse learning styles. Practice of these skills through sample student work and instructor assignments and, when applicable, content-specific suggestions from the tutee's instructor. Ideal for students intending to tutor for the second time.

**FHGE: Non-GE Transferable: CSU**

**L A 251 ENGLISH READING & COMPOSITION .5 Units  
STUDY TEAM SKILLS FOR PASS  
THE TORCH MEMBERS**

Non-degree applicable credit course.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**1 hour lecture. This is a 6 week course. (6 hours total per quarter)**

Individualized guidance to support students in the Pass the Torch Program. Topics include program expectations for English and ESLL study teams, utilizing campus resources, understanding how the brain learns, selecting a study environment, metacognition and learning styles, test/essay preparation, and coping with test anxiety. Intended for students matched in Pass the Torch English/ESLL study teams as a member for the first time.

**FHGE: Non-GE**

**LEARNING IN NEW MEDIA CLASSROOMS**

Fine Arts and Communication

650.949.7498 [foothill.edu/kci/linc](http://foothill.edu/kci/linc)

**LINC 50 TECHNOLOGY IN THE K-12 CLASSROOM I 1 Unit**

**Advisory:** Basic computer skills and knowledge of Macintosh or Windows operating systems; familiarity using Web browsers, email, bookmarking, searching and downloading; not open to students with credit in LINC 255; students may enroll in LINC 50 or 50B, but not both, for credit.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**1 hour lecture. (12 hours total per quarter)**

Intended for educators, this hands-on overview course addresses the effective integration of technologies for teaching and learning within any standards based curriculum. Students explore the cycle of technology learning; review the issues of technology in schools; discuss the role of technology savvy teachers; analyze online resources, tools, and applications; use online collaboration tools for class communication; evaluate audio-visual and multimedia hardware for classrooms; investigate mobile devices and software; and explore interactive whiteboards. Emphasis is given to creating student-centered projects or activities using appropriate educational technologies.

**FHGE: Non-GE Transferable: CSU**

**LINC 50A TECHNOLOGY IN THE K-12 CLASSROOM II .5 Units**

**Advisory:** Basic computer skills and knowledge of Macintosh or Windows operating systems; familiarity using Web browsers, email, bookmarking, searching and downloading; not open to students with credit in LINC 255S.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**6 hours lecture. This course meets 1 time per quarter. (6 hours total per quarter)**

An introductory course about educational hardware technology in the classroom. Intended for educators, this hands-on course demonstrates integration of hardware technologies such as document cameras, interactive white boards, student response systems, iPads, mobile phones, etc., for teaching and learning with any standards based curriculum. Emphasis is given to creating student-centered activities using appropriate educational hardware technologies.

**FHGE: Non-GE Transferable: CSU**

**LINC 50B TECHNOLOGY IN THE K-12 CLASSROOM III .5 Units**

**Advisory:** Basic computer skills and knowledge of Macintosh or Windows operating systems; familiarity using Web browsers, email, bookmarking, searching and downloading; fundamental understanding of content topics in LINC 50A; not open to students with credit in LINC 255T; students may enroll in LINC 50 or 50B, but not both, for credit.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**6 hours lecture. This course meets 1 time per quarter. (6 hours total per quarter)**

Deepens the student's knowledge of topics covered in LINC 50A focusing on computer and online-based software technology in the classroom. Intended for educators, this course examines the effective integration of software technologies such as word processing, presentation, spreadsheet, online resources, online collaboration tools, etc., used for teaching and learning. Emphasis is given to creating student-centered activities using appropriate educational software technologies.

**FHGE: Non-GE Transferable: CSU**

**LINC 50F INTEGRATING TECHNOLOGY INTO A STANDARDS-BASED CURRICULUM I 2 Units**

**Advisory:** Basic computer skills and knowledge of Macintosh or Windows operating systems; familiarity using Web browsers, email, bookmarking, searching and downloading; not open to students with credit in LINC 225.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**2 hours lecture. (24 hours total per quarter)**

Intended for educators (K-14) and includes hands-on experiences that demonstrate the effective integration of technologies and 21st century skills for teaching and learning with any standards based curriculum. Emphasis is given to developing effective student-centered projects or activities using appropriate educational technologies.

**FHGE: Non-GE Transferable: CSU**

**LINC 53 INTEGRATING TECHNOLOGY INTO MATHEMATICS 1 Unit**

**Advisory:** Basic computer skills and knowledge of Macintosh or Windows operating systems; familiarity using Web browsers, email, bookmarking, searching and downloading; not open to students with credit in LINC 263.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**1 hour lecture. (12 hours total per quarter)**

Overview course for mathematics educators to promote and encourage the use of technology in mathematics instruction at any level to support and enhance mathematics teaching and learning and to increase the use of technology for visualization and multiple representations of math concepts. Other topics include the assessment of technology enhanced math projects, California Mathematics Content Standards, state-approved mathematics textbooks, ISTE Technology Standards, California Technology Standards, and the emerging Common Core Standards.

**FHGE: Non-GE Transferable: CSU**

**LINC 53B INTEGRATING TECHNOLOGY INTO MATHEMATICS GRADES 6-8 .5 Units**

**Advisory:** Basic computer skills and knowledge of Macintosh or Windows operating systems; familiarity using Web browsers, email, bookmarking, searching and downloading; fundamental understanding of content topics in LINC 53; not open to students with credit in LINC 263T.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**6 hours lecture. This course meets 1 time per quarter. (6 hours total per quarter)**

This intermediate course for middle grades (6th - 8th) mathematics educators promotes and encourages the use of technology in mathematics instruction to support and enhance mathematics teaching and learning and increases the use of technology for visualization and multiple representations of math concepts. Other topics include the assessment of technology enhanced math projects, California Mathematics Content Standards, state-approved mathematics textbooks, ISTE Technology Standards, California Technology Standards, and the emerging Common Core Standards.

**FHGE: Non-GE Transferable: CSU**

**LINC 57 DESIGNING LEARNER-CENTERED INSTRUCTION 1 Unit**

**Advisory:** Basic computer skills and knowledge of Macintosh or Windows operating systems; familiarity using Web browsers, email, bookmarking, searching and downloading.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**1 hour lecture. (12 hours total per quarter)**

Educators will examine the learner-centered approach to teaching in order to create transformative experiences for students. Educators develop the skills and conceptual knowledge for instructional design and creating student-centered learning activities that meet Common Core and content standards. Topics addressed include how learning happens, the role of educational technologies in student engagement, and effective modifications to existing instructional material. Following the learner-centered classroom guidelines, educators will create a multidisciplinary unit of instruction that is aligned to teaching standards and include both formative and summative assessments.

**FHGE: Non-GE Transferable: CSU**

**LINC 58 GLOBAL PROJECT-BASED LEARNING 2 Units**

**Advisory:** Basic computer skills and knowledge of Macintosh or Windows operating systems; basic skills and knowledge using Web browsers, email, bookmarking, searching and downloading; not open to students with credit in LINC 224.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**2 hours lecture. (24 hours total per quarter)**

Intended for educators (K-14) who want to develop understanding and competencies in using the 21st century skills strategy of global project-based learning to create powerful, culturally diverse learning environments. Teachers and students connect globally via Internet telecommunications software to work collaboratively on curriculum-based, real-world projects. Participants will create a project that engages students in learning curricular content.

**FHGE: Non-GE Transferable: CSU**

**LINC 58A E-PORTFOLIOS 1 Unit**

**Advisory:** Basic computer skills and knowledge of Macintosh or Windows operating systems; familiarity using Web browsers, email, bookmarking, searching and downloading; not open to students with credit in LINC 223.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**1 hour lecture. (12 hours total per quarter)**

Course demonstrates how to build an e-portfolio as an authentic assessment tool. Electronic portfolios can be used for student work as well as for teacher professional development. Reflective practice that deepens learning will be presented. Student e-portfolios will be examined and analyzed. Computer tools that enable students to create powerful e-portfolios will be examined.

**FHGE: Non-GE Transferable: CSU**

**LINC 59 INTEGRATING 21ST CENTURY SKILLS INTO INSTRUCTION 2 Units**

**Advisory:** Basic computer skills and knowledge of Macintosh or Windows operating systems; familiarity using Web browsers, email, bookmarking, searching and downloading.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**2 hours lecture. (24 hours total per quarter)**

Intended for educators at all levels (K-12, college) and trainers of any discipline to develop the knowledge, skills, and attitude necessary to create instructional experiences integrated with 21st Century skills, such as critical thinking, creativity and problem solving, collaboration, and communication. Participants will examine the skills that business and industry determine important for new employees to know in order to succeed in a 21st Century global economy. Participants determine the importance of integrating 21st Century skills into their courses, analyze their curriculum content and instructional strategies to determine which 21st Century skills they currently teach and which additional skills can be integrated. The final course project is a lesson, unit, or project that requires the participants' students or trainees to use 21st Century skills.

**FHGE: Non-GE Transferable: CSU**

**LINC 60K GAME-BASED LEARNING 1 Unit**

**Advisory:** Basic computer skills and knowledge of Macintosh or Windows operating systems; basic skills and knowledge using Web browsers, email, bookmarking, searching and downloading; not open to students with credit in LINC 243.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**1 hour lecture. (12 hours total per quarter)**

Intended for educators who want to explore computer-based and internet games that engage students in science, engineering, and other content learning. Participants will analyze existing games for their educational value, create their own simple educational game and determine how students learn when they create a game. Participants will use a systematic method of game design to identify goals, develop a game, and evaluate the learning outcomes.

**FHGE: Non-GE Transferable: CSU**

**LINC 64 SLIDE PRESENTATION DESIGN 1 Unit**

**Advisory:** Basic computer skills and knowledge of Macintosh or Windows operating systems; familiarity using Web browsers, email, bookmarking, searching and downloading; not open to students with credit in LINC 246.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**1 hour lecture. (12 hours total per quarter)**

Develop the knowledge and skills to create effective and visually appealing slide presentations. This hands-on course uses software such as Keynote, PowerPoint, Prezi, or Google Presentations; however, primary emphasis is placed on applying visual literacy concepts. Additional topics include typography, inserting audio, applying animation/transition effects, and applying good presentation design.

**FHGE: Non-GE Transferable: CSU**

**LINC 66 INTRODUCTION TO THE INTERNET 1 Unit**

**Advisory:** Basic computer skills and knowledge of Macintosh or Windows operating systems; familiarity using Web browsers, email, bookmarking, searching and downloading; not open to students with credit in LINC 206; students may enroll in LINC 66 or 66B, but not both, for credit.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**1 hour lecture. (12 hours total per quarter)**

This overview course explores the educational, personal, professional, and social benefits of the Internet. Participants will develop information literacy skills by examining current Internet trends, tools, and technologies for information, communication, and collaboration.

**FHGE: Non-GE Transferable: CSU**

**LINC 66A INTRODUCTION TO THE INTERNET I .5 Units**

**Advisory:** Basic computer skills and knowledge of Macintosh or Windows operating systems; familiarity using Web browsers, email, bookmarking, searching and downloading; fundamental understanding of content topics in LINC 66; not open to students with credit in LINC 206S.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**6 hours lecture. This course meets 1 time per quarter. (6 hours total per quarter)**

Continues topics of LINC 66 and focuses on Internet tools to aid in gathering, accessing, and storing information, and communicating, and collaborating world wide for educational, business-related or personal use.

**FHGE: Non-GE Transferable: CSU**

**LINC 66C SEARCHING & RESEARCHING THE INTERNET 2 Units**

**Advisory:** Basic computer skills and knowledge of Macintosh or Windows operating systems; familiarity using Web browsers, email, bookmarking, searching and downloading; not open to students with credit in LINC 208.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**2 hours lecture. (24 hours total per quarter)**

Intermediate course for those who use the Internet for personal research and in their work. Emphasizes using advanced search techniques that incorporate logical reasoning, critical thinking, essential questions, and inquiry-based learning to refine searches, maximize the advantages of different search engines, evaluate websites for credibility, understand the legitimacy of search results, and use search findings ethically.

**FHGE: Non-GE Transferable: CSU**

**LINC 67 DESIGNING WEB-BASED LEARNING PROJECTS 1 Unit**

**Advisory:** Basic computer skills and knowledge of Macintosh or Windows operating systems; familiarity using Web browsers, email, bookmarking, searching and downloading.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**1 hour lecture. (12 hours total per quarter)**

Creation of online projects that promote inquiry-based student learning and effective use of Web 2.0 tools for research. Participants will generate ideas for projects, like Webquests or virtual tours, and develop their own project with focus and purpose. Participants will align their project with the Common Core State Standards requiring students to synthesize information by completing a challenge task.

**FHGE: Non-GE Transferable: CSU**

**LINC 68B GOOGLE DOCS .5 Units**

**Advisory:** Basic computer skills and knowledge of Macintosh or Windows operating systems and basic skill and knowledge of internet technologies such as using Web browsers, email, bookmarking, searching and downloading; not open to students with credit in LINC 270S.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**6 hours lecture. This course meets 1 time per quarter. (6 hours total per quarter)**

An introduction to Google Docs, the free online word processing application in the Google office suite, which allows people to collaborate on a single version of a document. Google docs is a powerful, easy to use application for teachers, students, groups, and organizations that want to share and collaborate with documents online. Participants will have hands-on experience creating, formatting, editing, saving, sharing, printing documents, inserting graphics, composing tables, and working collaboratively on a single document.

**FHGE: Non-GE Transferable: CSU**

**LINC 70 WEB PAGE DESIGN OVERVIEW 1 Unit**

**Advisory:** Basic computer skills and knowledge of Macintosh or Windows operating systems; familiarity using Web browsers, email, bookmarking, searching and downloading; not open to students with credit in LINC 200; students may enroll in LINC 70 or 70B, but not both, for credit.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**1 hour lecture. (12 hours total per quarter)**

Hands-on overview of how to design and create Web pages using current online authoring tools, such as Google Sites, Wix, Weebly, or others. Advantages of different online Web authoring tools will be analyzed. Techniques covered include building multiple pages; adding images, widgets, videos, banners, social media, calendars, and other features to create a neat, professional looking website. No knowledge of HTML is required.

**FHGE: Non-GE Transferable: CSU**

**LINC 70A WEB PAGE DESIGN I .5 Units**

**Advisory:** Basic computer skills and knowledge of Macintosh or Windows operating systems; familiarity using web browsers, email, bookmarking, searching and downloading; not open to students with credit in LINC 200S.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**6 hours lecture. This course meets 1 time per quarter. (6 hours total per quarter)**

An introduction to design and creation of webpages for educational, social, or business purposes using online website authoring software, such as Google Sites, Wix, WordPress, that provide a visual interface to website design. Knowledge of HTML is not required.

**FHGE: Non-GE Transferable: CSU**

**LINC 70B WEB PAGE DESIGN II 1 Unit**

**Advisory:** Basic computer skills and knowledge of Macintosh or Windows operating systems; familiarity using web browsers, email, bookmarking, searching and downloading; fundamental understanding of content topics in LINC 70A; not open to students with credit in LINC 211; students may enroll in LINC 70 or 70B, but not both, for credit.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**1 hour lecture. (12 hours total per quarter)**

Continues the content of LINC 70A and covers more advanced topics of online web authoring tools or services, such as good vs poor website design, building tables, using styles and addressing accessibility. Appropriate for application in educational, social, or business environments.

**FHGE: Non-GE Transferable: CSU**

**LINC 72B ADOBE INDESIGN OVERVIEW 1 Unit**

**Advisory:** Basic computer skills and knowledge of Macintosh or Windows operating systems; familiarity using Web browsers, email, bookmarking, searching and downloading; students may enroll in LINC 72B or 72D, but not both, for credit; not open to students with credit in LINC 234.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**1 hour lecture. (12 hours total per quarter)**

For anyone interested in print or Web-based publishing. Adobe InDesign creates page layouts for multi-page brochures, tri-folds, flyers, newsletters, books, websites, and Web-based publications with a professional quality. In this hands-on, overview course, students work with images; use guides and grids; set up master sheets and styles.

**FHGE: Non-GE Transferable: CSU**

**LINC 72C ADOBE INDESIGN I .5 Units**

**Advisory:** Basic computer skills and knowledge of Macintosh or Windows operating systems; familiarity using Web browsers, email, bookmarking, searching and downloading; not open to students with credit in LINC 234S.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**6 hours lecture. This course meets 1 time per quarter. (6 hours total per quarter)**

Adobe InDesign is desktop publishing software. Students will learn to arrange text in a variety of formats to design layouts that are easy and beautiful for readers to enjoy. Emphasis is given to creating student-centered projects or activities using InDesign for desktop publishing. Learn to design page layouts; import, format, and edit text; import and arrange photos; while creating pages that incorporate professional graphic design elements.

**FHGE: Non-GE Transferable: CSU**

**LINC 73 ADOBE PHOTOSHOP OVERVIEW 1 Unit**

**Advisory:** Basic computer skills and knowledge of Macintosh or Windows operating systems; familiarity using Web browsers, email, bookmarking, searching and downloading; students may enroll in LINC 73 or 73B, but not both, for credit; not open to students with credit in LINC 230.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**1 hour lecture. (12 hours total per quarter)**

Explore digital imaging with hands-on experiences that integrate image media with teaching and learning. Emphasis is given to creating student-centered projects or activities using Photoshop. Learn to enhance image color and contrast, touch-up photos, create collages that tell stories, paint with the paint tools, create layouts with text, apply filters and special effects, automate work-flow. Learn to communicate with compelling layouts.

**FHGE: Non-GE Transferable: CSU**

**LINC 73A ADOBE PHOTOSHOP I .5 Units**

**Advisory:** Basic computer skills and knowledge of Macintosh or Windows operating systems; familiarity using Web browsers, email, bookmarking, searching and downloading; not open to students with credit in LINC 230S.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**6 hours lecture. This course meets 1 time per quarter. (6 hours total per quarter)**

Intended for educators and includes hands-on experiences that integrate digital imaging with teaching and learning. Emphasis is given to creating student-centered projects or activities using Photoshop. Learn to enhance image color and contrast, touch-up photos, create collages that tell stories, design layouts, paint with the paint tools, manipulate and enhance text to create unique typographic effects, while creating student-centered projects.

**FHGE: Non-GE Transferable: CSU**

**LINC 73H ADOBE ILLUSTRATOR OVERVIEW 1 Unit**

**Advisory:** Basic computer skills and knowledge of Macintosh or Windows operating systems; familiarity using Web browsers, email, bookmarking, searching and downloading; students may enroll in LINC 73H or 73J, but not both, for credit; not open to students with credit in LINC 233.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**1 hour lecture. (12 hours total per quarter)**

Adobe Illustrator creates drawings, illustrations, and images for print or Web. Use vector graphics; draw objects, stroke outlines and pattern fills; work with brushes, gradients, color blends; design type; and develop graphs. Learn basic procedures of vector drawing to create moderately complex illustrations that can be transferred to collateral design.

**FHGE: Non-GE Transferable: CSU**

**LINC 73I ADOBE ILLUSTRATOR I .5 Units**

**Advisory:** Basic computer skills and knowledge of Macintosh or Windows operating systems; familiarity using Web browsers, email, bookmarking, searching and downloading; not open to students with credit in LINC 233S.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**6 hours lecture. This course meets 1 time per quarter. (6 hours total per quarter)**

This course provides hands-on experience with the basic elements and tools of Adobe Illustrator, a software drawing tool, to produce simple vector illustrations. Includes methods of illustration that contribute to digital storytelling.

**FHGE: Non-GE Transferable: CSU**

**LINC 75A INTRODUCTION TO INSTRUCTIONAL DESIGN & TECHNOLOGY 3 Units**

**Advisory:** Basic skills using standard computer systems and internet-based technologies.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**3 hours lecture. (36 hours total per quarter)**

This introductory course in instructional design and technology is for students, teachers, educators, and trainers who want to know how to create technology-based educational or training materials and resources for school, college, or business settings. Students will develop foundational knowledge and skills in systematic design processes that guide writing learning objectives, developing learning activities, applying best practices for using technology in instructional settings, and assessing learning outcomes. This is the first course in the Instructional Design & Technology program sequence.

**FHGE: Non-GE Transferable: CSU**

**LINC 75B INSTRUCTIONAL TECHNOLOGY STRATEGIES 3 Units**

**Advisory:** It is advised, but not required, that students have the background knowledge and skill taught in LINC 75A; basic skills using standard computer systems and internet-based technologies.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**3 hours lecture. (36 hours total per quarter)**

This instructional design and technology course builds on the coursework of LINC 75A and focuses on the specific strategies for using technology in the education or training environment. Students develop instructional plans that use technology to meet the needs of a variety of learners; plan for effective use and management of technology for teaching and learning (i.e., laptop carts, mobile devices, Bring Your Own Device [BYOD], classroom audio-visual, online technologies and learning systems); and learn to manage instructional design projects. This course is part of the Instructional Design & Technology program sequence.

**FHGE: Non-GE Transferable: CSU**

**LINC 75C DESIGNING ONLINE INSTRUCTION 3 Units**

**Prerequisite:** LINC 75A or 75B.

**Advisory:** Basic skills using standard computer systems and internet-based technologies.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**3 hours lecture. (36 hours total per quarter)**

This course advances the knowledge of instructional design and technology taught in LINC 75A and LINC 75B while focusing on the unique design challenges and delivery options of online education or training. Students apply the methods of instruction with web-based technologies to design online learning courses, lessons, activities, and resources. Special emphasis is provided for creating multimedia resources (e.g., screen casting and instructional videos) and for designing online learning with video conferencing, threaded discussions, shared documents and online collaboration used in learning management systems. This course is part of the Instructional Design & Technology program sequence.

**FHGE: Non-GE Transferable: CSU**

**LINC 76A CREATING EDUCATIONAL WEBSITES I 1 Unit**

**Advisory:** Basic computer skills and knowledge of Macintosh or Windows operating systems; familiarity using Web browsers, email, bookmarking, searching and downloading; not open to students with credit in LINC 210S.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**1 hour lecture. (12 hours total per quarter)**

Overview of several online and computer-based technologies and strategies to develop educational websites for educational or training purposes. Participants will explore Web 2.0 collaborative tools to make a website interactive and learning focused. Topics include presentation, audio, video, and embedding social media tools into a site. Elements of good Website design and ideas for creating engaging websites will be addressed.

**FHGE: Non-GE Transferable: CSU**

**LINC 76C CREATING WEBQUESTS 2 Units**

**Advisory:** Basic computer skills and knowledge of Macintosh or Windows operating systems; familiarity using Web browsers, email, bookmarking, searching and downloading; not open to students with credit in LINC 202.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**2 hours lecture. (24 hours total per quarter)**

Focuses on the strategies and techniques used to design and develop rich, interactive web searches, called WebQuests, for instructional purposes. WebQuests are web-based, curriculum-based challenges that include student resources and activities and requires students to transform information into a new form. Participants will analyze and evaluate WebQuests for depth of content, level of engagement, curriculum standards, and meaningful learning outcomes through the lens of 21st Century teaching and learning skills. The culminating course project is the design and development of a WebQuest.

**FHGE: Non-GE Transferable: CSU**

**LINC 79 MULTIMEDIA PROJECT PRODUCTION 2 Units**

**Advisory:** Basic computer skills and knowledge of Macintosh or Windows operating systems; familiarity using Web browsers, email, bookmarking, searching and downloading; familiarity with multimedia software.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**2 hours lecture. (24 hours total per quarter)**

This hands-on, project production course demonstrates how to integrate online multimedia production tools and resources (music, audio, images, video, animation) to produce a variety of artistic or communicative media for use in education, business and personal applications.

**FHGE: Non-GE Transferable: CSU**

**LINC 80 MULTIMEDIA OVERVIEW 1 Unit**

**Advisory:** Basic computer skills and knowledge of Macintosh or Windows operating systems; familiarity using Web browsers, email, bookmarking, searching and downloading; not open to students with credit in LINC 251.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**1 hour lecture. (12 hours total per quarter)**

An overview of multimedia software and hardware and the multimedia production process. Designed for trainers, educators, and anyone interested in multimedia, the course features hands-on learning with computer-based or internet software authoring tools to design and produce a multimedia project or presentation that integrates text, graphics, animation, sound, and digital video for educational, business, or entertainment purposes.

**FHGE: Non-GE Transferable: CSU**

**LINC 80A MULTIMEDIA IN THE CLASSROOM I 1 Unit**

**Advisory:** Basic computer skills and knowledge of Macintosh or Windows operating systems; familiarity using Web browsers, email, bookmarking, searching and downloading; not open to students with credit in LINC 252.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**1 hour lecture. (12 hours total per quarter)**

Explores the pedagogy and computer-based software tools used to effectively design and manage multimedia in the learning process. Best design practices and hands-on experience with computer-based multimedia authoring tools will be used to produce a student-centered project, such as an audio book, animation, musical slideshow, video composition, or interactive presentation. Course content is appropriate for students, entrepreneurs, media designers, and educators.

**FHGE: Non-GE Transferable: CSU**

**LINC 80B MULTIMEDIA IN THE CLASSROOM II .5 Units**

**Advisory:** Basic computer skills and knowledge of Macintosh or Windows operating systems; familiarity using Web browsers, email, bookmarking, searching and downloading; not open to students with credit in LINC 252S.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**6 hours lecture. This course meets 1 time per quarter. (6 hours total per quarter)**

Explores pedagogy and online multimedia tools for educators who want to use multimedia production for student-centered learning. Features hands-on experience with internet multimedia authoring tools and resources for audio, video, music, animation, and images, to design and produce a student-centered project.

**FHGE: Non-GE Transferable: CSU**

**LINC 81 USING DIGITAL IMAGES 1 Unit**

**Advisory:** Basic computer skills and knowledge of Macintosh or Windows operating systems; familiarity using Web browsers, email, bookmarking, searching and downloading; not open to students with credit in LINC 257.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**1 hour lecture. (12 hours total per quarter)**

An introduction to digital image acquisition, manipulation, use, and storage. Students will learn to find, edit, and use images in any software application for educational, business, or social purposes. Online image storage and sharing services will be evaluated. Students produce a gallery of images based on themes or categories.

**FHGE: Non-GE Transferable: CSU**

**LINC 81A USING DIGITAL IMAGES I .5 Units**

**Advisory:** Basic computer skills and knowledge of Macintosh or Windows operating systems; familiarity using Web browsers, email, bookmarking, searching and downloading; not open to students with credit in LINC 257S.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**6 hours lecture. This course meets 1 time per quarter. (6 hours total per quarter)**

Effectively use digital images for teaching and learning or training with emphasis on free, online image resources and editing tools. Topics include finding images, criteria for choosing images, editing tools and techniques, and importing into any application. Students will design and develop a project using images such as collateral materials, presentations, print publications, photo galleries, web pages, video, slideshow, or animation.

**FHGE: Non-GE Transferable: CSU**

**LINC 82A INTRODUCTION TO DESIGNING INSTRUCTIONAL TECHNOLOGY PROJECTS 3 Units**

**Advisory:** Basic skills using standard computer systems and internet-based technologies.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**3 hours lecture. (36 hours total per quarter)**

This introductory course in designing and developing instructional projects is for students, educators, and trainers interested in the planning of instructional design and technology projects. Students will acquire the knowledge and technology skills needed to lead the design, creation, and iteration of instructional materials, specifically, basic project management, applying instructional technology principles, and using rapid prototyping models to efficiently design, make, and evaluate instructional projects for education or business learning contexts. This course is part of the Instructional Design & Technology program sequence.

**FHGE: Non-GE Transferable: CSU**

**LINC 82B DEVELOPING INSTRUCTIONAL MATERIALS 3 Units**

**Advisory:** It is advised, but not required that students have the background knowledge and skill taught in LINC 82A; basic skills using standard computer systems and internet-based technologies.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**3 hours lecture. (36 hours total per quarter)**

This instructional design and development course builds on the coursework of LINC 82A and focuses on refining the skills needed for making digital media for education or business learning contexts. Students interested in the study of instructional design will rapidly design, develop, and evaluate presentations, infographics, posters, digital resources, multimedia, and websites for particular learning styles. Special emphasis is given for using collaborative tools to facilitate and manage group projects. This course is part of the Instructional Design & Technology program sequence.

**FHGE: Non-GE Transferable: CSU**

**LINC 82C CREATING INTERACTIVE MEDIA FOR INSTRUCTION 3 Units**

**Prerequisite:** LINC 82A or 82B.

**Advisory:** Basic skills using standard computer systems and internet-based technologies.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**3 hours lecture. (36 hours total per quarter)**

This advanced course in creating interactive media for instruction continues the coursework of LINC 82A and LINC 82B and provides the depth of skills and knowledge needed for making online learning media that includes interactive components, such as instructional video, multimedia, game-based learning, graphical user interface design, interactive tutorials, embedding collaborative elements in websites or learning management systems. Students interested in the study of instructional design and technology will develop a project for either education or business learning contexts. This course is part of the Instructional Design & Technology program sequence.

**FHGE: Non-GE Transferable: CSU**

**LINC 83F INTRODUCTION TO DIGITAL VIDEO EDITING 1 Unit**

**Advisory:** Basic computer skills and knowledge of Macintosh or Windows operating systems; familiarity using Web browsers, email, bookmarking, searching and downloading; not open to students with credit in LINC 244.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**1 hour lecture. (12 hours total per quarter)**

Introductory course covers the skills to create short, digital movies for the Web or computer playback using low-cost, internet-based, or free software. Course topics including finding existing video, creating video slideshows, making titles, adding voiceover or music, and creating animation effects. Class projects are designed for use in education, business, and personal applications.

**FHGE: Non-GE Transferable: CSU**

**LINC 85A ADOBE FLASH I .5 Units**

**Advisory:** Proficiency in a Mac or Windows operating system, software conventions and internet technologies; familiarity with Photoshop or similar photo editing software; not open to students with credit in LINC 238S.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**6 hours lecture. This course meets 1 time per quarter. (6 hours total per quarter)**

Create dynamic content and animations for Web, multimedia, and presentations. Develop interactive animations of illustrations, photos, and type. In this introductory, hands-on course, students learn basic Flash drawing tools, animation basics, tweening, and export options. Skills are delivered from a project-based framework.

**FHGE: Non-GE Transferable: CSU**



**LINC 85C ADOBE FLASH OVERVIEW 1 Unit**

**Advisory:** Proficiency in a computer operating system (Mac or Windows), software conventions and internet technologies; familiarity with Fireworks or similar photo editing software and Dreamweaver or similar webpage authoring software; students may enroll in LINC 85B or LINC 85C, but not both, for credit; not open to students with credit in LINC 287.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**1 hour lecture. (12 hours total per quarter)**

In this extended Adobe Flash course, create dynamic content and animations for the Web, multimedia, and presentations; develop interactive animations of illustrations, photos, and type using drawing tools, animation basics, and button scripting.

**FHGE: Non-GE Transferable: CSU**

**LINC 86 VIDEO PODCASTING OVERVIEW 1 Unit**

**Advisory:** Basic computer skills and knowledge of Macintosh or Windows operating systems; familiarity using Web browsers, email, bookmarking, searching and downloading; students may enroll in LINC 86 or 86B, but not both, for credit.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**1 hour lecture. (12 hours total per quarter)**

Overview course about video and multimedia podcast production. Intended to help educators, students, or hobbyists produce podcast type media for Internet distribution using free (e.g., Audacity, Jing) and industry-standard editing software (e.g., Garageband, Prof-Cast). Topics include: features of multimedia, attributes of internet-delivered media, evaluating media, evaluate different podcasting creation tools, copyright, and media distribution channels. Students in this course will create a media enhanced podcast of a presentation, webinar, or how-to tutorial.

**FHGE: Non-GE Transferable: CSU**

**LINC 86A VIDEO PODCASTING I .5 Units**

**Advisory:** Basic computer skills and knowledge of Macintosh or Windows operating systems; familiarity using Web browsers, email, bookmarking, searching and downloading.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**6 hours lecture. This course meets 1 time per quarter. (6 hours total per quarter)**

Introductory course on video podcast production. Using free online or industry-standard editing software, participants will create a basic video podcast or screencast that is for instructional, informative, or persuasive purposes in education, professional, or personal contexts.

**FHGE: Non-GE Transferable: CSU**

**LINC 87 SEMINAR IN TEACHING WITH EDUCATIONAL TECHNOLOGY 5 Units**

**Advisory:** Basic computer skills and knowledge of Macintosh or Windows operating systems; familiarity using Web browsers, email, bookmarking, searching and downloading.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**5 hours lecture. (60 hours total per quarter)**

This seminar is for educators at all levels to develop student-centered learning projects and teaching practices; apply practical educational technology tools and resources; and participate in a collaborative professional development experience. Participants learn to use innovative technologies in their own curriculum content area and best practices for teaching and learning that positively impacts student achievement. Topics include 21st century skills for teaching and learning, visual literacy, media literacy, free online tools and resources for education, educational software training, open education resources, professional learning networks, integrating technology into the curriculum, integrating science and mathematics into any curriculum, assessment strategies for complex learning outcomes, and student-centered learning.

**FHGE: Non-GE Transferable: CSU**

**LINC 88 INTRODUCTION TO COMPUTER OPERATING SYSTEMS 4 Units**

**Advisory:** Basic computer skills and knowledge of Macintosh or Windows operating systems and basic skills and knowledge of internet technologies, such as using Web browsers, email, bookmarking, searching, and downloading.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**3 hours lecture, 3 hours laboratory. (72 hours total per quarter)**

Introductory course covers computer operating systems such as Microsoft Windows NT, Vista, Windows 7, Windows 8, and Linux. Students learn to install, configure, and administer a desktop operating system, automate operating system installation, set up and manage user accounts, and configure local file systems. Configure and troubleshoot both local and network printers, manage and troubleshoot access to shared folders, and recover from system failures.

**FHGE: Non-GE Transferable: CSU**

**LINC 89 INTRODUCTION TO MICROSOFT WINDOWS SERVERS 4 Units**

**Advisory:** Basic computer skills and knowledge of Macintosh or Windows operating systems; familiarity using Web browsers, email, bookmarking, searching and downloading.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**3 hours lecture, 3 hours laboratory. (72 hours total per quarter)**

Introductory course covers the fundamentals of Microsoft Windows Server infrastructure, setup and administration. Topics include managing file systems (including Active Directory Domain Services (AD DS)), networking services, Hyper-V configuration, devices, user accounts, backups, and basic security.

**FHGE: Non-GE Transferable: CSU**

**LINC 90A WEBINARS 1 Unit**

**Advisory:** Basic computer skills and knowledge of Macintosh or Windows operating systems and basic skills and knowledge of internet technologies, such as using Web browsers, email, bookmarking, searching and downloading; not open to students with credit in LINC 290.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**1 hour lecture. (12 hours total per quarter)**

For educators and trainers to develop basic skills in creating synchronous or asynchronous "webinars", web based seminars. This course will use software tools and systems, such as CCC Confer, Adobe Connect, WebEx, or others. Students will incorporate video, media, slide presentations and Internet resources to create short webinar content for educational or training applications.

**FHGE: Non-GE Transferable: CSU**

**LINC 90B OPEN EDUCATION RESOURCES 1 Unit**

**Advisory:** Basic computer skills and knowledge of Macintosh or Windows operating systems and basic skills and knowledge of internet technologies, such as using Web browsers, email, bookmarking, searching and downloading; not open to students with credit in LINC 215.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**1 hour lecture. (12 hours total per quarter)**

Overview of Open Educational Resources (OER) and the use of free public domain materials for teaching and learning. It aims to build participant's knowledge and skills to find, adapt, re-purpose and create accessible OER for use in education and training environments. Course topics include OER terminology, OER quality, copyright and fair use issues, sources and repositories of public domain materials in various disciplines, technical issues regarding accessibility, and uses of Creative Commons. Participants will explore and analyze: OER tools and standards available to develop, organize and disseminate content; public domain learning materials; searching techniques for identifying public domain learning materials; professional collaboration strategies; and criteria for assessing the suitability of public domain learning materials for use various disciplines. Participants will either create a lesson, activity, or training module that incorporates OER or create an OER for an identified purpose.

**FHGE: Non-GE Transferable: CSU**

**LINC 90C ONLINE COLLABORATION TOOLS 2 Units**

**Advisory:** Basic computer skills and knowledge of Macintosh or Windows operating systems; familiarity using Web browsers, email, bookmarking, searching and downloading; not open to students with credit in LINC 214.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**2 hours lecture. (24 hours total per quarter)**

Features online collaboration tools for educational, business, or personal use. Explore different collaborative technologies and shared documents using the Internet with emphasis on how these tools can be integrated with curriculum and student projects; on more effective communication and collaboration for all participants; and on how these tools can be used for planning and evaluating projects.

**FHGE: Non-GE Transferable: CSU**

**LINC 91A INTRODUCTION TO ASSESSING INSTRUCTIONAL TECHNOLOGY 3 Units**

**Advisory:** Basic skills using standard computer systems and internet-based technologies.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**3 hours lecture. (36 hours total per quarter)**

This introductory course in assessing instructional technologies is for students, educators, and trainers interested in instructional design and technology. Students develop critical thinking skills and use evaluation processes, resources, and instruments to select and evaluate instructional materials, technologies, resources, and programs that meet specific learning outcomes for educational and training contexts. Coursework includes using technology to conduct survey research and basic data analysis. This course is part of the Instructional Design & Technology program sequence.

**FHGE: Non-GE Transferable: CSU**

**LINC 91B EVALUATING TECHNOLOGY-BASED LEARNING OUTCOMES 3 Units**

**Advisory:** It is advised, but not required that students have the background knowledge and skill taught in LINC 91A; basic skills using standard computer systems and internet-based technologies.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**3 hours lecture. (36 hours total per quarter)**

This instructional design and technology course builds on the coursework of LINC 91A and focuses on evaluating learning outcomes in educational and business training contexts. Students will design and develop technology-based authentic and performance-based assessments, rubrics, needs assessment plans, learner analysis instruments, adaptive testing, and surveys. Coursework includes managing data collection, analyzing results, and reporting findings. This course is part of the Instructional Design & Technology program sequence.

**FHGE: Non-GE Transferable: CSU**

**LINC 91C EVALUATING INSTRUCTIONAL PROGRAMS 3 Units**

**Prerequisite:** LINC 91A or 91B.

**Advisory:** Basic skills using standard computer systems and internet-based technologies.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**3 hours lecture. (36 hours total per quarter)**

This advanced course in evaluating instructional technology programs continues the coursework of LINC 91A and LINC 91B and further develops the skills and knowledge students need to measure and evaluate the effectiveness of educational curriculum or training programs. Using analysis skills, students examine the entire process from program design to implementation. Students interested in the study of instructional design and technology will determine and report on the effectiveness of an instructional program or curriculum for either online or classroom delivery in terms of instructor preparation, planning, delivery medium, and effective use of technology. Skill development includes effective use of technology tools for writing, conducting, analyzing, and reporting an instructional program evaluation plan. This course is part of the Instructional Design & Technology program sequence.

**FHGE: Non-GE Transferable: CSU**

**LINC 92 SEMINAR IN INSTRUCTIONAL DESIGN & TECHNOLOGY 3 Units**

**Prerequisites:** Completion of LINC 75A and (LINC 75B or 75C); LINC 82A and (LINC 82B or 82C); and LINC 91A and (LINC 91B or 91C).

**Advisory:** Basic skills using standard computer systems and internet-based technologies.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**3 hours lecture. (36 hours total per quarter)**

This seminar course is for teachers, educators, and trainers who have completed the pre-requisite coursework in the Instructional Design and Technology program sequence. Students demonstrate ability to apply knowledge, skills, and dispositions acquired through program coursework to the design, development, evaluation, and implementation of technology-based instructional and training projects in a "real-world" scenario. The seminar experience provides students the opportunity to act as consultants in a real, client-based case study to apply theories, concepts, and principles of instructional technology to solve an instructional or a training problem in authentic education or business settings.

**FHGE: Non-GE Transferable: CSU**

**LINC 94 INTRODUCTION TO COMPUTER NETWORKS 4 Units**

**Advisory:** Basic computer skills and knowledge of Macintosh or Windows operating systems and basic skills and knowledge of internet technologies, such as using Web browsers, email, bookmarking, searching and downloading.  
**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**3 hours lecture, 3 hours laboratory. (72 hours total per quarter)**  
Fundamental networking concepts and develops the skills and knowledge to set up and maintain small business/home networks. The course is not hardware or vendor specific. It helps students prepare for the "Network +" certification exam, an industry- wide, vendor-neutral certification program developed and sponsored by the Computing Technology Industry Association (CompTIA).  
**FHGE: Non-GE Transferable: CSU**

**LINC 95C ASSESSMENT STRATEGIES FOR TECHNOLOGY INTEGRATION 1 Unit**

**Advisory:** Basic computer skills and knowledge of Macintosh or Windows operating systems; familiarity using Web browsers, email, bookmarking, searching and downloading; not open to students with credit in LINC 260.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.  
**1 hour lecture. (12 hours total per quarter)**

The effectiveness of technology integration for teaching and learning. The content explores various assessment strategies for technology integration when applied to curriculum development, teaching, and student learning. Participants will create formative and summative assessments of how technology infused instruction affects teaching practice and facilitates students' use of technology to learn and communicate. Other content topics include 21st Century Skills, Common Core standards, and ISTE NETS standards.  
**FHGE: Non-GE Transferable: CSU**

**LINC 96B HANDHELD DIGITAL MEDIA DEVICES I .5 Units**

**Advisory:** Basic computer skills and knowledge of Macintosh or Windows operating systems; familiarity using Web browsers, email, bookmarking, searching and downloading; not open to students with credit in LINC 292A.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.  
**6 hours lecture. This course meets 1 time per quarter. (6 hours total per quarter)**

This introductory course is for those interested in exploring how hand-held devices can be applied in an education or training setting. Provides hands on experience with hand-held devices such as smartphones, tablet computers, iPods, etc. Participants will learn how to operate the hand-held, explore available software for the device, and learn how to use it for educational, training or other projects.  
**FHGE: Non-GE Transferable: CSU**

**LINC 96C HANDHELD DIGITAL MEDIA DEVICES II .5 Units**

**Advisory:** Basic computer skills and knowledge of Macintosh or Windows operating systems; familiarity using Web browsers, email, bookmarking, searching and downloading; fundamental understanding of content topics in LINC 96B; not open to students with credit in LINC 292B.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.  
**6 hours lecture. This course meets 1 time per quarter. (6 hours total per quarter)**

This intermediate course builds on LINC 96B by developing activities, lessons, or experiments using hand-held devices in education or training settings. Provides hands-on experience with hand-held devices such as smartphones, tablet computers, iPods, etc.  
**FHGE: Non-GE Transferable: CSU**

**LINC 97 IPADS IN EDUCATION .5 Units**

**Advisory:** Appropriate skills and abilities with mobile computer systems and internet technologies.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**6 hours lecture. This course meets 1 time per quarter. (6 hours total per quarter)**

Tablet computer technology is having greater influence in education and impacting student learning with mobile, rich media applications. Explore using the Apple iPad in every level of education; analyze changes mobile computing brings to the teaching and learning environment; evaluate applications relevant for academic disciplines and that reflect the Common Core State Standards. Provides practice in using iPads in a classroom setting and for developing instructional resources and learning aids.  
**FHGE: Non-GE Transferable: CSU**

**LINC 97A IPADS FOR TEACHING & LEARNING 1 Unit**

**Advisory:** Basic technology skills and knowledge of iPad and Mac iOS systems; familiarity using Web browsers, email, bookmarking, searching, and downloading.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**1 hour lecture. (12 hours total per quarter)**

Participants who are familiar with basic iPad use will integrate iPads into the teaching and learning process. Find, review and select applications and resources to create learning experiences aligned with Common Core State Standards. Use iPad for evaluation and assessment of student mastery. Develop course materials for student-centered activities. Build a virtual library of online resources, tips, and tricks.  
**FHGE: Non-GE Transferable: CSU**

**LINC 98 TEACHING & LEARNING IN THE DIGITAL AGE 1 Unit**

**Advisory:** Basic computer skills and knowledge of Macintosh or Windows operating systems; familiarity using Web browsers, email, bookmarking, searching and downloading; not open to students with credit in LINC 228; students may enroll in LINC 98 or 98B, but not both, for credit.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**1 hour lecture. (12 hours total per quarter)**

Overview course for those interested in developing and integrating educational technology into the classroom or training environment. Students will analyze learner characteristics; analyze the role of technology in student-centered learning environments; create a design plan for a technology-enhanced learning lesson, project or activity; use collaborative online technologies to support group work and peer feedback; and develop evaluation methods for the course project.  
**FHGE: Non-GE Transferable: CSU**

**LINC 98A TEACHING & LEARNING IN THE DIGITAL AGE I .5 Units**

**Advisory:** Basic computer skills and knowledge of Macintosh or Windows operating systems; familiarity using Web browsers, email, bookmarking, searching and downloading; not open to students with credit in LINC 228S.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**6 hours lecture. This course meets 1 time per quarter. (6 hours total per quarter)**

Introduction to integrating educational technology in the classroom for those interested in using technology to effectively deliver curriculum content, engage in professional development, and efficiently manage the classroom or training environment (e.g., online grading, storage, communication with parents, etc.). Participants will examine and set up appropriate technology tools.  
**FHGE: Non-GE Transferable: CSU**

**LINC 98B TEACHING & LEARNING  
IN THE DIGITAL AGE II** .5 Units

**Advisory:** Basic computer skills and knowledge of Macintosh or Windows operating systems; familiarity using Web browsers, email, bookmarking, searching and downloading; fundamental understanding of content topics in LINC 98A; not open to students with credit in LINC 228T; students may enroll in LINC 98 or 98B, but not both, for credit.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**6 hours lecture.** This course meets 1 time per quarter. (6 hours total per quarter)

An intermediate course in educational technology in the classroom, this course extends the topics in LINC 98A for educators, trainers, and instructional designers who want to develop student-centered lessons for the classroom or training environment. Focuses on collaborative software technologies that can be used for student group work and project sharing.

**FHGE: Non-GE Transferable: CSU**

**LIBRARY SCIENCE**

Language Arts  
650.949.7608 foothill.edu/ol

**LIBR 10 RESEARCH PAPER  
SEARCH STRATEGIES** 1 Unit

**Advisory:** Familiarity with Macs or PCs; not open to students with credit in LIBR 10H or 71.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**1 hour lecture.** (12 hours total per quarter)

Intended for students writing a research paper in another class. Strategies and methods to identify a research topic and then find and evaluate information in various formats to meet the identified information needed. Consideration of the ethical and legal uses of information. Interdisciplinary application of concepts, often covering multicultural topics.

**FHGE: Lifelong Learning Transferable: UC/CSU**

**LIBR 10H HONORS RESEARCH PAPER  
SEARCH STRATEGIES** 1 Unit

**Prerequisite:** Honors Institute participant.

**Advisory:** Familiarity with Macs or PCs; not open to students with credit in LIBR 10 or 71.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**1 hour lecture.** (12 hours total per quarter)

This honors-enhanced course is designed to introduce students to college level research. Students will develop critical thinking skills to identify a research topic; find, use, evaluate, and analyze information in various formats to meet the identified information need; and consider the ethical and legal uses of information. Interdisciplinary application of concepts, often covering multicultural topics. This course is of special value to those students intending to transfer to a four-year institution (CSU/UC).

**FHGE: Lifelong Learning Transferable: UC/CSU**

**MATHEMATICS**

Physical Sciences, Mathematics & Engineering  
650.949.7259 foothill.edu/psme

**MATH 1A CALCULUS** 5 Units

**Prerequisite:** Satisfactory score on the mathematics placement test or MATH 48C.

**Advisory:** Demonstrated proficiency in English by placement as determined by score on the English placement test OR through an equivalent placement process OR completion of ESLL 125 & ESLL 249; not open to students with credit in MATH 1AH.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**5 hours lecture.** (60 hours total per quarter)

Introduction to differential calculus, including limits, derivatives and their applications to curve-sketching, families of functions, and optimization.

**FHGE: Communication & Analytical Thinking Transferable: UC/CSU**

**MATH 1AH HONORS CALCULUS I** 5 Units

**Prerequisite:** Satisfactory score on the mathematics placement test or MATH 48C; Honors Institute participant.

**Corequisite:** MATH 1AHP.

**Advisory:** Not open to students with credit in MATH 1A.

**Grade Type:** Letter Grade Only Not Repeatable.

**5 hours lecture.** (60 hours total per quarter)

An introductory differential calculus class including limits, derivatives and their applications to curve sketching, families of functions, and optimization. Honors work emphasizes a deeper study of differential calculus via the study of proofs using analytic techniques, real-world problems, and special applied projects.

**FHGE: Communication & Analytical Thinking Transferable: UC/CSU**

**MATH 1AHP HONORS CALCULUS I SEMINAR** 1 Unit

**Prerequisite:** Honors Institute participant.

**Corequisite:** MATH 1AH.

**Grade Type:** Letter Grade Only Not Repeatable.

**1 hour lecture.** (12 hours total per quarter)

An honors seminar linked to MATH 1AH. In this course, students will explore a multitude of advanced problems from the calculus I honors course, including proofs of limit laws, differentiation rules, and corresponding theorems concerning the behavior of differentiable functions. As the calculus I honors course will require students to submit typed technical solutions to applied problems, this seminar will support students in learning how to use mathematical typesetting software. Best practices for mathematical writing will also be discussed.

**FHGE: Non-GE Transferable: UC/CSU**

**MATH 1B CALCULUS** 5 Units

**Prerequisite:** MATH 1A or 1AH.

**Advisory:** Demonstrated proficiency in English by placement as determined by score on the English placement test OR through an equivalent placement process OR completion of ESLL 125 & ESLL 249.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**5 hours lecture.** (60 hours total per quarter)

Introduction to integral calculus including definite and indefinite integrals, the first and second Fundamental Theorems and their applications to geometry, physics, and the solution of elementary differential equations.

**FHGE: Communication & Analytical Thinking Transferable: UC/CSU**

**MATH 1C CALCULUS** 5 Units  
Prerequisite: MATH 1B.  
Advisory: Demonstrated proficiency in English by placement as determined by score on the English placement test OR through an equivalent placement process OR completion of ESLL 125 & ESLL 249.  
Grade Type: Letter Grade, the student may select Pass/No Pass Not Repeatable.  
5 hours lecture. (60 hours total per quarter)  
Introduction to functions of more than one variable, including vectors, partial differentiation, the gradient, contour diagrams and optimization. Additional topics include infinite series, convergence and Taylor series.  
FHGE: Communication & Analytical Thinking Transferable: UC/CSU

**MATH 1D CALCULUS** 5 Units  
Prerequisite: MATH 1C.  
Advisory: Demonstrated proficiency in English by placement as determined by score on the English placement test OR through an equivalent placement process OR completion of ESLL 125 & ESLL 249.  
Grade Type: Letter Grade, the student may select Pass/No Pass Not Repeatable.  
5 hours lecture. (60 hours total per quarter)  
Introduction to integration of functions of more than one variable, including double, triple, flux and line integrals. Additional topics include polar, cylindrical and spherical coordinates, parameterization, vector fields, path-independence, divergence and curl.  
FHGE: Non-GE Transferable: UC/CSU

**MATH 2A DIFFERENTIAL EQUATIONS** 5 Units  
Prerequisite: MATH 1C.  
Advisory: Demonstrated proficiency in English by placement as determined by score on the English placement test OR through an equivalent placement process OR completion of ESLL 125 & ESLL 249; not open to students with credit in MATH 12A.  
Grade Type: Letter Grade, the student may select Pass/No Pass Not Repeatable.  
5 hours lecture. (60 hours total per quarter)  
Differential equations and selected topics of mathematical analysis.  
FHGE: Non-GE Transferable: UC/CSU

**MATH 2B LINEAR ALGEBRA** 5 Units  
Prerequisite: MATH 1C.  
Advisory: Demonstrated proficiency in English by placement as determined by score on the English placement test OR through an equivalent placement process OR completion of ESLL 125 & ESLL 249.  
Grade Type: Letter Grade, the student may select Pass/No Pass Not Repeatable.  
5 hours lecture. (60 hours total per quarter)  
A first course in Linear Algebra, including systems of linear equations, matrices, linear transformations, determinants, abstract vector spaces and subspaces, eigenvalues and eigenvectors, inner product spaces and orthogonality, and selected applications of these topics.  
FHGE: Non-GE Transferable: UC/CSU

**MATH 10 ELEMENTARY STATISTICS** 5 Units  
Prerequisite: Satisfactory score on the mathematics placement test or MATH 105 or 108.  
Advisory: Demonstrated proficiency in English by placement as determined by score on the English placement test OR through an equivalent placement process OR completion of ESLL 125 & ESLL 249; UC will grant transfer credit for a maximum of one course from the following: PSYC 7, SOC 7, MATH 10 or 17-students are strongly encouraged to meet with a counselor for appropriate course selection.  
Grade Type: Letter Grade, the student may select Pass/No Pass Not Repeatable.  
5 hours lecture. (60 hours total per quarter)

An introduction to modern methods of descriptive statistics, including collection and presentation of data; measures of central tendency and dispersion; probability; sampling distributions; hypothesis testing and statistical inference; linear regression and correlation; analysis of variance; use of microcomputers for statistical calculations. Illustrations taken from the fields of business, economics, medicine, engineering, education, psychology, sociology, social sciences, life science, and health science.  
FHGE: Communication & Analytical Thinking Transferable: UC/CSU

**MATH 11 FINITE MATHEMATICS** 5 Units  
Prerequisite: Satisfactory score on the mathematics placement test or MATH 105 or 108.  
Advisory: Demonstrated proficiency in English by placement as determined by score on the English placement test OR through an equivalent placement process OR completion of ESLL 125 & ESLL 249.  
Grade Type: Letter Grade, the student may select Pass/No Pass Not Repeatable.  
5 hours lecture. (60 hours total per quarter)  
Set theory, basic combinatorial analysis, introduction to probability, linear equations and inequalities, introduction to linear programming and the simplex method, introduction to matrix algebra with applications, Markov chains, game theory and mathematics of finance.  
FHGE: Communication & Analytical Thinking Transferable: UC/CSU

**MATH 12 CALCULUS FOR BUSINESS & ECONOMICS** 5 Units  
Prerequisite: MATH 48A.  
Advisory: Demonstrated proficiency in English by placement as determined by score on the English placement test OR through an equivalent placement process OR completion of ESLL 125 & ESLL 249.  
Grade Type: Letter Grade, the student may select Pass/No Pass Not Repeatable.  
5 hours lecture. (60 hours total per quarter)  
A study of the techniques of differential and integral calculus, with an emphasis on the application of these techniques to problems in business and economics.  
FHGE: Communication & Analytical Thinking Transferable: UC/CSU

**MATH 17 INTEGRATED STATISTICS II 5 Units**

Formerly: MATH 57  
Prerequisite: MATH 217.

Advisory: Demonstrated proficiency in English by placement as determined by score on the English placement test OR through an equivalent placement process OR completion of ESLL 125 & ESLL 249; UC will grant transfer credit for a maximum of one course from the following: PSYC 7, SOC 7, MATH 10 or 17-students are strongly encouraged to meet with a counselor for appropriate course selection; not open to students with credit in MATH 57.  
Grade Type: Letter Grade, the student may select Pass/No Pass Not Repeatable.

5 hours lecture. (60 hours total per quarter)

The second of two in the Statway sequence. Covers concepts and methods of statistics with an emphasis on data analysis. Topics include methods for collecting data, graphical and numerical descriptive statistics, correlation, simple linear regression, basic concepts of probability, confidence intervals and hypothesis tests for means and proportions, chi-square tests, and ANOVA. Application problems will be taken from the fields of business, economics, medicine, engineering, education, psychology, sociology and from culturally diverse situations. This sequence is recommended for students with majors that require no mathematics beyond freshman-level statistics.

FHGE: Communication & Analytical Thinking Transferable: UC/CSU

**MATH 22 DISCRETE MATHEMATICS 5 Units**

Prerequisites: C S 1A or 1AH; satisfactory score on the mathematics placement test or MATH 48C.

Advisory: Demonstrated proficiency in English by placement as determined by score on the English placement test OR through an equivalent placement process OR completion of ESLL 125 & ESLL 249; not open to students with credit in CIS 18 or C S 18.

Grade Type: Letter Grade, the student may select Pass/No Pass Not Repeatable.

5 hours lecture. (60 hours total per quarter)

Discrete mathematics: set theory, logic, Boolean algebra, methods of proof, mathematical induction, number theory, discrete probability, combinatorics, functions, relations, recursion, algorithm efficiencies, graphs, trees.

FHGE: Communication & Analytical Thinking Transferable: UC/CSU

**MATH 42 MATH FOR ELEMENTARY SCHOOL TEACHERS 5 Units**

Prerequisite: Satisfactory score on the mathematics placement test or MATH 105 or 108 with a grade of C or better.

Advisory: Demonstrated proficiency in English by placement as determined by score on the English placement test OR through an equivalent placement process OR completion of ESLL 125 & ESLL 249.

Grade Type: Letter Grade, the student may select Pass/No Pass Not Repeatable.

5 hours lecture. (60 hours total per quarter)

Focuses on the development of quantitative reasoning skills through in-depth, integrated explorations of topics in mathematics, including real numbers systems and subsystems. Emphasis is on comprehension and analysis of mathematical concepts and applications of logical reasoning.

FHGE: Non-GE Transferable: UC/CSU

**MATH 44 MATH FOR THE LIBERAL ARTS 5 Units**

Prerequisite: Satisfactory score on the mathematics placement test or MATH 105 or 108.

Advisory: Demonstrated proficiency in English by placement as determined by score on the English placement test OR through an equivalent placement process OR completion of ESLL 125 & ESLL 249.

Grade Type: Letter Grade, the student may select Pass/No Pass Not Repeatable.

5 hours lecture. (60 hours total per quarter)

A survey of mathematical models and other tools to introduce the nonspecialist to the methods of quantitative reasoning. Problem solving by Polya's method with analytic, numeric, graphical, and verbal investigation. Selecting, constructing, and using mathematical models. Interpreting quantitative results in qualitative context. Emphasis on deductive reasoning and formal logic; algebraic, exponential, logarithmic, and trigonometric models; probability and the normal distribution; data analysis; and selected topics from discrete math, finite math, and statistics.

FHGE: Communication & Analytical Thinking Transferable: UC/CSU

**MATH 48A PRECALCULUS I 5 Units**

Prerequisite: Satisfactory score on the mathematics placement test or MATH 105 or 108.

Advisory: Demonstrated proficiency in English by placement as determined by score on the English placement test OR through an equivalent placement process OR completion of ESLL 125 & ESLL 249; UC credit for MATH 48A, B & C is limited to a maximum of 7.5 units for the combination or any portion of the series completed.

Grade Type: Letter Grade, the student may select Pass/No Pass Not Repeatable.

5 hours lecture. (60 hours total per quarter)

Introduction to functions and families of functions including quadratics, polynomials, power and root functions, transformations of these functions, and their use in solving applications problems.

FHGE: Communication & Analytical Thinking Transferable: UC/CSU

**MATH 48B PRECALCULUS II 5 Units**

Prerequisite: MATH 48A.

Advisory: Demonstrated proficiency in English by placement as determined by score on the English placement test OR through an equivalent placement process OR completion of ESLL 125 & ESLL 249; UC credit for MATH 48A, B & C is limited to a maximum of 7.5 units for the combination or any portion of the series completed.

Grade Type: Letter Grade, the student may select Pass/No Pass Not Repeatable.

5 hours lecture. (60 hours total per quarter)

This course is a continuation of topics from MATH 48A. Topics include rational, exponential and logarithmic functions, piecewise functions, combination and composition of functions and an introduction to trigonometry.

FHGE: Communication & Analytical Thinking Transferable: UC/CSU

**MATH 48C PRECALCULUS III 5 Units**

Prerequisite: MATH 48B.

Advisory: Demonstrated proficiency in English by placement as determined by score on the English placement test OR through an equivalent placement process OR completion of ESLL 125 & ESLL 249; UC credit for MATH 48A, B & C is limited to a maximum of 7.5 units for the combination or any portion of the series completed.

Grade Type: Letter Grade, the student may select Pass/No Pass Not Repeatable.

5 hours lecture. (60 hours total per quarter)

This course is a continuation of topics from MATH 48B. Topics include the six trigonometric functions, trigonometric identities, inverse trigonometric functions, trigonometric equations, right triangles, oblique triangles, vectors, parametric equations, and modeling data with various functions.

FHGE: Communication & Analytical Thinking Transferable: UC/CSU

**MATH 67 ENHANCED MATHEMATICS LEARNING WITH MATHEMATICA** 3 Units

**Advisory:** MATH 48A; ability to download software and work with basic programs like Word or Excel.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**3 hours lecture. (36 hours total per quarter)**

An introduction to Mathematica mathematics software and its use as a tool for computation and visualization in mathematics and statistics. Use of Mathematica for solving problems taken from algebra and statistics through linear algebra and differential equations. Access to Mathematica provided at no additional cost.

**FHGE: Non-GE Transferable: CSU**

**MATH 70R INDEPENDENT STUDY IN MATHEMATICS** 1 Unit  
**MATH 71R** 2 Units  
**MATH 72R** 3 Units  
**MATH 73R** 4 Units

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**3-12 hours laboratory per week. (36-144 hours total per quarter)**

Provides an opportunity for the student to expand their studies in Mathematics beyond the classroom by completing a project or an assignment arranged by agreement between the student and instructor. The student is required to contract with the instructor to determine the scope of assignment and the unit value assigned for successful completion. Students may take a maximum of 6 units of Independent Study per department.

**FHGE: Non-GE Transferable: CSU**

**MATH 105 INTERMEDIATE ALGEBRA** 5 Units

**Prerequisite:** Satisfactory score on the mathematics placement test or MATH 220.

**Advisory:** Not open to students with credit in MATH 108.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**5 hours lecture. (60 hours total per quarter)**

Quadratic, polynomial, rational, radical, exponential and logarithmic functions and expressions with an emphasis on graphing and applications.

**FHGE: Non-GE**

**MATH 108 ACCELERATED ALGEBRA** 10 Units

**Prerequisite:** Satisfactory score on the mathematics placement test or successful completion of MATH 230 or 230J.

**Advisory:** Not open to students with credit in MATH 105.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**10 hours lecture. (120 hours total per quarter)**

This course will cover content from two algebra courses, beginning and intermediate algebra. The content consists of linear equations, linear inequalities, linear systems, polynomials with focus on quadratics, rationals, radicals, absolute values, exponential and logarithmic functions. Relationships between analytical, graphical, numerical, and verbal approaches will be emphasized.

**FHGE: Non-GE**

**MATH 217 INTEGRATED STATISTICS I** 10 Units

Non-degree applicable credit course.

**Prerequisites:** Satisfactory score on the mathematics placement test; MATH 230 or 230J.

**Advisory:** Demonstrated proficiency in English by placement as determined by score on the English placement test OR through an equivalent placement process OR completion of ESLL 125 & ESLL 249.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**10 hours lecture. (120 hours total per quarter)**

The first of two courses in the Statway sequence. Covers concepts and methods of statistics with an emphasis on data analysis. Topics include methods for collecting data, graphical and numerical descriptive statistics, correlation, simple linear regression, basic concepts of probability, confidence intervals and hypothesis tests for means and proportions, chi-square tests, and ANOVA. Application problems will be taken from the fields of business, economics, medicine, engineering, education, psychology, sociology and from culturally diverse situations. This sequence is recommended for students with majors that require no mathematics beyond freshman-level statistics.

**FHGE: Non-GE**

**MATH 220 ELEMENTARY ALGEBRA** 5 Units

Non-degree applicable basic skills-2 course.

**Prerequisites:** Satisfactory score on the mathematics placement test; MATH 230 or 230J.

**Advisory:** Not open to students with credit in MATH 101 or 224.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**5 hours lecture. (60 hours total per quarter)**

Includes linear equations inequalities in one variable, graphs of linear and quadratic functions, solving linear systems, integer exponents, operations on polynomials, factoring, and proportional reasoning.

**FHGE: Non-GE**

**MATH 230 PREPARING FOR ALGEBRA: LINEAR EQUATIONS, PROPORTIONS & GEOMETRY** 6 Units

Non-degree applicable basic skills-3 course.

**Prerequisite:** MATH 235.

**Advisory:** Not open to students with credit in MATH 230J.

**Grade Type:** Pass/No Pass Only

Not Repeatable.

**4 hours lecture, 6 hours laboratory. (120 hours total per quarter)**

Review of order of operations with rational numbers. Introduction to algebraic concepts including solving first-degree equations and evaluating and simplifying expressions. Development and applications of ratios, rates, proportions, percents, and geometric concepts. Modeling with linear equations and proportions to solve and interpret results of applications in diverse fields.

**FHGE: Non-GE**

**MATH 230J PREPARING FOR ALGEBRA** 3 Units

Non-degree applicable basic skills-3 course.

**Prerequisite:** Completion of 2 or more modules from MATH 230; permission of instructor.

**Grade Type:** Pass/No Pass Only

Not Repeatable.

**3 hours lecture. (36 hours total per quarter)**

Development and applications of ratios, rates, proportions, percents and geometric concepts. Review of addition, subtraction, multiplication and division of whole numbers, fractions, decimals and signed numbers. Review of algebraic concepts including solving first-degree equations and evaluating and simplifying expressions.

**FHGE: Non-GE**

**MATH 235 PREPARING FOR ALGEBRA: REAL NUMBERS** 6 Units  
Non-degree applicable basic skills course.  
Grade Type: Pass/No Pass Only  
Not Repeatable.  
4 hours lecture, 6 hours laboratory. (120 hours total per quarter)  
Addition, subtraction, multiplication and division of whole numbers, fractions, decimals and signed numbers. Order of operations with real numbers and applications of such operations.  
FHGE: Non-GE

## MEDIA STUDIES

Fine Arts and Communication  
650.949.7262

**MDIA 1 INTRODUCTION TO FILM STUDIES** 4 Units  
Advisory: Not open to students with credit in F TV 1 or VART 1.  
Grade Type: Letter Grade, the student may select Pass/No Pass  
Not Repeatable.  
4 hours lecture, 1 hour laboratory. (60 hours total per quarter)  
A survey of the language, technology, theory and aesthetics of the moving image as an art form. Emphasizes an introduction to the critical analysis of the film and video.  
FHGE: Humanities Transferable: UC/CSU

**MDIA 2A HISTORY OF FILM 1895-1945** 4 Units  
Advisory: Not open to students with credit in F TV 2A or VART 2A.  
Grade Type: Letter Grade, the student may select Pass/No Pass  
Not Repeatable.  
4 hours lecture, 1 hour laboratory. (60 hours total per quarter)  
Survey of the development of motion pictures from beginning to the 1940s. Emphasis on understanding evolution of international filmmaking.  
FHGE: Humanities Transferable: UC/CSU

**MDIA 2B HISTORY OF FILM 1945-CURRENT** 4 Units  
Formerly: VART 2B  
Advisory: Not open to students with credit in F TV 2B or VART 2B.  
Grade Type: Letter Grade, the student may select Pass/No Pass  
Not Repeatable.  
4 hours lecture, 1 hour laboratory. (60 hours total per quarter)  
A survey of the advancement of cinematic art from 1945 to the present. Investigation and critical analysis of influential films, prominent filmmakers, and technological developments. Study of the economic, regulatory, cultural, and artistic forces at work in the evolution of film.  
FHGE: Humanities Transferable: UC/CSU

**MDIA 2C CURRENT TRENDS IN FILM, TV & THE INTERNET** 4 Units  
Formerly: VART 2C  
Advisory: Not open to students with credit in F TV 2C or VART 2C.  
Grade Type: Letter Grade, the student may select Pass/No Pass  
Not Repeatable.  
4 hours lecture, 1 hour laboratory. (60 hours total per quarter)  
Current trends of film, video, television, and internet media. Critical analysis of time based linear and non-linear visual media. Emphasis on the visual experience of communicating ideas, stories, and events.  
FHGE: Humanities Transferable: UC/CSU

**MDIA 3 INTRODUCTION TO FILM & MEDIA CRITICISM** 4 Units  
Advisory: ENGL 110.  
Grade Type: Letter Grade, the student may select Pass/No Pass  
Not Repeatable.  
4 hours lecture, 1 hour laboratory. (60 hours total per quarter)  
An introduction to the critical analysis of film, television, and internet media. Explore and apply the core concepts and language of media theory including approaches through semiotics, post-structuralism, psychoanalysis, multicultural analysis, gender and sexuality.  
FHGE: Communication & Analytical Thinking Transferable: UC/CSU

**MDIA 5 AMERICAN CINEMA** 4 Units  
Formerly: VART 3  
Advisory: Not open to students with credit in F TV 3 or VART 3.  
Grade Type: Letter Grade, the student may select Pass/No Pass  
Not Repeatable.  
4 hours lecture, 1 hour laboratory. (60 hours total per quarter)  
Introduction to American Film as a component of art, history, culture and business. How Hollywood has shaped an industry that has come to reflect many aspects of the American experience. American cinematic history, terminology, economic structure and cultural importance. Development of analysis and writing skills.  
FHGE: Non-GE Transferable: UC/CSU

**MDIA 6 FILM & NEW MEDIA GENRES** 4 Units  
Advisory: UC course transferability will be determined by the university after student transfer.  
Grade Type: Letter Grade, the student may select Pass/No Pass  
Not Repeatable.  
4 hours lecture, 1 hour laboratory. (60 hours total per quarter)  
Analysis of specific genres within film and new media and their evolution. Specific genres will be explored considering their historic, aesthetic, structural, and cultural dimensions as well as their mode of screening and distribution. Genres include film noir, horror, science fiction, science fiction, disaster, musical, war, action-adventure, musical, romance, comedy. The genre studied will change each quarter.  
FHGE: Non-GE Transferable: UC/CSU

**MDIA 9 GLOBAL MEDIA** 4 Units  
Advisory: Not open to students with credit in VART 8.  
Grade Type: Letter Grade, the student may select Pass/No Pass  
Not Repeatable.  
4 hours lecture, 1 hour laboratory. (60 hours total per quarter)  
Examines the economic, political and cultural dynamics that shape the international media environment, its central actors and institutions.  
FHGE: Non-GE Transferable: UC/CSU

**MDIA 11 INTRODUCTION TO POPULAR CULTURE** 4 Units  
Advisory: Demonstrated proficiency in English by placement as determined by score on the English placement test OR through an equivalent placement process OR completion of ESLL 125 & ESLL 249; not open to students with credit in F A 1 or MDIA 11H.  
Grade Type: Letter Grade, the student may select Pass/No Pass  
Not Repeatable.  
4 hours lecture, 1 hour laboratory. (60 hours total per quarter)  
Overview, history and critical analysis of popular culture as a window for understanding American society. Theories and methods of analyzing artifacts of popular culture. Overarching themes: history/social theories of popular culture; popular culture as a product of American multiculturalism; the relationship between a commodity culture and intellect/artistry; philosophical/ethical issues surrounding popular culture.  
FHGE: Humanities Transferable: UC/CSU

**MDIA 11H HONORS INTRODUCTION TO POPULAR CULTURE** 4 Units  
Prerequisite: Honors Institute participant.  
Advisory: Not open to students with credit in F A 1 or MDIA 11.  
Grade Type: Letter Grade, the student may select Pass/No Pass  
Not Repeatable.  
4 hours lecture, 1 hour laboratory. (60 hours total per quarter)  
Overview, history and critical analysis of popular culture as a window for understanding American society. Theories and methods of analyzing artifacts of popular culture. Overarching themes: history/social theories of popular culture; popular culture as a product of American multiculturalism; the relationship between a commodity culture and intellect/artistry; philosophical/ethical issues surrounding popular culture. The honors section offers deeper theoretical content, assignments that require more sophisticated cognition/critical thinking, more rigorous assessment, and an additional summative project.  
FHGE: Humanities Transferable: UC/CSU



**MDIA 12 POPULAR CULTURE & UNITED STATES HISTORY 4 Units**

**Advisory:** Demonstrated proficiency in English by placement as determined by score on the English placement test OR through an equivalent placement process OR completion of ESLL 125 & ESLL 249; not open to students with credit in F A 2 or 12.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**4 hours lecture, 1 hour laboratory. (60 hours total per quarter)**

Interdisciplinary overview of popular culture as a window for understanding American history and society. Theories and methods of analyzing the artifacts of popular culture. Overarching themes: 1) interaction between American historical events and trends, and popular culture; 2) the interpretation of American history via popular culture media.

**FHGE:** American Cultures & Communities **Transferable:** UC/CSU

**MDIA 13 VIDEO GAMES & POPULAR CULTURE 4 Units**

**Advisory:** Not open to students with credit in MUS 11F.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**4 hours lecture, 1 hour laboratory. (60 hours total per quarter)**

The impact of game design and game technology on popular culture. Topics will include early history including the early hardware and software designers that emerged after World War II, the rise of the video game entrepreneurs and the resulting multi-billion dollar arcade industry, eight generations of home video game console inventors from the Magnavox Odyssey through the present day, the impact of the home computer on video games, the evolution of the handheld game console from early LCD games through the smart phone, online gaming from the first text-based games built by hobbyists through the current massively multi-player online role-playing games, and the validation of video games as an art form as evidenced by their addition to the collections of prominent institutions such as the Smithsonian and MoMA. For each historical era, the influence of video games on popular culture will be demonstrated through film, television, print, and music.

**FHGE:** Humanities **Transferable:** UC/CSU

**MDIA 20 FUNDAMENTALS OF MEDIA PRODUCTION 4 Units**

**Advisory:** Not open to students with credit in F TV 20, GID 20 or VART 20.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**4 hours lecture, 1 hour laboratory. (60 hours total per quarter)**

Basic instruction in concepts, techniques, and strategies of digital media production. Basic camera, lighting and sound recording will be covered through technical assignments. Emphasis on story telling, creative problem solving, web video production and distribution techniques.

**FHGE:** Non-GE **Transferable:** UC/CSU

**MDIA 30 DIGITAL VIDEO EDITING I 4 Units**

**Formerly:** VART 30

**Advisory:** Not open to students with credit in FTV 84, VART 30 or 84.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**4 hours lecture, 1 hour laboratory. (60 hours total per quarter)**

Basic instruction on the use of the computer for video and film editing. Theory and practice of cinematic editing which is explored through projects, screenings, class exercises, and demonstration. Topics include montage, pace and rhythm, openings, cutting dialogue, use of sound.

**FHGE:** Non-GE **Transferable:** UC/CSU

**MDIA 31 DIGITAL VIDEO EDITING II 4 Units**

**Formerly:** VART 31

**Advisory:** MDIA 30; not open to students with credit in F TV 85, VART 31 or 85.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**4 hours lecture, 1 hour laboratory. (60 hours total per quarter)**

Continuation of MDIA 30. Further exploration of technical and aesthetic considerations in film and video editing. Address advanced topics in digital post-production. Software topics include sync, audio mixing, color correction, and compositing.

**FHGE:** Non-GE **Transferable:** UC/CSU

**MDIA 32 MOTION GRAPHICS 4 Units**

**Advisory:** Not open to students with credit in GID 47, 84, GRDS 87 or VART 87.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**3 hours lecture, 3 hours laboratory. (72 hours total per quarter)**

Basic instruction using the computer for motion graphic design, animation, and composite digital video production. Emphasis on time based media and its application to creative problem solving and communication solutions.

**FHGE:** Non-GE **Transferable:** UC/CSU

**MDIA 40 DIGITAL SOUND, VIDEO & ANIMATION 4 Units**

**Advisory:** Not open to students with credit in ART 88, DRAM 86, F TV 86, GID 45, 80, GRDS 86, MUS 12, 86 or VART 86.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**3 hours lecture, 3 hours laboratory. (72 hours total per quarter)**

Introductory instruction using the computer for time-based digital media technologies: digital sound editing and synchronization, digital video editing and production, and digital animated effects. Emphasis on time-based digital media and creative problem solving using current cross-platform software tools for sound design, video design, and animated effects.

**FHGE:** Non-GE **Transferable:** UC/CSU

**MDIA 51 WEB VIDEO 4 Units**

**Formerly:** VART 51

**Advisory:** Not open to students with credit in VART 15 or 51.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**4 hours lecture, 1 hour laboratory. (60 hours total per quarter)**

An introduction to new developments in the use of video on the internet. The course covers a variety of internet media concepts such as compression, streaming, media production for the web and vodcasting. Students study both technical and aesthetic considerations for web video.

**FHGE:** Non-GE **Transferable:** CSU

**MDIA 52 SCRIPTWRITING FOR FILM & VIDEO 4 Units**

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**4 hours lecture, 1 hour laboratory. (60 hours total per quarter)**

An introductory course in scriptwriting for film and video which covers the basic skills needed in scripting for the media. Emphasis will be on the development of visual sensitivity, the examination of sample scripts and experience in progressing from concept to finished script. The role of the script in media production and the appropriate formats for fiction and non-fiction scripts will also be examined.

**FHGE:** Non-GE **Transferable:** CSU

**MDIA 81B SOUND DESIGN FOR FILM & VIDEO 4 Units**

Formerly: VART 81B

Advisory: Not open to students with credit in MTEC 57A, MUS 81B or VART 81B.

Grade Type: Letter Grade, the student may select Pass/No Pass Not Repeatable.

3 hours lecture, 3 hours laboratory. (72 hours total per quarter)

Creating, editing, and mixing audio for film and video. Understanding aesthetic qualities of sound effects and music as it relates to story. Recording original sound elements and using commercial sound libraries. Editing, layering, and processing sound elements to create complex sound effects. Synchronizing audio to video using a digital audio workstation. Basics of mixing and mastering finished soundtracks for digital distribution.

FHGE: Non-GE Transferable: CSU

**MUSIC**

Fine Arts and Communication

650.949.7333 foothill.edu/music

Foothill offers music activity courses in three different family categories, as well as theatre arts activity courses in four different family categories. No single course may be repeated. Enrollment is limited to six courses per family within the Foothill-De Anza Community College District. Please refer to the De Anza College Catalog for the corresponding families and courses.

Piano Class Applied Performance Family: MUS 12A, 12B &amp; 12C

Voice Class Applied Performance Family: MUS 13A, 13B &amp; 13C

Guitar Class Applied Performance Family: MUS 14A, 14B, 14C, 15A, 15B &amp; 15C

Theatre Voice Family: MUS 47A or THTR 47A, MUS 47B or THTR 47B, MUS 47C or THTR 47C, MUS 47D or THTR 47D, THTR 48A, MUS 48B or THTR 48B, MUS 48C or THTR 48C &amp; THTR 48F

**MUS 1 INTRODUCTION TO MUSIC 4 Units**

Grade Type: Letter Grade, the student may select Pass/No Pass Not Repeatable.

4 hours lecture, 1 hour laboratory. (60 hours total per quarter)

A study of Western music and its place in civilization. Selected listening and readings from the masterpieces of music of Europe and the Western Hemisphere with an emphasis on methods of comprehension, listening techniques, the elements of music, primary musical forms, and a wide range of concert repertoire. Includes a study of how social, political, philosophical, and other artistic developments outside of music influenced compositional thinking and how these were integrated into the different periods of Western musical history. A variety of media consisting of slides, videos, recordings, and lecture will be used. Live performance used when possible.

FHGE: Humanities Transferable: UC/CSU

**MUS 2A GREAT COMPOSERS & MUSIC MASTERPIECES OF WESTERN CIVILIZATION 5 Units**

Grade Type: Letter Grade, the student may select Pass/No Pass Not Repeatable.

4 hours lecture, 3 hours laboratory. (84 hours total per quarter)

An introduction to the great composers and music masterpieces of Western culture, including composer biographies with emphasis on how composers synthesize or transform the aesthetic ideals of their time. Examines how composers' music reflects their own lives as well as mirrors contemporary social, political, and religious events. Historical periods include the Ancient World and the Medieval, Renaissance, and Baroque eras. Composers include Josquin, Lassus, Palestrina, Monteverdi, Purcell, Vivaldi, Handel and Bach.

FHGE: Humanities Transferable: UC/CSU

**MUS 2B GREAT COMPOSERS & MUSIC MASTERPIECES OF WESTERN CIVILIZATION 5 Units**

Grade Type: Letter Grade, the student may select Pass/No Pass Not Repeatable.

4 hours lecture, 3 hours laboratory. (84 hours total per quarter)

Introduction to the great composers and music masterpieces of Western culture. Includes composer biographies with emphasis on how composers synthesize or transform the aesthetic ideals of their time. Examines how composers' music reflects their own lives as well as mirrors contemporary social, political, and religious events. Historical periods include the Classical period up through early Romanticism. Composers include Gluck, Haydn, Mozart, Beethoven, Schubert and Weber.

FHGE: Humanities Transferable: UC/CSU

**MUS 2C GREAT COMPOSERS & MUSIC MASTERPIECES OF WESTERN CIVILIZATION 5 Units**

Grade Type: Letter Grade, the student may select Pass/No Pass Not Repeatable.

4 hours lecture, 3 hours laboratory. (84 hours total per quarter)

Introduction to the great composers and music masterpieces of Western culture. Includes composer biographies with emphasis on how composers synthesize or transform the aesthetic ideals of their time. Examines how their music reflects their own lives as well as mirrors contemporary social, political, and religious events. Historical periods are mid-19th Century Romanticism through the present. Composers include Schumann, Chopin, Mendelssohn, Brahms, Berlioz, Liszt, Tchaikovsky, Mussorgsky, Strauss, Verdi, Wagner, Bizet, Debussy, Ravel, Ives, Cowell, Bartok, Berg, Webern, Stravinsky, Copland, Varese, Babbitt, Cage, Crumb, Ligeti, Penderecki, Reich, Glass and Adams.

FHGE: Humanities Transferable: UC/CSU

**MUS 2D WORLD MUSIC: ROOTS TO CONTEMPORARY GLOBAL FUSION 5 Units**

Grade Type: Letter Grade, the student may select Pass/No Pass Not Repeatable.

4 hours lecture, 3 hours laboratory. (84 hours total per quarter)

A survey of world music styles from their roots in the ethnic traditions of a specific culture through their evolution into new forms that retain vitality and relevance in contemporary society. Traces the elements that make each style distinctive from a purely musical perspective as well as the social, historical, and cultural context that shaped each style's development. Styles include salsa, reggae, rai, Celtic, fado, flamenco, South African Township, Bollywood filmi, and more.

FHGE: Humanities Transferable: UC/CSU

**MUS 2F HISTORY OF AMERICAN MUSICAL THEATRE 4 Units**

Advisory: Not open to students with credit in THTR 2F.

Grade Type: Letter Grade, the student may select Pass/No Pass Not Repeatable.

4 hours lecture, 1 hour laboratory. (60 hours total per quarter)

An introductory survey of the history of the American musical theatre genre. Includes roots in British music halls, Viennese operetta and African American jazz through the golden age of the musical and up to the contemporary Broadway stage. Emphasis will be placed on genres and styles, as well as the key composers, lyricists, librettists, directors, producers, designers, choreographers and performers. Examines how the musical mirrors contemporary social and political events.

FHGE: Humanities Transferable: UC/CSU

**MUS 3A THEORY & MUSICIANSHIP I 5 Units****Advisory:** MUS 12A strongly recommended.**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.**4 hours lecture, 3 hours laboratory. (84 hours total per quarter)**

Introduction to the fundamentals of music and their application to composition and music literature. Notation, scales, intervals, triads, essential cadential formulas and phrase structure and their use in basic composition. Musicianship skills to include melodic dictation with leaps within the triad, rhythmic dictation in different meters, ear recognition of intervals, triad qualities including inversions, and dominant seventh chords, sight-singing simple step-wise melodies.

**FHGE: Non-GE Transferable: UC/CSU****MUS 3B THEORY & MUSICIANSHIP II 5 Units****Advisory:** MUS 3A proficiency or equivalent.**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.**4 hours lecture, 3 hours laboratory. (84 hours total per quarter)**

Continuation of common practice procedures in music and their application to composition and music literature. Seventh chords, an introduction to two-part counterpoint, secondary dominants and leading tone chords, modulation, and voice-leading techniques in four-part chorale writing. Musicianship skills to include melodic dictation with leaps from the I, IV, and V7 chords, rhythmic dictation in both simple and compound meters, harmonic dictation of typical chord progressions including notation of outer voices and Roman numerals, and sight-singing melodies with leaps from the I, IV, and V7 chords.

**FHGE: Non-GE Transferable: UC/CSU****MUS 3C THEORY & MUSICIANSHIP III 5 Units****Advisory:** MUS 3B proficiency or equivalent.**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.**4 hours lecture, 3 hours laboratory. (84 hours total per quarter)**

Continuation of concepts from MUS 3B, including guided analysis and composition using beginning chromatic harmony, secondary dominants and leading tone chords, modulation, borrowed chords, the Neapolitan sixth chord, and all forms of the augmented sixth chord. Musicianship skills to include melodic dictation in major and minor keys with triplets, syncopation, and pivot chord modulations, rhythmic dictation in simple and compound meters with syncopation and triplets, aural identification of four part harmonic progressions that use secondary dominants and pivot chord modulation, sight-singing melodies that modulate.

**FHGE: Non-GE Transferable: UC/CSU****MUS 3D THEORY & MUSICIANSHIP IV 5 Units****Advisory:** MUS 3C proficiency or equivalent.**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.**4 hours lecture, 3 hours laboratory. (84 hours total per quarter)**

Continuation of concepts from MUS 3C, including late 19th century chromatic harmony. Through guided analysis and composition, course includes: application of augmented 6th chords, borrowed chords, medieval modes, 9th, 11th, and 13th chords, altered dominants, chromatic mediants, and Impressionism. Analysis and writing on atonality, 12-tone method, pandiatonicism, set theory, and polytonality. Musicianship skills to include sight-singing modes, melodic dictation with modes and chromatic melodies, rhythmic dictation of irregular or asymmetrical meters, aural identification of harmonic progressions using chromatic chords and modulations to non-closely related keys.

**FHGE: Non-GE Transferable: UC/CSU****MUS 7 CONTEMPORARY MUSICAL 4 Units****STYLES: ROCK, POP & JAZZ****Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.**4 hours lecture, 1 hour laboratory. (60 hours total per quarter)**

Contemporary Musical Styles is a research and listening based survey course that begins with the roots in blues and continues with jazz, popular songs, and rock music of today. It is a social history of rock and roll that examines music before and after World War II, from the migration of the blues in the United States, to the social changes of the civil rights era of the 60s, to current times. The course will compare the historical and cultural context of popular lyrics in reference to contemporary, traditional, and folk styles by studying prominent musicians, genres, and songs associated with current musical idioms and social media.

**FHGE: Humanities Transferable: UC/CSU****MUS 7D CONTEMPORARY MUSICAL 4 Units****STYLES: THE BEATLES IN THE CULTURE OF POPULAR MUSIC****Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.**4 hours lecture, 1 hour laboratory. (60 hours total per quarter)**

Continuation of jazz, popular, and rock music with a focus on the Beatles. Includes prominent albums and songs associated with the band's evolution and stature, and their synthesis of a wide variety of popular and non popular musical styles. Identifies the significant effects that Hindu religious beliefs, social and cultural diversity, and the language arts had on their music. Analyzes the sociological impact the Beatles' statements had on non-musical matters, such as politics, drugs, religion, etc. Examines the influences of pop music on the Beatles' early style as well as the group's own influence on music and pop culture in general. A variety of media consisting of videos, recordings, lecture, and live performance will be used.

**FHGE: Humanities Transferable: UC/CSU****MUS 7E HISTORY OF THE BLUES 4 Units****Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.**4 hours lecture, 1 hour laboratory. (60 hours total per quarter)**

The History of the Blues is a research based course that examines the geographical regions, social influences, technological innovations, and musical styles within the blues form. It is about the dissemination and popularization of the blues, the basic song form of African American origin that is marked by flatted "blue" notes. The course will cover the development of the blues in the United States throughout the 20th century. Emphasis will be on the creation of the 12 bar blues, its evolution into jazz, rhythm and blues, rock and roll, and its impact on social issues.

**FHGE: Humanities Transferable: UC/CSU****MUS 7F MUSIC IN FILM 4 Units****Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.**4 hours lecture, 1 hour laboratory. (60 hours total per quarter)**

A cross cultural study of how music propels the story line in motion pictures from symphonic scores to pop soundtracks comparing imagery, emotions, characterizations, rhythm, intervals, melody, and chords. A music-in-film history course that blends the study of film music composers with an analysis of musical techniques from the earliest examples of film sound to film noir, westerns to James Bond, Hitchcock to musicals, and the Golden Era of Hollywood to Star Wars. Students will differentiate between parallel, contrapuntal, and associative types of music in film. The goal of the class is to identify how music and culture function in film to highlight dialogue, reflect thoughts, create tension, and establish a sense of time and place. Previous musical knowledge is helpful, but not necessary.

**FHGE: Humanities Transferable: UC/CSU**

**MUS 8 MUSIC OF MULTICULTURAL AMERICA 5 Units**

**Advisory: Not open to students with credit in MUS 8H.**  
**Grade Type: Letter Grade, the student may select Pass/No Pass Not Repeatable.**

**4 hours lecture, 3 hours laboratory. (84 hours total per quarter)**

A comparative and integrative study of the multicultural musical styles of the United States, this class explores the musics of Native Americans, European Americans, African Americans, Chicano/Latino Americans, and Asian Americans from their historical roots to the present. It includes a wide variety of musical styles such as Folk, Spirituals, Gospel, Soul, Blues, Jazz, Cajun, Zydeco, Salsa, Tejano, Hip-Hop and Rap. Students will look at these musical traditions from a technical and a cultural perspective as they develop listening and descriptive skills.

**FHGE: Amer, Human Transferable: UC/CSU**

**MUS 8H HONORS MUSIC OF MULTICULTURAL AMERICA 5 Units**

**Prerequisite: Honors Institute participant.**

**Advisory: Not open to students with credit in MUS 8.**  
**Grade Type: Letter Grade, the student may select Pass/No Pass Not Repeatable.**

**4 hours lecture, 3 hours laboratory. (84 hours total per quarter)**

A comparative and integrative study of the multicultural musical styles of the United States, this class explores the musics of Native Americans, European Americans, African Americans, Chicano/Latino Americans, and Asian Americans from their historical roots to the present. It includes a wide variety of musical styles such as Folk, Spirituals, Gospel, Soul, Blues, Jazz, Cajun, Zydeco, Salsa, Tejano, Hip-Hop and Rap. Students will look at these musical traditions from a technical and a cultural perspective as they develop listening and descriptive skills. The honors course offers an enriched and challenging experience for the more talented student, including deeper content, more rigorous grading, and more demanding and creative assignments requiring application of higher-level thinking, writing, and communication skills.

**FHGE: Amer, Human Transferable: UC/CSU**

**MUS 9A MUSIC & MEDIA: EDISON TO HENDRIX 4 Units**

**Advisory: Not open to students with credit in MUS 85 or 85A.**  
**Grade Type: Letter Grade, the student may select Pass/No Pass Not Repeatable.**

**4 hours lecture, 1 hour laboratory. (60 hours total per quarter)**

Introductory study of the history and development of popular music from the inception of recording through the first televised performances of the Beatles in the U.S. Development of media delivery including recording, radio, television, and how those delivery systems changed both the content of music, and its use by the public. The influence of media on the development of styles such as jazz, swing, country, rockabilly and rock and roll, including societal changes brought about by media delivery of music and how it became associated with graphic imagery such as television and cinema.

**FHGE: Non-GE Transferable: UC/CSU**

**MUS 9B MUSIC & MEDIA: HENDRIX TO HIP-HOP 4 Units**

**Advisory: Not open to students with credit in MUS 85B.**  
**Grade Type: Letter Grade, the student may select Pass/No Pass Not Repeatable.**

**4 hours lecture, 1 hour laboratory. (60 hours total per quarter)**

Introductory study of the history and development of popular music from 1964 through the present in the U.S. The class will examine the development of media delivery systems after The Beatles' first appearances on television through the growth of rock and alternative styles. Styles and artist to be studied are such as punk, ska, the rebirth of country music and the rise of hip hop culture, examining artists such as Jimi Hendrix, Pink Floyd, David Bowie, Frank Zappa, Prince, The Police, Chuck D. and others. The class will study the development and growth of music videos as an art form and the delivery/promotional systems developed for them such as MTV.

**FHGE: Non-GE Transferable: UC/CSU**

**MUS 10 MUSIC FUNDAMENTALS 4 Units**

**Grade Type: Letter Grade, the student may select Pass/No Pass Not Repeatable.**

**4 hours lecture, 1 hour laboratory. (60 hours total per quarter)**

Beginning theory course where the basic elements of musicianship and harmony are explored through lecture, listening, and written assignments. Rudiments of music like pitch, rhythm, harmony, style, and form will be examined as rock and roll is analyzed through classical music theory.

**FHGE: Non-GE Transferable: UC/CSU**

**MUS 11A JAZZ & SWING 4 Units**

**Advisory: Not open to students with credit in MUS 64A.**

**Grade Type: Letter Grade, the student may select Pass/No Pass Not Repeatable.**

**4 hours lecture, 1 hour laboratory. (60 hours total per quarter)**

History and analysis of jazz styles and trends from the development of Ragtime to 1969. An introduction to the instruments, performers, composers, compositions and recordings that defined jazz before the introduction of rock as the primary commercial music style in the US. Presentation of jazz and swing recordings, videos and print resources. Major artists include Louis Armstrong, Duke Ellington, Benny Goodman, Glenn Miller, Lionel Hampton, Count Basie, Charlie Parker, Dizzy Gillespie, Miles Davis, Sonny Rollins, Charles Mingus and John Coltrane. Style periods include Early ("Dixieland"), Big Band, Jump, Swing, Bebop, Hard Bop, Cool, Modal, and Avant-Garde Jazz.

**FHGE: Non-GE Transferable: UC/CSU**

**MUS 11B FUNK, FUSION & HIP-HOP 4 Units**

**Advisory: Not open to students with credit in MUS 64B.**

**Grade Type: Letter Grade, the student may select Pass/No Pass Not Repeatable.**

**4 hours lecture, 1 hour laboratory. (60 hours total per quarter)**

History and analysis of funk, fusion and Hip-Hop styles from 1969 to the present. An introduction to the instruments, performers, composers, compositions and recordings that defined/define funk, fusion & Hip-Hop from the collapse of traditional jazz and the introduction of funk and jazz fusion to the present. Presentation of recordings, videos and print resources. Major artists include Miles Davis, Herbie Hancock, James Brown, Sly Stone, Weather Report, Wayne Shorter, George Clinton and P-Funk, Jaco Pastorius, Pat Metheny, Grandmaster Flash, Africa Bambaataa, Chuck D. and Dr. Dre. Style periods include Early Jazz Fusion, Early Funk, East Bay Funk, Groove and Smooth Jazz, Modern Fusion, Early Hip-Hop and Commercial Rap.

**FHGE: Non-GE Transferable: UC/CSU**

**MUS 11D HISTORY OF ELECTRONIC MUSIC: ORIGINS-1970 4 Units**

**Grade Type: Letter Grade, the student may select Pass/No Pass Not Repeatable.**

**4 hours lecture, 1 hour laboratory. (60 hours total per quarter)**

The impact of electronic musical instruments and electronic musical technology on the creation of music. Origins in the late 19th and early 20th century and the subsequent development of the first electronic instruments. Emergence of new musical styles including electroacoustic music, music concrète, and elektronische musik. The first use of computers in music. Performance with live electronics. The introduction of the synthesizer and the rise of mainstream electronic music. In addition, students will analyze historically significant works from the experimental art music of the mid-20th century through the popular forms of the 1960s.

**FHGE: Humanities Transferable: UC/CSU**

**MUS 11E HISTORY OF ELECTRONIC MUSIC: 1970-PRESENT 4 Units**

**Grade Type: Letter Grade Only  
Not Repeatable.**

**4 hours lecture, 1 hour laboratory. (60 hours total per quarter)**

The impact of emerging electronic music styles on instrument development, recording technology and popular culture in the late 20th and early 21st centuries. Incorporation of electronic music and instruments in new music, television & film soundtracks and live performance, creating a market for the development and sales of portable music synthesizers. Analysis of the impact of emerging musical styles including ambient, techno and trance on the composition of contemporary music and youth culture. Comparison of analog and digital music synthesis techniques in the recording and performance of electronic music. Advances in computer technology in relation to the compositional needs of the emerging electronic musical styles. Students will analyze historically significant electronic works from experimental academic compositions to popular music from the era.  
**FHGE: Humanities Transferable: UC/CSU**

**MUS 11F VIDEO GAMES & POPULAR CULTURE 4 Units**

**Advisory: Not open to students with credit in MDIA 13.  
Grade Type: Letter Grade, the student may select Pass/No Pass  
Not Repeatable.**

**4 hours lecture, 1 hour laboratory. (60 hours total per quarter)**

The impact of game design and game technology on popular culture. Topics will include early history including the early hardware and software designers that emerged after World War II, the rise of the video game entrepreneurs and the resulting multi-billion dollar arcade industry, eight generations of home video game console inventors from the Magnavox Odyssey through the present day, the impact of the home computer on video games, the evolution of the handheld game console from early LCD games through the smart phone, online gaming from the first text-based games built by hobbyists through the current massively multi-player online role-playing games, and the validation of video games as an art form as evidenced by their addition to the collections of prominent institutions such as the Smithsonian and MoMA. For each historical era, the influence of video games on popular culture will be demonstrated through film, television, print, and music.  
**FHGE: Humanities Transferable: UC/CSU**

**MUS 12A BEGINNING CLASS PIANO 2 Units**

**Advisory: Concurrent enrollment in MUS 10; this course is included in the Piano Class Applied Performance family of activity courses.  
Grade Type: Letter Grade, the student may select Pass/No Pass  
Not Repeatable.**

**2 hours lecture, 1 hour laboratory. (36 hours total per quarter)**

Group instruction in piano for those with no previous training. Emphasis is on finger technique, note reading, and performance of simple piano literature. For music majors as well as the general student.  
**FHGE: Non-GE Transferable: UC/CSU**

**MUS 12B INTERMEDIATE CLASS PIANO 2 Units**

**Advisory: MUS 12A or equivalent skills; this course is included in the Piano Class Applied Performance family of activity courses.  
Grade Type: Letter Grade, the student may select Pass/No Pass  
Not Repeatable.**

**2 hours lecture, 1 hour laboratory. (36 hours total per quarter)**

Continuation of MUS 12A with increased emphasis on independence of hands, proper hand position, building repertoire in different genres, variety in rhythmic figurations and articulation.  
**FHGE: Non-GE Transferable: UC/CSU**

**MUS 12C ADVANCED CLASS PIANO 2 Units**

**Advisory: MUS 12B or equivalent skills; this course is included in the Piano Class Applied Performance family of activity courses.  
Grade Type: Letter Grade, the student may select Pass/No Pass  
Not Repeatable.**

**2 hours lecture, 1 hour laboratory. (36 hours total per quarter)**

Continuation of MUS 12B with greater emphasis on building a repertoire, varied styles of performance, and ensemble playing.  
**FHGE: Non-GE Transferable: UC/CSU**

**MUS 13A CLASS VOICE I 4 Units**

**Advisory: Concurrent enrollment in MUS 12A; this course is included in the Voice Class Applied Performance family of activity courses.  
Grade Type: Letter Grade, the student may select Pass/No Pass  
Not Repeatable.**

**4 hours lecture. (48 hours total per quarter)**

An introduction to the fundamental techniques of vocal production and performance. Group vocal instruction with the potential to sing in a variety of musical styles. Emphasis on understanding the basic foundation of a healthy vocal technique and integrating that technique into songs. Topics include warm-up techniques, breath support, tone production, musical phrasing, diction and text communication, as well as an introduction to standard vocal repertoire and associated performance practices.  
**FHGE: Non-GE Transferable: UC/CSU**

**MUS 13B CLASS VOICE II 4 Units**

**Prerequisite: MUS 13A.**

**Advisory: Concurrent enrollment in MUS 12A or equivalent skills; this course is included in the Voice Class Applied Performance family of activity courses.**

**Grade Type: Letter Grade, the student may select Pass/No Pass  
Not Repeatable.**

**4 hours lecture. (48 hours total per quarter)**

A continuation at the intermediate level of MUS 13A with increased emphasis on tone production and support, expansion of vocal range, differentiate between the various styles of singing studied: classical, legitimate, mix and belt, develop more complex repertoire in a variety of languages, attention to communication of text and character development, simple choral harmonies, and rehearsal practices with an accompanist.  
**FHGE: Non-GE Transferable: UC/CSU**

**MUS 13C CLASS VOICE III 4 Units**

**Prerequisite: MUS 13B.**

**Advisory: Concurrent enrollment in MUS 12A or equivalent skills; this course is included in the Voice Class Applied Performance family of activity courses.**

**Grade Type: Letter Grade, the student may select Pass/No Pass  
Not Repeatable.**

**4 hours lecture. (48 hours total per quarter)**

A continuation at the advanced level of MUS 13B with increased emphasis on more advanced and subtle concepts of vocal production. Emphasis on understanding and managing vocal passaggios, expansion of vocal styles to include classical and/or complex musical theatre repertoire. Small ensembles of duets or trio's with independent vocal lines and full communication of character will be introduced. Emphasis on ensemble building and collaboration with accompanist.  
**FHGE: Non-GE Transferable: UC/CSU**

**MUS 14A BEGINNING CLASSICAL GUITAR 2 Units**

**Advisory: This course is included in the Guitar Class Applied Performance family of activity courses.**

**Grade Type: Letter Grade, the student may select Pass/No Pass  
Not Repeatable.**

**2 hours lecture, 1 hour laboratory. (36 hours total per quarter)**

A guitar fundamentals course that places emphasis on reading standard notation in the first position. Techniques such as rest stroke, free stroke, and correct left hand position are covered. Fundamental exercises and pieces will be played by the student in class as the instructor provides accompaniment. Includes an overview of the literature and the major performers of the classical guitar. No public performances are required.  
**FHGE: Non-GE Transferable: UC/CSU**

**MUS 14B INTERMEDIATE CLASSICAL GUITAR 2 Units**

**Advisory:** MUS 14A; this course is included in the Guitar Class Applied Performance family of activity courses.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**2 hours lecture, 1 hour laboratory. (36 hours total per quarter)**

Continuation of MUS 14A. Covers more advanced techniques for the right and left hands. Includes reading standard notation up to the 9th position. Increased emphasis is placed on solo guitar literature in addition to ensemble literature. No public performances are required.

**FHGE: Non-GE Transferable: UC/CSU**

**MUS 14C ADVANCED CLASSICAL GUITAR 2 Units**

**Advisory:** MUS 14B; this course is included in the Guitar Class Applied Performance family of activity courses.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**2 hours lecture, 1 hour laboratory. (36 hours total per quarter)**

Continuation of MUS 14B. Covers more advanced techniques for the right and left hands. Includes reading standard notation up to the 9th position. Includes more complex solo ensemble literature. Additional class time is spent with lectures, demonstrations and performances. No public performances are required.

**FHGE: Non-GE Transferable: UC/CSU**

**MUS 15A BEGINNING ACOUSTIC GUITAR TECHNIQUES 2 Units**

**Advisory:** This course is included in the Guitar Class Applied Performance family of activity courses.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**2 hours lecture, 1 hour laboratory. (36 hours total per quarter)**

A performance based course in beginning guitar (nylon, steel, or electric guitar) with a concentration on folk music. Traditional and popular songs will be used to demonstrate the development of right and left hand techniques. Standard music notation, tablature, and chord symbols will be presented and students can choose instrumental or popular vocal selections to play.

**FHGE: Non-GE Transferable: UC/CSU**

**MUS 15B INTERMEDIATE ACOUSTIC GUITAR TECHNIQUES 2 Units**

**Advisory:** MUS 15A or equivalent; this course is included in the Guitar Class Applied Performance family of activity courses.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**2 hours lecture, 1 hour laboratory. (36 hours total per quarter)**

Development of traditional finger-picking style playing and picking techniques. Solo and ensemble performance on an intermediate level. Emphasis on reading traditional notation, chord symbols and tablature. This course is a continuation of the study of the guitar in the popular and folk idiom. Through analysis, singing, performing and listening, various songs and styles will be studied. This is a performance based course with the broad range of folk music as its subject matter.

**FHGE: Non-GE Transferable: UC/CSU**

**MUS 15C ADVANCED ACOUSTIC GUITAR TECHNIQUES 2 Units**

**Advisory:** MUS 15B or equivalent; this course is included in the Guitar Class Applied Performance family of activity courses.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**2 hours lecture, 1 hour laboratory. (36 hours total per quarter)**

Instruction in the playing of popular and folk guitar with an emphasis on finger-picking, barre chords, and altered tunings. Sight reading in tablature, chord symbols, and standard notation. Instrumental Blues and blues scales will be covered.

**FHGE: Non-GE Transferable: UC/CSU**

**MUS 41 LIVE MUSIC PERFORMANCE WORKSHOP 2 Units**

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**1 hour lecture, 3 hours laboratory. (48 hours total per quarter)**

Seminar-style course provides a forum for performing and presenting music and multimedia work, receiving constructive feedback, and encountering a broad diversity of styles in the work of others. All music performance practices are welcome, including electronic and visual media that integrate music. A wide range of musical styles will be explored including Folk, Reggae, Jazz, Blues, Electronic, and Classical. Students may use traditional acoustic, electric, and software based virtual instruments. In addition to standard repertoire, the course provides an opportunity for performance of original compositions. Students will gain music performing experience and also learn the technical side of sound reinforcements systems, concert promotion and stage management. The culmination of the student's work for the quarter will be participation in a live music concert.

**FHGE: Non-GE Transferable: UC/CSU**

**MUS 47A INTRODUCTION TO MUSICAL THEATRE PRODUCTION 6 Units**

**Advisory:** Enrollment subject to audition and instructor assignment; this course is included in the Theatre Voice family of activity courses; not open to students with credit in THTR 47 or 47A.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**18 hours laboratory. (216 hours total per quarter)**

This course will introduce the fundamentals of musical theatre performance through the rehearsal and performance of a fully staged musical theatre production. Students are required to attend rehearsals and performances.

**FHGE: Non-GE Transferable: UC/CSU**

**MUS 47B INTERMEDIATE MUSIC THEATRE PRODUCTION WORKSHOP 6 Units**

**Advisory:** Enrollment subject to audition and instructor assignment; this course is included in the Theatre Voice family of activity courses; not open to students with credit in THTR 47B or 47X.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**18 hours laboratory. (216 hours total per quarter)**

This course will develop technical skills required at the intermediate level of musical theatre performance through the rehearsal and performance of a fully staged musical theatre production. Students are required to attend rehearsals and performances.

**FHGE: Non-GE Transferable: UC/CSU**

**MUS 47C ADVANCED MUSIC THEATRE PRODUCTION WORKSHOP 6 Units**

**Prerequisite:** MUS 47B or THTR 47B.

**Advisory:** Enrollment subject to audition and instructor assignment; this course is included in the Theatre Voice family of activity courses; not open to students with credit in THTR 47C.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**18 hours laboratory. (216 hours total per quarter)**

Assists the student to develop technical skills required at the advanced level of musical theatre performance through the rehearsal and performance of a fully staged musical theatre production.

**FHGE: Non-GE Transferable: UC/CSU**

## MUSIC TECHNOLOGY

Fine Arts and Communication  
650.949.7262

### MTEC 50A INTRODUCTION TO MUSIC TECHNOLOGY 4 Units

Formerly: MUS 66A

Advisory: Not open to students with credit in MUS 66A.

Grade Type: Letter Grade, the student may select Pass/No Pass  
Not Repeatable.

3 hours lecture, 3 hours laboratory. (72 hours total per quarter)

Introduction to creating music with computers, keyboards, audio samples and beats using Pro Tools and other Digital Audio Workstations. Basic principles and use of MIDI sequencing/audio software. Songwriting, musical composition, mixing, mastering and the basic elements of music (pitch, rhythm, harmony, style and form) as they relate to contemporary music. Basic music production using Pro Tools. General computer literacy and media management. All styles are included, and prior musical training is not required.

FHGE: Non-GE Transferable: CSU

### MTEC 51A STUDIO RECORDING I 4 Units

Formerly: MUS 80A

Advisory: Not open to students with credit in MUS 80A.

Grade Type: Letter Grade, the student may select Pass/No Pass  
Not Repeatable.

3 hours lecture, 3 hours laboratory. (72 hours total per quarter)

Introduction to fundamental concepts and techniques of mixing boards, amplifiers, microphones, signal processors and their application to both live and studio sound reinforcement. Basic introduction to computer based recording with Avid Pro Tools HD systems. Microphone placement, physics of sound as it relates to recording, sound reinforcement and studio setup techniques.

FHGE: Non-GE Transferable: CSU

### MTEC 51B STUDIO RECORDING II 4 Units

Formerly: MUS 81A

Advisory: Not open to students with credit in MUS 81 or 81A.

Grade Type: Letter Grade, the student may select Pass/No Pass  
Not Repeatable.

3 hours lecture, 3 hours laboratory. (72 hours total per quarter)

Introduction to multitrack recording and production using AVID Pro Tools HD systems. Contemporary recording studio production techniques including microphone selection, placement, analog and digital signal paths, speaker monitors and studio acoustics. Techniques for recording drums, bass, piano, guitar, woodwinds, strings and vocals. Practical hands-on experience with professional recording artists and student collaborations.

FHGE: Non-GE Transferable: CSU

### MTEC 52A MIXING & MASTERING I 4 Units

Formerly: MUS 81C

Advisory: Not open to students with credit in MUS 81C.

Grade Type: Letter Grade, the student may select Pass/No Pass  
Not Repeatable.

3 hours lecture, 3 hours laboratory. (72 hours total per quarter)

Mixing and mastering multitrack recordings using Pro Tools. EQ, compression, reverb, delays, tempo maps, harmonic distortion, multi-band compression. Comparison and contrast of various styles of mixing including jazz, classical, country, rock, hip hop and electronica etc. Example exercises featuring professional recordings and mixes. Understanding and applying mixing concepts such as balance, dimension, and monitoring. Deliver final mixes that translate accurately to various speaker systems and listening environments.

FHGE: Non-GE Transferable: CSU

### MUS 47D ADVANCED MUSIC THEATRE PRODUCTION WORKSHOP II 6 Units

Prerequisite: MUS 47C or THTR 47C.

Advisory: Enrollment subject to audition and instructor assignment; this course is included in the Theatre Voice family of activity courses; not open to students with credit in THTR 47D.

Grade Type: Letter Grade, the student may select Pass/No Pass  
Not Repeatable.

18 hours laboratory. (216 hours total per quarter)

This course will assist the student to develop technical skills required at the advanced level of musical theatre in the areas of stage direction or choreography through the rehearsal and performance of a fully staged musical theatre production.

FHGE: Non-GE Transferable: UC/CSU

### MUS 48B SINGING TECHNIQUE FOR MUSICAL THEATRE 4 Units

Advisory: MUS 13A, 13B and 13C; this course is included in the Theatre Voice family of activity courses; not open to students with credit in THTR 48B.

Grade Type: Letter Grade Only  
Not Repeatable.

3 hours lecture, 3 hours laboratory. (72 hours total per quarter)

Practical introduction to the fundamentals of singing for musical theatre repertoire. Students will explore the principals of healthy vocal production in solo and/or ensemble singing to develop the singing voice through exercises and repertoire from the Standard American Musical Theatre. Songs will be developed with strong emphasis on character development and communication.

FHGE: Non-GE Transferable: UC/CSU

### MUS 48C MUSICAL THEATRE REPERTOIRE FOR SINGERS 4 Units

Prerequisite: MUS 48B or THTR 48B.

Advisory: MUS 13C; this course is included in the Theatre Voice family of activity courses; not open to students with credit in THTR 48C.

Grade Type: Letter Grade Only  
Not Repeatable.

3 hours lecture, 3 hours laboratory. (72 hours total per quarter)

Vocal techniques and styles as utilized in musical theater. Instruction includes development of singing skills, basic body movement, acting technique, interpretation of Broadway song literature in a staged performance. Students are required to prepare a final project excerpted from a standard works. Attendance at all scheduled performances is required.

FHGE: Non-GE Transferable: UC/CSU

### MUS 70R INDEPENDENT STUDY IN MUSIC/ 1 Unit MUS 71R MUSIC TECHNOLOGY 2 Units MUS 72R 3 Units MUS 73R 4 Units

Grade Type: Letter Grade, the student may select Pass/No Pass  
Not Repeatable.

3-12 hours laboratory per week. (36-144 hours total per quarter)

Provides an opportunity for the student to expand their studies in Music or Music Technology beyond the classroom by completing a project or an assignment arranged by agreement between the student and instructor. The student is required to contract with the instructor to determine the scope of assignment and the unit value assigned for successful completion. Students may take a maximum of 6 units of Independent Study per department.

FHGE: Non-GE Transferable: CSU

**MTEC 52B MIXING & MASTERING II 4 Units**

Formerly: MUS 81G

**Advisory: Not open to students with credit in MUS 81G.****Grade Type: Letter Grade, the student may select Pass/No Pass Not Repeatable.****3 hours lecture, 3 hours laboratory. (72 hours total per quarter)**

Advanced mixing and mastering techniques with Pro Tools. EQ, compression, reverb, delays and tempo maps as applied to all styles of music including jazz, pop, rock, hip-hop, orchestral and electronica. Apply critical listening to mixes and enhance mixes with automation, audio plug-ins and external hardware equipment. Use multi-band compression and advancing audio processing in mastering. Study mixes of professional audio engineers and recording artists. Prepare to work in commercial production facilities and apply these techniques in a home studio. Learn professional collaboration workflows, file management and delivery to a wide range of formats including CD, DVD, MP3 and Internet Streaming. Although this course uses Pro Tools, the concepts and techniques can be applied to any digital audio workstation (Logic, Cubase etc.) or any traditional analog mixing console.

**FHGE: Non-GE Transferable: CSU****MTEC 53A AUDIO PLUG-INS & SIGNAL PROCESSING I 4 Units**

Formerly: MUS 81D

**Advisory: Not open to students with credit in MUS 81D.****Grade Type: Letter Grade, the student may select Pass/No Pass Not Repeatable.****3 hours lecture, 3 hours laboratory. (72 hours total per quarter)**

Creative applications of Pro Tools hardware and software Plug-Ins used in contemporary music production and sound design. Signal processing, equalization, compression, Beat Detective, distortion, reverb, delay, pitch correction, modulation, advanced plug-in automation techniques. Compare plug-ins and processors from different companies including Sonnox, McDSP, Massey, Avid, Antares and Waves. Waves Certification Program textbook provides high-quality, standardized means of mastering Waves plug-ins. Successful completion achieves Waves Certification Level A.

**FHGE: Non-GE Transferable: CSU****MTEC 53B AUDIO PLUG-INS & SIGNAL PROCESSING II 4 Units**

Formerly: MUS 81E

**Advisory: Not open to students with credit in MUS 81E.****Grade Type: Letter Grade, the student may select Pass/No Pass Not Repeatable.****3 hours lecture, 3 hours laboratory. (72 hours total per quarter)**

Audio processing and mixing techniques using Pro Tools Plug-Ins with Waves Gold Certification Training material. Study and compare plug-ins from different manufactures including Sonnox, McDSP, Massey, Avid, Antares and Waves. Drum sample triggering and audio quantizing techniques. Apply Melodyne and Autotune pitch correction, EQ and compression, Elastic Audio editing. Sound restoration plug-ins, forensic audio enhancement, convolution reverbs, virtual instruments, advanced plug-in automation and signal processing techniques. Example exercises include sound design plug-ins for music, film, and video games. Successful completion achieves Waves Gold Level Certification.

**FHGE: Non-GE Transferable: CSU****MTEC 55A INTRODUCTION TO GAME AUDIO 4 Units**

Formerly: MUS 82F, 84A

**Advisory: Not open to students with credit in MUS 82F or 84A.****Grade Type: Letter Grade, the student may select Pass/No Pass Not Repeatable.****3 hours lecture, 3 hours laboratory. (72 hours total per quarter)**

Recording, editing and mastering sound for games and interactive multimedia. Working with dialog, scripts, sound effects, foley, ambient backgrounds, loops, elastic audio, tempo matching, digital processing and plug-ins. Producing game music, layering, splicing, mixing cinematic audio. Deliver game audio formats to commercial players and end users. Hands-on experience with professional examples of game audio production soundtracks and workflows including Sony Computer Entertainment and Microsoft Game Studios. Part of Avid Pro Tools Certification training program.

**FHGE: Non-GE Transferable: CSU****MTEC 55B ADVANCED SOUND DESIGN FOR GAMES 4 Units**

Formerly: MUS 84B

**Advisory: Not open to students with credit in MUS 84B.****Grade Type: Letter Grade, the student may select Pass/No Pass Not Repeatable.****3 hours lecture, 3 hours laboratory. (72 hours total per quarter)**

Designing and implementing sound effects for games and interactive media. Recording custom sound effects and working with commercial sound effects libraries. Advanced techniques for designing hard effects, foley sounds, and ambient backgrounds. Industry-standard workflows for sound effects implementation with audio middleware solutions. Hands-on experience with professional examples of game audio sound design on desktop, console, and mobile platforms.

**FHGE: Non-GE Transferable: CSU****MTEC 55C MUSIC COMPOSITION FOR GAMES 4 Units**

Formerly: MUS 84C

**Advisory: Not open to students with credit in MUS 84C.****Grade Type: Letter Grade, the student may select Pass/No Pass Not Repeatable.****3 hours lecture, 3 hours laboratory. (72 hours total per quarter)**

Composing, orchestrating, and implementing music for games and interactive multimedia. Fundamental composition and orchestration techniques for strings, brass, woodwinds, and percussion. Mixing and mastering finished compositions for optimal interactivity. Industry-standard workflows for interactive music implementation with sophisticated audio middleware solutions. Hands-on experience with professional examples of game music on desktop, console, and mobile platforms.

**FHGE: Non-GE Transferable: CSU****MTEC 57A SOUND DESIGN FOR FILM & VIDEO 4 Units**

Formerly: MUS 81B

**Advisory: Not open to students with credit in MDIA 81B, MUS 81B or VART 81B.****Grade Type: Letter Grade, the student may select Pass/No Pass Not Repeatable.****3 hours lecture, 3 hours laboratory. (72 hours total per quarter)**

Creating, editing, and mixing audio for film and video. Understanding aesthetic qualities of sound effects and music as it relates to story. Recording original sound elements and using commercial sound libraries. Editing, layering, and processing sound elements to create complex sound effects. Synchronizing audio to video using a digital audio workstation. Basics of mixing and mastering finished soundtracks for digital distribution.

**FHGE: Non-GE Transferable: CSU****MTEC 57B SURROUND SOUND PRODUCTION 4 Units**

Formerly: MUS 81J

**Advisory: Not open to students with credit in MUS 81J.****Grade Type: Letter Grade, the student may select Pass/No Pass Not Repeatable.****3 hours lecture, 3 hours laboratory. (72 hours total per quarter)**

Record, mix, and produce surround music with digital audio workstations. Calibrating surround speaker systems, recording surround music in the studio and concert hall, multichannel mixing for music and post, processing source sound elements using surround reverbs and delays, mastering music and post sessions to industry specifications, and encoding mixes into popular surround formats. Analysis of historically significant surround sound music recordings and film soundtracks.

**FHGE: Non-GE Transferable: CSU**



**MTEC 60A PRODUCING IN THE HOME STUDIO I 4 Units****Formerly: MUS 60A****Advisory: Not open to students with credit in MUS 60A.****Grade Type: Letter Grade, the student may select Pass/No Pass Not Repeatable.****4 hours lecture, 1 hour laboratory. (60 hours total per quarter)**

Design, set up and operation of an audio/video recording studio in a small environment. Space considerations, electrical requirements and acoustic treatment options. Computer requirements including processor speed, memory requirements, data storage devices and monitor selection/ placement. MIDI keyboard types and compatibility, mixer selection and setup, cable selection and care, microphone design, and USB/firewire interface options. Software programs and compatibility issues. How to produce recordings from start to finish in a home studio.

**FHGE: Non-GE Transferable: CSU****MTEC 60B PRODUCING IN THE HOME STUDIO II 4 Units****Formerly: MUS 60B****Advisory: Not open to students with credit in MUS 60B.****Grade Type: Letter Grade, the student may select Pass/No Pass Not Repeatable.****3 hours lecture, 3 hours laboratory. (72 hours total per quarter)**

In-depth operation of an audio/video recording studio in a small environment. Microphone selection and placement, creative sound treatments in non-traditional environments, and application of plug-in effects. Use of auxiliary tracks and busses. Mixing and mastering in various digital formats.

**FHGE: Non-GE Transferable: CSU****MTEC 62A COMPOSING & PRODUCING ELECTRONIC MUSIC I 4 Units****Formerly: MUS 6, 67****Advisory: Not open to students with credit in MUS 6 or 67.****Grade Type: Letter Grade, the student may select Pass/No Pass Not Repeatable.****3 hours lecture, 3 hours laboratory. (72 hours total per quarter)**

Introduction to the tools and techniques used to create and perform electronic music in a variety of styles. Programming of virtual analog and digital synthesizers, developing techniques for recording unique instruments and sounds, creating custom single and multi-sample patches using software samplers, using algorithmic composition tools and techniques, building interactive performance systems using object-oriented programming environments, and adapting hardware and software for live performance.

**FHGE: Non-GE Transferable: CSU****MTEC 62B COMPOSING & PRODUCING ELECTRONIC MUSIC II 4 Units****Formerly: MUS 66C****Advisory: Not open to students with credit in MUS 66C.****Grade Type: Letter Grade, the student may select Pass/No Pass Not Repeatable.****3 hours lecture, 3 hours laboratory. (72 hours total per quarter)**

Creating and editing digital audio with MIDI, hardware synthesizers and virtual instruments. Avid Pro Tools plug-ins including Boom, Vacuum, Xpand, Structure and Mini Grand. Third party software includes Native Instruments Kontakt, Reason and Ableton Live. History of sampling and loop based compositional techniques. Create, edit, and arrange drum beats. Configure filters, envelopes, modulation, and arpeggiators. Modify all synthesizer parameters to create unique sounds. Utilize Pro Tools MIDI Editor and Score Editor. Analyze variety of musical styles utilizing MIDI and Virtual Instruments for composition and production. Examples from recording artists including The Beatles, Dr. Dre, Michael Jackson, Peter Gabriel, Radiohead, Herbie Hancock, Rachmaninov and Miles Davis. Organize sound libraries for music production, TV, film, websites and video games.

**FHGE: Non-GE Transferable: CSU****MTEC 62C COMPOSING & PRODUCING ELECTRONIC MUSIC III 4 Units****Grade Type: Letter Grade, the student may select Pass/No Pass Not Repeatable.****3 hours lecture, 3 hours laboratory. (72 hours total per quarter)**

Advanced techniques for electronic music production in a variety of genres. Recording and processing vocals. Advanced analog and digital synthesis and sound design techniques. Field recording of original samples for use in producing drum beats and textures. Mixing and mastering finished compositions for commercial distribution. Remixing existing songs from both stereo mixes and multi-channel stems. Creating dynamic, real-time live performances using a variety of hardware controllers.

**FHGE: Non-GE Transferable: CSU****MTEC 66A MUSIC VIDEO PRODUCTION 4 Units****Formerly: MUS 81F****Advisory: MDIA 20, MTEC 57A. Not open to students with credit in MUS 81F.****Grade Type: Letter Grade, the student may select Pass/No Pass Not Repeatable.****3 hours lecture, 3 hours laboratory. (72 hours total per quarter)**

Beginning digital video production course. Learning the basics of digital video production by shooting a music video. Music videos provide a unique opportunity to look at the moving image from the perspective of a recorded piece of music. Ideal platform for developing essential technical skills while learning the importance of aesthetic choices in the video production process. Emphasis on the aesthetics and technical aspects of video camera operation; pre-production planning, including collaboration, visualization, and storyboarding; production techniques and concepts such as mise-en-scene, set design, and lighting. Emphasis on visual story telling and creative problem solving.

**FHGE: Non-GE Transferable: CSU****MTEC 70A PRO TOOLS 101-AVID CERTIFICATION 4 Units****Formerly: MUS 82A****Advisory: Not open to students with credit in MUS 82A.****Grade Type: Letter Grade, the student may select Pass/No Pass Not Repeatable.****3 hours lecture, 3 hours laboratory. (72 hours total per quarter)**

Introduction to Pro Tools with Avid Certification training material. Basic audio editing tools and techniques, plug-ins and mixing in the Pro Tools environment. Build sessions that include multitrack recordings of live instruments, MIDI sequences, virtual instruments, audio loops and beats. Practical experience with examples from major label recording artists and feature films. Understanding menus, windows, preferences and system configurations for Pro Tools in home studios and professional facilities. Intro to automation, dialog editing and audio post production for film and video. Required for Avid Pro Tools Certification.

**FHGE: Non-GE Transferable: CSU****MTEC 70B PRO TOOLS 110-AVID CERTIFICATION 4 Units****Formerly: MUS 82B****Advisory: Not open to students with credit in MUS 82B.****Grade Type: Letter Grade, the student may select Pass/No Pass Not Repeatable.****3 hours lecture, 3 hours laboratory. (72 hours total per quarter)**

Pro Tools production concepts and techniques with Avid Certification training material. Recording, editing, routing audio and MIDI data. Managing Pro Tools sessions, using virtual instruments, plug-ins, loop recording, Elastic Audio, Beat Detective and music notation. Conform loops and beats to any tempo. Introduction to control surfaces, automation modes and signal path workflows. Practical applications with examples from professional recording artists including pop, rock, jazz and hip hop. Create tempo maps, meter changes and transpose key signatures. Required for Avid Pro Tools Operator Level Certification.

**FHGE: Non-GE Transferable: CSU**

**MTEC 70C PRO TOOLS 201-AVID CERTIFICATION 4 Units**

Formerly: MUS 82C

Advisory: Not open to students with credit in MUS 82C.

Grade Type: Letter Grade, the student may select Pass/No Pass Not Repeatable.

3 hours lecture, 3 hours laboratory. (72 hours total per quarter)

Avid Pro Tools Certified training material covers concepts and skills needed to operate Pro Tools in a professional recording studio environment. Introduction to Pro Tools HD system configurations. Pro Tools HD features including control surfaces, automation, advanced editing, mixing, hardware setup and session management. Practical examples and experience with exercise files from professional music, film and TV productions. Required class for Avid Pro Tools Operator Level Certification. Prepares for enrollment in Pro Tools 300 Expert Level Certification Courses.

FHGE: Non-GE Transferable: CSU

**MTEC 70D PRO TOOLS 210M-AVID CERTIFICATION 4 Units**

Formerly: MUS 82D

Advisory: Not open to students with credit in MUS 82D.

Grade Type: Letter Grade, the student may select Pass/No Pass Not Repeatable.

3 hours lecture, 3 hours laboratory. (72 hours total per quarter)

Avid Pro Tools Certified course completes skills needed to operate sophisticated Pro Tools systems in professional music production environments. Music production techniques, composing with MIDI, loop editing, sampling in Pro Tools, Beat Detective, drum replacement and augmentation, final mixing and mastering. Collaborate workflows between home studios and commercial recording facilities. Pro Tools keyboard shortcuts for increased efficiency. Practical examples and experience with exercise files from professional recording artists. Successful completion achieves Avid Pro Tools Operator Music Certification.

FHGE: Non-GE Transferable: CSU

**MTEC 70E PRO TOOLS 210P-AVID CERTIFICATION 4 Units**

Formerly: MUS 82E

Advisory: Not open to students with credit in MUS 82E.

Grade Type: Letter Grade, the student may select Pass/No Pass Not Repeatable.

3 hours lecture, 3 hours laboratory. (72 hours total per quarter)

Synchronizing Pro Tools for audio post production with film, video and multimedia. Recording and editing ADR (automated dialog replacement), music, sound effects and multichannel audio. Mixing stereo and surround sound formats synchronized to digital picture. Layback and export options for final delivery to broadcast industry formats including QuickTime and Avid media. Practical experience with examples from feature films, documentaries and TV commercials. Successful completion achieves Avid Pro Tools Operator Post Certification.

FHGE: Non-GE Transferable: CSU

**MTEC 70F PRO TOOLS 310M-AVID CERTIFICATION 4 Units**

Formerly: MUS 82G

Advisory: Not open to students with credit in MUS 82G.

Grade Type: Letter Grade, the student may select Pass/No Pass Not Repeatable.

3 hours lecture, 3 hours laboratory. (72 hours total per quarter)

Advanced operation of Pro Tools in a professional music production environment. Audio recording, editing, MIDI, virtual instruments, final mix down, automation and mastering techniques. Integration of Pro Tools shortcuts and equipment configurations for increased efficiency in recording studio facility workflows. Hands-on experience with examples from major label recording artists, producers and mix engineers. Successful completion achieves Avid Pro Tools Expert Level Music Certification.

FHGE: Non-GE Transferable: CSU

**MTEC 70G PRO TOOLS 310P-AVID CERTIFICATION 4 Units**

Grade Type: Letter Grade, the student may select Pass/No Pass Not Repeatable.

3 hours lecture, 3 hours laboratory. (72 hours total per quarter)

Advanced operation of Pro Tools in a professional post-production environment. Hardware configuration and troubleshooting for synchronization to linear and non-linear video. Foley recording techniques using the Avid PRE. Post-production sound design workflows utilizing plug-in processing and Elastic Audio. Mixing and automation concepts exploring the Pro Tools HD Mix Engine. Synchronizing multiple Pro Tools systems using Satellite Link. Advanced layback concepts for outputting linear and non-linear printmasters. Hands-on experience with examples from film and television. Successful completion prepares students for Avid Pro Tools Expert Level Post Certification.

FHGE: Non-GE Transferable: CSU

**MTEC 72A PRODUCING MUSIC WITH REASON 4 Units**

Formerly: MUS 66B

Advisory: Not open to students with credit in MUS 66B.

Grade Type: Letter Grade, the student may select Pass/No Pass Not Repeatable.

3 hours lecture, 3 hours laboratory. (72 hours total per quarter)

Creating and editing digital audio with Pro Tools and Reason. Introduction to Reason's virtual instruments including Dr. Rex, Subtractor, Malstrom, Thor, Redrum and NN-Xt. Songwriting, musical composition, and the basic elements of music (pitch, rhythm, harmony, style and form) as they relate to contemporary music. Introduction to synthesis and digital sampling techniques. Integrate Reason and Pro Tools using ReWire, Pro Tools MIDI Editor and the Pro Tools Mixer.

FHGE: Non-GE Transferable: CSU

**MTEC 72B PRODUCING MUSIC WITH ABLETON LIVE 4 Units**

Formerly: MUS 66E

Advisory: Not open to students with credit in MUS 66E.

Grade Type: Letter Grade, the student may select Pass/No Pass Not Repeatable.

3 hours lecture, 3 hours laboratory. (72 hours total per quarter)

Producing music with Ableton Live software. Compose, record, remix, improvise, produce and edit music. Study Ableton Live interface, edit audio, use plug-ins, MIDI sequencing and realtime mixing techniques. Compile live sets from audio clips, loops, samples in realtime and create songs in a variety of styles including R&B, Hip-hop, Trance, Drum and Bass, and House Music. Integrate Ableton Live with Pro Tools for final mixing and delivery to dance clubs, radio stations and iTunes.

FHGE: Non-GE Transferable: CSU

**MTEC 72C PRODUCING MUSIC WITH LOGIC PRO 4 Units**

Formerly: MUS 66F

Advisory: Not open to students with credit in MUS 66F.

Grade Type: Letter Grade, the student may select Pass/No Pass Not Repeatable.

3 hours lecture, 3 hours laboratory. (72 hours total per quarter)

Producing Music with Apple Logic Pro software. Understanding the Logic Pro interface, windows and editors, navigation, key commands and screensets. MIDI editing, MIDI real-time control, audio recording and editing, and working with QuickTime video. Explore Logic Pro software instruments, including the ES2, EXS-24, Sculpture, UltraBeat, subtractive synthesizers and vintage instruments. Study critical listening examples with interactive demos and tutorials. Elements of production design, music composition and song form, arrangement tools and mixing techniques.

FHGE: Non-GE Transferable: CSU

**MTEC 72D MAKING MUSIC WITH THE APPLE IOS 4 Units****Formerly: MUS 66D****Advisory: Not open to students with credit in MUS 66D.****Grade Type: Letter Grade, the student may select Pass/No Pass Not Repeatable.****4 hours lecture, 1 hour laboratory. (60 hours total per quarter)**

Study of music creation applications and practices on Apple iOS-based devices (iPod Touch, iPhone, iPad). Primary emphasis on music sequencing, music performance, audio distribution and music theory. Secondary emphasis on audio sampling, recording and mixing. iOS-compatible audio, MIDI and video interfaces. USB and wireless syncing. Inter-app protocols such as AudioCopy/AudioPaste and Virtual MIDI.

**FHGE: Non-GE Transferable: CSU**

**MTEC 80A MUSIC BUSINESS 4 Units****Formerly: MUS 50A****Advisory: Not open to students with credit in MUS 50A.****Grade Type: Letter Grade Only Not Repeatable.****4 hours lecture, 1 hour laboratory. (60 hours total per quarter)**

Study of legal and business aspects of the music industry. Emphasis on publishing, licensing, and promotion. Copyright law, interaction between songwriters and music publishers, record companies, distributors and the rules that govern them. How music is licensed, service marks, trademarks and patents. The role of lawyers, agents, personal managers, producers and promoters. Licensing and copyright of intellectual properties in the growing multimedia industry and the internet. Synchronization of music in film, video and television. Career development and how major/independent labels market and distribute media.

**FHGE: Non-GE Transferable: CSU**

**MTEC 80B ENTERTAINMENT LAW & NEW MEDIA 4 Units****Formerly: MUS 50B****Advisory: Not open to students with credit in MUS 50B.****Grade Type: Letter Grade Only Not Repeatable.****4 hours lecture, 1 hour laboratory. (60 hours total per quarter)**

In-depth study and discussion of entertainment law as it applies to the emerging new media market and the music industry. Internet sales and distribution for new media, file sharing, licensing for the web, and digital copyright considerations. Promotional packages, website development, delivery systems, career promotion strategies, contracts and touring. In-depth analysis of contracts and regulations/potential of starting an independent media production company, record label, or online retail site. Sampling licenses/international copyright law and publishing.

**FHGE: Non-GE Transferable: CSU**

**MTEC 80C BASICS OF MUSIC PUBLISHING 4 Units****Formerly: MUS 51****Advisory: Not open to students with credit in MUS 18, 51, or 59.****Grade Type: Letter Grade, the student may select Pass/No Pass Not Repeatable.****3 hours lecture, 3 hours laboratory. (72 hours total per quarter)**

Prepares the student to navigate the music publishing business by eliminating the legalese and explaining the business in everyday language. Class includes writing original songs for review. Active listening and constructive critiquing of original student compositions.

**FHGE: Non-GE Transferable: CSU**

**MTEC 82A CAREERS IN MUSIC & MEDIA 4 Units****Formerly: MUS 50C****Advisory: Not open to students with credit in MUS 50C or 65.****Grade Type: Letter Grade, the student may select Pass/No Pass Not Repeatable.****3 hours lecture, 3 hours laboratory. (72 hours total per quarter)**

An overview of the music industry and its career opportunities. Areas of study include studio management and engineering, music merchandising on the local and national levels, artist promotion, concert promotion, concert management, music contracting, graphic support in music recording, the role of the agent/personal manager, technical support in electronic music, technical support in traditional music, video and film production and editing, instrument maintenance and repair, and music retailing. Guest lectures from local industry professionals, field trips to studios, production facilities and retail facilities.

**FHGE: Non-GE Transferable: CSU**

**MTEC 82B MARKETING YOUR MUSIC 4 Units****Formerly: MUS 60C****Advisory: Not open to students with credit in MUS 60C.****Grade Type: Letter Grade, the student may select Pass/No Pass Not Repeatable.****4 hours lecture, 1 hour laboratory. (60 hours total per quarter)**

Post Production, manufacturing, graphic design, marketing and managing all the aspects of a CD release from the mastering of an audio recording to sales and promotions of the final product. Creating a business, a publishing company, obtain copyrights for sampled audio or works of other artists, protect and promote original music. Create an image, photography and press kits for promotional campaigns, marketing, merchandise and sales. Making artistic and business decisions, working with manufacturing companies and graphic artists to create the final product for sale.

**FHGE: Non-GE Transferable: CSU**

**MTEC 82C INTRODUCTION TO THE VIDEO GAME BUSINESS 3.5 Units****Formerly: MUS 50D****Advisory: Not open to students with credit in MUS 50D.****Grade Type: Letter Grade, the student may select Pass/No Pass Not Repeatable.****2.5 hours lecture, 3 hours laboratory. (66 hours total per quarter)**

Introduction to the video game business including how games are designed, manufactured, marketed and distributed. Examines the differences between game publishers and game developers. Breaks down different career paths in the industry and how their roles are integrated such as producers, artists, programmers, marketers, testers, etc. Covers the various market places for games and how they differ.

**FHGE: Non-GE Transferable: CSU**

**MTEC 84A INTRODUCTION TO MUSIC THERAPY & SOUND HEALING 4 Units****Formerly: MUS 83A****Advisory: Not open to students with credit in MUS 83A.****Grade Type: Letter Grade, the student may select Pass/No Pass Not Repeatable.****3 hours lecture, 3 hours laboratory. (72 hours total per quarter)**

Introduction to the field of music therapy and the creative powers of sound. Survey the history of the American Music Therapy Association as applied by practicing music therapists. Study diverse styles of music including classical, jazz, blues, pop, hip-hop, new age and world music used as a transformative force to enhance social, emotional, educational, behavioral development and pain management. Apply music therapy concepts to compose and produce original music. Develop music making skills with drumming, group songwriting, lyric analysis, guided relaxation, movement, improvisation and original compositions integrated with the latest music software technologies including Pro Tools and Virtual Instruments. Study prevention of injury and maintenance of health for musicians and performing artists. Survey careers in the music therapy industry including degrees, certifications and multi-media production applications.

**FHGE: Non-GE Transferable: CSU**

**MTEC 86A SOUND REINFORCEMENT & LIVE RECORDING** 4 Units

Formerly: MUS 62

Advisory: Not open to students with credit in MUS 62.

Grade Type: Letter Grade, the student may select Pass/No Pass Not Repeatable.

3 hours lecture, 3 hours laboratory. (72 hours total per quarter)

Setup and operation of live sound reinforcement systems. Basic design and operation of analog and digital mixing boards. Microphone type, design, construction and selection. Loudspeaker monitor systems and their application with musical groups and performers. Stereo and multichannel recording techniques for live concert productions. Practice with live musicians in practice and performance settings. Location field recording dialog and ambient sound effects for film and TV synchronized to digital video.

FHGE: Non-GE Transferable: CSU

**MTEC 88A SONGWRITER'S WORKSHOP** 4 Units

Formerly: MUS 58A

Advisory: Not open to students with credit in MUS 58A.

Grade Type: Letter Grade, the student may select Pass/No Pass Not Repeatable.

3 hours lecture, 3 hours laboratory. (72 hours total per quarter)

Workshop course for beginning songwriters that focuses on basic songwriting styles and techniques. Different songwriting basic methods are presented. Students are assigned weekly songwriting projects. Class is appropriate for basic levels of songwriting competency.

FHGE: Non-GE Transferable: CSU

**MTEC 88B MODERN SONG COMPOSITION** 4 Units

Formerly: MUS 58B

Advisory: Not open to students with credit in MUS 58B.

Grade Type: Letter Grade, the student may select Pass/No Pass Not Repeatable.

3 hours lecture, 3 hours laboratory. (72 hours total per quarter)

Workshop course for intermediate songwriters that focuses on contemporary and songwriting methodology. Different songwriting components and structures are presented. Students are assigned weekly songwriting projects and are expected to submit finished songs with all the necessary components. Course includes analytical listening and discussion of various songwriting styles. Class is appropriate for medium levels of songwriting competency.

FHGE: Non-GE Transferable: CSU

**MTEC 88C ADVANCED SONG STRUCTURE** 4 Units

Formerly: MUS 58C

Advisory: Not open to students with credit in MUS 58C.

Grade Type: Letter Grade, the student may select Pass/No Pass Not Repeatable.

3 hours lecture, 3 hours laboratory. (72 hours total per quarter)

Workshop course for advanced songwriters that focuses on higher-level topics such as Self Criticism, Rewriting and Co-Writing. Demonstrations of the practical use of technique and an understanding of the works of the most accomplished professional songwriters. Class is appropriate for advanced levels of songwriting competency.

FHGE: Non-GE Transferable: CSU

**NANOTECHNOLOGY**

Physical Sciences, Mathematics & Engineering  
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**NANO 10 INTRODUCTION TO NANOTECHNOLOGY** 5 Units

Advisory: CHEM 30A & 30B; not open to students with credit in NANO 50.

Grade Type: Letter Grade Only Not Repeatable.

4 hours lecture, 3 hours laboratory. (84 hours total per quarter)

Introduction to Nanoscience and Nanotechnology, emphasis on nanoscale phenomenon, including novel properties and industrial applications of nanoengineered materials. Review of the history and development of nanotechnology, and synergy of chemistry, physics, and biology. Introduces tools for fabrication, structural characterization, and physical properties measurements. Hands on introduction to Atomic Force Microscopy and Scanning Electron Microscopy.

FHGE: Non-GE Transferable: UC/CSU

**NANO 51 APPLICATIONS OF NANOTECHNOLOGY** 5 Units

Advisory: CHEM 30A or equivalent; BIOL 10 or equivalent; not open to students with credit in ENGR 76.

Grade Type: Letter Grade, the student may select Pass/No Pass Not Repeatable.

5 hours lecture. (60 hours total per quarter)

Introduction to the underlying principles and industrial applications of nanoscience and nanotechnology. Introduces scientific principles and theory relevant at the nanoscale dimension, including the emergence and engineering of novel properties at scale. Overview of current and future applications of nanotechnology in materials engineering, physics, chemistry, biology, electronics and computing, clean energy technology, and medicine. Introduces the field of nanomaterials engineering from an application design perspective, and serves as the foundation to the integrated nanotechnology program.

FHGE: Non-GE Transferable: CSU

**NANO 52 NANOMATERIALS & NANOSTRUCTURES** 5 Units

Advisory: Knowledge of atomic and molecular structure, basic physical properties of materials, electricity and magnetism, and thermal and electrical conductivity of materials.

Grade Type: Letter Grade, the student may select Pass/No Pass Not Repeatable.

5 hours lecture. (60 hours total per quarter)

Introduction to the fundamental science and technology of nanomaterials, including semiconductors, carbon nanostructures, polymer and composite materials, and high performance metals and alloys. Topics include a review of the periodic table, atomic and electronic structure, chemical bonding and molecular geometry, crystal structure and crystallization, phase diagrams and phase transitions, and semiconduction. Particular emphasis placed on understanding material processes, such as the physics of solids, importance of defects and impurities in material structures, thermal conduction, deformation and plasticity, and electromagnetism. Depending on student interests, advanced topics can include surface chemistry, quantum structures, and fabrication of nanostructures such as carbon nanotubes and organic thin films.

FHGE: Non-GE Transferable: CSU

**NANO 53 NANOMATERIALS CHARACTERIZATION** 5 Units

**Advisory:** NANO 52 or equivalent; basic knowledge of materials science, physics, and inorganic/organic chemistry; experience with some type of analytical instrumentation is beneficial.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**5 hours lecture. (60 hours total per quarter)**

Techniques for micro and nano characterization of materials, including imaging, structural and surface analysis techniques, and physical properties measurements. Surveys the physics of modern instrumentation involved in characterizing materials, and the typical approaches to analyzing a wide variety of materials and nanostructures. Materials analysis approaches to quality assurance and quality control, failure analysis, and problem solving. Hands-on exercises and experiential learning will include use of the Scanning Electron Microscope (SEM), Atomic Force Microscope (AFM), Auger Electron Spectroscopy (AES), X-Ray Photoelectron Spectroscopy (XPS), and Raman spectroscopy.

**FHGE: Non-GE Transferable: CSU**

**NANO 54 NANOFABRICATION TOOLS & PROCESS** 5 Units

**Advisory:** NANO 52 & 53 or equivalent; basic knowledge of materials science, physics, and inorganic/organic chemistry.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**5 hours lecture. (60 hours total per quarter)**

Introduction to common fabrication techniques used in the synthesis, preparation, and processing of nanostructured materials. Topics include thin film coating and deposition, plasma deposition and surface modification, powder metallurgy, and fabrication of silicon nano and micro structures. Emphasis on safety, process development, monitoring and optimization, and quality control. Students will fabricate and characterize small prototype materials as part of the integrated nanomaterials engineering program.

**FHGE: Non-GE Transferable: CSU**

**NANO 62 NANOMATERIALS ENGINEERING: STRUCTURES, PROCESSING & CHARACTERIZATION** 5 Units

**Advisory:** CHEM 1A or 1AH; NANO 51; and PHYS 2A.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**4 hours lecture, 3 hours laboratory. (84 hours total per quarter)**

Provides support to students and practitioners of materials engineering to learn about structure-property relationships, materials processing and characterization, for twenty key nanostructures and nanostructured materials. Provides support for students using characterization and deposition tools to explore nanomaterials engineering, process development and optimization.

**FHGE: Non-GE Transferable: CSU**

**NANO 70R INDEPENDENT STUDY IN NANOTECHNOLOGY** 1 Unit  
**NANO 71R** 2 Units  
**NANO 72R** 3 Units  
**NANO 73R** 4 Units

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**3-12 hours laboratory per week. (36-144 hours total per quarter)**

Provides an opportunity for the student to expand their studies in Nanotechnology beyond the classroom by completing a project or an assignment arranged by agreement between the student and instructor. The student is required to contract with the instructor to determine the scope of assignment and the unit value assigned for successful completion. Students may take a maximum of 6 units of Independent Study per department.

**FHGE: Non-GE Transferable: CSU**

**NON-CREDIT: BASIC SKILLS**

**Non-Credit**

**650.949.6950**

**NCBS 401A MATHEMATICAL FOUNDATIONS FOR COLLEGE PART I** 0 Units

**Non-degree applicable non-credit course.**

**Grade Type:** Non-credit course that receives no grade

**Unlimited Repeatability.**

**20 hours total.**

Part one of a bridge to college program that focuses on the development of quantitative thinking skills within the context of: the culture of the college classroom: reading and understanding the syllabus, completing assignments and meeting deadlines, taking quizzes and exams, and classroom communication skills; the assessment of skills without a calculator; exploration of the resources offered by the community college in mathematics; the development of basic mathematical literacy skills to enhance future success in mathematics. Introduction to addition, subtraction, multiplication and division of whole numbers in preparation for basic skills mathematics course.

**FHGE: Non-GE**

**NCBS 401B MATHEMATICAL FOUNDATIONS FOR COLLEGE PART II** 0 Units

**Non-degree applicable non-credit course.**

**Prerequisite:** NCBS 401A.

**Grade Type:** Non-credit course that receives no grade

**Unlimited Repeatability.**

**40 hours total.**

Part two of a bridge to college program that focuses on the development of quantitative thinking skills within the context of: the culture of the college classroom: reading and understanding the syllabus, completing assignments and meeting deadlines, taking quizzes and exams, and classroom communication skills; the assessment of skills without a calculator; exploration of the resources offered by the community college in mathematics; the development of basic mathematical literacy skills to enhance future success in mathematics. Introduction to addition, subtraction, multiplication and division of fractions in preparation for basic skills mathematics course.

**FHGE: Non-GE**

**NCBS 405 SUPPLEMENTAL INSTRUCTION: PHYSICAL SCIENCE, MATH & ENGINEERING** 0 Units

**Non-degree applicable non-credit course.**

**Grade Type:** Non-credit course that receives no grade

**Unlimited Repeatability.**

**60-360 hours total.**

An open-entry, open-exit course for students who seek academic support, through supplemental instructions and use of computers, to fill in missing prerequisite knowledge and strengthen skills developed in a referring course or courses as follows: ACTG 1A-C, 1BH, 1CH, 51A-C, 52, 53, 58, 59, 60, 64A-B, 65, 66, 67, 68A-C, 75, 76; ASTR 10A-B, 10BH, 10L, 54H, 77; CHEM 1A-C, 1AH, 1BH, 12A-C, 12AL-CL, 13AH-CH, 20, 25, 30A, 30B, 70; C S 1A-C, 1AH, 1M, 2A-C, 2AH, 3A, 10, 18, 19A, 20A, 21A, 21B, 22A, 26A, 30A-C, 31A, 40A, 49, 50A-E, 52A-C, 53A-C, 54A-D, 56A, 56B, 60A-C, 61A, 63A, 64A, 80A, 81A, 82A, 84A, 84B; ECON 1A-B, 9, 9H, 25, 54H; ENGR 6, 10, 11, 12, 35, 37, 37L, 39, 40, 45, 46, 47, 49, 62A-D, 70R, 83A-D; MATH 1A-D, 1AH, 1AHP, 2A, 2B, 10, 11, 12, 17, 22, 42, 44, 48A-C, 70R, 105, 108, 217, 220, 230, 230J, 235; NANO 10, 51, 52, 53, 54, 62; PHYS 2A-C, 2AM-CM, 4A-D, 6, 12, 70R.

**FHGE: Non-GE**

## NON-CREDIT: BIOLOGICAL & HEALTH SCIENCES

Biological and Health Sciences  
650.949.7249

### NCBH 400 SUPPLEMENTAL INSTRUCTION: BIOLOGICAL & HEALTH SCIENCES 0 Units

Non-degree applicable non-credit course.  
Grade Type: Non-credit course that receives no grade  
Unlimited Repeatability.  
36-360 hours total.

An open-entry, open-exit course for students who seek academic support through supplemental instruction and use of computers, to fill in missing prerequisite knowledge and strengthen skills developed in a referring course or courses as follows: AHS 60A; BIOL 1A-D, 8, 9, 10, 12, 13, 14, 15, 40A-C, 41, 45, 58; D A 50, 51A-C, 53A-C, 56, 57, 58, 60A, 60B, 62A-C, 63, 71, 73, 74, 85, 88; DMS 50A, 50B, 51A, 52A-C, 53A-C, 54A, 54B, 55A, 55B, 56A, 56B, 60A-F, 70A-E, 72A, 80A; EMS 50, 52, 53, 60A, 60B, 61A, 61B, 62A, 62B, 63A, 63B, 64A, 64B, 120; HLTH 21, 60, 70, 75; HORT 10, 15, 21, 22, 23, 24, 25, 26, 30, 31, 40, 43, 45, 52C, 52E-H, 54A-D, 55A, 60B-D, 60F, 60G, 60J, 80A-D; PCA 51A, 52A, 52B, 53A-C, 54A-C, 56A-G, 60A-E, 61A-C, 62A-C; PHT 50, 51, 52A, 52B, 53, 54A, 54B, 55A-C, 56A, 56B, 60, 61, 62; RSPT 50A-C, 51A-C, 52, 53A, 53B, 54, 55A-G, 60B, 60C, 61A-D, 62, 63A, 65, 70A-D, 82, 83, 84, 85, 86, 87A, 87B, 88; R T 51A-C, 52D, 53, 53A-D, 53AL-CL 54A-C, 55A-C, 61B, 62A-C, 63, 63A-C, 64, 65, 71, 72; V T 50A-F, 51, 52A, 52B, 53A-C, 54A, 54B, 55, 56, 60, 61, 66, 70, 72, 75A-C, 81, 83, 84, 85, 86, 87A, 87B, 88A, 89, 91, 92, 93, 95.

FHGE: Non-GE

## NON-CREDIT: COLLEGE SKILLS

Language Arts  
650.949.7250

### NCSS 406 SUPERVISED TUTORING 0 Units

Non-degree applicable non-credit course.  
Grade Type: Non-credit course that receives no grade  
Unlimited Repeatability.  
60 to 360 hours total.

This class provides instructional oversight and supervision of tutoring in various academic subjects through a designated learning center to augment classroom instruction. The course requires a referral from a subject-area instructor, counselor or supplemental instructor.

FHGE: Non-GE

## NON-CREDIT: ENGLISH AS A SECOND LANGUAGE

Language Arts  
408.745.8000

### NCEL 400 BRIDGE TO COLLEGE 0 Units

Non-degree applicable non-credit course.  
Advisory: Completion of the adult education course sequence or test score above 247 on the CASAS Level C Reading test.  
Grade Type: Non-credit course that receives no grade  
Unlimited Repeatability.  
60 hours total.

A bridge to college course for non-native speakers of English that focuses on the development of English language skills within the context of: the culture of the college classroom; selecting and registering for classes, reading and understanding the syllabus, completing assignments and meeting deadlines, taking quizzes and test, and classroom communication skills; the assessment of skills, exploration of life paths and the resources offered by the community college; the development of basic digital literacy skills to access information on the Internet.

FHGE: Non-GE

### NCEL 401 ESL FOR CHILD CARE PROVIDERS 0 Units

Non-degree applicable basic skills-3 course.  
Advisory: Concurrent enrollment in a Child Development course.  
Grade Type: Non-credit course that receives no grade  
Unlimited Repeatability.  
24 hours total.

Develops basic written and oral communications skills needed for success in credit Child Development courses. Emphasis on practice of listening, speaking, reading and writing skills necessary in a typical credit-level child development course. Skills will be taught within the context of common child development topics such as age-appropriate development and behavioral issues. Intended for students in the child development program who need assistance gaining college level skills.

FHGE: Non-GE

### NCEL 402 VOCATIONAL ESL FOR ALLIED HEALTH: GERIATRIC HOME AIDE 0 Units

Non-degree applicable non-credit course.  
Grade Type: Non-credit course that receives no grade  
Unlimited Repeatability.  
30 hours total.

Accompanies the geriatric home aid and nutrition courses as a support for English language learners and those needing additional time to cover the content in the Geriatric and Home Aid courses. Provides students with support for acquisition of vocabulary and skills covered in Geriatric and Home Aid courses, incorporating content-based language practice for non-native English speakers interested in Allied Health careers. Emphasis will be placed on practice of students' oral/aural skills as well as social and cultural skills necessary for successful interaction in health care settings.

FHGE: Non-GE

### NCEL 403A TRANSITIONING TO COLLEGE ESL FOR WORKING ADULTS PART I 0 Units

Non-degree applicable non-credit course.  
Grade Type: Non-credit course that receives no grade  
Unlimited Repeatability.  
36 hours total.

Introduction for the adult English-learner to the community college campus and requirements for successful studies, and to prepare ESL students for successful transition to credit college-level coursework. Primary focus will be on Listening and Speaking activities in the classroom, including note taking and class participation.

FHGE: Non-GE

### NCEL 403B TRANSITIONING TO COLLEGE ESL FOR WORKING ADULTS PART II 0 Units

Non-degree applicable non-credit course.  
Grade Type: Non-credit course that receives no grade  
Unlimited Repeatability.  
36 hours total.

Assists the adult English-learner to navigate the community college campus and requirements for successful studies and to prepare ESL students for successful transition to credit college-level coursework. Primary focus will be on Reading and Writing skills needed in and outside the classroom for academic success.

FHGE: Non-GE

### NCEL 411 ADVANCED-BEGINNING ENGLISH AS A SECOND LANGUAGE I 0 Units

Non-degree applicable non-credit course.  
Formerly: ESLL 200A  
Grade Type: Non-credit course that receives no grade  
Unlimited Repeatability.  
120 hours total.

Introductory advanced-beginning level integrated skills course for learners of English as an additional language. Focus is on developing a basic level of grammar and vocabulary through listening, speaking, reading and writing so that learners can communicate with other English speakers in and outside of the classroom.

FHGE: Non-GE

**NCEL 412    ADVANCED-BEGINNING ENGLISH AS A SECOND LANGUAGE II    0 Units**

Non-degree applicable non-credit course.

Formerly: ESLL 200B

Grade Type: Non-credit course that receives no grade

Unlimited Repeatability.

120 hours total.

Continuation of the advanced-beginning level integrated skills course for learners of English as an additional language. Focus on developing a basic level of grammar and vocabulary through listening, speaking, reading and writing so that learners can communicate with other English speakers in and outside of the classroom.

FHGE: Non-GE

**NCEL 413    ADVANCED-BEGINNING ENGLISH AS A SECOND LANGUAGE III    0 Units**

Non-degree applicable non-credit course.

Grade Type: Non-credit course that receives no grade

Unlimited Repeatability.

120 hours total.

Final advanced-beginning level integrated skills course for learners of English as an additional language. Focus on developing a basic level of grammar and vocabulary through listening, speaking, reading and writing so that learners can communicate with other English speakers in and outside of the classroom.

FHGE: Non-GE

**NCEL 421    INTERMEDIATE ENGLISH AS A SECOND LANGUAGE I    0 Units**

Non-degree applicable non-credit course.

Formerly: ESLL 210A

Grade Type: Non-credit course that receives no grade

Unlimited Repeatability.

120 hours total.

Introductory intermediate level integrated skills course for learners of English as an additional language who already have a basic level of speaking, listening, reading and writing. Focus assists learners advance in their development of grammar and vocabulary through listening, speaking, reading and writing.

FHGE: Non-GE

**NCEL 422    INTERMEDIATE ENGLISH AS A SECOND LANGUAGE II    0 Units**

Non-degree applicable non-credit course.

Formerly: ESLL 210B

Grade Type: Non-credit course that receives no grade

Unlimited Repeatability.

120 hours total.

This is a continuation of the intermediate level integrated skills course for learners of English as an additional language who already have a basic level of speaking, listening, reading and writing. The focus of this course is help learners advance in their development of grammar and vocabulary through listening, speaking, reading and writing.

FHGE: Non-GE

**NCEL 423    INTERMEDIATE ENGLISH AS A SECOND LANGUAGE III    0 Units**

Non-degree applicable non-credit course.

Grade Type: Non-credit course that receives no grade

Unlimited Repeatability.

120 hours total.

This is the final intermediate level integrated skills course for learners of English as an additional language who already have a basic level of speaking, listening, reading and writing. The focus of this course is help learners advance in their development of grammar and vocabulary through listening, speaking, reading and writing.

FHGE: Non-GE

**NCEL 470    LOW TO INTERMEDIATE VOCATIONAL ESL FOR FOOD WORKERS    0 Units**

Non-degree applicable basic skills-4 course.

Grade Type: Non-credit course that receives no grade

Unlimited Repeatability.

48 hours total.

Introductory low-to-intermediate level vocational English course for non-native speakers in the food service industry. Focus on improving comprehension and communication in a food service workplace.

FHGE: Non-GE

**NCEL 471    INTERMEDIATE TO ADVANCED ESL FOR FOOD WORKERS    0 Units**

Non-degree applicable basic skills-4 course.

Grade Type: Non-credit course that receives no grade

Unlimited Repeatability.

48 hours total.

Intermediate-to-advanced level vocational English course for non-native speakers in the food service industry. Focus on improving comprehension and communication in a food service workplace.

FHGE: Non-GE

**NCEL 480    ESL FOR JOB SEARCHING    0 Units**

Non-degree applicable basic skills-4 course.

Grade Type: Non-credit course that receives no grade

Unlimited Repeatability.

48 hours total.

Designed to teach English for job searching to non-native speakers. Focus on developing reading/writing/speaking/listening skills needed for job searching and interviewing as well as improved understanding of American work culture.

FHGE: Non-GE

**NON-CREDIT: LANGUAGE ARTS**

Language Arts

650.949.7250

**NCLA 406A    SUPPLEMENTAL INSTRUCTION ENGLISH: ESSAY- & PARAGRAPH-LEVEL REVISION    0 Units**

Non-degree applicable basic skills course.

Grade Type: Non-credit course that receives no grade

Unlimited Repeatability.

60 to 360 hours total.

An open-entry, open-exit course for students who seek academic support in English. Instruction and/or review of writing skills such as paragraphing, topic sentence, thesis, development, essay organization, sentence structure, basic sentence patterns, style, sentence mechanics, through supplemental instruction developed in a referring course or courses as follows: ENGL 1A, 1B, 1C, 1S & 1T, 110, 209, 242A, 242B.

FHGE: Non-GE

**NCLA 406B    SUPPLEMENTAL INSTRUCTION ENGLISH: SENTENCE-LEVEL EDITING & PROOFREADING IN CONTEXT    0 Units**

Non-degree applicable basic skills course.

Grade Type: Non-credit course that receives no grade

Unlimited Repeatability.

60 to 360 hours total.

An open-entry, open-exit course for students who seek academic support in English. Through individualized instruction, including one-on-one tutorials by an English department instructor, an instructional aide, and trained peer tutors as available, students receive help on sentence level (writing) and vocabulary development (reading). Course provides instruction and/or review of sentence level reading/writing skills such as basic sentence patterns, style and flow, sentence mechanics, proofreading, spelling and vocabulary development through supplemental instruction developed in a referring course or courses as follows: ENGL 1A, 1B, 1C, 1S & 1T, 110, 209, 242A, 242B.

FHGE: Non-GE

## NON-CREDIT: PARENTING EDUCATION

Counseling and Student Services  
650.949.6950

### NCP 400A STRONG START FOR CHILDREN I: BIRTH-8 YEARS 0 Units

Non-degree applicable non-credit course.

Formerly: NCP 400

Grade Type: Non-credit course that receives no grade  
Unlimited Repeatability.  
8 hours total.

Introduces families and caregivers to stages of child development and best practices in parenting, and links students to resources focused on Early Years Development, birth through 8 years old. Emphasis placed on child development, effective communication and discipline, and school and college readiness focused on young children (birth through 8 years). Helps prepare students for credit classes in Child Development. May be offered bilingually.

FHGE: Non-GE

### NCP 400B STRONG START FOR CHILDREN II: NAVIGATING MIDDLE SCHOOL 0 Units

Non-degree applicable non-credit course.

Formerly: NCP 400

Grade Type: Non-credit course that receives no grade  
Unlimited Repeatability.  
8 hours total.

Introduces families and caregivers to stages of child and adolescent development and best practices in parenting, and links students to resources focused on Middle School Age Development (children ages 10-14 years). Emphasis placed on child development, effective communication and discipline, and school and college readiness focused on Middle School aged children (10-14 years). Helps prepare students for credit classes in Child Development. May be offered bilingually.

FHGE: Non-GE

### NCP 400C STRONG START FOR CHILDREN III: PATHWAYS TO COLLEGE 0 Units

Non-degree applicable non-credit course.

Formerly: NCP 400

Grade Type: Non-credit course that receives no grade  
Unlimited Repeatability.  
8 hours total.

Introduces families and caregivers to stages of youth and adolescent development and best practices in parenting, and links students to resources focused on High School Age Development (children ages 15-18+ years). Emphasis placed on child development, effective communication and discipline, and school and college readiness focused on High School aged youth (15-18+ years). Helps prepare students for credit classes in Child Development. May be offered bilingually.

FHGE: Non-GE

### NCP 401A NURTURING HEALTHY CHOICES I: EARLY YEARS 0 Units

Non-degree applicable non-credit course.

Formerly: NCP 401

Grade Type: Non-credit course that receives no grade  
Unlimited Repeatability.  
8 hours total.

Introduces families and caregivers to healthy feeding and eating practices and best practices in parenting, and links students to resources focused on the Early Years (birth through 8 years). Emphasis placed on family wellness, nutrition and healthy feeding dynamics as related to the child's developmental stages. This course helps prepare students for credit classes in Child Development. May be offered bilingually.

FHGE: Non-GE

### NCP 401B NURTURING HEALTHY CHOICES II: ADOLESCENT YEARS 0 Units

Non-degree applicable non-credit course.

Formerly: NCP 401

Grade Type: Non-credit course that receives no grade  
Unlimited Repeatability.  
8 hours total.

Introduces families and caregivers to healthy feeding and eating practices and best practices in parenting, and links students to resources. Emphasis placed on family wellness, nutrition and healthy feeding dynamics as related to the child and youth developmental stages. This course helps prepare students for credit classes in Child Development. May be offered bilingually.

FHGE: Non-GE

### NCP 402A THE IMPORTANCE OF FAMILY IN THE LIVES OF CHILDREN I: EARLY YEARS 0 Units

Non-degree applicable non-credit course.

Formerly: NCP 402

Grade Type: Non-credit course that receives no grade  
Unlimited Repeatability.  
8 hours total.

Introduces families and caregivers to the importance of family in the lives of children and best practices in parenting, and links students to resources. Emphasis placed on family engagement linked to learning and student success; leadership; accessing resources; and navigating systems in multicultural communities. This course helps prepare students for credit classes in Child Development. May be offered bilingually.

FHGE: Non-GE

### NCP 402B THE IMPORTANCE OF FAMILY IN THE LIVES OF CHILDREN II: ADOLESCENT YEARS 0 Units

Non-degree applicable non-credit course.

Formerly: NCP 402

Grade Type: Non-credit course that receives no grade  
Unlimited Repeatability.  
8 hours total.

Introduces families and caregivers to the importance of family in the lives of adolescents and best practices in parenting, and links students to resources. Emphasis placed on family engagement linked to learning and student success; leadership; accessing resources; and navigating systems in multicultural communities. This course helps prepare students for credit classes in Child Development. May be offered bilingually.

FHGE: Non-GE

### NCP 403 BUILDING BRIDGES, OPENING DOORS, RAISING EMOTIONALLY HEALTHY CHILDREN 0 Units

Non-degree applicable non-credit course.

Grade Type: Non-credit course that receives no grade  
Unlimited Repeatability.

24 hours total.

A Parents as Partners Series targeted to families and their caregivers, providers and educators serving these families. Provides an understanding of the importance of meeting emotional needs in raising healthy, school-college ready children through parenting and child development, prenatal through adolescence. Completion of this class helps prepare students for credit classes in Child Development. May be offered bilingually.

FHGE: Non-GE



## NON-CREDIT: SHORT-TERM VOCATIONAL

Counseling and Student Services  
408.745.8022

### NCSV 400 GERIATRIC HOME AIDE BASICS 0 Units

Non-degree applicable non-credit course.  
Grade Type: Non-credit course that receives no grade  
Unlimited Repeatability.  
60 hours total.

Prepares students to care for ambulatory elderly clients in their own homes with focus on basic clientele needs and skills required to meet those needs. Intended for students pursuing a career as a geriatric home aide. Completion of both NCSV 400 and 401 leads to a noncredit certificate in Geriatric Home Aide.

FHGE: Non-GE

### NCSV 401 GERIATRIC HOME AIDE-NUTRITION 0 Units

Non-degree applicable non-credit course.  
Grade Type: Non-credit course that receives no grade  
Unlimited Repeatability.  
44 hours total.

Prepares students to care for ambulatory elderly clients in their own homes. Focus on nutrition, including dietary needs of geriatric and AIDS patients, cultural foods, cooking, and kitchen sanitation. Intended for students pursuing a career as a geriatric home aide. Completion of both NCSV 400 and 401 leads to a noncredit certificate in Geriatric Home Aide.

FHGE: Non-GE

## PERFORMING ARTS

Fine Arts and Communication  
650.949.7479 [foothill.edu/fa](http://foothill.edu/fa)

### P A 211A PERFORMANCE PRACTICES IN THEATRE I 4 Units

Non-degree applicable credit course.  
Formerly: P A 311A  
Prerequisite: Enrollment subject to audition.  
Advisory: Enrollment is limited to six times within the P A group; not open to students with credit in P A 311A.  
Grade Type: Pass/No Pass Only  
Not Repeatable.  
12 hours laboratory. (144 hours total per quarter)

Study, rehearsal, and performance of assigned theatre performance repertoire. Through guided instruction, students learn the core theory and techniques of modern acting. Intended as a performance course for actors wishing to explore theatre repertoire more fully with other performance artists and under the tutelage of a theatre professional.

FHGE: Non-GE

### P A 211B PERFORMANCE PRACTICES IN THEATRE II 4 Units

Non-degree applicable credit course.  
Formerly: P A 311B  
Prerequisite: Enrollment subject to audition.  
Advisory: Enrollment is limited to six times within the P A group; not open to students with credit in P A 311B.  
Grade Type: Pass/No Pass Only  
Not Repeatable.  
12 hours laboratory. (144 hours total per quarter)

Study, rehearsal, and performance of assigned theatre performance repertoire. Building on the fundamentals learned in P A 211A, this course will concentrate on the use of voice in a performance setting. Intended as a performance course for actors wishing to explore theatre repertoire more fully with other performance artists and under the tutelage of a theatre professional.

FHGE: Non-GE

### P A 211C PERFORMANCE PRACTICES IN THEATRE III 4 Units

Non-degree applicable credit course.  
Formerly: P A 311C  
Prerequisite: Enrollment subject to audition.  
Advisory: Enrollment is limited to six times within the P A group; not open to students with credit in P A 311C.  
Grade Type: Pass/No Pass Only  
Not Repeatable.

12 hours laboratory. (144 hours total per quarter)  
Study, rehearsal, and performance of assigned theatre performance repertoire. Building on the fundamentals learned in P A 211B, this course will concentrate on the use of movement in a performance setting. Intended as a performance course for actors wishing to explore theatre repertoire more fully with other performance artists and under the tutelage of a theatre professional.

FHGE: Non-GE

### P A 211D PERFORMANCE PRACTICES IN THEATRE IV 4 Units

Non-degree applicable credit course.  
Formerly: P A 311D  
Prerequisite: Enrollment subject to audition.  
Advisory: Enrollment is limited to six times within the P A group; not open to students with credit in P A 311D.  
Grade Type: Pass/No Pass Only  
Not Repeatable.

12 hours laboratory. (144 hours total per quarter)  
Study, rehearsal, and performance of assigned theatre performance repertoire. Building on the previous courses, this class will examine the works of specific periods of theatre. Intended as a performance course for actors wishing to explore theatre repertoire more fully with other performance artists and under the tutelage of a theatre professional.

FHGE: Non-GE

### P A 211E PERFORMANCE PRACTICES IN THEATRE V 4 Units

Non-degree applicable credit course.  
Formerly: P A 311E  
Prerequisite: Enrollment subject to audition.  
Advisory: Enrollment is limited to six times within the P A group; not open to students with credit in P A 311E.  
Grade Type: Pass/No Pass Only  
Not Repeatable.

12 hours laboratory. (144 hours total per quarter)  
Study, rehearsal, and performance of assigned theatre performance repertoire. Building on the previous courses, this class will explore the techniques of improvisation in theatre. Intended as a performance course for actors wishing to explore theatre repertoire more fully with other performance artists and under the tutelage of a theatre professional.

FHGE: Non-GE

### P A 211F PERFORMANCE PRACTICES IN THEATRE VI 4 Units

Non-degree applicable credit course.  
Formerly: P A 311F  
Prerequisite: Enrollment subject to audition.  
Advisory: Enrollment is limited to six times within the P A group; not open to students with credit in P A 311F.  
Grade Type: Pass/No Pass Only  
Not Repeatable.

12 hours laboratory. (144 hours total per quarter)  
Study, rehearsal, and performance of assigned theatre performance repertoire. Building on all previous courses, this class will expand the advanced actor's performance capabilities through more in depth text and character analysis. Intended as a performance course for actors wishing to explore theatre repertoire more fully with other performance artists and under the tutelage of a theatre professional.

FHGE: Non-GE

<p><b>P A 215A</b>      <b>PERFORMANCE PRACTICES IN TECHNICAL THEATRE I: BASICS OF TECHNICAL THEATRE</b>      <b>4 Units</b></p> <p>Non-degree applicable credit course. Formerly: P A 315A Prerequisite: Enrollment subject to audition. Advisory: Enrollment is limited to six times within the P A group; not open to students with credit in P A 315A. Grade Type: Pass/No Pass Only Not Repeatable. 12 hours laboratory. (144 hours total per quarter) Study, rehearsal, and performance of basic technical theatre. Intended for theatre students wishing to learn more about backstage practices. Culminates in a full-scale production performed for a public audience. FHGE: Non-GE</p>	<p><b>P A 215E</b>      <b>PERFORMANCE PRACTICES IN TECHNICAL THEATRE V: SOUND</b>      <b>4 Units</b></p> <p>Non-degree applicable credit course. Formerly: P A 315E Prerequisite: Enrollment subject to audition. Advisory: Enrollment is limited to six times within the P A group; not open to students with credit in P A 315E. Grade Type: Pass/No Pass Only Not Repeatable. 12 hours laboratory. (144 hours total per quarter) Study, rehearsal, and performance of technical theatre. Builds on P A 215D, adding techniques of sound design and operation for theatre. Culminates in a full-scale production performed for a public audience. FHGE: Non-GE</p>
<p><b>P A 215B</b>      <b>PERFORMANCE PRACTICES IN TECHNICAL THEATRE II: SETS</b>      <b>4 Units</b></p> <p>Non-degree applicable credit course. Formerly: P A 315B Prerequisite: Enrollment subject to audition. Advisory: Enrollment is limited to six times within the P A group; not open to students with credit in P A 315B. Grade Type: Pass/No Pass Only Not Repeatable. 12 hours laboratory. (144 hours total per quarter) Study, rehearsal, and performance of technical theatre. Builds on P A 215A, adding best practices in set design and construction for theatre. Culminates in a full-scale production performed for a public audience. FHGE: Non-GE</p>	<p><b>P A 215F</b>      <b>PERFORMANCE PRACTICES IN TECHNICAL THEATRE VI: STAGE MANAGEMENT</b>      <b>4 Units</b></p> <p>Non-degree applicable credit course. Formerly: P A 315F Prerequisite: Enrollment subject to audition. Advisory: Enrollment is limited to six times within the P A group; not open to students with credit in P A 315F. Grade Type: Pass/No Pass Only Not Repeatable. 12 hours laboratory. (144 hours total per quarter) Study, rehearsal, and performance of technical theatre. Builds on previous courses, adding techniques of stage management for theatre. Culminates in a full-scale production performed for a public audience. FHGE: Non-GE</p>
<p><b>P A 215C</b>      <b>PERFORMANCE PRACTICES IN TECHNICAL THEATRE III: COSTUME &amp; MAKEUP</b>      <b>4 Units</b></p> <p>Non-degree applicable credit course. Formerly: P A 315C Prerequisite: Enrollment subject to audition. Advisory: Enrollment is limited to six times within the P A group; not open to students with credit in P A 315C. Grade Type: Pass/No Pass Only Not Repeatable. 12 hours laboratory. (144 hours total per quarter) Study, rehearsal, and performance of technical theatre. Builds on P A 215B, adding instruction in costumes and make-up designed for theatre. Culminates in a full-scale production performed for a public audience. FHGE: Non-GE</p>	<p><b>P A 221A</b>      <b>PERFORMANCE PRACTICES IN VOCAL MUSIC I</b>      <b>2 Units</b></p> <p>Non-degree applicable credit course. Formerly: P A 321A Prerequisite: Enrollment subject to audition. Advisory: Enrollment is limited to six times within the P A group; not open to students with credit in P A 321A. Grade Type: Pass/No Pass Only Not Repeatable. 6 hours laboratory. (72 hours total per quarter) Study, rehearsal, and performance of vocal/choral repertoire for singers of little to no experience. Intended as a beginning performance course for ensemble singers wishing to explore the vast choral repertoire with other performance artists and under the tutelage of a choral professional. FHGE: Non-GE</p>
<p><b>P A 215D</b>      <b>PERFORMANCE PRACTICES IN TECHNICAL THEATRE IV: LIGHTING</b>      <b>4 Units</b></p> <p>Non-degree applicable credit course. Formerly: P A 315D Prerequisite: Enrollment subject to audition. Advisory: Enrollment is limited to six times within the P A group; not open to students with credit in P A 315D. Grade Type: Pass/No Pass Only Not Repeatable. 12 hours laboratory. (144 hours total per quarter) Study, rehearsal, and performance of technical theatre. Builds on P A 215C, adding techniques of light design and implementation for theatre. Culminates in a full-scale production performed for a public audience. FHGE: Non-GE</p>	<p><b>P A 221B</b>      <b>PERFORMANCE PRACTICES IN VOCAL MUSIC II</b>      <b>2 Units</b></p> <p>Non-degree applicable credit course. Formerly: P A 321B Prerequisite: Enrollment subject to audition. Advisory: Enrollment is limited to six times within the P A group; not open to students with credit in P A 321B. Grade Type: Pass/No Pass Only Not Repeatable. 6 hours laboratory. (72 hours total per quarter) Study, rehearsal, and performance of vocal/choral repertoire for singers of who have taken P A 221A. Further emphasis on music theory and choral training. For ensemble singers wishing to explore the vast choral repertoire with other performance artists and under the tutelage of a choral professional. FHGE: Non-GE</p>

<p><b>P A 221C</b>      <b>PERFORMANCE PRACTICES IN VOCAL MUSIC III</b>      <b>2 Units</b></p> <p>Non-degree applicable credit course. Formerly: P A 321C Prerequisite: Enrollment subject to audition Advisory: Enrollment is limited to six times within the P A group; not open to students with credit in P A 321C. Grade Type: Pass/No Pass Only Not Repeatable. 6 hours laboratory. (72 hours total per quarter) Study, rehearsal, and performance of vocal/choral repertoire for singers of who have taken P A 221B. Expands choral styles and vocal range. For ensemble singers wishing to explore the vast choral repertoire with other performance artists and under the tutelage of a choral professional. FHGE: Non-GE</p>	<p><b>PA 231A</b>      <b>PERFORMANCE PRACTICES IN INSTRUMENTAL MUSIC I</b>      <b>6 Units</b></p> <p>Non-degree applicable credit course. Formerly: P A 331A Prerequisite: Enrollment subject to audition. Advisory: Enrollment is limited to six times within the P A group; not open to students with credit in P A 331A. Grade Type: Pass/No Pass Only Not Repeatable. 18 hours laboratory. (216 hours total per quarter) Study, rehearsal, and performance of ensemble instrumental performance. Intended as a performance course for players of string, wind, brass and percussion instruments of little ensemble experience under the tutelage of a music professional. FHGE: Non-GE</p>
<p><b>P A 221D</b>      <b>PERFORMANCE PRACTICES IN VOCAL MUSIC IV</b>      <b>2 Units</b></p> <p>Non-degree applicable credit course. Formerly: P A 321D Prerequisite: Enrollment subject to audition. Advisory: Enrollment is limited to six times within the P A group; not open to students with credit in P A 321D. Grade Type: Pass/No Pass Only Not Repeatable. 6 hours laboratory. (72 hours total per quarter) Study, rehearsal, and performance of vocal/choral repertoire for singers of who have taken P A 221C. Teaches intermediate-level harmonies and theory and expanding the vocal repertoire. For ensemble singers wishing to explore the vast choral repertoire with other performance artists and under the tutelage of a choral professional. FHGE: Non-GE</p>	<p><b>P A 231B</b>      <b>PERFORMANCE PRACTICES IN INSTRUMENTAL MUSIC II</b>      <b>6 Units</b></p> <p>Non-degree applicable credit course. Formerly: P A 331B Prerequisite: Enrollment subject to audition. Advisory: Enrollment is limited to six times within the P A group; not open to students with credit in P A 331B. Grade Type: Pass/No Pass Only Not Repeatable. 18 hours laboratory. (216 hours total per quarter) Study, rehearsal, and performance of ensemble instrumental performance for musicians who have taken P A 231A or equivalent. Further emphasis on musicality and technique. Designed as a performance course for players of string, wind, brass and percussion instruments under the tutelage of a music professional. FHGE: Non-GE</p>
<p><b>P A 221E</b>      <b>PERFORMANCE PRACTICES IN VOCAL MUSIC V</b>      <b>2 Units</b></p> <p>Non-degree applicable credit course. Formerly: P A 321E Prerequisite: Enrollment subject to audition. Advisory: Enrollment is limited to six times within the P A group; not open to students with credit in P A 321E. Grade Type: Pass/No Pass Only Not Repeatable. 6 hours laboratory. (72 hours total per quarter) Study, rehearsal, and performance of vocal/choral repertoire for singers of who have taken P A 221D. Expands vocal range, abilities, and repertoire. For ensemble singers wishing to explore the vast choral repertoire with other performance artists and under the tutelage of a choral professional. FHGE: Non-GE</p>	<p><b>P A 231C</b>      <b>PERFORMANCE PRACTICES IN INSTRUMENTAL MUSIC III</b>      <b>6 Units</b></p> <p>Non-degree applicable credit course. Formerly: P A 331C Prerequisite: Enrollment subject to audition. Advisory: Enrollment is limited to six times within the P A group; not open to students with credit in P A 331C. Grade Type: Pass/No Pass Only Not Repeatable. 18 hours laboratory. (216 hours total per quarter) Study, rehearsal, and performance of ensemble instrumental performance for musicians who have taken P A 231B or equivalent. Emphasizes both individual accuracy and section unification. Intended as a performance course for players of string, wind, brass and percussion instruments under the tutelage of a music professional. FHGE: Non-GE</p>
<p><b>P A 221F</b>      <b>PERFORMANCE PRACTICES IN VOCAL MUSIC VI</b>      <b>2 Units</b></p> <p>Non-degree applicable credit course. Formerly: P A 321F Prerequisite: Enrollment subject to audition. Advisory: Enrollment is limited to six times within the P A group; not open to students with credit in P A 321F. Grade Type: Pass/No Pass Only Not Repeatable. 6 hours laboratory. (72 hours total per quarter) Study, rehearsal, and performance of vocal/choral repertoire for singers of who have taken P A 221E. Advanced class gives students the chance to take on leadership roles in both performance and rehearsals. For ensemble singers wishing to explore the vast choral repertoire with other performance artists and under the tutelage of a choral professional. FHGE: Non-GE</p>	<p><b>P A 231D</b>      <b>PERFORMANCE PRACTICES IN INSTRUMENTAL MUSIC IV</b>      <b>6 Units</b></p> <p>Non-degree applicable credit course. Formerly: P A 331D Prerequisite: Enrollment subject to audition. Advisory: Enrollment is limited to six times within the P A group; not open to students with credit in P A 331D. Grade Type: Pass/No Pass Only Not Repeatable. 18 hours laboratory. (216 hours total per quarter) Study, rehearsal, and performance of ensemble instrumental performance for musicians who have taken P A 231C or equivalent. Concentrates on styles and periods of music, and their interpretation. Intended as a performance course for players of string, wind, brass and percussion instruments under the tutelage of a music professional. FHGE: Non-GE</p>

**P A 231E      PERFORMANCE PRACTICES IN INSTRUMENTAL MUSIC V      6 Units**

Non-degree applicable credit course.  
Formerly: P A 331E  
Prerequisite: Enrollment subject to audition.  
Advisory: Enrollment is limited to six times within the P A group; not open to students with credit in P A 331E.  
Grade Type: Pass/No Pass Only  
Not Repeatable.  
18 hours laboratory. (216 hours total per quarter)  
Study, rehearsal, and performance of ensemble instrumental performance for musicians who have taken P A 231D or equivalent. Addition of playing in smaller ensembles. A performance course for players of string, wind, brass and percussion instruments under the tutelage of a music professional.  
FHGE: Non-GE

**P A 231F      PERFORMANCE PRACTICES IN INSTRUMENTAL MUSIC VI      6 Units**

Non-degree applicable credit course.  
Formerly: P A 331F  
Prerequisite: Enrollment subject to audition.  
Advisory: Enrollment is limited to six times within the P A group; not open to students with credit in P A 331F.  
Grade Type: Pass/No Pass Only  
Not Repeatable.  
18 hours laboratory. (216 hours total per quarter)  
Study, rehearsal, and performance of ensemble instrumental performance for musicians who have taken P A 231E or equivalent. Explores advanced repertoire and playing technique. A performance course for players of string, wind, brass and percussion instruments under the tutelage of a music professional.  
FHGE: Non-GE

**P A 241A      PERFORMANCE PRACTICES IN OPERA: CHORUS, COACHINGS, REHEARSALS & PERFORMANCE VOICE      6 Units**

Non-degree applicable credit course.  
Formerly: P A 341A  
Prerequisite: Enrollment subject to audition.  
Advisory: Enrollment is limited to six times within the P A group; not open to students with credit in P A 341A.  
Grade Type: Pass/No Pass Only  
Not Repeatable.  
18 hours laboratory. (216 hours total per quarter)  
Study, rehearsal, and performance of opera repertoire for students with little performance experience. A beginning course for performers wishing to explore the vast opera repertoire with other artists and under the tutelage of opera professionals.  
FHGE: Non-GE

**P A 241B      PERFORMANCE PRACTICES IN OPERA: SMALL ROLES      6 Units**

Non-degree applicable credit course.  
Formerly: P A 341B  
Prerequisite: Enrollment subject to audition.  
Advisory: Enrollment is limited to six times within the P A group; not open to students with credit in P A 341B.  
Grade Type: Pass/No Pass Only  
Not Repeatable.  
18 hours laboratory. (216 hours total per quarter)  
Study, rehearsal, and performance of opera repertoire. Builds on the skills acquired in P A 241A, adding tutelage for students wishing to perform in a minor role. Culminates in a full-scale production performed for a public audience.  
FHGE: Non-GE

**P A 241C      PERFORMANCE PRACTICES IN OPERA: COSTUME & MAKEUP      6 Units**

Non-degree applicable credit course.  
Formerly: P A 341C  
Prerequisite: Enrollment subject to audition.  
Advisory: Enrollment is limited to six times within the P A group; not open to students with credit in P A 341C.  
Grade Type: Pass/No Pass Only  
Not Repeatable.  
18 hours laboratory. (216 hours total per quarter)  
Study, rehearsal, and performance of opera repertoire. Builds on P A 241B, adding instruction in costumes and make-up designed for opera. Culminates in a full-scale production performed for a public audience.  
FHGE: Non-GE

**P A 241D      PERFORMANCE PRACTICES IN OPERA: SETS      6 Units**

Non-degree applicable credit course.  
Formerly: P A 341D  
Prerequisite: Enrollment subject to audition.  
Advisory: Enrollment is limited to six times within the P A group; not open to students with credit in P A 341D.  
Grade Type: Pass/No Pass Only  
Not Repeatable.  
18 hours laboratory. (216 hours total per quarter)  
Study, rehearsal, and performance of opera repertoire. Best practices in set design and construction for opera. Culminates in a full-scale production performed for a public audience.  
FHGE: Non-GE

**P A 241E      PERFORMANCE PRACTICES IN OPERA: LIGHTING      6 Units**

Non-degree applicable credit course.  
Formerly: P A 341E  
Prerequisite: Enrollment subject to audition.  
Advisory: Enrollment is limited to six times within the P A group; not open to students with credit in P A 341E.  
Grade Type: Pass/No Pass Only  
Not Repeatable.  
18 hours laboratory. (216 hours total per quarter)  
Study, rehearsal, and performance of opera repertoire. Techniques of light design and set-up for opera. Culminates in a full-scale production performed for a public audience.  
FHGE: Non-GE

**P A 241F      PERFORMANCE PRACTICES IN OPERA: ADVANCED OPERA      6 Units**

Non-degree applicable credit course.  
Formerly: P A 341F  
Prerequisite: Enrollment subject to audition.  
Advisory: Enrollment is limited to six times within the P A group; not open to students with credit in P A 341F.  
Grade Type: Pass/No Pass Only  
Not Repeatable.  
18 hours laboratory. (216 hours total per quarter)  
Study, rehearsal, and performance of opera repertoire. Emphasis on performance techniques for the advanced singer. Culminates in a full-scale production performed for a public audience.  
FHGE: Non-GE

## PHARMACY TECHNOLOGY

Biological and Health Sciences

650.949.7538 [foothill.edu/bio/programs/pharmtec](http://foothill.edu/bio/programs/pharmtec)

### PHT 50 ORIENTATION TO PHARMACY TECHNOLOGY 3 Units

**Prerequisite:** PHT 200L.

**Grade Type:** Letter Grade Only

**Not Repeatable.**

**3 hours lecture. (36 hours total per quarter)**

Orientation to the role and working environment of the pharmacy technician, in both inpatient and outpatient settings. An introduction to the legal responsibilities and technical activities of the pharmacy technician. Intended for students in the Pharmacy Technician Program; enrollment is limited to students accepted in the program.

**FHGE: Non-GE Transferable: CSU**

### PHT 51 BASIC PHARMACEUTICS 3 Units

**Grade Type:** Letter Grade Only

**Not Repeatable.**

**3 hours lecture. (36 hours total per quarter)**

An introduction to the pharmacological principles as they are related to and support an understanding of rational drug usage. An understanding of the profound influence of drug laws, standards and regulations. Intended for students in the Pharmacy Technician Program; enrollment is limited to students accepted in the program.

**FHGE: Non-GE Transferable: CSU**

### PHT 52A INPATIENT DISPENSING 3 Units

**Grade Type:** Letter Grade Only

**Not Repeatable.**

**2 hours lecture, 3 hours laboratory. (60 hours total per quarter)**

A general study of the usual technician functions associated with an institutional drug distribution system. Practical experience in the manipulative and record-keeping functions of extemporaneous preparations in an inpatient pharmacy. Intended for students in the Pharmacy Technician Program; enrollment is limited to students accepted in the program.

**FHGE: Non-GE Transferable: CSU**

### PHT 52B ASEPTIC TECHNIQUE & IV PREPARATION 4 Units

**Prerequisite:** PHT 52A.

**Grade Type:** Letter Grade Only

**Not Repeatable.**

**3 hours lecture, 3 hours laboratory. (72 hours total per quarter)**

Compounding of sterile products according to the appropriate technique. An introduction to the concepts of sterility and incompatibility. The use of applicable quality assurance processes and performance of work in accordance with the laws, regulations, and standards which govern the preparation of sterile products, with special emphasis on the preparation of parenteral chemotherapy with strict adherence to all precautionary standards. Intended for students in the Pharmacy Technician Program; enrollment is limited to students accepted in the program.

**FHGE: Non-GE Transferable: CSU**

### PHT 53 AMBULATORY PHARMACY PRACTICE 4 Units

**Grade Type:** Letter Grade Only

**Not Repeatable.**

**3 hours lecture, 3 hours laboratory. (72 hours total per quarter)**

A review of the skills needed to operate effectively in an ambulatory setting, with emphasis on receiving and controlling inventory, processing prescriptions using computerized prescription processing, and medical insurance billing. Customer relations. Intended for students in the Pharmacy Technician Program; enrollment is limited to students accepted in the program.

**FHGE: Non-GE Transferable: CSU**

### PHT 54A DOSAGE CALCULATIONS A 3 Units

**Prerequisite:** MATH 220 or equivalent.

**Grade Type:** Letter Grade Only

**Not Repeatable.**

**3 hours lecture. (36 hours total per quarter)**

An introduction to the use of pharmaceutical measuring systems with emphasis on the metric system and intersystem conversions. Intended for students in the Pharmacy Technician Program; enrollment is limited to students accepted in the program.

**FHGE: Non-GE Transferable: CSU**

### PHT 54B DOSAGE CALCULATIONS B 3 Units

**Prerequisite:** PHT 54A.

**Grade Type:** Letter Grade Only

**Not Repeatable.**

**3 hours lecture. (36 hours total per quarter)**

Calculation of the correct oral and parenteral dosages of drugs using information from prescriptions or medications orders. Accurate determination of the correct amount of ingredients for the compounding of pharmaceutical products from a prescription or medications order. Intended for students in the Pharmacy Technician Program; enrollment is limited to students accepted in the program.

**FHGE: Non-GE Transferable: CSU**

### PHT 55A PHARMACOLOGY A 3 Units

**Prerequisite:** BIOL 14 or equivalent.

**Grade Type:** Letter Grade Only

**Not Repeatable.**

**3 hours lecture. (36 hours total per quarter)**

Introduction to the general principals of pharmacology and pharmacokinetics with a focus on the anatomy, physiology and application of pharmacological principles pertaining to the peripheral and central nervous system. Drugs are discussed related to their mechanism of action, indications, adverse effects, contraindications, precautions and drug interactions. Intended for students in the Pharmacy Technician Program; enrollment is limited to students accepted in the program.

**FHGE: Non-GE Transferable: CSU**

### PHT 55B PHARMACOLOGY B 3 Units

**Prerequisite:** PHT 55A.

**Grade Type:** Letter Grade Only

**Not Repeatable.**

**3 hours lecture. (36 hours total per quarter)**

A study of the fundamentals of pharmacology with a focus on the anatomy, physiology and application of pharmacological principles related to various body systems and disorders; the cardiovascular system, respiratory system and gastrointestinal system. Drugs are discussed in relation to their mechanism of action, indications, adverse effects, contraindications, precautions and drug interactions. Intended for students in the Pharmacy Technician Program; enrollment is limited to students accepted in the program.

**FHGE: Non-GE Transferable: CSU**

### PHT 55C PHARMACOLOGY C 3 Units

**Prerequisite:** PHT 55B.

**Grade Type:** Letter Grade Only

**Not Repeatable.**

**3 hours lecture. (36 hours total per quarter)**

A study of the fundamentals of pharmacology with a focus on the anatomy, physiology and application of pharmacological principles related to various body systems and disorders; the endocrine system, infectious diseases, cancer, the immune system and nutrition. Drugs are discussed in relation to their mechanism of action, indications, adverse effects, contraindications, precautions and drug interactions. Intended for students in the Pharmacy Technician Program; enrollment is limited to students accepted in the program.

**FHGE: Non-GE Transferable: CSU**

**PHT 56A DISPENSING & COMPOUNDING A 3 Units**

**Prerequisite:** PHT 50.  
**Grade Type:** Letter Grade Only  
**Not Repeatable.**

**2 hours lecture, 3 hours laboratory. (60 hours total per quarter)**

General preparation of non-sterile solid and liquid pharmaceutical dosage forms for oral and topical use. Practical experience in the manipulative and record keeping functions associated with the compounding and dispensing of prescriptions for ambulatory patients. Study of dosage forms, advantages and disadvantages, uses, storage and packaging of pharmaceutical products. Intended for students in the Pharmacy Technician Program; enrollment is limited to students accepted in the program.

**FHGE: Non-GE Transferable: CSU**

**PHT 56B DISPENSING & COMPOUNDING B 3 Units**

**Prerequisite:** PHT 56A.  
**Grade Type:** Letter Grade Only  
**Not Repeatable.**

**2 hours lecture, 3 hours laboratory. (60 hours total per quarter)**

General preparation of topical, transdermal, rectal, ophthalmic, and otic pharmaceutical dosage forms. Practical experience in the manipulative and record keeping functions associated with the compounding and dispensing of prescriptions. Study of dosage forms, advantages and disadvantages, uses, storage and packaging of pharmaceutical products. Intended for students in the Pharmacy Technician Program; enrollment is limited to students accepted in the program.

**FHGE: Non-GE Transferable: CSU**

**PHT 60 RETAIL CLINICAL 4 Units**

**Grade Type:** Letter Grade Only  
**Not Repeatable.**  
**12 hours clinical experience. (144 hours total per quarter)**

The practice of pharmacy technology skills in a retail environment developed in didactic and laboratory training. Activities will be evaluated by a preceptor at the site. Intended for students in the Pharmacy Technician Program; enrollment is limited to students accepted in the program.

**FHGE: Non-GE Transferable: CSU**

**PHT 61 HOME HEALTH CARE SUPPLIES 3 Units**

**Prerequisite:** PHT 50.  
**Grade Type:** Letter Grade Only  
**Not Repeatable.**

**2 hours lecture, 3 hours laboratory. (60 hours total per quarter)**

A study of diseases and conditions which require continual health maintenance by the patient with tests and devices used to identify, monitor and control them. It also includes an evaluation of alternative forms of health care and a study of the vitamins and minerals commonly used in pharmaceutical preparations. Students will interpret various test equipment results and have a working knowledge of OTC and prescribed single/multiple use test kits and equipment. Intended for students in the Pharmacy Technician Program; enrollment is limited to students accepted in the program.

**FHGE: Non-GE Transferable: CSU**

**PHT 62 HOSPITAL CLINICAL 4 Units**

**Grade Type:** Letter Grade Only  
**Not Repeatable.**  
**12 hours clinical experience. (144 hours total per quarter)**

The practice of pharmacy technology skills in either inpatient or outpatient hospital environments developed in didactic and laboratory training. Activities will be evaluated by a preceptor. Intended for students in the Pharmacy Technician Program; enrollment is limited to students accepted in the program.

**FHGE: Non-GE Transferable: CSU**

**PHT 63 PHARMACY TECHNICIAN CERTIFICATION EXAM (PTCE) REVIEW 1 Unit**

**Prerequisites:** PHT 60 and 62 or equivalent.  
**Grade Type:** Letter Grade Only  
**Not Repeatable.**

**1 hour lecture, 1 hour laboratory. (24 hours total per quarter)**

Intended for students in the Pharmacy Technician Program or for students who have completed an ASHP accredited Pharmacy Technician Program. Course provides application requirements for the Pharmacy Technician Certification Exam (PTCE) and Pharmacy Technician license in the State of California. Comprehensive review of pharmacy technician technical and didactic competencies to prepare students for the Pharmacy Technician Certification Exam (PTCE). Also includes several mock practice Pharmacy Technician Certification Exams. Enrollment is limited to students accepted in the program.

**FHGE: Non-GE Transferable: CSU**

**PHT 101 PHARMACY CAREERS A 5 Units**

**Advisory:** Passing grade in high school algebra 1, biology, chemistry and two years of English.

**Grade Type:** Letter Grade, the student may select Pass/No Pass  
**Not Repeatable.**

**3 hours lecture, 6 hours laboratory. (108 hours total per quarter)**

The first of three courses to be taken in series; intended for students enrolled in the CTE Pharmacy Careers Program. It will provide students foundational knowledge crucial for success as they pursue further education in pharmacy technology. Topics of instruction will include introduction to the profession of pharmacy technology as a career, introduction to pharmaceutical calculations, basic anatomy and physiology, basic medical terminology and pharmaceutical abbreviations, pharmaceutical preparations and medications, pharmacy practice, professionalism, learning strategies, effective study and life management skills necessary for success in the profession of pharmacy technology.

**FHGE: Non-GE**

**PHT 102 PHARMACY CAREERS B 5 Units**

**Prerequisite:** PHT 101.  
**Grade Type:** Letter Grade, the student may select Pass/No Pass  
**Not Repeatable.**

**3 hours lecture, 6 hours laboratory. (108 hours total per quarter)**

The second of three courses to be taken in series; intended for students enrolled in the CTE Pharmacy Careers Program. Topics of instruction will build on content in the following areas; pharmacy law, dosage forms and calculations, pharmaceutical abbreviations, basic anatomy, physiology and medical terminology pertaining to the gastrointestinal, endocrine and reproductive systems, including diseases and medications used to treat conditions that affect these systems. Topics on inter-professional skills required to work effectively in a health care team.

**FHGE: Non-GE**

**PHT 103 PHARMACY CAREERS C 5 Units**

**Prerequisite:** PHT 102.  
**Grade Type:** Letter Grade, the student may select Pass/No Pass  
**Not Repeatable.**

**3 hours lecture, 6 hours laboratory. (108 hours total per quarter)**

The final course in a series of three; intended for students enrolled in the CTE Pharmacy Careers Program. Will continue to build on topics pertaining to the following areas: pharmaceutical compounding, various dosage formulations, complementary and alternative medicine, pharmaceutical calculations used in community and institutional pharmacy practice, California Board of Pharmacy requirements for technicians, the Foothill College Pharmacy Technician Program overview, basic anatomy, physiology, and medical terminology pertaining to the renal/urological and musculoskeletal systems, including diseases and medications used to treat conditions affecting these systems.

**FHGE: Non-GE**

**PHT 200L PHARMACY TECHNICIAN AS A CAREER** 1 Unit

Non-degree applicable credit course.

Advisory: Demonstrated proficiency in English by placement as determined by score on the English placement test OR through an equivalent placement process OR completion of ESLL 125 & ESLL 249.

Grade Type: Letter Grade, the student may select Pass/No Pass Not Repeatable.

1 hour lecture. (12 hours total per quarter)

Introduction to the pharmaceutical sciences and the functions of a pharmacy technician in health care. Role of the pharmacy technician, areas of specialization in the field, technical standards, state registration requirements and employment opportunities.

FHGE: Non-GE

## PHILOSOPHY

Business and Social Sciences

650.949.7322 [foothill.edu/bss](http://foothill.edu/bss)

**PHIL 1 CRITICAL THINKING & WRITING** 5 Units

Prerequisite: One of the following: ENGL 1A, 1AH, or 1S & 1T.

Grade Type: Letter Grade, the student may select Pass/No Pass Not Repeatable.

5 hours lecture. (60 hours total per quarter)

Develops understanding of informal logic and practical reasoning skills necessary for academic success, including tools needed to analyze information from a variety of sources such as academic essays, philosophic literature, news media and advertising. Focus on skills of argumentation including, but not limited to, elements of an argument, deductive and inductive forms of argumentation, the evaluation of arguments and the recognition of a variety of fallacies. Skills developed through a series of written assignments of increasing scope and difficulty culminating in a sophisticated argumentative essay.

FHGE: Communication & Analytical Thinking Transferable: UC/CSU

**PHIL 2 INTRODUCTION TO SOCIAL & POLITICAL PHILOSOPHY** 4 Units

Grade Type: Letter Grade, the student may select Pass/No Pass Not Repeatable.

4 hours lecture. (48 hours total per quarter)

Social and political philosophies of classical, modern and contemporary thinkers. Issues of concern to include the justification and structure of the political state, constitution of government, individual rights and distribution of wealth.

FHGE: Humanities Transferable: UC/CSU

**PHIL 4 INTRODUCTION TO PHILOSOPHY** 4 Units

Grade Type: Letter Grade, the student may select Pass/No Pass Not Repeatable.

4 hours lecture. (48 hours total per quarter)

Introductory survey of writings, principles and concerns of philosophy. Primarily examines major topics in the study of metaphysics and epistemology through reading and critical examination of the writings of major figures in the history of philosophy. Related topics of concern to include ethics, theology and political philosophy.

FHGE: Humanities Transferable: UC/CSU

**PHIL 7 INTRODUCTION TO SYMBOLIC LOGIC** 5 Units

Grade Type: Letter Grade, the student may select Pass/No Pass Not Repeatable.

5 hours lecture. (60 hours total per quarter)

The use of logic as a tool for constructing, analyzing and evaluating arguments. Topics to be covered will be the basic construction of premises and conclusion to form arguments, common formal and informal fallacies, categorical propositions and syllogisms, propositional logic, natural deduction and predicate logic.

FHGE: Communication & Analytical Thinking Transferable: UC/CSU

**PHIL 8 ETHICS** 5 Units

Grade Type: Letter Grade, the student may select Pass/No Pass Not Repeatable.

5 hours lecture. (60 hours total per quarter)

Analysis and application of competing conceptions of the good. Course focuses on ethical theory (utilitarianism, duty-oriented ethics, virtue ethics, egoism, relativism, etc.) and various topics in applied ethics.

FHGE: Non-GE Transferable: UC/CSU

**PHIL 11 INTRODUCTION TO THE PHILOSOPHY OF ART & AESTHETICS** 4 Units

Grade Type: Letter Grade, the student may select Pass/No Pass Not Repeatable.

4 hours lecture. (48 hours total per quarter)

Analysis of the nature of art and aesthetics as an aspect of philosophic discourse. Engagement with historical and contemporary philosophic literature regarding central topics of aesthetic concern. Topics include the possibility of defining and delineating art from other related fields of endeavor (craft, mass entertainment, video games, etc.); examination of the reasons and qualities that make some sensory experiences specifically artistic; the possibility, or otherwise, for defining objective standards of beauty and taste; the potential for deriving meaning, value and knowledge regarding the human condition from artistic endeavor. Topics illustrated through examples from classical through contemporary visual art, architecture, music, and film.

FHGE: Humanities Transferable: UC/CSU

**PHIL 12 PHILOSOPHY OF SCIENCE** 4 Units

Grade Type: Letter Grade, the student may select Pass/No Pass Not Repeatable.

4 hours lecture. (48 hours total per quarter)

An investigation of major philosophical issues and problems regarding the nature of science, its importance and its implications for human understanding. In particular, the course will investigate the how scientific knowledge is constructed and how that knowledge influences our contemporary view of reality. Major issues in the course will include how science can be defined and demarcated from pseudoscience (astrology, creationism, new age spiritualism etc.), the concept of paradigms and paradigm shifts in the history of science, the role of inductive reasoning in science and its potential problems, and the importance of falsificationism in the development of scientific theory.

FHGE: Humanities Transferable: UC/CSU

**PHIL 20A HISTORY OF WESTERN PHILOSOPHY FROM SOCRATES THROUGH ST. THOMAS** 4 Units

Grade Type: Letter Grade, the student may select Pass/No Pass Not Repeatable.

4 hours lecture. (48 hours total per quarter)

Examination of Western philosophy with an emphasis on Greek philosophy from Thales through Aristotle and selected medieval philosophers from Augustine to St. Thomas Aquinas.

FHGE: Humanities Transferable: UC/CSU

**PHIL 20B HISTORY OF WESTERN PHILOSOPHY FROM THE RENAISSANCE THROUGH KANT** 4 Units

Grade Type: Letter Grade, the student may select Pass/No Pass Not Repeatable.

4 hours lecture. (48 hours total per quarter)

Examination of the major European philosophers and philosophic movements of the 17th and 18th centuries. Particular attention to paid to the transition out of the Medieval period into the Age of Enlightenment.

FHGE: Humanities Transferable: UC/CSU

**PHIL 20C CONTEMPORARY PHILOSOPHY: 19TH & 20TH CENTURY THOUGHT 4 Units**

**Advisory:** Demonstrated proficiency in English by placement as determined by score on the English placement test OR through an equivalent placement process OR completion of ESLL 125 & ESLL 249.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**4 hours lecture. (48 hours total per quarter)**

Survey of the history of Western philosophy during the 19th and 20th centuries. Examination of major philosophic developments, theories and movements. Special attention to the influence of 19th and 20th century thought on our contemporary world view.

**FHGE:** Humanities **Transferable:** UC/CSU

**PHIL 24 COMPARATIVE WORLD RELIGIONS: EAST 4 Units**

**Advisory:** Demonstrated proficiency in English by placement as determined by score on the English placement test OR through an equivalent placement process OR completion of ESLL 125 & ESLL 249.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**4 hours lecture. (48 hours total per quarter)**

Origin, history and significant ideas of the world's major Eastern religions. Particular focus on practice and concepts in Hinduism, Buddhism, Confucianism, Taoism, and Zen.

**FHGE:** Humanities **Transferable:** UC/CSU

**PHIL 25 COMPARATIVE WORLD RELIGIONS: WEST 4 Units**

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**4 hours lecture. (48 hours total per quarter)**

Explores the origin, history and significant ideas of the world's Western religions. Compares the fundamental insights, ideals and contributions toward the human moral heritage and wisdom of the Early Religions, Judaism, Zoroastrianism, Christianity, and Islam.

**FHGE:** Humanities **Transferable:** UC/CSU

**PHIL 30 INTRODUCTION TO CRITICAL THINKING 4 Units**

**Advisory:** Demonstrated proficiency in English by placement as determined by score on the English placement test OR through an equivalent placement process OR completion of ESLL 125 & ESLL 249; not open to students with credit in PHIL 50.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**4 hours lecture. (48 hours total per quarter)**

Develops understanding of informal logic and practical reasoning skills necessary for academic success, including tools needed to analyze information from a variety of sources such as academic essays, philosophic literature, news media and advertising. Focus on skills of argumentation including, but not limited to, elements of an argument, deductive and inductive forms of argumentation, the evaluation of arguments and the recognition of a variety of fallacies. Skills developed through written analysis of a variety of sources including but not limited to academic articles, news media, televised debates and advertisements.

**FHGE:** Communication & Analytical Thinking **Transferable:** UC/CSU

**PHIL 70R INDEPENDENT STUDY IN PHILOSOPHY 1 Unit**  
**PHIL 71R 2 Units**  
**PHIL 72R 3 Units**  
**PHIL 73R 4 Units**

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**3-12 hours laboratory per week. (36-144 hours total per quarter)**

Provides an opportunity for the student to expand their studies in Philosophy beyond the classroom by completing a project or an assignment arranged by agreement between the student and instructor. The student is required to contract with the instructor to determine the scope of assignment and the unit value assigned for successful completion. Students may take a maximum of 6 units of Independent Study per department.

**FHGE:** Non-GE **Transferable:** CSU

## PHOTOGRAPHY

Fine Arts and Communication

650.949.7318 [foothill.edu/fa/photo](http://foothill.edu/fa/photo)

Foothill offers photography activity courses in three different family categories. No single course may be repeated. Enrollment is limited to six courses per family within the Foothill-De Anza Community College District. Please refer to the De Anza College Catalog for the corresponding families and courses.

Digital Photography Family: PHOT 4A, 4B, 4C & 72

Analog Photography Family: PHOT 1, 2, 3 & 13

Photography-Professional Practices Family: PHOT 22, 68C, 68E, 71, 74A, 74B & 78D

**PHOT 1 BLACK & WHITE PHOTOGRAPHY I 4 Units**

**Advisory:** This course is included in the Analog Photography family of activity courses.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**3 hours lecture, 3 hours laboratory. (72 hours total per quarter)**

Fundamentals of black and white still photography. Introduction to the historical development of the medium and the role that photography has played in shaping social issues and its effect on culture. Practical investigation of photography's potential to contribute to personal visual expression. Exposure to multiple perspectives on photography as practiced and contributed by diverse cultures. Topics cover photographic seeing, camera operation, use of aperture and shutter settings for aesthetic and sensitometric control, film processing, printing, and use of natural light for personal expression and communication. Introduction to electronic imaging processes.

**FHGE:** Non-GE **Transferable:** UC/CSU

**PHOT 2 BLACK & WHITE PHOTOGRAPHY II 4 Units**

**Advisory:** PHOT 1 or equivalent experience; this course is included in the Analog Photography family of activity courses.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**3 hours lectures, 3 hours laboratory. (72 hours total per quarter)**

Emphasis on control of available light through use of tripods and push-processing; use of electronic flash and studio lights; attributes of various films and appropriate chemistry for each; graded papers; larger format cameras, introduction to sensitometry; specialized developing and printing techniques, enhancing personal photographic expression; digital manipulation of the photographic image.

**FHGE:** Non-GE **Transferable:** UC/CSU



**PHOT 3 BLACK & WHITE PHOTOGRAPHY III 4 Units**  
**Advisory:** PHOT 2 or equivalent experience; this course is included in the Analog Photography family of activity courses; not open to students with credit in PHOT 50.  
**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.  
**3 hours lecture, 3 hours laboratory. (72 hours total per quarter)**  
 Exploration of photographic seeing through the use of advanced processing and printing techniques; introduction to the Zone System and film calibration; creating special effects; high contrast and infrared films; integration of aesthetics and technique, emphasis on development of a personal style.  
**FHGE: Non-GE Transferable: UC/CSU**

**PHOT 4A PHOTOSHOP FOR PHOTOGRAPHERS I 4 Units**  
**Advisory:** PHOT 1, 5 or equivalent; this course is included in the Digital Photography family of activity courses; not open to students with credit in PHOT 65A.  
**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.  
**3 hours lecture, 3 hours laboratory. (72 hours total per quarter)**  
 Introduction to the tools for expressive communication in digital photography using Adobe Photoshop and Adobe Photoshop Lightroom. Development of skills in image capture, enhancement, printing, and web publishing, for both fine art and commercial applications.  
**FHGE: Non-GE Transferable: UC/CSU**

**PHOT 4B PHOTOSHOP FOR PHOTOGRAPHERS II 4 Units**  
**Advisory:** PHOT 4A or equivalent experience; this course is included in the Digital Photography family of activity courses; not open to students with credit in PHOT 65B.  
**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.  
**3 hours lecture, 3 hours laboratory. (72 hours total per quarter)**  
 Intermediate-level exploration with the tools for expressive communication in digital photography using Adobe Photoshop and Adobe Photoshop Lightroom. Development of skills in image capture, enhancement, printing, and web publishing, for both fine art and commercial applications.  
**FHGE: Non-GE Transferable: UC/CSU**

**PHOT 4C PHOTOSHOP FOR PHOTOGRAPHERS III 4 Units**  
**Advisory:** PHOT 4B or equivalent; this course is included in the Digital Photography family of activity courses; not open to students with credit in PHOT 65C.  
**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.  
**3 hours lecture, 3 hours laboratory. (72 hours total per quarter)**  
 Advanced-level exploration with the tools for expressive communication in digital photography using Adobe Photoshop and Adobe Photoshop Lightroom. Development of skills in image capture, enhancement, printing, and web publishing, for both fine art and commercial applications.  
**FHGE: Non-GE Transferable: UC/CSU**

**PHOT 5 INTRODUCTION TO PHOTOGRAPHY 4 Units**  
**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.  
**3 hours lecture, 3 hours laboratory. (72 hours total per quarter)**  
 A survey of the historical and practical aspects of photography as an art form and social document. Students will be introduced to the use of light, composition and communication through images. Significant photographers from a diversity of backgrounds will inspire students in the practice of photography and developing an understanding of the varied uses of the photographic image in our culture including advertising, journalism, social concern, fine art, and scientific applications.  
**FHGE: Humanities Transferable: UC/CSU**

**PHOT 8 PHOTOGRAPHY OF MULTICULTURAL AMERICA 4 Units**  
**Advisory:** Not open to students with credit in PHOT 8H.  
**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.  
**3 hours lecture, 3 hours laboratory. (72 hours total per quarter)**  
 Examination of photography's role in shaping ideas about race, class, gender, sexuality and national identity in America. Critical analysis of images from a wide range of genres including: commercial photography, portraiture, social documentary, photojournalism, ethnographic and scientific photography, erotica, and fine-art photography are discussed within their historical and social context.  
**FHGE: Amer, Human Transferable: UC/CSU**

**PHOT 8H HONORS PHOTOGRAPHY OF MULTICULTURAL AMERICA 4 Units**  
**Prerequisite:** Honors Institute participant.  
**Advisory:** Not open to students with credit in PHOT 8.  
**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.  
**3 hours lecture, 3 hours laboratory. (72 hours total per quarter)**  
 Examination of photography's role in shaping ideas about race, class, gender, sexuality and national identity in America. Critical analysis of images from a wide range of genres including: commercial photography, portraiture, social documentary, photojournalism, ethnographic and scientific photography, erotica, and fine-art photography are discussed within their historical and social context. The honors course offers an enriched and challenging experience for the more talented student, including deeper content, more rigorous grading, and more demanding and creative assignments requiring application of higher-level thinking, writing, and communication skills.  
**FHGE: Amer, Human Transferable: UC/CSU**

**PHOT 10 HISTORY OF PHOTOGRAPHY 4 Units**  
**Advisory:** One of the following: ENGL 1A, 1AH, 1S & 1T or ESLL 26 or equivalent; not open to students with credit in PHOT 10H.  
**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.  
**3 hours lecture, 3 hours laboratory. (72 hours total per quarter)**  
 The history of still photography from the earliest investigations of the camera obscura to late 20th Century electronic imaging. Emphasis on the role of photographs as a social and cultural force and on our artistic heritage of camera work.  
**FHGE: Humanities Transferable: UC/CSU**

**PHOT 10H HONORS HISTORY OF PHOTOGRAPHY 4 Units**  
**Prerequisite:** Honors Institute participant.  
**Advisory:** Not open to students with credit in PHOT 10.  
**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.  
**3 hours lecture, 3 hours laboratory. (72 hours total per quarter)**  
 The history of still photography from the earliest investigations of the camera obscura to late 20th Century electronic imaging. Emphasis on the role of photographs as a social and cultural force and on our artistic heritage of camera work. The honors course offers an enriched and challenging experience for the more talented student, including deeper content, more rigorous grading, and more demanding and creative assignments requiring application of higher-level thinking, writing, and communication skills.  
**FHGE: Humanities Transferable: UC/CSU**

**PHOT 11 CONTEMPORARY ISSUES IN PHOTOGRAPHY 4 Units**

**Advisory:** Not open to students with credit in PHOT 11H or 59.  
**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**3 hours lecture, 3 hours laboratory. (72 hours total per quarter)**

Survey of contemporary issues in photography. Critical theory and other issues surrounding contemporary photographic practices are explored through the style and content of work by selected contemporary photographers. Censorship, copyright, appropriation, and other current issues affecting the contemporary photographer are discussed. The interplay of traditional and digital photography and how it affects our concepts of truth, reality, society, and culture.

**FHGE:** Humanities **Transferable:** UC/CSU

**PHOT 11H HONORS CONTEMPORARY ISSUES IN PHOTOGRAPHY 4 Units**

**Prerequisite:** Honors Institute participant.

**Advisory:** Not open to students with credit in PHOT 11 or 59.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**3 hours lecture, 3 hours laboratory. (72 hours total per quarter)**

Survey of contemporary issues in photography. Critical theory and other issues surrounding contemporary photographic practices are explored through the style and content of work by selected contemporary photographers. Censorship, copyright, appropriation, and other current issues affecting the contemporary photographer are discussed. The interplay of traditional and digital photography and how it affects our concepts of truth, reality, society, and culture. The honors course offers an enriched and challenging experience for the more talented student, including deeper content, more rigorous grading, and more demanding and creative assignments requiring application of higher-level thinking, writing, and communication skills.

**FHGE:** Humanities **Transferable:** UC/CSU

**PHOT 13 EXPERIMENTAL PHOTOGRAPHY 4 Units**

**Advisory:** PHOT 2; this course is included in the Analog Photography family of activity courses; not open to students with credit in PHOT 56.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**3 hours lecture, 3 hours laboratory. (72 hours total per quarter)**

Exploration of experimental approaches to creative photography, using silver and nonsilver processes. Introduction to digital manipulation of images.

**FHGE:** Non-GE **Transferable:** UC/CSU

**PHOT 22 PHOTOJOURNALISM 4 Units**

**Advisory:** PHOT 2, 72 or equivalent; this course is included in the Photography-Professional Practices family of activity courses; not open to students with credit in PHOT 63.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**3 hours lecture, 3 hours laboratory. (72 hours total per quarter)**

Instruction in basic skills needed for effective online and print photography for use in newspapers, magazines, web journals and blogs with emphasis on developing appropriate behavior and craft needed in meeting deadlines for photojournal publication. Assignments include news photographs, human interest and feature pictures, and the picture story. Special emphasis on print quality, picture editing, layout design, image content and captioning. Introduction to digital capture, preparation of files and transmittal of photographs, and video and sound recording techniques.

**FHGE:** Non-GE **Transferable:** UC/CSU

**PHOT 57A PHOTOGRAPHIC PORTFOLIO DEVELOPMENT 4 Units**

**Prerequisite:** PHOT 3 or 4B or instructor's permission.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**3 hours lecture, 3 hours laboratory. (72 hours total per quarter)**

Professional practices course for the organization and assembly of a photographic portfolio from concept to final presentation. This intensive advanced class requires building of a group of photographic works that function both individually and as a group. Goal setting for the vocational and transfer students and packaging work for school, job and exhibition applications will be a priority. Concerns will include how to build a portfolio and organize images that communicate clearly, how to utilize technical execution for effective communication and techniques for giving and receiving feedback to further photographic projects.

**FHGE:** Non-GE **Transferable:** CSU

**PHOT 57B PROFESSIONAL PRACTICES IN PHOTOGRAPHY 4 Units**

**Prerequisite:** PHOT 57A or instructor's permission.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**3 hours lecture, 3 hours laboratory. (72 hours total per quarter)**

Organization of photographic work from prior classes and projects to meet individual goals including transfer, exhibition and employment. Development of professional materials such as resume, website and business cards as well as finalization of a photographic portfolio. Develop support materials for applications and exhibitions. Share work with photography community through exhibition or other methods of display.

**FHGE:** Non-GE **Transferable:** CSU

**PHOT 68C STUDIO LIGHTING TOPICS IN PHOTOGRAPHY 1 Unit**

**Advisory:** PHOT 1 or 5; this course is included in the Photography-Professional Practices family of activity courses.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**1 hour lecture. (12 hours total per quarter)**

Investigation of a specific aspect or topic of photography through discussion and demonstration by the instructor(s).

**FHGE:** Non-GE **Transferable:** CSU

**PHOT 68E LECTURE TOPICS IN PHOTOGRAPHY 1 Unit**

**Advisory:** PHOT 1 or 5; this course is included in the Photography-Professional Practices family of activity courses.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**1 hour lecture. (12 hours total per quarter)**

Investigation of a specific aspect or topic of photography through discussion and demonstration by the instructor(s).

**FHGE:** Non-GE **Transferable:** CSU

**PHOT 71 THE PHOTOGRAPHIC BOOK 4 Units**

**Advisory:** PHOT 1, 4A, 5 or equivalent experience; this course is included in the Photography-Professional Practices family of activity courses.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**3 hours lecture, 3 hours laboratory. (72 hours total per quarter)**

Exploration of the book for the display and sharing of photographic imagery including the history of the photographic book and its uses in fine art, commercial and documentary photography. Use of appropriate technology for creation of photographic books including digital image editing, color correction, graphic design and typography. Investigation of sequencing and presentation of photographs in book format for communication.

**FHGE:** Non-GE **Transferable:** CSU

**PHOT 72 LIGHTROOM & PHOTOGRAPHIC DESIGN 4 Units**

**Advisory:** PHOT 1 or 5 or equivalent experience; this course is included in the Digital Photography family of activity courses.  
**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**3 hours lecture, 3 hours laboratory. (72 hours total per quarter)**  
Develop intermediate photographic skills with the use of Adobe Photoshop Lightroom and photographic design techniques. Evaluate and utilize current methods of workflow including archiving, file management, development, image publishing, beginning color management and printing. Build skills in composition, design, project editing and visual communication. Utilize design principles to create images that communicate effectively.  
**FHGE:** Non-GE **Transferable:** CSU

**PHOT 74A STUDIO PHOTOGRAPHY TECHNIQUES I 4 Units**

**Formerly:** PHOT 74  
**Advisory:** PHOT 1 or 5; this course is included in the Photography-Professional Practices family of activity courses; not open to students with credit in PHOT 74.  
**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**3 hours lecture, 3 hours laboratory. (72 hours total per quarter)**  
Introduction and overview to studio lighting, digital medium format cameras, exploration of photographic practices in a studio environment; emphasis on developing effective skills and techniques necessary to begin a career in studio photography.  
**FHGE:** Non-GE **Transferable:** CSU

**PHOT 74B STUDIO PHOTOGRAPHY TECHNIQUES II 4 Units**

**Advisory:** Completion of one or more of the following courses: PHOT 2, 4A, 5, 72, 74A; this course is included in the Photography-Professional Practices family of activity courses.  
**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**3 hours lecture, 3 hours laboratory. (72 hours total per quarter)**  
This course follows PHOT 74A and is intended to teach intermediate level skills in studio photography. Proper and creative use of digital small and medium format cameras, and lighting in a studio environment. Emphasis on developing the specific photographic skills, techniques and business practices necessary for success in a photography career path that is chosen by the student in consultation with the instructor, e.g., wedding, product, portrait, editorial or illustration, etc.  
**FHGE:** Non-GE **Transferable:** CSU

**PHOT 78A LANDSCAPE FIELD STUDY IN PHOTOGRAPHY 1 Unit**

**Advisory:** PHOT 1 or 5; not open to students with credit in PHOT 78.  
**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**1 hour lecture. (12 hours total per quarter)**  
Investigates historical and contemporary approaches to photographing landscape. Through field trips, lecture and demonstrations, students will learn about ways that other photographers have interpreted the landscape. Photographic techniques will enable students to develop a personal approach to photographing the landscape.  
**FHGE:** Non-GE **Transferable:** CSU

**PHOT 78B SOCIAL CONCERNS FIELD STUDY IN PHOTOGRAPHY 1 Unit**

**Advisory:** PHOT 1 or 5.  
**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**1 hour lecture. (12 hours total per quarter)**  
Investigation of a specific aspect or topic of photography through discussion and demonstration by the instructor(s) in the field.  
**FHGE:** Non-GE **Transferable:** CSU

**PHOT 78C DOCUMENTARY FIELD STUDY IN PHOTOGRAPHY 1 Unit**

**Advisory:** PHOT 1 or 5.  
**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**1 hour lecture. (12 hours total per quarter)**  
Investigation of a specific aspect or topic of photography through discussion and demonstration by the instructor(s) in the field.  
**FHGE:** Non-GE **Transferable:** CSU

**PHOT 78D MUSEUM/GALLERY FIELD STUDY IN PHOTOGRAPHY 1 Unit**

**Advisory:** PHOT 1 or 5; this course is included in the Photography-Professional Practices family of activity courses.  
**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**1 hour lecture. (12 hours total per quarter)**  
Investigation of a specific aspect or topic of photography through discussion and demonstration by the instructor(s) in the field.  
**FHGE:** Non-GE **Transferable:** CSU

## PHYSICAL EDUCATION

Kinesiology and Athletics  
650.949.7742 [foothill.edu/ath](http://foothill.edu/ath)

Foothill offers physical education activity courses in eight different family categories. No single course may be repeated. Enrollment is limited to six courses per family within the Foothill-De Anza Community College District. Please refer to the De Anza College Catalog for the corresponding families and courses.

**Aquatic Family:** PHED 10A, 10B, 10C, 11A, 11B & 11C

**Cardio Fitness Family:** PHED 22E, 23A, 23B, 26F, 27, 27A, 27B, 27C, 41, 41A, 41B & 41C

**Combatives Family:** PHED 18, 18B, 18C, 19B, 19C & 19D

**Cross Training Family:** PHED 47B, 47C, 49A & 49B

**Flexibility & Stability Family:** PHED 20A, 20B, 20C, 21, 21A, 21B, 21C, 21D, 21E, 22, 22A, 22B & 22C

**Individual Sports Family:** PHED 15A, 15B, 15C, 24, 24A, 24B, 24C, 24D, 25A, 25B, 26, 26A, 26C, 26D, 26E, 33, 33A, 33B, 36A, 36B, 36C, 37, 37A, 37B & 42

**Strength Development Family:** PHED 14, 45, 45A, 45C, 46, 46A & 46B

**Team Sports Family:** PHED 13, 13A, 13B, 13C, 31A, 31B, 31C, 31D, 32C, 38A, 38B, 38C, 38D, 38E, 40, 40A, 40B & 40C

**PHED 10A AQUATICS: LEVEL I, BEGINNING SWIMMING 1 Unit**

**Advisory:** This course is included in the Aquatic family of activity courses.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**3 hours laboratory. (36 hours total per quarter)**  
Introduction to swimming and safety skills. Includes physical and mental adjustment to water, buoyancy and body position, survival skills, and basic swim strokes.  
**FHGE:** Lifelong Learning **Transferable:** UC/CSU

**PHED 10B AQUATICS: LEVEL II, INTERMEDIATE SWIMMING** 1 Unit

**Advisory:** This course is included in the Aquatic family of activity courses.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**3 hours laboratory. (36 hours total per quarter)**

A continuation of development of swim and safety skills beyond the beginning phase. Includes physical and mental adjustment to water, buoyancy and body position, survival skills, and the basic competitive swim strokes. Includes intermediate water safety skills and knowledge leading to safe practices while in, on or about the water.

**FHGE: Lifelong Learning Transferable: UC/CSU**

**PHED 10C AQUATICS LEVEL III, MASTERS SWIMMING/ADVANCED SWIM TRAINING** 1 Unit

**Advisory:** This course is included in the Aquatic family of activity courses.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**3 hours laboratory. (36 hours total per quarter)**

Advanced programs & concepts of swim strokes, competitive flip turns, and endurance training for competition.

**FHGE: Lifelong Learning Transferable: UC/CSU**

**PHED 11A WATER EXERCISE** 1 Unit

**Advisory:** This course is included in the Aquatic family of activity courses.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**3 hours laboratory. (36 hours total per quarter)**

A unique non-impact form of aquatic exercise to improve cardiovascular endurance, muscular strength, endurance, and flexibility while wearing a flotation belt to maintain an upright position in deep water.

**FHGE: Lifelong Learning Transferable: UC/CSU**

**PHED 11B AQUATIC FITNESS** 1 Unit

**Advisory:** This course is included in the Aquatic family of activity courses.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**3 hours laboratory. (36 hours total per quarter)**

An aerobic water fitness program applying the basic principles of exercise and dynamics of water movement.

**FHGE: Lifelong Learning Transferable: UC/CSU**

**PHED 11C WATER AWARENESS** 1 Unit

**Advisory:** This course is included in the Aquatic family of activity courses.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**3 hours laboratory. (36 hours total per quarter)**

Water awareness for non-swimmers Including basic water safety information as well as elementary swim techniques.

**FHGE: Lifelong Learning Transferable: UC/CSU**

**PHED 13 BEGINNING WATER POLO** 1 Unit

**Advisory:** This course is included in the Team Sports family of activity courses.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**3 hours laboratory. (36 hours total per quarter)**

Basic water polo skills and techniques including ball handling, dribbling, passing, shooting & blocking. Includes an introduction to the rules of the game as well as basic tactical strategies for offense and defense.

**FHGE: Lifelong Learning Transferable: UC/CSU**

**PHED 13A INTERMEDIATE WATER POLO** 1 Unit

**Advisory:** This course is included in the Team Sports family of activity courses.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**3 hours laboratory. (36 hours total per quarter)**

Intermediate water polo skills and techniques including ball handling, dribbling, passing, shooting, and blocking. Includes a review of the rules of the game, team offense, team defense, developing players at specific positions and an introduction to specific team plays and strategies.

**FHGE: Lifelong Learning Transferable: UC/CSU**

**PHED 13B ADVANCED WATER POLO** 1 Unit

**Advisory:** This course is included in the Team Sports family of activity courses.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**3 hours laboratory. (36 hours total per quarter)**

Advanced skills in various offensive and defensive techniques of water polo.

**FHGE: Lifelong Learning Transferable: UC/CSU**

**PHED 13C WATER POLO: GAME SKILLS** 1 Unit

**Advisory:** This course is included in the Team Sports family of activity courses.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**3 hours laboratory. (36 hours total per quarter)**

Practice and preparation for competitive water polo, emphasizing water polo skills, fundamentals and strategies of the game, position specific training and full body preparation.

**FHGE: Lifelong Learning Transferable: UC/CSU**

**PHED 14 NUTRITIONAL ASSESSMENT & FITNESS** 1 Unit

**Advisory:** This course is included in the Strength Development family of activity courses; not open to students with credit in PHED 50C.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**3 hours laboratory. (36 hours total per quarter)**

A study of nutritional concepts, body fat assessment and work-out programs for lifetime fitness.

**FHGE: Lifelong Learning Transferable: UC/CSU**

**PHED 15A BEGINNING PICKLEBALL** 1 Unit

**Advisory:** This course is included in the Individual Sports family of activity courses.

**Grade Type:** Letter Grade Only Not Repeatable.

**3 hours laboratory. (36 hours total per quarter)**

Strategy and competition for both singles and doubles pickleball play.

**FHGE: Lifelong Learning Transferable: UC/CSU**

**PHED 15B INTERMEDIATE PICKLEBALL** 1 Unit

**Advisory:** This course is included in the Individual Sports family of activity courses.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**3 hours laboratory. (36 hours total per quarter)**

Focus on the strategies of singles and doubles play. Includes introduction to serving long and short, forehands smashes, drop shots, angle play, and doubles formations.

**FHGE: Lifelong Learning Transferable: UC/CSU**

**PHED 15C ADVANCED PICKLEBALL 1 Unit**

**Advisory:** This course is included in the Individual Sports family of activity courses.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**3 hours laboratory. (36 hours total per quarter)**

Focus on the strategies of singles and double play, including serving with a variety of spins, forehand and backhand smashes, drop shots, angle play and doubles formations. Strong emphasis on fitness, flexibility and nutrition. How to design a point, set and match will also be a main focus. **FHGE: Lifelong Learning Transferable: UC/CSU**

**PHED 18 BEGINNING TAI CHI (TAIJI) 1 Unit**

**Advisory:** This course is included in the Combatives family of activity courses; not open to students with credit in PHED 19A.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**3 hours laboratory. (36 hours total per quarter)**

Beginning Tai Chi (Taiji) introduces the fundamentals and principles of Taijiquan. Emphasizes body alignment in stillness with natural breathing and its relationship to mind-body awareness. Traditional Chen Style Taijiquan Lao Jia (Old Frame) first routine and the standing posture with breathing exercises (Wuji Qigong) will be practiced to facilitate the development of basic body strength and mind-body coordination. **FHGE: Lifelong Learning Transferable: UC/CSU**

**PHED 18B INTERMEDIATE TAI CHI (TAIJI) 1 Unit**

**Prerequisite:** PHED 18.

**Advisory:** This course is included in the Combatives family of activity courses.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**3 hours laboratory. (36 hours total per quarter)**

Intermediate Taiji focuses on the understanding and transition of body alignment in stillness to dynamic alignment during the Taijiquan form practice. Emphasizes maintaining the body alignment during movements and through motion with natural breathing. External movements guiding the internal energy flow exercises (Hun Yuan Qigong) and a series of connected spiral movements (Silk Reeling Exercises) will be taught in this class as well as to mind body awareness. Practice of second section of Chen Style Taijiquan Lao Jia (Old Frame) first routine to facilitate the development of the body-ground connection. **FHGE: Lifelong Learning Transferable: UC/CSU**

**PHED 18C ADVANCED TAI CHI (TAIJI) 1 Unit**

**Prerequisite:** PHED 18B.

**Advisory:** This course is included in the Combatives family of activity courses.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**3 hours laboratory. (36 hours total per quarter)**

Advanced Taiji focuses on the applications and dynamic alignment during the Taijiquan form practice. Emphasizes total integration of mind and body movements through Taijiquan push-hand exercises and the development of ting jin (listening energy). Emphasis on the sensitivity and awareness of surroundings to achieve a focused center in order to neutralize and redirect incoming forces. **FHGE: Lifelong Learning Transferable: UC/CSU**

**PHED 19B KICKBOXING FOR FITNESS 1 Unit**

**Advisory:** This course is included in the Combatives family of activity courses.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**3 hours laboratory. (36 hours total per quarter)**

Introduction to the basic skills and mechanics of kickboxing for fitness. Total cardiovascular workout emphasizing basic footwork, body mechanics, punching and kicking combinations and basic offensive and defensive techniques. **FHGE: Lifelong Learning Transferable: UC/CSU**

**PHED 19C INTERMEDIATE KICKBOXING FOR FITNESS 1 Unit**

**Prerequisite:** PHED 19B.

**Advisory:** This course is included in the Combatives family of activity courses.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**3 hours laboratory. (36 hours total per quarter)**

Intermediate kickboxing focuses on punching and kicking combination drills, with fewer breaks or interruptions, and with an increase in intensity, impact and duration. An emphasis is placed on intermediate level footwork and body mechanics to improve coordination, reaction time and balance. **FHGE: Lifelong Learning Transferable: UC/CSU**

**PHED 19D ADVANCED KICKBOXING FOR FITNESS 1 Unit**

**Prerequisite:** PHED 19C.

**Advisory:** This course is included in the Combatives family of activity courses.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**3 hours laboratory. (36 hours total per quarter)**

Emphasizes high-intensity and moderate- to high-impact advanced level kickboxing sequences using complex and choreographed movements. **FHGE: Lifelong Learning Transferable: UC/CSU**

**PHED 20A BEGINNING MAT PILATES 1 Unit**

**Advisory:** This course is included in the Flexibility & Stability family of activity courses.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**3 hours laboratory. (36 hours total per quarter)**

Beginning Pilates stresses the fundamentals and principles of the Pilates method. Traditional Mat Pilates exercises and principles are combined to achieve body control, core strength and joint mobility. **FHGE: Lifelong Learning Transferable: UC/CSU**

**PHED 20B INTERMEDIATE MAT PILATES 1 Unit**

**Prerequisite:** PHED 20A.

**Advisory:** This course is included in the Flexibility & Stability family of activity courses.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**3 hours laboratory. (36 hours total per quarter)**

An intermediate level mat Pilates class focusing on fluid transitions between stretching and strengthening intermediate exercises to improve coordination, endurance, posture, flexibility and balance for a more streamlined shape. Focuses on neutral pelvic placement and increasingly challenging series of exercises considered intermediate. **FHGE: Lifelong Learning Transferable: UC/CSU**

**PHED 20C ADVANCED PILATES 1 Unit**

**Prerequisite:** PHED 20B.

**Advisory:** This course is included in the Flexibility & Stability family of activity courses.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**3 hours laboratory. (36 hours total per quarter)**

A vigorous and dynamic full body conditioning class using mat and standing exercises to tighten, tone and lengthen core muscles and flexibility exercises to improve mobility and stability. Focuses on the vertical positioning of the body which is the most advanced manifestation of Pilates. **FHGE: Lifelong Learning Transferable: UC/CSU**

**PHED 21 FOUNDATIONS OF YOGA 1 Unit**  
**Advisory:** This course is included in the Flexibility & Stability family of activity courses.  
**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.  
**3 hours laboratory. (36 hours total per quarter)**  
Introduction to the fundamentals of yoga, including foundation principles and practices. Emphasis on the demonstration and practice of correct alignment, balance and connection for yoga poses (asanas), yogic locks, and pranayama (breathing techniques) for overall fitness and stress management.  
**FHGE: Lifelong Learning Transferable: UC/CSU**

**PHED 21A BEGINNING HATHA YOGA 1 Unit**  
**Advisory:** This course is included in the Flexibility & Stability family of activity courses.  
**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.  
**3 hours laboratory. (36 hours total per quarter)**  
Principles and methods of practice in the discipline of beginning hatha yoga. Emphasis on the practice and demonstration of the beginning postures and the usage of hatha yoga for increased focus and concentration, integration of personal values and actions, and integration of mind, body and spirit.  
**FHGE: Lifelong Learning Transferable: UC/CSU**

**PHED 21B INTERMEDIATE HATHA YOGA 1 Unit**  
**Prerequisite:** PHED 21A.  
**Advisory:** This course is included in the Flexibility & Stability family of activity courses.  
**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.  
**3 hours laboratory. (36 hours total per quarter)**  
Intermediate training in yoga, skills and techniques with independent, group, and personalized training. Emphasis is on practice of intermediate asanas (poses) and pranayama (breathing techniques) with the introduction of ujayi breath.  
**FHGE: Lifelong Learning Transferable: UC/CSU**

**PHED 21C ADVANCED HATHA YOGA 1 Unit**  
**Prerequisite:** PHED 21B.  
**Advisory:** This course is included in the Flexibility & Stability family of activity courses.  
**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.  
**3 hours laboratory. (36 hours total per quarter)**  
A combination of the traditional forms of yoga woven into one powerful all-inclusive practice. Postures are combined into a vigorous, flowing series, linking one movement to the next, building strength, flexibility, and endurance.  
**FHGE: Lifelong Learning Transferable: UC/CSU**

**PHED 21D VINYASA FLOW YOGA 1 Unit**  
**Advisory:** This course is included in the Flexibility & Stability family of activity courses.  
**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.  
**3 hours laboratory. (36 hours total per quarter)**  
A form of traditional hatha yoga that focuses on integrating breath and movement, awareness and alignment, strength, and flexibility. Uses series of sequences of advancing difficulty with repeated closing sections between each sequence. Each variation is linked to the next one by a succession of specific transitional movements. Likened to a dynamic dance, postures or asanas are connected through the breath for a transformative and balancing effect. Practice ranges from slow flowing to fast aerobic, developing strength and endurance.  
**FHGE: Lifelong Learning Transferable: UC/CSU**

**PHED 21E RESTORATIVE YOGA 1 Unit**  
**Advisory:** This course is included in the Flexibility & Stability family of activity courses.  
**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.  
**3 hours laboratory. (36 hours total per quarter)**  
A relatively modern form of yoga that focuses on opening the connective tissue and fascia of the body in order to create balance, connection, alignment, strength and flexibility. Poses are held for extended periods of time with additional support and emphasis on allowing the body to release without force.  
**FHGE: Lifelong Learning Transferable: UC/CSU**

**PHED 22 BEGINNING FULL-BODY FLEXIBILITY 1 Unit**  
**Advisory:** This course is included in the Flexibility & Stability family of activity courses.  
**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.  
**3 hours laboratory. (36 hours total per quarter)**  
Increased flexibility enhances physical performance, helps maintain muscle fitness and assists in injury rehabilitation. Intended for individuals with a variety of fitness experience levels. Students must provide their own fitness mat.  
**FHGE: Lifelong Learning Transferable: UC/CSU**

**PHED 22A INTERMEDIATE FULL-BODY FLEXIBILITY 1 Unit**  
**Prerequisite:** PHED 22.  
**Advisory:** This course is included in the Flexibility & Stability family of activity courses.  
**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.  
**3 hours laboratory. (36 hours total per quarter)**  
An intermediate level stretching program emphasizing seated and standing flexibility exercises for the hips, hamstrings, quadriceps, wrists, ankles, shoulders, obliques, and lumbar, thoracic and cervical spine. Complimentary abdominal exercises and standing postures will be introduced to develop balance, tone and endurance.  
**FHGE: Lifelong Learning Transferable: UC/CSU**

**PHED 22B PILATES & YOGA 1 Unit**  
**Advisory:** This course is included in the Flexibility & Stability family of activity courses.  
**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.  
**3 hours laboratory. (36 hours total per quarter)**  
Combines basic Pilates mat exercises to strengthen abdominals with full body yoga based stretches for development of improved posture, flexibility, and relaxation. Students must provide their own fitness mat.  
**FHGE: Lifelong Learning Transferable: UC/CSU**

**PHED 22C CORE CONDITIONING 1 Unit**  
**Advisory:** This course is included in the Flexibility & Stability family of activity courses.  
**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.  
**3 hours laboratory. (36 hours total per quarter)**  
A combination Pilates and Yoga class designed to improve strength, body control, and coordination. Resistance and stability equipment will be incorporated with abdominal, low back, and full body exercises. Students must provide their own fitness mat.  
**FHGE: Lifelong Learning Transferable: UC/CSU**

**PHED 22E FUNCTIONAL TRAINING FOR ENDURANCE** 1 Unit

**Advisory:** This course is included in the Cardio Fitness family of activity courses.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**3 hours laboratory. (36 hours total per quarter)**

Explore the concept of functional training as it applies to the endurance athlete. Learn, utilize and understand effective training strategies to promote improved performance by the student. Emphasis placed on the application of skills and improved fitness. The importance of proper nutrition to improve performance will also be included.

**FHGE: Lifelong Learning Transferable: UC/CSU**

**PHED 23A TRAIL HIKING** 1 Unit

**Advisory:** This course is included in the Cardio Fitness family of activity courses.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**3 hours laboratory. (36 hours total per quarter)**

The opportunity to exercise in the great outdoors to gain and improve cardiovascular fitness, muscular strength and endurance through hiking at a fitness pace on the trail.

**FHGE: Lifelong Learning Transferable: UC/CSU**

**PHED 23B DAY HIKING** 1 Unit

**Advisory:** This course is included in the Cardio Fitness family of activity courses.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**3 hours laboratory. (36 hours total per quarter)**

A hiking class that prepares healthy, fit individuals for a final 8-12 mile hike on established trails over moderate to steep terrain.

**FHGE: Lifelong Learning Transferable: UC/CSU**

**PHED 24 INTRODUCTION TO GOLF** 1 Unit

**Advisory:** This course is included in the Individual Sports family of activity courses.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**3 hours laboratory. (36 hours total per quarter)**

Introduces the fundamentals of the golf swing, knowledge of equipment, terminology and course etiquette.

**FHGE: Lifelong Learning Transferable: UC/CSU**

**PHED 24A SWING DEVELOPMENT FOR THE EXPERIENCED GOLFER** 1 Unit

**Advisory:** This course is included in the Individual Sports family of activity courses.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**3 hours laboratory. (36 hours total per quarter)**

Development of golf skills for the intermediate/advanced player including grip, posture, alignment and swing fundamentals, selection of equipment, knowledge of rules, etiquette and course management.

**FHGE: Lifelong Learning Transferable: UC/CSU**

**PHED 24B SKILLS OF GOLF COURSE PLAY** 1 Unit

**Advisory:** Students are expected to have previously gained an understanding of and proficiency with basic golf swings for a variety of club types; no previous golf course experience is necessary; this course is included in the Individual Sports family of activity courses.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**3 hours laboratory. (36 hours total per quarter)**

Introduction to beginning golf course play includes basic fundamentals of the golf swing, knowledge of rules and golf course etiquette as well as developing on course experience.

**FHGE: Lifelong Learning Transferable: UC/CSU**

**PHED 24C INTERMEDIATE GOLF COURSE PLAY** 2 Units

**Prerequisite:** PHED 25B.

**Advisory:** This course is included in the Individual Sports family of activity courses; not open to students with credit in H P 25DX.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**6 hours laboratory. (72 hours total per quarter)**

Students will play an 18 hole golf course including multiple game formats (scramble, shotgun and bestball), practice with club selection and ireadingġ the ball.

**FHGE: Lifelong Learning Transferable: UC/CSU**

**PHED 24D ADVANCED GOLF COURSE PLAY** 2 Units

**Prerequisite:** PHED 24C.

**Advisory:** This course is included in the Individual Sports family of activity courses.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**6 hours laboratory. (72 hours total per quarter)**

Students will play an 18 hole golf course with focus on increasing pace of play, development of advanced skills and execution of the golf swing, proper etiquette and strategies for lowering a score and establishing a handicap.

**FHGE: Lifelong Learning Transferable: UC/CSU**

**PHED 25A SWING ANALYSIS** 1 Unit

**Advisory:** This course is included in the Individual Sports family of activity courses.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**3 hours laboratory. (36 hours total per quarter)**

Using Swing Solutions video technology, the student will identify and correct individual golf swing flaws and design drills to develop skills to improve golf strokes.

**FHGE: Lifelong Learning Transferable: UC/CSU**

**PHED 25B BEGINNING GOLF COURSE PLAY** 2 Units

**Advisory:** Students are expected to have previously gained an understanding of and proficiency with basic golf swings for a variety of club types; no previous golf course experience is necessary; this course is included in the Individual Sports family of activity courses.

**Grade Type: Letter Grade Only**

**Not Repeatable.**

**6 hours laboratory. (72 hours total per quarter)**

Students will play an 18 hole round of golf utilizing a variety of swing skills and clubs (e.g., wood, iron, wedge, putter). Both long and short game skills and strategies will be incorporated on the course. Students will apply rules of golf and course etiquette during play.

**FHGE: Lifelong Learning Transferable: UC/CSU**

**PHED 26 BEGINNING TENNIS SKILLS** 1 Units

**Advisory:** This course is included in the Individual Sports family of activity courses.

**Grade Type: Letter Grade, the student may select Pass/No Pass Not Repeatable.**

**3 hours laboratory. (36 hours total per quarter)**

Introduction to beginning tennis play including basic strokes, drills, rules and etiquette.

**FHGE: Lifelong Learning Transferable: UC/CSU**

**PHED 26A INTERMEDIATE TENNIS** 1 Unit

**Advisory:** This course is included in the Individual Sports family of activity courses.

**Grade Type: Letter Grade, the student may select Pass/No Pass Not Repeatable.**

**3 hours laboratory. (36 hours total per quarter)**

Intermediate/advanced tennis for competitive play includes covering drills, advanced strategies, techniques and rules.

**FHGE: Lifelong Learning Transferable: UC/CSU**

**PHED 26C BEGINNING DOUBLES TENNIS 1 Unit**

**Advisory:** This course is included in the Individual Sports family of activity courses.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**3 hours laboratory. (36 hours total per quarter)**

Introduction to doubles tennis play. Includes basic court position, skill drills, and offensive and defensive strategies.

**FHGE: Lifelong Learning Transferable: UC/CSU**

**PHED 26D INTERMEDIATE DOUBLES TENNIS 1 Unit**

**Advisory:** This course is included in the Individual Sports family of activity courses.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**3 hours laboratory. (36 hours total per quarter)**

Reviews strategy for intermediate doubles play. Includes introduction to volley, overhead, approach shots, service, return and poaching.

**FHGE: Lifelong Learning Transferable: UC/CSU**

**PHED 26E ADVANCED DOUBLES TENNIS 1 Unit**

**Advisory:** This course is included in the Individual Sports family of activity courses.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**3 hours laboratory. (36 hours total per quarter)**

Reviews strategy for advanced doubles play. Advanced strategies and court positions of the Australian and I formations. Students will participate in competitive match play.

**FHGE: Lifelong Learning Transferable: UC/CSU**

**PHED 26F AEROBIC TENNIS 1 Unit**

**Advisory:** This course is included in the Cardio Fitness family of activity courses.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**3 hours laboratory. (36 hours total per quarter)**

Combines tennis skills and drills with high energy fitness activity. Students will engage in tennis specific activities, drills, and movements, designed to keep the heart rate in the training zone.

**FHGE: Lifelong Learning Transferable: UC/CSU**

**PHED 27 WALK FOR HEALTH 1 Unit**

**Advisory:** This course is included in the Cardio Fitness family of activity courses; not open to students with credit in H P 16.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**3 hours laboratory. (36 hours total per quarter)**

Introduction to fitness walking. Includes basic principles of exercise and how they relate to fitness walking.

**FHGE: Lifelong Learning Transferable: UC/CSU**

**PHED 27A RUN FOR FITNESS 1 Unit**

**Advisory:** This course is included in the Cardio Fitness family of activity courses; not open to students with credit in H P 61.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**3 hours laboratory. (36 hours total per quarter)**

Explanation of all phases of running, improve cardiovascular fitness, increase flexibility, develop endurance, introduction to the physiologic responses of the body to running.

**FHGE: Lifelong Learning Transferable: UC/CSU**

**PHED 27B INTERMEDIATE RUN FOR FITNESS 1 Unit**

**Prerequisite:** PHED 27A.

**Advisory:** This course is included in the Cardio Fitness family of activity courses.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**3 hours laboratory. (36 hours total per quarter)**

Focus on proper training and running technique, race management, nutrition, prevention and treatments of common running injuries. Intended for the student wishing to improve fitness and running skills.

**FHGE: Lifelong Learning Transferable: UC/CSU**

**PHED 27C INTERMEDIATE WALK FOR HEALTH 1 Unit**

**Prerequisite:** PHED 27.

**Advisory:** This course is included in the Cardio Fitness family of activity courses.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**3 hours laboratory. (36 hours total per quarter)**

Development of advanced walking skills for fitness and athletic walkers. Including program customization and how walking fits into a healthy lifestyle.

**FHGE: Lifelong Learning Transferable: UC/CSU**

**PHED 31A FUTSAL: INDOOR SOCCER BEGINNING 1 Unit**

**Advisory:** This course is included in the Team Sports family of activity courses; not open to students with credit in PHED 29.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**3 hours laboratory. (36 hours total per quarter)**

Indoor soccer class developing basic skills including passing, shooting, dribbling and heading. Includes game strategy, tactics, and laws of the game.

**FHGE: Lifelong Learning Transferable: UC/CSU**

**PHED 31B FUTSAL: INDOOR SOCCER INTERMEDIATE 1 Unit**

**Prerequisite:** PHED 31A.

**Advisory:** This course is included in the Team Sports family of activity courses.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**3 hours laboratory. (36 hours total per quarter)**

Indoor soccer class developing intermediate skills including curve passing, chip shooting, dribbling and heading. Includes intermediate game strategy, tactics, and laws of the game.

**FHGE: Lifelong Learning Transferable: UC/CSU**

**PHED 31C FUTSAL: INDOOR SOCCER ADVANCED 1 Unit**

**Prerequisite:** PHED 31B.

**Advisory:** This course is included in the Team Sports family of activity courses.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**3 hours laboratory. (36 hours total per quarter)**

Indoor soccer class developing advanced skills including power passing, power shooting, speed dribbling and offensive heading. Includes advanced game strategy, tactics, and laws of the game.

**FHGE: Lifelong Learning Transferable: UC/CSU**

**PHED 31D TOURNAMENT FUTSAL: INDOOR SOCCER 1 Unit**

**Advisory:** This course is included in the Team Sports family of activity courses.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**3 hours laboratory. (36 hours total per quarter)**

Tournament Indoor soccer provides students the opportunity to demonstrate their soccer skills in a competitive tournament environment.

**FHGE: Lifelong Learning Transferable: UC/CSU**



**PHED 32C SOCCER: GAME SKILLS 1 Unit**

**Advisory:** This course is included in the Team Sports family of activity courses; not open to students with credit in PHED 29A.  
**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**3 hours laboratory. (36 hours total per quarter)**

Practice and preparation for competitive soccer emphasizing soccer skills fundamentals and strategies of the game, position specific training and full body preparation.

**FHGE: Lifelong Learning Transferable: UC/CSU**

**PHED 33 BEGINNING TABLE TENNIS 1 Unit**

**Advisory:** This course is included in the Individual Sports family of activity courses.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**3 hours laboratory. (36 hours total per quarter)**

Strategy and competition for both singles and doubles table tennis play.

**FHGE: Lifelong Learning Transferable: UC/CSU**

**PHED 33A INTERMEDIATE TABLE TENNIS 1 Unit**

**Prerequisite:** PHED 33.

**Advisory:** This course is included in the Individual Sports family of activity courses.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**3 hours laboratory. (36 hours total per quarter)**

Focus on the strategies of singles and doubles play. Includes introduction to serving long and short, forehands smashes, drop shots, angle play, and doubles formations.

**FHGE: Lifelong Learning Transferable: UC/CSU**

**PHED 33B ADVANCED TABLE TENNIS 1 Unit**

**Prerequisite:** PHED 33A.

**Advisory:** This course is included in the Individual Sports family of activity courses.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**3 hours laboratory. (36 hours total per quarter)**

Focus on the strategies of singles and double play including serving with a variety of spins, forehand and backhand smashes, drop shots, angle play and doubles formations. Strong emphasis on fitness, flexibility and nutrition. How to design a point, set and match will also be a main focus of this course.

**FHGE: Lifelong Learning Transferable: UC/CSU**

**PHED 36A BEGINNING ARCHERY 1 Unit**

**Advisory:** This course is included in the Individual Sports family of activity courses; not open to students with credit in PHED 36.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**3 hours laboratory. (36 hours total per quarter)**

Introduction to Olympic archery using the recurve bow. Includes building a good basic foundation for shooting using the recurve bow through the utilization and practice of various skill development techniques.

**FHGE: Lifelong Learning Transferable: UC/CSU**

**PHED 36B INTERMEDIATE ARCHERY 1 Unit**

**Prerequisite:** PHED 36A, equivalency or instructor's permission.

**Advisory:** This course is included in the Individual Sports family of activity courses.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**3 hours laboratory. (36 hours total per quarter)**

Intermediate skills will be developed through the in depth observation and understanding of the elements that produce consistency and competency in using the recurve bow. Basic maintenance of equipment will be covered.

**FHGE: Lifelong Learning Transferable: UC/CSU**

**PHED 36C ADVANCED ARCHERY 1 Unit**

**Prerequisite:** PHED 36B, equivalency or instructor's permission.

**Advisory:** This course is included in the Individual Sports family of activity courses.

**Grade Type:** Letter Grade Only

**Not Repeatable.**

**3 hours laboratory. (36 hours total per quarter)**

Advanced archery concepts in shot foundation development. Scapulae positioning, breathing, imagery, focusing, relaxation and various physical training methodologies are presented. Aligning and tuning methods will be presented.

**FHGE: Lifelong Learning Transferable: UC/CSU**

**PHED 37 BEGINNING BADMINTON: SINGLES & DOUBLES 1 Unit**

**Advisory:** This course is included in the Individual Sports family of activity courses.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**3 hours laboratory. (36 hours total per quarter)**

Strategy and competition for both singles and doubles in badminton play.

**FHGE: Lifelong Learning Transferable: UC/CSU**

**PHED 37A INTERMEDIATE BADMINTON: SINGLES & DOUBLES 1 Unit**

**Prerequisite:** PHED 37.

**Advisory:** This course is included in the Individual Sports family of activity courses.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**3 hours laboratory. (36 hours total per quarter)**

Focus on the strategies of singles and doubles play. Includes serving long and short, forehand smashes, drop shots, angle play and doubles formations.

**FHGE: Lifelong Learning Transferable: UC/CSU**

**PHED 37B ADVANCED BADMINTON: SINGLES & DOUBLES 1 Unit**

**Prerequisite:** PHED 37A.

**Advisory:** This course is included in the Individual Sports family of activity courses.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**3 hours laboratory. (36 hours total per quarter)**

Focus on the strategies of singles and doubles play. Introduction to serving long and short, forehand smashes, drop shots, angle play, and doubles formations. Emphasis on fitness, flexibility, and nutrition. How to design a point, set and match will be a main focus.

**FHGE: Lifelong Learning Transferable: UC/CSU**

**PHED 38A BASKETBALL FUNDAMENTALS 1 Unit**

**Advisory:** This course is included in the Team Sports family of activity courses.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**3 hours laboratory. (36 hours total per quarter)**

An introduction to the fundamental skills and techniques of the sport of basketball through skill work and drills. Includes sprint drills, ball passing, plyometric and stretching exercises.

**FHGE: Lifelong Learning Transferable: UC/CSU**

**PHED 38B BASKETBALL GAME SKILLS 1 Unit**

**Advisory:** This course is included in the Team Sports family of activity courses.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**3 hours laboratory. (36 hours total per quarter)**

Intermediate skills and techniques of the sport of basketball. Includes offensive and defensive foundations, unique situations in game play, personal strategies and core concepts for winning in basketball game play.

**FHGE: Lifelong Learning Transferable: UC/CSU**

**PHED 38C BEGINNING BASKETBALL 1 Unit**

**Advisory:** This course is included in the Team Sports family of activity courses; students with disabilities that significantly limit mobility or sensory perception may have difficulty participating and/or put themselves at risk of injury due to the physical demands of the course.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**3 hours laboratory. (36 hours total per quarter)**

Introduction to the basic rules and strategies of the game of basketball. This will be accomplished through demonstration and practice of skills as well as competition.

**FHGE:** Lifelong Learning **Transferable:** UC/CSU

**PHED 38D INTERMEDIATE BASKETBALL 1 Unit**

**Prerequisite:** PHED 38C.

**Advisory:** This course is included in the Team Sports family of activity courses; students with disabilities that significantly limit mobility or sensory perception may have difficulty participating and/or put themselves at risk of injury due to the physical demands of the course.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**3 hours laboratory. (36 hours total per quarter)**

This course will introduce students to intermediate level skills, strategies and play in basketball. This will include but not be limited to fundamentals, game strategy and team offense and defense alignments.

**FHGE:** Lifelong Learning **Transferable:** UC/CSU

**PHED 38E ADVANCED BASKETBALL 1 Unit**

**Prerequisite:** PHED 38D.

**Advisory:** This course is included in the Team Sports family of activity courses; students with disabilities that significantly limit mobility or sensory perception may have difficulty participating and/or put themselves at risk of injury due to the physical demands of the course.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**3 hours laboratory. (36 hours total per quarter)**

Introduce students to advanced basketball skills, strategies and games. This will include but not limited to, advanced offensive and defensive techniques, game strategies and advanced team play.

**FHGE:** Lifelong Learning **Transferable:** UC/CSU

**PHED 40 BEGINNING VOLLEYBALL 1 Unit**

**Advisory:** This course is included in the Team Sports family of activity courses.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**3 hours laboratory. (36 hours total per quarter)**

Introduction to the game of volleyball. Includes basic skills, strategy, and team play.

**FHGE:** Lifelong Learning **Transferable:** UC/CSU

**PHED 40A INTERMEDIATE VOLLEYBALL 1 Unit**

**Prerequisite:** PHED 40.

**Advisory:** This course is included in the Team Sports family of activity courses.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**3 hours laboratory. (36 hours total per quarter)**

Introduce and build upon prior knowledge of the intermediate game of volleyball. Strategies and skills at an intermediate level will be presented and will promote the appreciation for this lifetime activity.

**FHGE:** Lifelong Learning **Transferable:** UC/CSU

**PHED 40B ADVANCED VOLLEYBALL 1 Unit**

**Prerequisite:** PHED 40A.

**Advisory:** This course is included in the Team Sports family of activity courses.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**3 hours laboratory. (36 hours total per quarter)**

Introduces the advance level skills, theory, and strategies in volleyball. This includes advanced techniques and tactics of tournament competition. This course will include drills, practice, and intensive review of rules and tournament play.

**FHGE:** Lifelong Learning **Transferable:** UC/CSU

**PHED 40C VOLLEYBALL: GAME SKILLS 1 Unit**

**Advisory:** This course is included in the Team Sports family of activity courses.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**3 hours laboratory. (36 hours total per quarter)**

Presents teach game play in live game situations. Includes rotations and offensive and defensive strategies.

**FHGE:** Lifelong Learning **Transferable:** UC/CSU

**PHED 41 INDOOR CYCLING: SPIN 1 Unit**

**Advisory:** This course is included in the Cardio Fitness family of activity courses.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**3 hours laboratory. (36 hours total per quarter)**

An indoor cycling program to enhance cardiovascular fitness and improve cycling techniques. Emphasis will be on improving endurance through non-impact activity.

**FHGE:** Lifelong Learning **Transferable:** UC/CSU

**PHED 41A INDOOR CYCLING: HILLS & SPRINTS 1 Unit**

**Advisory:** This course is included in the Cardio Fitness family of activity courses.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**3 hours laboratory. (36 hours total per quarter)**

Cardio interval exercise set to appropriate cadence music on an indoor bicycle with periods of aerobic and anaerobic work mixed with appropriate recovery periods.

**FHGE:** Lifelong Learning **Transferable:** UC/CSU

**PHED 41B INTERMEDIATE INDOOR CYCLING 1 Unit**

**Prerequisite:** PHED 41.

**Advisory:** This course is included in the Cardio Fitness family of activity courses.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**3 hours laboratory. (36 hours total per quarter)**

Promotes physical fitness using an indoor stationary bike. This intermediate indoor cycling course focuses on pedaling techniques, safety procedures, and conditioning exercises necessary for an intermediate cycling.

**FHGE:** Lifelong Learning **Transferable:** UC/CSU

**PHED 41C INTERMEDIATE INDOOR CYCLING: HILLS & SPRINTS 1 Unit**

**Prerequisite:** PHED 41A.

**Advisory:** This course is included in the Cardio Fitness family of activity courses.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**3 hours laboratory. (36 hours total per quarter)**

An intermediate cardio interval exercise class which includes high-end endurance. Periods of aerobic and anaerobic work depending on the "ride" and "terrain" for this intermediate class.

**FHGE:** Lifelong Learning **Transferable:** UC/CSU

**PHED 42 BOWLING FOR FITNESS** 1 Unit  
**Advisory:** This course is included in the Individual Sports family of activity courses.  
**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.  
**3 hours laboratory. (36 hours total per quarter)**  
 A comprehensive study of the physical skills and practice for lifetime enjoyment of bowling.  
**FHGE: Lifelong Learning Transferable: UC/CSU**

**PHED 45 FITNESS FOR LIFE** 1 Unit  
**Advisory:** This course is included in the Strength Development family of activity courses.  
**Grade Type:** Pass/No Pass Only Not Repeatable.  
**3 hours laboratory. (36 hours total per quarter)**  
 Increase muscle strength, endurance and cardiovascular fitness through self paced program of use on cardio, strength and fitness machines.  
**FHGE: Lifelong Learning Transferable: UC/CSU**

**PHED 45A FOUNDATIONS OF STRENGTH & CONDITIONING** 1 Unit  
**Advisory:** This course is included in the Strength Development family of activity courses.  
**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.  
**3 hours laboratory. (36 hours total per quarter)**  
 Provide an exercise program to develop the key components of health related physical fitness: cardiovascular/respiratory conditioning, muscular strength, muscular endurance, flexibility and body composition.  
**FHGE: Lifelong Learning Transferable: UC/CSU**

**PHED 45C CIRCUIT TRAINING** 1 Unit  
**Advisory:** This course is included in the Strength Development family of activity courses.  
**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.  
**3 hours laboratory. (36 hours total per quarter)**  
 Increase strength, flexibility and cardiovascular endurance through the application of circuit training.  
**FHGE: Lifelong Learning Transferable: UC/CSU**

**PHED 46 WEIGHT LIFTING FOR HEALTH & FITNESS** 1 Unit  
**Advisory:** This course is included in the Strength Development family of activity courses.  
**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.  
**3 hours laboratory. (36 hours total per quarter)**  
 Provides training and instruction on the use of weights for lifetime fitness and health.  
**FHGE: Lifelong Learning Transferable: UC/CSU**

**PHED 46A INTERMEDIATE WEIGHT TRAINING FOR HEALTH & FITNESS** 1 Unit  
**Prerequisite:** PHED 46.  
**Advisory:** This course is included in the Strength Development family of activity courses.  
**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.  
**3 hours laboratory. (36 hours total per quarter)**  
 A total body conditioning class that emphasizes intense free weight exercises set to music and incorporates core conditioning. Featured equipment includes dumbbells, body bar, resistance bands, body weight and balls. Students must provide their own fitness mat.  
**FHGE: Lifelong Learning Transferable: UC/CSU**

**PHED 46B ADVANCED WEIGHT LIFTING FOR HEALTH & FITNESS** 1 Unit  
**Advisory:** This course is included in the Strength Development family of activity courses.  
**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.  
**3 hours laboratory. (36 hours total per quarter)**  
 Advanced training and instruction in the use of weights for lifetime health and fitness.  
**FHGE: Lifelong Learning Transferable: UC/CSU**

**PHED 47B THIGHS, ABS & GLUTEUS (TAG)** 1 Unit  
**Advisory:** This course is included in the Cross Training family of activity courses.  
**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.  
**3 hours laboratory. (36 hours total per quarter)**  
 Strengthen thigh, abdominal and gluteus muscles in an intensive, fun and highly energized workout.  
**FHGE: Lifelong Learning Transferable: UC/CSU**

**PHED 47C HIGH-INTENSITY INTERVAL TRAINING (HIIT)** 1 Unit  
**Advisory:** This course is included in the Cross Training family of activity courses.  
**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.  
**3 hours laboratory. (36 hours total per quarter)**  
 An intense total body workout to improve endurance and strengthen and define every muscle using high intensity intervals. This type of training is an effective way to train taking fitness to the next level. Students must provide their own fitness mat.  
**FHGE: Lifelong Learning Transferable: UC/CSU**

**PHED 49A SURVIVOR TRAINING** 1 Unit  
**Advisory:** This course is included in the Cross Training family of activity courses.  
**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.  
**3 hours laboratory. (36 hours total per quarter)**  
 Intended for the average group exercise participant, using sports fitness drills and functional training to develop footwork, anaerobic and aerobic conditioning, muscular strength and power.  
**FHGE: Lifelong Learning Transferable: UC/CSU**

**PHED 49B BOOT CAMP TRAINING** 1 Unit  
**Advisory:** This course is included in the Cross Training family of activity courses.  
**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.  
**3 hours laboratory. (36 hours total per quarter)**  
 Group training uses functional fitness activities to develop core strength, cardiovascular conditioning and muscle strength and power.  
**FHGE: Lifelong Learning Transferable: UC/CSU**

**PHED 70R INDEPENDENT STUDY IN** 1 Unit  
**PHED 71R PHYSICAL EDUCATION** 2 Units  
**PHED 72R** 3 Units  
**PHED 73R** 4 Units  
**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.  
**3-12 hours laboratory per week. (36-144 hours total per quarter)**  
 Provides an opportunity for the student to expand their studies in Physical Education beyond the classroom by completing a project or an assignment arranged by agreement between the student and instructor. The student is required to contract with the instructor to determine the scope of assignment and the unit value assigned for successful completion. Students may take a maximum of 6 units of Independent Study per department.  
**FHGE: Non-GE Transferable: CSU**

**PHYSICAL EDUCATION - ADAPTIVE PE  
[FORMERLY ADAPTIVE LEARNING]**

Kinesiology and Athletics  
650.949.7742 foothill.edu/ath

**PHDA 16 MODIFIED GENERAL CONDITIONING 1 Unit**

**Advisory:** UC will limit transfer credit for any/all Physical Education activity courses to a maximum of 6 quarter units; not open to students with credit in ALAP 60X.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**3 hours laboratory. (36 hours total per quarter)**

Personal instruction in exercise programs to develop a comprehensive exercise program based on physical abilities and individual goals. Cardiovascular endurance, flexibility, muscular strength and endurance, balance and/or motor skills, as appropriate.

**FHGE:** Lifelong Learning Transferable: UC/CSU

**PHDA 17 MODIFIED RESISTIVE EXERCISE 1 Unit**

**Advisory:** UC will limit transfer credit for any/all Physical Education activity courses to a maximum of 6 quarter units; not open to students with credit in ALAP 61X.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**3 hours laboratory. (36 hours total per quarter)**

Instructs students in methodologies for increasing muscular strength. Uses free weights, weight machines, as appropriate. Teaches skills necessary to prepare students for mainstreamed physical education.

**FHGE:** Lifelong Learning Transferable: UC/CSU

**PHDA 18 INDIVIDUALIZED EXERCISE FOR SPECIAL POPULATIONS 1 Unit**

**Advisory:** UC will limit transfer credit for any/all Physical Education activity courses to a maximum of 6 quarter units; not open to students with credit in ALAP 62X.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**3 hours laboratory. (36 hours total per quarter)**

Cardiovascular endurance, muscular endurance and strength, flexibility, balance and coordination activities, motor skills, as appropriate. Emphasis on adapting and developing an exercise program to meet individual needs and goals.

**FHGE:** Lifelong Learning Transferable: UC/CSU

**PHDA 19 BACK HEALTH & FITNESS 1 Unit**

**Advisory:** UC will limit transfer credit for any/all Physical Education activity courses to a maximum of 6 quarter units; not open to students with credit in ALAP 63X.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**3 hours laboratory. (36 hours total per quarter)**

Exercises for improving body mechanics for those with musculo-skeletal impairments. Body mechanics and lumbar spine stabilization.

**FHGE:** Lifelong Learning Transferable: UC/CSU

**PHDA 20 MODIFIED FUNCTIONAL FITNESS 1 Unit**

**Advisory:** UC will limit transfer credit for any/all Physical Education activity courses to a maximum of 6 quarter units; not open to students with credit in ALAP 66X.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**3 hours laboratory. (36 hours total per quarter)**

Exercises for improving activities of daily living. Emphasis on proper body mechanics, postures and movement patterns. Development of joint mobility, muscular strength, muscular endurance, balance, coordination and locomotion as it relates to daily activities.

**FHGE:** Lifelong Learning Transferable: UC/CSU

**PHDA 21A MODIFIED AQUATICS 1 Unit**

**Advisory:** UC will limit transfer credit for any/all Physical Education activity courses to a maximum of 6 quarter units; not open to students with credit in ALAP 70X.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**3 hours laboratory. (36 hours total per quarter)**

Individualized swimming instruction to improve cardiovascular endurance.

**FHGE:** Lifelong Learning Transferable: UC/CSU

**PHDA 21B MODIFIED WATER EXERCISE 1 Unit**

**Advisory:** UC will limit transfer credit for any/all Physical Education activity courses to a maximum of 6 quarter units; not open to students with credit in ALAP 71X.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**3 hours laboratory. (36 hours total per quarter)**

Individually prescribed aquatic exercises to increase muscular strength and endurance, flexibility, cardiovascular endurance, gross motor coordination, relaxation, as appropriate.

**FHGE:** Lifelong Learning Transferable: UC/CSU

**PHDA 22 TEAM SPORTS FOR SPECIAL POPULATIONS 1 Unit**

**Advisory:** UC will limit transfer credit for any/all Physical Education activity courses to a maximum of 6 quarter units; not open to students with credit in ALAP 80X.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**3 hours laboratory. (36 hours total per quarter)**

A variety of team sports, adapted for the physically limited adult. Team activity and rules of play for team sports, including, but not limited to, soccer, basketball, track and field, softball.

**FHGE:** Lifelong Learning Transferable: UC/CSU

**PHDA 23 MODIFIED AEROBIC EXERCISE 1 Unit**

Formerly: PHDA 64

**Advisory:** UC will limit transfer credit for any/all Physical Education activity courses to a maximum of 6 quarter units; not open to students with credit in ALAP 64 or PHDA 64.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**3 hours laboratory. (36 hours total per quarter)**

Aerobic exercise, individually modified for those with physical limitations, to increase cardiovascular and muscular endurance. Combination of aerobic exercise through the use of various cardiovascular machines.

**FHGE:** Lifelong Learning Transferable: UC/CSU

**PHDA 24 MODIFIED STRETCHING & FLEXIBILITY 1 Unit**

Formerly: PHDA 65

**Advisory:** UC will limit transfer credit for any/all Physical Education activity courses to a maximum of 6 quarter units; not open to students with credit in ALAP 65 or PHDA 65.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**3 hours laboratory. (36 hours total per quarter)**

Individualized and/or group instruction on the proper forms of stretching exercises for students with chronic conditions. Emphasis on increased range of motion and flexibility.

**FHGE:** Lifelong Learning Transferable: UC/CSU

**PHDA 25 BALANCE & FUNCTIONAL MOVEMENT 1 Unit**

Formerly: PHDA 67

**Advisory:** UC will limit transfer credit for any/all Physical Education activity courses to a maximum of 6 quarter units; not open to students with credit in ALAP 67 or PHDA 67.

**Grade Type:** Letter Grade, the student may select Pass/No Pass  
**Not Repeatable.**

**3 hours laboratory. (36 hours total per quarter)**

Balance and functional exercise training to enhance mobility and neuromuscular function. Emphasis on enhancing functional movement, movement efficiency, muscular strength and flexibility.

**FHGE:** Lifelong Learning **Transferable:** UC/CSU

**PHYSICAL SCIENCES & ENGINEERING**

Physical Sciences, Mathematics & Engineering

650.949.7259 foothill.edu/psme

**PSE 41 CLASS PRACTICES: MIDDLE SCHOOL SCIENCE 2 Units**

**Prerequisites:** Satisfactory score on the mathematics placement test or MATH 105 or 108; college level chemistry, physics or biology course; instructor permission; participation in an interview session; will require a current TB test, finger printing, and background investigation.

**Advisory:** ENGL 209 or ESLL 125; not open to students with credit in CHEM 41.

**Grade Type:** Pass/No Pass Only  
**Not Repeatable.**

**1.5 hours lecture, 2 hours laboratory. (42 hours total per quarter)**

Introduce prospective science, technology, engineering, and mathematics (STEM) teachers to the field of middle school education and the teaching and learning of science in middle school classrooms. Students are placed in local middle school classrooms to observe, participate, and assist a mentor teacher in instruction. Participate in a weekly seminar where relevant topics in education are discussed. Students are expected to work a minimum of 18 hours in the middle school classroom during the quarter. Observe a successful and experienced mentor teacher, assist the mentor teacher and provide support to ensure a positive classroom environment conducive to learning.

**FHGE:** Non-GE **Transferable:** UC/CSU

**PSE 42 CLASS PRACTICES: ELEMENTARY SCHOOL SCIENCE 2 Units**

**Prerequisites:** PSE 41; instructor permission; will require a current TB test.

**Advisory:** ENGL 209 or ESLL 125; not open to students with credit in CHEM 42.

**Grade Type:** Pass/No Pass Only  
**Not Repeatable.**

**1.5 hours lecture, 2 hours laboratory. (42 hours total per quarter)**

Introduce prospective science, technology, engineering, and mathematics (STEM) teachers to the field of elementary school education and the teaching and learning of science in elementary school classrooms. Students are placed in local elementary school classrooms to observe, participate, and assist a mentor teacher in instruction. Participate in a weekly seminar where relevant topics in education are discussed. Students are expected to work a minimum of 18 hours in the elementary school classroom during the quarter. Observe a successful and experienced mentor teacher, assist the mentor teacher, and provide support to ensure a positive classroom environment conducive to learning.

**FHGE:** Non-GE **Transferable:** UC/CSU

**PSE 43 CLASS PRACTICES: HIGH SCHOOL SCIENCE 2 Units**

**Prerequisites:** Must participate in an interview session; satisfactory score on the mathematics placement test or MATH 105 or 108; college level chemistry, physics or biology course; instructor permission; will require a current TB test, finger printing, and background investigation.

**Advisory:** ENGL 209 or ESLL 125.

**Grade Type:** Pass/No Pass Only  
**Not Repeatable.**

**1.5 hours lecture, 2 hours laboratory. (42 hours total per quarter)**

Introduce prospective science, technology, engineering, and mathematics (STEM) teachers to the field of high school education and the teaching and learning of science in high school classrooms. Students are placed in local high school classrooms to observe, participate, and assist a mentor teacher in instruction. Participate in the weekly seminar and discussion of learning in K-12 culture, cognitive development of students, and best means to teach appropriate science concepts at this level. Students are expected to work a minimum of 18 hours in the high school classroom during the quarter. Introduced to the concepts that as classroom assistants or teachers, as role models to the K-12 students and there is a large responsibility inherent in assuming this role. Support creating a respectful and inclusive classroom atmosphere where children learn most effectively.

**FHGE:** Non-GE **Transferable:** UC/CSU

**PSE 51 FRONTIERS IN SCIENCE 1 Unit**

**Grade Type:** Letter Grade, the student may select Pass/No Pass  
**Not Repeatable.**

**1 hour lecture. (12 hours total per quarter)**

This course will help all students learn about the sciences, what science is, and what scientists do. Students taking this course will be able to make more informed decisions about future career paths in the sciences. This course covers the scientific method, data collection and analysis, the idea of scientific evidence, and experimental design.

**FHGE:** Non-GE **Transferable:** CSU

**PSE 56 SEMINAR IN TEACHING PRE-COLLEGIATE MATHEMATICS 1 Unit**

**Advisory:** Completion of MATH 105 or 108 or the equivalent; basic competency in using computers and online software.

**Grade Type:** Letter Grade, the student may select Pass/No Pass  
**Not Repeatable.**

**1 hour lecture. (12 hours total per quarter)**

Strategies to successfully teach topics in pre-collegiate mathematics. Topics include number theory, fraction operations, proportional reasoning, statistics, linear relationships and problem solving. Intended as professional development for middle and high school mathematics teachers.

**FHGE:** Non-GE **Transferable:** CSU

**PSE 61A TUTOR TRAINING I 1 Unit**

Formerly: PSE 111A

**Advisory:** An earned A or B+ grade with instructor recommendation in one of the following: MATH 1A, 1AH, 1B, 1C, 1D, 2A, 2B, 10, 48A, 48B, 48C, 105, 220, or a "Pass" in MATH 230; not open to students with credit in PSE 111A.

**Grade Type:** Letter Grade, the student may select Pass/No Pass  
**Not Repeatable.**

**1 hour lecture. (12 hours total per quarter)**

Training in team leading skills necessary for tutoring, including study skills, college policies, professionalism, ethics and role modeling of successful student behavior. Techniques of subject specific tutoring skills. Practice of these skills through sample student work and instructor assignments and, when applicable, content-specific suggestions from the tutee's instructor. Ideal for students intending to tutor math for the first time.

**FHGE:** Non-GE **Transferable:** CSU

**PSE 61B TUTOR TRAINING II** 1 Unit  
 Formerly: PSE 111B  
 Prerequisite: PSE 61A.  
 Advisory: An earned A or B+ grade with instructor recommendation in one of the following: MATH 1A, 1AH, 1B, 1C, 1D, 2A, 2B, 10, 48A, 48B, 48C, 105, 220, or a "Pass" in MATH 230; not open to students with credit in PSE 111B.  
 Grade Type: Letter Grade, the student may select Pass/No Pass  
 Not Repeatable.  
 1 hour lecture. (12 hours total per quarter)  
 Advanced training in team leading skills necessary for tutoring. Students will be asked to engage in advanced reflections on tutoring and advanced level critique of one's own and other tutoring processes. Techniques of subject specific tutoring skills with attention given to diverse learning styles. Practice of these skills through sample student work and instructor assignments and, when applicable, content-specific suggestions from the tuttee's instructor. Ideal for students intending to tutor math for the second time.  
 FHGE: Non-GE Transferable: CSU

**PSE 251 MATH STUDY SKILLS** .5 Units  
 Non-degree applicable credit course.  
 Grade Type: Letter Grade, the student may select Pass/No Pass  
 Not Repeatable.  
 1 hour lecture. This is a 6 week course. (6 hours total per quarter)  
 Individualized guidance designed to academically support students enrolled in classes that require quantitative problem solving. Topics include understanding faculty expectation for students, utilizing campus resources, effective use of study sessions, understanding how the brain learns, metacognition and learning styles, test preparation and coping with test anxiety.  
 FHGE: Non-GE

## PHYSICS

Physical Sciences, Mathematics & Engineering  
 650.949.7259 foothill.edu/psme

**PHYS 2A GENERAL PHYSICS** 5 Units  
 Prerequisite: MATH 48C or higher placement on the placement test.  
 Grade Type: Letter Grade, the student may select Pass/No Pass  
 Not Repeatable.  
 4 hours lecture, 3 hours laboratory. (84 hours total per quarter)  
 Lectures, demonstrations, and problems in mechanics; properties of matter.  
 FHGE: Natural Sciences Transferable: UC/CSU

**PHYS 2AM GENERAL PHYSICS: CALCULUS SUPPLEMENT** 1 Unit  
 Prerequisite: MATH 1A or 1AH.  
 Corequisite: Completion of or concurrent enrollment in MATH 1B and PHYS 2A.  
 Grade Type: Letter Grade Only  
 Not Repeatable.  
 1 hour lecture. (12 hours total per quarter)  
 Application of calculus to physics topics and problems in mechanics.  
 FHGE: Non-GE Transferable: UC/CSU

**PHYS 2B GENERAL PHYSICS** 5 Units  
 Prerequisite: PHYS 2A.  
 Grade Type: Letter Grade, the student may select Pass/No Pass  
 Not Repeatable.  
 4 hours lecture, 3 hours laboratory. (84 hours total per quarter)  
 Lectures, demonstrations, and problems in thermal physics; electricity and magnetism and fluids.  
 FHGE: Non-GE Transferable: UC/CSU

**PHYS 2BM GENERAL PHYSICS: CALCULUS SUPPLEMENT** 1 Unit  
 Prerequisite: MATH 1B.  
 Corequisite: Completion of or concurrent enrollment in PHYS 2B.  
 Grade Type: Letter Grade Only  
 Not Repeatable.  
 1 hour lecture. (12 hours total per quarter)  
 Application of calculus to physics topics and problems in electricity and magnetism.  
 FHGE: Non-GE Transferable: UC/CSU

**PHYS 2C GENERAL PHYSICS** 5 Units  
 Prerequisite: PHYS 2B.  
 Grade Type: Letter Grade, the student may select Pass/No Pass  
 Not Repeatable.  
 4 hours lecture, 3 hours laboratory. (84 hours total per quarter)  
 Lectures, demonstrations, and problems in waves; optics; introductory quantum mechanics; atomic physics; and nuclear physics.  
 FHGE: Non-GE Transferable: UC/CSU

**PHYS 2CM GENERAL PHYSICS: CALCULUS SUPPLEMENT** 1 Unit  
 Prerequisite: MATH 1B.  
 Corequisite: Completion of or concurrent enrollment in PHYS 2C.  
 Grade Type: Letter Grade Only  
 Not Repeatable.  
 1 hour lecture. (12 hours total per quarter)  
 Application of calculus to physics topics and problems in thermodynamics, waves, optics and modern physics.  
 FHGE: Non-GE Transferable: UC/CSU

**PHYS 4A GENERAL PHYSICS (CALCULUS)** 6 Units  
 Corequisite: Completion of or concurrent enrollment in MATH 1B.  
 Advisory: Students who have not taken physics in high school are strongly encouraged to take either PHYS 2A or 6 prior; not open to students with credit in PHYS 5A and 5B.  
 Grade Type: Letter Grade, the student may select Pass/No Pass  
 Not Repeatable.  
 5 hours lecture, 3 hours laboratory. (96 hours total per quarter)  
 Mathematics-physics interrelationships, classical Newtonian mechanics.  
 FHGE: Natural Sciences Transferable: UC/CSU

**PHYS 4B GENERAL PHYSICS (CALCULUS)** 6 Units  
 Prerequisite: PHYS 4A.  
 Corequisite: Completion of or concurrent enrollment in MATH 1C.  
 Grade Type: Letter Grade, the student may select Pass/No Pass  
 Not Repeatable.  
 5 hours lecture, 3 hours laboratory. (96 hours total per quarter)  
 Classical electricity and magnetism.  
 FHGE: Non-GE Transferable: UC/CSU

**PHYS 4C GENERAL PHYSICS (CALCULUS)** 6 Units  
 Prerequisites: MATH 1C and PHYS 4B.  
 Grade Type: Letter Grade, the student may select Pass/No Pass  
 Not Repeatable.  
 5 hours lecture, 3 hours laboratory. (96 hours total per quarter)  
 Thermodynamics; mechanical, acoustical, and electromagnetic waves; optics.  
 FHGE: Non-GE Transferable: UC/CSU

**PHYS 4D GENERAL PHYSICS (CALCULUS)** 6 Units  
 Prerequisite: PHYS 4C.  
 Corequisite: Completion of or concurrent enrollment in MATH 2A.  
 Grade Type: Letter Grade, the student may select Pass/No Pass  
 Not Repeatable.  
 5 hours lecture, 3 hours laboratory. (96 hours total per quarter)  
 Special relativity, statistical mechanics, quantum mechanics, atomic physics, nuclear physics, particle physics.  
 FHGE: Non-GE Transferable: UC/CSU

**PHYS 6 INTRODUCTORY PHYSICS 5 Units**  
**Prerequisite:** Satisfactory score on the mathematics placement test or MATH 48C.  
**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.  
**5 hours lecture. (60 hours total per quarter)**  
 Lectures, demonstrations, and problems in mechanics, electricity and magnetism.  
**FHGE: Non-GE Transferable: UC/CSU**

**PHYS 12 INTRODUCTION TO MODERN PHYSICS 5 Units**  
**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.  
**5 hours lecture. (60 hours total per quarter)**  
 Non-mathematical introduction to the ideas of modern physics intended for majors in the physical sciences. Introduction to the history and ideas of physics focus on three areas of modern physics, thermodynamics and the concept of entropy, Einstein's special and general theories of relativity, and quantum mechanics. The key ideas in these areas are explained using demonstrations, analogies, and examples drawn, whenever possible, from the student's own experience. Examine the impact these physics ideas have had on other fields, such as poetry, literature and music. No background in science or math is assumed.  
**FHGE: Non-GE Transferable: UC/CSU**

**PHYS 54H HONORS INSTITUTE SEMINAR IN PHYSICS 1 Unit**  
**Prerequisite:** Honors Institute participant.  
**Advisory:** Not open to students with credit in PHYS 34H.  
**Grade Type:** Letter Grade Only Not Repeatable.  
**1 hour lecture. (12 hours total per quarter)**  
 A seminar in directed readings, discussions and projects in physics. Specific topics to be determined by the instructor. The subject matter for this seminar will be drawn from a number of possible topics, including Lagrangian/Hamiltonian mechanics, celestial mechanics, astrophysics, the role of the Eigenvalue problem in advanced physics, historical approaches to physics (Galileo, Newton) or other topics of mutual interest to the instructor and students.  
**FHGE: Non-GE Transferable: CSU**

**PHYS 70R INDEPENDENT STUDY IN PHYSICS 1 Unit**  
**PHYS 71R 2 Units**  
**PHYS 72R 3 Units**  
**PHYS 73R 4 Units**  
**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.  
**3-12 hours laboratory per week. (36-144 hours total per quarter)**  
 Provides an opportunity for the student to expand their studies in Physics beyond the classroom by completing a project or an assignment arranged by agreement between the student and instructor. The student is required to contract with the instructor to determine the scope of assignment and the unit value assigned for successful completion. Students may take a maximum of 6 units of Independent Study per department.  
**FHGE: Non-GE Transferable: CSU**

**POLITICAL SCIENCE**

Business and Social Sciences  
 650.949.7322 foothill.edu/bss

**POLI 1 POLITICAL SCIENCE: INTRODUCTION TO AMERICAN GOVERNMENT & POLITICS 5 Units**

**Advisory:** Demonstrated proficiency in English by placement as determined by score on the English placement test OR through an equivalent placement process OR completion of ESLL 125 & ESLL 249.  
**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.  
**5 hours lecture. (60 hours total per quarter)**  
 Contemporary analysis of the structure and function of American Government, its constitutional and political systems at the federal, state and local levels. Focus on the following topics: paradigms in the social sciences, models of justice and models of democracy, evolution of American elites and American constitutionalism, role of media in American political culture, political parties and political socialization, concept of the separation of powers: legislative, executive and judiciary branches, protest and protest movements, Civil Rights Acts of 1964 and 1991.  
**FHGE: Social & Behavioral Sciences Transferable: UC/CSU**

**POLI 2 COMPARATIVE GOVERNMENT & POLITICS 4 Units**

**Advisory:** Demonstrated proficiency in English by placement as determined by score on the English placement test OR through an equivalent placement process OR completion of ESLL 125 & ESLL 249; not open to students with credit in POLI 2H.  
**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.  
**4 hours lecture. (48 hours total per quarter)**  
 Introductory analysis of comparative governmental systems and politics emphasizing a variety of political forms, theory of political differentiation and development, and patterns, processes and regularities among political systems in developing and developed world.  
**FHGE: Non-GE Transferable: UC/CSU**

**POLI 2H HONORS COMPARATIVE GOVERNMENT & POLITICS 4 Units**

**Prerequisites:** Honors Institute participant.  
**Advisory:** Not open to students with credit in POLI 2.  
**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.  
**4 hours lecture. (48 hours total per quarter)**  
 Introductory analysis of comparative governmental systems and politics emphasizing a variety of political forms, theory of political differentiation and development, and patterns, processes and regularities among political systems in developing and developed world. As an honors course, it is a full seminar with advanced teaching methods focusing on major writing, reading, and research assignments, student class presentations, group discussions and interactions.  
**FHGE: Non-GE Transferable: UC/CSU**

**POLI 3 INTRODUCTION TO POLITICAL PHILOSOPHY/POLITICAL THEORY 5 Units**

**Advisory:** Demonstrated proficiency in English by placement as determined by score on the English placement test OR through an equivalent placement process OR completion of ESLL 125 & ESLL 249; not open to students with credit in POLI 3H.  
**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.  
**5 hours lecture. (60 hours total per quarter)**  
 Analysis of the history of political thought, the development of forms of political ideologies and their manifestation in forms of the state. Philosophical formulations of concepts of state of nature, natural law, natural rights, civil and political society explored as integral parts of philosophies of: Plato and Aristotle, Augustine and Aquinas, Machiavelli and Hobbes, Locke and Rousseau, Bentham and Mill, Hegel, Marx, and Antonio Gramsci.  
**FHGE: Social & Behavioral Sciences Transferable: UC/CSU**

**POLI 3H HONORS INTRODUCTION TO POLITICAL PHILOSOPHY/ POLITICAL THEORY** 5 Units

**Prerequisite:** Honors Institute participant.  
**Advisory:** Not open to students with credit in POLI 3.  
**Grade Type:** Letter Grade, the student may select Pass/No Pass  
**Not Repeatable.**

**5 hours lecture. (60 hours total per quarter)**

Analysis of the history of political thought, the development of various forms of political ideologies and their manifestation in forms of the state. Philosophical formulations of concepts of state of nature, natural law, natural rights, civil and political society explored as integral parts of political philosophies of: Plato and Aristotle, Augustine and Aquinas, Machiavelli and Hobbes, Locke and Rousseau, Bentham and Mill, Hegel, Marx and Gramsci. As an Honors Course, it is a full seminar with advanced teaching methods focusing on major writing, reading, and research assignments, student oral class presentations, group discussions and interactions.

**FHGE: Social & Behavioral Sciences Transferable: UC/CSU**

**POLI 9 POLITICAL ECONOMY** 4 Units

**Advisory:** Demonstrated proficiency in English by placement as determined by score on the English placement test OR through an equivalent placement process OR completion of ESLL 125 & ESLL 249; not open to students with credit in ECON 9, 9H or POLI 9H.  
**Grade Type:** Letter Grade, the student may select Pass/No Pass  
**Not Repeatable.**

**4 hours lecture. (48 hours total per quarter)**

Analysis of the contending theoretical formulations of International Political Economy (IPE) emphasizing the interconnection between economics and politics in the broad context of a global economy and the formulation of national public policy. Economic and political policy issues of current national and international significance are emphasized.

**FHGE: Social & Behavioral Sciences Transferable: UC/CSU**

**POLI 9H HONORS POLITICAL ECONOMY** 4 Units

**Prerequisite:** Honors Institute participant.  
**Advisory:** Not open to students with credit in ECON 9, 9H or POLI 9.

**Grade Type:** Letter Grade, the student may select Pass/No Pass  
**Not Repeatable.**

**4 hours lecture. (48 hours total per quarter)**

Analysis of the contending theoretical formulations of International Political Economy (IPE) emphasizing the interconnection between economics and politics in the broad context of a global economy and the formulation of national public policy. Economic and political policy issues of current national and international significance are emphasized. As an honors course, it is a full thematic seminar with advanced teaching methods focusing on extensive writing, reading, and research assignments, student lectures, group discussions and interactions. Distinguishing features include: heightened focus on and evaluation of global objectives and components of developed and developing nations, increased depth of analysis and breadth of examination, higher level of student critical thinking. Expanded learning outcomes and fuller description of these focused elements.

**FHGE: Social & Behavioral Sciences Transferable: UC/CSU**

**POLI 15 INTERNATIONAL RELATIONS/ WORLD POLITICS** 4 Units

**Advisory:** Demonstrated proficiency in English by placement as determined by score on the English placement test OR through an equivalent placement process OR completion of ESLL 125 & ESLL 249; not open to students with credit in POLI 15H.

**Grade Type:** Letter Grade, the student may select Pass/No Pass  
**Not Repeatable.**

**4 hours lecture. (48 hours total per quarter)**

Analysis of the central elements of international relations including: contending theoretical formulations of international relations, factors of sovereignty, nationalism, relations between the core, semi-periphery and peripheral countries, the role of the World Trade Organization in international trade relations, international terrorism and global warming. The international struggle for global hegemony and the impact of terrorism on world politics are systematically analyzed in the context of an increasingly unipolar world.

**FHGE: Social & Behavioral Sciences Transferable: UC/CSU**

**POLI 15H HONORS INTERNATIONAL RELATIONS/WORLD POLITICS** 4 Units

**Prerequisites:** Honors Institute participant.  
**Advisory:** Not open to students with credit in POLI 15.  
**Grade Type:** Letter Grade, the student may select Pass/No Pass  
**Not Repeatable.**

**4 hours lecture. (48 hours total per quarter)**

Analysis of the contending theoretical formulations of international relations, the international political economy, factors of sovereignty, nationalism, relations between the core, semi-periphery and peripheral countries, the role of the World Trade Organization in international trade relations, international terrorism and global warming. The impact of international terrorism and international security on world politics are systematically analyzed in the context of an increasingly unipolar world as the struggle for hegemony ensues. As an Honors Course, it is a full seminar with advanced teaching methods focusing on major writing, reading, and research assignments, student class presentations, group discussions and interactions.

**FHGE: Social & Behavioral Sciences Transferable: UC/CSU**

**POLI 54H HONORS INSTITUTE SEMINAR IN POLITICAL SCIENCE** 1 Unit

**Prerequisite:** Honors Institute participant.  
**Advisory:** Not open to students with credit in POLI 34 or 34H.  
**Grade Type:** Letter Grade, the student may select Pass/No Pass  
**Not Repeatable.**

**1 hour lecture. (12 hours total per quarter)**

A seminar in directed readings, discussions and projects in political science. Specific topics to be determined by the instructor.

**FHGE: Non-GE Transferable: CSU**

**PRIMARY CARE ASSOCIATE**

**Biological and Health Sciences**  
650.725.6959 [foothill.edu/bio/programs/primary](http://foothill.edu/bio/programs/primary)

**PCA 50 ORIENTATION TO PRIMARY CARE ASSOCIATE PROGRAM** 1 Unit

**Advisory:** Not open to students with credit in P C 190X.  
**Grade Type:** Letter Grade Only  
**Not Repeatable.**

**1 hour lecture. (12 hours total per quarter)**

Orientation to the Primary Care Associate Program and self-guided tasks required to complete a student pre-entry portfolio. Includes important health and safety clearances to ensure that students can participate safely in Primary Care Associate training. Intended for students in the Primary Care Associate Program; enrollment is limited to students accepted in the program.

**FHGE: Non-GE Transferable: CSU**



**PCA 51A BASIC SCIENCE/MICROBIOLOGY/  
INFECTIOUS DISEASE 2 Units**

**Prerequisite:** PCA 50.

**Advisory:** Not open to students with credit in P C 190Z.

**Grade Type:** Letter Grade Only

**Not Repeatable.**

**2 hours lecture. (24 hours total per quarter)**

Review of microbiology, cell physiology, molecular basis of biologic processes including genetics and the immune response. Builds on pre-entry knowledge to advance the depth and application of that knowledge to the range of disease states commonly seen in primary medical care. Coordinates with concurrent introductory topics in pharmacology. Includes function of organisms that cause human disease: prion, virus, prokaryotic bacteria, fungi, parasites. Prepares student for understanding the infectious disease process experienced in interaction of host and infecting organism. Intended for students in the Primary Care Associate Program; enrollment is limited to students accepted in the program.  
**FHGE: Non-GE Transferable: CSU**

**PCA 52A ANATOMY/PHYSIOLOGY/  
PATHOPHYSIOLOGY I 4 Units**

**Prerequisite:** PCA 50.

**Grade Type:** Letter Grade Only

**Not Repeatable.**

**3 hours lecture, 3 hours laboratory. (72 hours total per quarter)**

First of two courses presenting human anatomy, physiology and pathophysiology as pertinent to disorders of primary care. Composed of (1) introductory overview of normal development, structure and function of components of all human body systems with emphasis on integration of normal system function and homeostatic mechanisms; (2) review of mechanisms of injury and tissue response (basic pathology); (3) in-depth study of selected systems [immune, hematologic, dermatologic, musculoskeletal, neurologic, EENT (eye, ear, nose, throat), respiratory], with emphasis on alterations from normal produced by the range of common disease states in these systems. Expands concepts presented in concurrent course PCA 51A. Intended for students in the Primary Care Associate Program; enrollment is limited to students accepted in the program.  
**FHGE: Non-GE Transferable: CSU**

**PCA 52B ANATOMY/PHYSIOLOGY/  
PATHOPHYSIOLOGY II 3.5 Units**

**Prerequisite:** PCA 52A.

**Grade Type:** Letter Grade Only

**Not Repeatable.**

**3 hours lecture, 1.5 hours laboratory (54 hours total per quarter)**

Second of two courses presenting human anatomy, physiology and pathophysiology as pertinent to disorders of primary care. Course composed of (1) lectures to continue advancing student knowledge of organ function within selected major human body systems (cardiovascular, gastrointestinal, renal-urologic, reproductive, and endocrine), (2) appreciating alterations of physiology produced by disease states commonly seen in primary care medicine. Includes systems-based anatomy lectures in preparation for gross anatomy lab. Lab provides application of lecture concepts to study of cadaver specimens, diagnostic images, microscopic slides and photomicrographs. An integrative component includes lectures on psychiatry/behavior (normal and abnormal) and pathophysiology of common primary care disorders that affect multiple systems. Intended for students in the Primary Care Associate Program; enrollment is limited to students accepted in the program.  
**FHGE: Non-GE Transferable: CSU**

**PCA 53A PHARMACOLOGY I 3 Units**

**Prerequisite:** PCA 50.

**Grade Type:** Letter Grade Only

**Not Repeatable.**

**3 hours lecture. (36 hours total per quarter)**

First of three-course sequence of pharmacology courses. Introducing pharmacology principles and drug function in management of disease, prescription writing and laws for safe and ethical prescribing of medication. Pharmacologic management of infectious disease and disorders of hematology, dermatology, musculoskeletal, neurologic, ophthalmologic, ear, nose, throat (EENT), and respiratory systems. Intended for students in the Primary Care Associate Program; enrollment is limited to students accepted in the program.  
**FHGE: Non-GE Transferable: CSU**

**PCA 53B PHARMACOLOGY II 3 Units**

**Prerequisite:** PCA 53A.

**Grade Type:** Letter Grade Only

**Not Repeatable.**

**3 hours lecture. (36 hours total per quarter)**

Second of three-course sequence of pharmacology courses; structured to expand the knowledge of drug function in management of disease. Builds on introductory concepts from PCA 53A and provides specific in-depth discussion of pharmacological management of infectious disease and disorders of the following systems: cardiovascular, gastrointestinal, renal-urologic, reproductive, endocrine, psychiatric/behavioral. Intended for students in the Primary Care Associate Program; enrollment is limited to students accepted in the program.  
**FHGE: Non-GE Transferable: CSU**

**PCA 53C PHARMACOLOGY III 1 Unit**

**Prerequisite:** PCA 53B.

**Grade Type:** Letter Grade Only

**Not Repeatable.**

**1 hour lecture. (12 hours total per quarter)**

Third of three-course sequence of pharmacology courses; structured to expand the knowledge of drug function in management of disease in special groups and settings. Builds on concepts from PCA 53B; provides in-depth discussion of pharmacological management of pediatric and geriatric patients, patients at end of life, and patients living with chronic disease including cancer. Includes introduction to pharmacologic management of patients in urgent/emergent settings and hospital-based care. Intended for students in the Primary Care Associate Program; enrollment is limited to students accepted in the program.  
**FHGE: Non-GE Transferable: CSU**

**PCA 54A PRE-CLINICAL I 3 Units**

**Prerequisite:** PCA 50

**Advisory:** Not open to students with credit in P C 80P.

**Grade Type:** Letter Grade Only

**Not Repeatable.**

**1.5 hours lecture, 4.5 hours laboratory. (72 hours total per quarter)**

First of three courses in the preclinical sequence. Focusing on clinical skills, clinical problem solving and technical skills. Includes (1) review of general health history and screening adult physical exam skills; (2) problem-focused history and diagnostic physical exam skills of selected systems [musculoskeletal, neurologic, respiratory-pulmonary, EENT (ear, eye, nose, throat)]. Intended for students in the Primary Care Associate Program; enrollment is limited to students accepted in the program.  
**FHGE: Non-GE Transferable: CSU**

**PCA 54B PRE-CLINICAL II 2.5 Units**

**Prerequisite:** PCA 54A.

**Advisory:** Not open to students with credit in P C 80P.

**Grade Type:** Letter Grade Only

**Not Repeatable.**

**1 hour lecture, 4.5 hours laboratory. (66 hours total per quarter)**

Second of three courses in the preclinical sequence. Focusing on clinical skills, clinical problem solving and technical skills. Includes (1) problem-focused history and diagnostic physical exam skills of selected systems (cardiovascular, gastrointestinal, renal-urologic, reproductive, endocrine, psychiatric/behavioral); (2) instruction in skills to evaluate disorders of multiple systems; (3) technical skills pertinent to medical office setting. Intended for students in the Primary Care Associate Program; enrollment is limited to students accepted in the program.

**FHGE: Non-GE Transferable: CSU**

**PCA 54C PRE-CLINICAL III 2.5 Units**

**Prerequisite:** PCA 54B.

**Advisory:** Not open to students with credit in P C 81P.

**Grade Type:** Letter Grade Only

**Not Repeatable.**

**1 hour lecture, 4.5 hours laboratory. (66 hours total per quarter)**

Third of three courses in the preclinical sequence. Focusing on clinical skills, clinical problem solving and technical skills. Includes instruction in (1) health history and physical exam of pediatric and geriatric patients, patients living with chronic disease, and patients at end of life; (2) technical skills pertinent to pre-hospital and hospital settings. Intended for students in the Primary Care Associate Program; enrollment is limited to students accepted in the program.

**FHGE: Non-GE Transferable: CSU**

**PCA 56A CORE MEDICINE I 6 Units**

**Prerequisite:** PCA 50.

**Advisory:** Not open to students with credit in P C 80.

**Grade Type:** Letter Grade Only

**Not Repeatable.**

**6 hours lecture. (72 hours total per quarter)**

First of seven courses. Covering presentation, evaluation, diagnosis and management of primary care disorders of the following systems: hematology, dermatology, musculoskeletal (axial, appendicular), neurologic, ophthalmologic, ear/nose/throat (ENT), and respiratory. Intended for students in the Primary Care Associate Program; enrollment is limited to students accepted in the program.

**FHGE: Non-GE Transferable: CSU**

**PCA 56B CORE MEDICINE II 8.5 Units**

**Prerequisite:** PCA 56A.

**Advisory:** Not open to students with credit in P C 80.

**Grade Type:** Letter Grade Only

**Not Repeatable.**

**8.5 hours lecture. (102 hours total per quarter)**

Second of seven courses. Covering the presentation, evaluation, diagnosis and management of primary care disorders of the following systems: cardiovascular, gastrointestinal, renal-urologic, reproductive-obstetrics, endocrine, psychiatric/behavioral, multisystems-rheumatologic. Intended for students in the Primary Care Associate Program; enrollment is limited to students accepted in the program.

**FHGE: Non-GE Transferable: CSU**

**PCA 56C CORE MEDICINE III 10 Units**

**Prerequisite:** PCA 56B.

**Advisory:** Not open to students with credit in P C 81.

**Grade Type:** Letter Grade Only

**Not Repeatable.**

**10 hours lecture. (120 hours total per quarter)**

Third of seven courses. Covering presentation, evaluation, diagnosis and management of disorders of the following special groups seen in primary care settings: children, elders, patients at end of life, and those living with chronic disease. Systems-based instruction in detecting and managing complex medical conditions, comorbidities and oncologic disorders is presented. Emphasis on care across the life span. End of life issues are explored. Expand and build on knowledge of topics introduced during PCA 56A and 56B. Intended for students in the Primary Care Associate Program; enrollment is limited to students accepted in the program.

**FHGE: Non-GE Transferable: CSU**

**PCA 56D CORE MEDICINE IV 5 Units**

**Prerequisite:** PCA 56C.

**Advisory:** Not open to students with credit in P C 82.

**Grade Type:** Letter Grade Only

**Not Repeatable.**

**5 hours lecture. (60 hours total per quarter)**

Fourth of seven courses. Covering presentation, evaluation, diagnosis and management urgent/emergent diseases and disorders. Includes preparation for hospital-based care in inpatient, surgery and emergency medicine departments. Intended for students in the Primary Care Associate Program; enrollment is limited to students accepted in the program.

**FHGE: Non-GE Transferable: CSU**

**PCA 56E CORE MEDICINE V 1.5 Units**

**Prerequisite:** PCA 56D.

**Advisory:** Not open to students with credit in P C 83.

**Grade Type:** Letter Grade Only

**Not Repeatable.**

**1.5 hours lecture. (18 hours total per quarter)**

Fifth of seven courses. Assists the student to develop awareness of the role primary care clinicians play in issues of Epidemiology and Public Health. Students use case histories from their clinical experience to explore epidemiologic principles. Intended for students in the Primary Care Associate Program; enrollment is limited to students accepted in the program.

**FHGE: Non-GE Transferable: CSU**

**PCA 56F CORE MEDICINE VI 1.5 Units**

**Prerequisite:** PCA 56E.

**Advisory:** Not open to students with credit in P C 83.

**Grade Type:** Letter Grade Only

**Not Repeatable.**

**1.5 hours lecture. (18 hours total per quarter)**

Sixth of seven courses. Expands awareness of the role hospital-based clinicians play in issues of Epidemiology and Public Health. Students use case histories from their hospital-based experience to explore epidemiologic principles. Intended for students in the Primary Care Associate Program; enrollment is limited to students accepted in the program.

**FHGE: Non-GE Transferable: CSU**

**PCA 56G CORE MEDICINE VII 2 Units**

**Prerequisite:** PCA 56F.

**Advisory:** Not open to students with credit in P C 84.

**Grade Type:** Letter Grade Only

**Not Repeatable.**

**2 hours lecture. (24 hours total per quarter)**

Final course of seven. Provides a summary review of all aspects of Core Medicine, Basic Science, Anatomy & Physiology, Pharmacology in preparation for summative evaluation, graduation and taking the Physician Assistant National Certifying Exam (PANCE). Intended for students in the Primary Care Associate Program; enrollment is limited to students accepted in the program.

**FHGE: Non-GE Transferable: CSU**

**PCA 60A PRECEPTORSHIP I** 6 Units  
**Prerequisite:** PCA 54B.  
**Advisory:** Not open to students with credit in P C 81P.  
**Grade Type:** Letter Grade Only  
**Not Repeatable.**  
**1 hour lecture, 15 hours preceptorship. (192 hours total per quarter)**  
 First of five courses in the clinical sequence. Includes classroom lectures and supervised experience evaluating diverse patients in primary care settings. Utilizes skills acquired in pre-clinical courses. Emphasizes medical care of adults presenting with non-complex, single medical problem. Includes awareness of primary or secondary problems of mental health. Provides introduction to care of children, elders, women, medically underserved patients. An introductory community/public health component is included. Development of progress in clinical performance with each successive academic period. Intended for students in the Primary Care Associate Program; enrollment is limited to students accepted in the program.  
**FHGE: Non-GE Transferable: CSU**

**PCA 60B PRECEPTORSHIP II** 11 Units  
**Prerequisite:** PCA 60A.  
**Advisory:** Not open to students with credit in P C 82P.  
**Grade Type:** Letter Grade Only  
**Not Repeatable.**  
**1 hour lecture, 30 hours preceptorship. (372 hours total per quarter)**  
 Second of five courses in the clinical sequence. Includes classroom lectures and supervised experience evaluating patients in primary care settings. Utilizes skills acquired in pre-clinical courses. Emphasizes medical care of adults presenting with complex or multiple acute or chronic illness. Includes awareness of primary or secondary problems of mental health. Provides opportunity for care of children, elders, women, medically underserved patients. A community/public health component is included. Lectures provide introduction to health care delivery in surgical and emergency department settings. Development of progress in clinical performance with each successive academic period. Intended for students in the Primary Care Associate Program; enrollment is limited to students accepted in the program.  
**FHGE: Non-GE Transferable: CSU**

**PCA 60C PRECEPTORSHIP III** 11.5 Units  
**Prerequisite:** PCA 60B.  
**Advisory:** Not open to students with credit in P C 83P.  
**Grade Type:** Letter Grade Only  
**Not Repeatable.**  
**35 hours preceptorship. (420 hours total per quarter)**  
 Third of five courses in the clinical sequence to include assessing, planning, implementing, and evaluating patients in a primary care clinical setting. In addition to the content in PCA 60A and B, it includes Emergency and Surgical care in the hospital setting. Development of progress in clinical performance with each successive academic period. Intended for students in the Primary Care Associate Program; enrollment is limited to students accepted in the program.  
**FHGE: Non-GE Transferable: CSU**

**PCA 60D PRECEPTORSHIP IV** 11.5 Units  
**Prerequisite:** PCA 60C.  
**Advisory:** Not open to students with credit in P C 84P.  
**Grade Type:** Letter Grade Only  
**Not Repeatable.**  
**35 hours preceptorship. (420 hours total per quarter)**  
 Fourth of five courses in the clinical sequence to include assessing, planning, implementing, and evaluating patients in a primary care clinical setting. In addition to the content in PCA 60C, it includes hospital in-patient care. Development of progress in clinical performance with each successive academic period. Intended for students in the Primary Care Associate Program; enrollment is limited to students accepted in the program.  
**FHGE: Non-GE Transferable: CSU**

**PCA 60E PRECEPTORSHIP V** 10 Units  
**Prerequisite:** PCA 60D.  
**Advisory:** Not open to students with credit in P C 84P.  
**Grade Type:** Letter Grade Only  
**Not Repeatable.**  
**30 hours preceptorship. (360 hours total per quarter)**  
 The last of five courses in the clinical sequence to include assessing, planning, implementing, and evaluating patients in a primary care setting, ER, surgical, and in-patient setting. Additional information about geriatric care is included. Continuation of PCA 60D. Intended for students in the Primary Care Associate Program; enrollment is limited to students accepted in the program.  
**FHGE: Non-GE Transferable: CSU**

**PCA 61A PROFESSIONALISM/ CULTURAL MEDICINE I** 1 Unit  
**Formerly:** PCA 55A  
**Prerequisite:** PCA 50.  
**Advisory:** Not open to students with credit in PCA 55A.  
**Grade Type:** Letter Grade Only  
**Not Repeatable.**  
**1 hour lecture. (12 hours total per quarter)**  
 Focus on core content related to professional, ethical and cross cultural issues in the Primary Care Associate profession. Content includes overview of the history of the professions, medical ethics, overview of the Primary Care and Non-Primary Care Associate professions, health policies and overview of the national health care system. Includes development of skill to practice culturally appropriate medicine. Intended for students in the Primary Care Associate Program; enrollment is limited to students accepted in the program.  
**FHGE: Non-GE Transferable: CSU**

**PCA 61B PROFESSIONALISM/ CULTURAL MEDICINE II** 1 Unit  
**Formerly:** PCA 55B & 55C  
**Prerequisite:** PCA 61A.  
**Advisory:** Not open to students with credit in PCA 55B or C.  
**Grade Type:** Letter Grade Only  
**Not Repeatable.**  
**1 hour lecture. (12 hours total per quarter)**  
 Continuation of PCA 61A. It continues to focus on professional, ethical, and cross cultural issues in the Primary Care Associate profession. Content includes national accreditation and state regulations for Primary Care Associate programs. National certifications and State licensing requirements. It includes information on the scope of practice and delegation of services agreement as well as information on electronic medical records, coding and billing for services. Includes effects of language barriers in the delivery of medical care, working with interpreters and health literacy. Intended for students in the Primary Care Associate Program; enrollment is limited to students accepted in the program.  
**FHGE: Non-GE Transferable: CSU**

**PCA 61C PROFESSIONALISM/ CULTURAL MEDICINE III** 3 Units  
**Formerly:** PCA 55D  
**Prerequisite:** PCA 61B.  
**Advisory:** Not open to students with credit in PCA 55D.  
**Grade Type:** Letter Grade Only  
**Not Repeatable.**  
**3 hours lecture. (36 hours total per quarter)**  
 Continuation of PCA 61B. This course focuses on preparation for practice for the Primary Care Associate profession: including national certification and CA licensing requirements, medical malpractice, and health care practice issues. It includes development of skills to practice culturally appropriate medicine. Intended for students in the Primary Care Associate Program; enrollment is limited to students accepted in the program.  
**FHGE: Non-GE Transferable: CSU**

**PCA 62A BEHAVIORAL MEDICINE I 1 Unit**

**Prerequisite:** PCA 50.  
**Grade Type:** Letter Grade Only  
**Not Repeatable.**

**1 hour lecture, 2 hours laboratory (laboratory meets every other week). (24 hours total per quarter)**

First of three courses in the behavioral medicine sequence. Focus on the social and behavioral sciences knowledge and skills to conduct a therapeutic medical interview. Includes basic interviewing, problem solving, basic counseling techniques and patient education skills. Includes content on feedback techniques, and motivational interviewing. Intended for students in the Primary Care Associate Program; enrollment is limited to students accepted in the program.

**FHGE: Non-GE Transferable: CSU**

**PCA 62B BEHAVIORAL MEDICINE II 1 Unit**

**Prerequisite:** PCA 62A.  
**Grade Type:** Letter Grade Only  
**Not Repeatable.**

**1 hour lecture, 1 hour laboratory (laboratory meets every other week). (18 hours total per quarter)**

Second of three courses in the behavioral medicine sequence. Focus on the social and behavioral sciences knowledge and skills to detect, assess and diagnose substance abuse, psychiatric and behavioral conditions, sexual health and to deal with difficult situations like giving bad news to the patient. Intended for students in the Primary Care Associate Program; enrollment is limited to students accepted in the program.

**FHGE: Non-GE Transferable: CSU**

**PCA 62C BEHAVIORAL MEDICINE III 1 Unit**

**Prerequisite:** PCA 62B.  
**Grade Type:** Letter Grade Only  
**Not Repeatable.**

**1 hour lecture, 2 hours laboratory (laboratory meets every other week). (24 hours total per quarter)**

Third of three courses in the behavioral medicine sequence. Focus on the social and behavioral science knowledge and skills to address psychosocial issues in the primary care setting associated with behavior change, dealing with chronic disease, coping with bad news, dementia, delirium, death and loss. Covers strategies for counseling and managing patients across the life span. Intended for students in the Primary Care Associate Program; enrollment is limited to students accepted in the program.

**FHGE: Non-GE Transferable: CSU**

**PCA 290 ENRICHMENT COURSE: DIDACTIC PRINCIPLES 1 Unit**

**Grade Type:** Pass/No Pass Only  
**Not Repeatable.**

**1 hour lecture. (12 hours total per quarter)**

An enrichment course developed to provide additional instruction to achieve competence in didactic course principles employed in the practice of primary care medicine. Intended for students in the primary care associate program.

**FHGE: Non-GE**

**PCA 291 ENRICHMENT COURSE: PRECEPTORSHIP PRINCIPLES 6.5 Units**

**Grade Type:** Pass/No Pass Only  
**Not Repeatable.**

**20 hours clinic. (240 hours total per quarter)**

Provide enrichment to complete preceptorship requirements. It may include self-study, tutoring, additional clinical experience and assignments. Focus training under the supervision of a physician preceptor. Intended for students in the primary care associate program.

**FHGE: Non-GE**

**PSYCHOLOGY**

**Business and Social Sciences**  
**650.949.7322 foothill.edu/bss**

**PSYC 1 GENERAL PSYCHOLOGY 5 Units**

**Advisory:** Not open to students with credit in PSYC 1H.  
**Grade Type:** Letter Grade, the student may select Pass/No Pass  
**Not Repeatable.**

**5 hours lecture. (60 hours total per quarter)**

An exploration of the major perspectives, concepts, and theories in psychology and the factors that influence human behavior. Topics include: research methodology, biological psychology, perception, sleep and dreaming, learning, cognitive processes, developmental psychology, motivation and emotion, sexuality and gender, stress and health, social psychology, theories of personality, psychological disorders and psychological therapies.

**FHGE: Social & Behavioral Sciences Transferable: UC/CSU**

**PSYC 1H HONORS GENERAL PSYCHOLOGY 5 Units**

**Advisory:** Not open to students with credit in PSYC 1.  
**Grade Type:** Letter Grade, the student may select Pass/No Pass  
**Not Repeatable.**

**5 hours lecture. (60 hours total per quarter)**

An exploration of the major perspectives, concepts, and theories in psychology and the factors that influence human behavior. Topics include: research methodology, biological psychology, perception, sleep and dreaming, learning, cognitive processes, developmental psychology, motivation and emotion, sexuality and gender, stress and health, social psychology, theories of personality, psychological disorders and psychological therapies. As an honors course, there will be a focus on analytical writing and exploring the field through reading primary source research.

**FHGE: Social & Behavioral Sciences Transferable: UC/CSU**

**PSYC 4 INTRODUCTION TO BIOPSYCHOLOGY 5 Units**

**Prerequisite:** PSYC 1 or 1H.  
**Grade Type:** Letter Grade, the student may select Pass/No Pass  
**Not Repeatable.**

**5 hours lecture. (60 hours total per quarter)**

This course examines the brain-behavior connection and the biological aspects of behavior and consciousness. Topics covered within the course include behavioral genetics, evolutionary psychology, neuroanatomy, physiological perspectives of sensory perception, learning and memory, sleep and dreaming, drug addiction, emotion, human sexuality, and biological bases of psychiatric disorders.

**FHGE: Social & Behavioral Sciences Transferable: UC/CSU**

**PSYC 7 STATISTICS FOR THE BEHAVIORAL SCIENCES 5 Units**

**Prerequisites:** One of the following: PSYC 1, 1H, SOC 1, 1H; and satisfactory score on the mathematics placement test or MATH 105 or MATH 108.

**Advisory:** UC will grant transfer credit for a maximum of one course from the following: PSYC 7, SOC 7, MATH 10 or 17-students are strongly encouraged to meet with a counselor for appropriate course selection; not open to students with credit in SOC 7.

**Grade Type:** Letter Grade, the student may select Pass/No Pass  
**Not Repeatable.**

**5 hours lecture. (60 hours total per quarter)**

For students majoring in psychology, sociology, and other behavioral sciences. Introduction to the basic statistical techniques and design methodologies used in behavioral sciences. Topics include descriptive statistics; probability and sampling distributions; statistical inference and power; linear correlation and regression; chi-square; t-tests, and ANOVA. Computations will be completed by hand and with the use of statistical software. Emphasis on the interpretation and relevance of statistical findings and the application of statistical concepts to real-world problems in the behavioral and social sciences.

**FHGE: Communication & Analytical Thinking Transferable: UC/CSU**

**PSYC 10 RESEARCH METHODS & DESIGNS 5 Units**  
**Prerequisites:** PSYC 1 or 1H; and PSYC 7, SOC 7, or MATH 10.  
**Advisory:** One of the following: ENGL 1A, 1AH, 1S & 1T or ESLL 26;  
 not open to students with credit in SOC 10.  
**Grade Type:** Letter Grade Only  
**Not Repeatable.**  
**4 hours lecture, 3 hours laboratory. (84 hours total per quarter)**  
 Survey of the various quantitative and qualitative research methods.  
 Emphasis on the research design, planning, experimental procedures,  
 and the collection, analysis, interpretation, and reporting of data.  
 Laboratory emphasis on group work, data entry and analysis of data  
 with statistical software.  
**FHGE:** Social & Behavioral Sciences **Transferable:** UC/CSU

**PSYC 14 CHILD & ADOLESCENT DEVELOPMENT 4 Units**  
**Advisory:** College-level reading and writing ability.  
**Grade Type:** Letter Grade Only  
**Not Repeatable.**  
**4 hours lecture. (48 hours total per quarter)**  
 Survey of human development from conception through adolescence.  
 Emphasis on the biological, cognitive, social, and emotional changes  
 during development. Discussion of historical and contemporary research,  
 and theoretical perspectives pertaining to children and adolescents.  
**FHGE:** Social & Behavioral Sciences **Transferable:** UC/CSU

**PSYC 21 PSYCHOLOGY OF WOMEN: SEX & GENDER DIFFERENCES 4 Units**  
**Advisory:** Demonstrated proficiency in English by placement as  
 determined by score on the English placement test OR through an  
 equivalent placement process OR completion of ESLL 125 & ESLL  
 249; not open to students with credit in SOC 21 or WMN 21.  
**Grade Type:** Letter Grade, the student may select Pass/No Pass  
**Not Repeatable.**  
**4 hours lecture. (48 hours total per quarter)**  
 Survey of gender issues based upon psychological and sociological  
 theories and research. Examination of sex differences and sex role  
 stereotyping in a global, multi-cultural approach. Appraisal of effects  
 of biology, culture, and society in creating sex and gender differences.  
 Consideration of major theories of gender development. Focus on  
 biology, socialization, mass media, communication, personality, abilities,  
 work, family, sex and violence.  
**FHGE:** Social & Behavioral Sciences **Transferable:** UC/CSU

**PSYC 22 PSYCHOLOGY OF PREJUDICE & DISCRIMINATION 4 Units**  
**Advisory:** PSYC 1.  
**Grade Type:** Letter Grade, the student may select Pass/No Pass  
**Not Repeatable.**  
**4 hours lecture. (48 hours total per quarter)**  
 Exploration of the psychological underpinnings of prejudice and  
 discrimination. Investigates fundamental aspects of the mind and society  
 that can lead to prejudice, conditions that can trigger discrimination,  
 and complex psychological patterns that develop among different  
 majority and non-majority groups. Explores ethnic, racial, gender,  
 and sexual prejudice and solutions for how to reduce prejudice among  
 these groups and others.  
**FHGE:** Amer, SocBeh **Transferable:** UC/CSU

**PSYC 25 INTRODUCTION TO ABNORMAL PSYCHOLOGY 4 Units**  
**Advisory:** One of the following: ENGL 1A, 1AH, 1S & 1T or ESLL 26.  
**Grade Type:** Letter Grade Only  
**Not Repeatable.**  
**4 hours lecture. (48 hours total per quarter)**  
 Introduction to the scientific study of psychopathology. Investigation  
 of psychological disorders from various theoretical perspectives such  
 as biological, psychodynamic, behavioral, sociocultural, cognitive, and  
 humanistic approaches. Survey of psychological disorders and their  
 major causes and treatments.  
**FHGE:** Social & Behavioral Sciences **Transferable:** UC/CSU

**PSYC 30 SOCIAL PSYCHOLOGY 4 Units**  
**Advisory:** College-level reading and writing ability; not open to  
 students with credit in SOC 30.  
**Grade Type:** Letter Grade Only  
**Not Repeatable.**  
**4 hours lecture. (48 hours total per quarter)**  
 Survey of human behavior in relation to the social environment. Focus  
 on human interaction and the shaping of diverse and commonly-shared  
 attitudes, beliefs and worldviews by society, culture and social groups.  
 Emphasis on how individuals are influenced behaviorally, emotionally, and  
 cognitively. Topics include but not limited to the self, social cognition,  
 aggression, interpersonal attraction, attitudes, social influence, prejudice  
 and discrimination, gender, person perception, cultural norms, and  
 conflict and peace-making.  
**FHGE:** Social & Behavioral Sciences **Transferable:** UC/CSU

**PSYC 33 INTRODUCTION TO PERSONALITY PSYCHOLOGY 4 Units**  
**Advisory:** College-level reading and writing ability.  
**Grade Type:** Letter Grade Only  
**Not Repeatable.**  
**4 hours lecture. (48 hours total per quarter)**  
 This course is an introduction to the study of personality. The course  
 examines theoretical explanations for understanding personality  
 development and explores each theory. The course also investigates  
 current research on individual differences and personality development,  
 including work in genetics, evolutionary psychology, emotions, traits,  
 motivation, and attachment theory.  
**FHGE:** Social & Behavioral Sciences **Transferable:** UC/CSU

**PSYC 39 PSYCHOLOGY OF SPORTS 4 Units**  
**Formerly:** PSYC 55  
**Advisory:** Not open to students with credit in PSYC 55.  
**Grade Type:** Letter Grade, the student may select Pass/No Pass  
**Not Repeatable.**  
**4 hours lecture. (48 hours total per quarter)**  
 Current theoretical perspectives in sports psychology, applications  
 of theories and techniques of optimal performance, and experiential  
 exercises related to psychological factors that affect performance  
 in sports, and in life. Topics include: Goal setting, motivation,  
 neuropsychology, physiology, stress vs. relaxation (arousal regulation),  
 commitment, peak potential, focus/concentration, confidence,  
 visualization, and hypnosis.  
**FHGE:** Non-GE **Transferable:** UC/CSU

**PSYC 40 HUMAN DEVELOPMENT 5 Units**  
**Advisory:** One of the following: ENGL 1A, 1AH, 1S & 1T or ESLL 26 or  
 equivalent; PSYC 1 or introductory psychology course.  
**Grade Type:** Letter Grade, the student may select Pass/No Pass  
**Not Repeatable.**  
**5 hours lecture. (60 hours total per quarter)**  
 The psychology of human development includes cognitive, physical, social,  
 and emotional development throughout the lifespan. Comprehensive  
 presentation of the issues, forces, and outcomes that make us who we  
 are. Topics in childhood and adolescence, emphasize child development  
 including all stages from conception, through childhood, adolescence,  
 adult issues, later life and gerontology, cover all life-span stages and  
 important topics. Development is presented in a chronological and  
 sequential order from conception through death, while also presenting  
 important themes and theories essential to this field of psychology.  
 Provides an extensive amount of information on developmental stages  
 covering theoretical and empirical foundations that enable students to  
 become educated, critical interpreters of developmental information. A  
 blend of basic and applied research, as well as coverage of controversial  
 topics and emergent trends, demonstrating connections between the  
 laboratory and life is presented.  
**FHGE:** Social & Behavioral Sciences **Transferable:** UC/CSU

**PSYC 49 HUMAN SEXUALITY 4 Units**

**Grade Type: Letter Grade, the student may select Pass/No Pass Not Repeatable.**

**4 hours lecture. (48 hours total per quarter)**

Current scientific analysis of and information on sexual functioning and sexuality. Basic questions regarding sexual behavior, sexual roles, anatomy and physiology of sexual response, social patterns of sexual behavior, sexual adjustment and maladjustment. Includes treatment of sexual dysfunction, sex variance, the reproductive span of contraception-pregnancy-birth, sexual disease. Legal, political and cultural aspects of sexual behavior.

**FHGE: Lifelong, SocBeh Transferable: UC/CSU**

**PSYC 51 APPLIED RESEARCH EXPERIENCE 1 Unit**

**Advisory: Students must meet with the instructor during the first week of the quarter to schedule hours and responsibilities.**

**Grade Type: Pass/No Pass Only**

**Not Repeatable.**

**1 hour lecture. (12 hours total per quarter)**

Provides an opportunity for students to gain advanced reflection from their research skills gained through their volunteer research assistant activities in other academic settings. Trainings will be provided in conducting research with human participants and safety procedures. Additional requirements include participation in online and/or in-person workshop trainings on developing research skills, submission of a writing assignment on an assigned reading, and completion of an exit survey regarding their experience as a research assistant.

**FHGE: Non-GE Transferable: CSU**

**PSYC 54H HONORS INSTITUTE SEMINAR IN PSYCHOLOGY 1 Unit**

**Prerequisite: Honors Institute participant.**

**Advisory: ENGL 1A; not open to students with credit in PSYC 34 or 34H.**

**Grade Type: Letter Grade, the student may select Pass/No Pass Not Repeatable.**

**1 hour lecture. (12 hours total per quarter)**

A seminar in directed readings, discussions and projects in psychology. Specific topics to be determined by the instructor.

**FHGE: Non-GE Transferable: CSU**

**PSYC 70R INDEPENDENT STUDY 1 Unit**

**PSYC 71R IN PSYCHOLOGY 2 Units**

**PSYC 72R 3 Units**

**PSYC 73R 4 Units**

**Grade Type: Letter Grade, the student may select Pass/No Pass Not Repeatable.**

**3-12 hours laboratory per week. (36-144 hours total per quarter)**

Provides an opportunity for the student to expand their studies in Psychology beyond the classroom by completing a project or an assignment arranged by agreement between the student and instructor. The student is required to contract with the instructor to determine the scope of assignment and the unit value assigned for successful completion. Students may take a maximum of 6 units of Independent Study per department.

**FHGE: Non-GE Transferable: CSU**

**RADIOLOGIC TECHNOLOGY**

Biological and Health Sciences

650.949.7538 foothill.edu/bio/programs/radtech

**R T 50 ORIENTATION TO RADIATION SCIENCE TECHNOLOGIES 2 Units**

**Prerequisites: BIOL 40A, 40B and 40C or equivalent; R T 200L; AHS 200 or medical terminology course of 2 units or greater.**

**Corequisite: R T 53.**

**Grade Type: Letter Grade Only**

**Not Repeatable.**

**2 hours lecture. (24 hours total per quarter)**

Overview of Radiologic Technology as a career. Radiographic terminology, positioning for abdomen, vital sign assessment, introduction to x-ray protection and production, radiographic image formation, patient care, basic computer operation and Internet application. Overview of program structure and student services. Intended for students in the Radiologic Technology Program; enrollment is limited to students accepted in the program.

**FHGE: Non-GE Transferable: CSU**

**R T 51A FUNDAMENTALS OF RADIOLOGIC TECHNOLOGY I 4 Units**

**Prerequisite: R T 50.**

**Grade Type: Letter Grade Only**

**Not Repeatable.**

**4 hours lecture. (48 hours total per quarter)**

Medical and Radiographic terms. Basic positioning and anatomy related to chest, abdomen, upper and lower extremities. Intended for students in the Radiologic Technology Program; enrollment is limited to students accepted in the program.

**FHGE: Non-GE Transferable: CSU**

**R T 51B FUNDAMENTALS OF RADIOLOGIC TECHNOLOGY II 4 Units**

**Prerequisite: R T 51A.**

**Grade Type: Letter Grade Only**

**Not Repeatable.**

**4 hours lecture. (48 hours total per quarter)**

Continuation of R T 51A; radiographic anatomy, positioning and procedures related to shoulder girdle, hip/pelvis, gastrointestinal tract, urinary system and biliary system. Intended for students in the Radiologic Technology Program; enrollment is limited to students accepted in the program.

**FHGE: Non-GE Transferable: CSU**

**R T 51C FUNDAMENTALS OF RADIOLOGIC TECHNOLOGY III 4 Units**

**Prerequisite: R T 51B.**

**Grade Type: Letter Grade Only**

**Not Repeatable.**

**4 hours lecture. (48 hours total per quarter)**

Continuation of R T 51B; radiographic anatomy, positioning and terminology, related to the skull, vertebral column, bony thorax, surgical, pediatric and trauma radiology. Intended for students in the Radiologic Technology Program; enrollment is limited to students accepted in the program.

**FHGE: Non-GE Transferable: CSU**

**R T 52D DIGITAL IMAGE ACQUISITION & DISPLAY 2.5 Units**

**Prerequisite:** R T 55B.

**Grade Type:** Letter Grade Only

**Not Repeatable.**

**2.5 hours lecture, 3 hours laboratory (laboratory meets once per quarter). (33 hours total per quarter)**

Imparts an understanding of components, principles and operation of digital imaging systems found in diagnostic radiology. Factors that impact image acquisition, display, archiving and retrieval are discussed. Compare/contrast digital and film-based systems. Principles of digital system quality assurance and maintenance. Intended for students in the Radiologic Technology Program; enrollment is limited to students accepted in the program.

**FHGE: Non-GE Transferable: CSU**

**R T 53 ORIENTATION TO RADIOLOGIC TECHNOLOGY 1 Unit**

**Corequisite:** R T 50.

**Grade Type:** Letter Grade Only

**Not Repeatable.**

**4 hours clinical laboratory. (48 hours total per quarter)**

Orientation to radiation sciences, with emphasis on clinical participation. Intended for students in the Radiologic Technology Program; enrollment is limited to students accepted in the program.

**FHGE: Non-GE Transferable: CSU**

**R T 53A APPLIED RADIOGRAPHIC TECHNOLOGY I 4 Units**

**Prerequisite:** R T 53.

**Grade Type:** Letter Grade Only

**Not Repeatable.**

**16 hours clinical laboratory. This is a 10 week course. (160 hours total per quarter)**

First of four courses that includes clinical participation and application of basic positioning, patient care, equipment manipulation, radiation protection and image analysis. Emphasis is placed on chest, abdomen and upper & lower extremity radiography. A clinical presentation is also required with the same emphasis. Intended for students in the Radiologic Technology Program; enrollment is limited to students accepted in the program.

**FHGE: Non-GE Transferable: CSU**

**R T 53AL APPLIED RADIOGRAPHIC TECHNOLOGY LABORATORY I 1 Unit**

**Prerequisite:** R T 50.

**Grade Type:** Letter Grade Only

**Not Repeatable.**

**3 hours laboratory. (36 hours total per quarter)**

First of three courses that includes laboratory participation and application of basic positioning, patient care, equipment manipulation, radiation protection, image analysis and technical radiographic experiments. Emphasis on abdomen, chest, upper and lower extremities as learned in the companion lecture course, R T 51A. Intended for students in the Radiologic Technology Program; enrollment is limited to students accepted in the program.

**FHGE: Non-GE Transferable: CSU**

**R T 53B APPLIED RADIOGRAPHIC TECHNOLOGY II 4 Units**

**Prerequisite:** R T 53A.

**Grade Type:** Letter Grade Only

**Not Repeatable.**

**16 hours clinical laboratory. This is a 10 week course. (160 hours total per quarter)**

Second of four courses that includes clinical participation and application of basic positioning, patient care, equipment manipulation, radiation protection and image analysis. Emphasis is placed on the biliary tract, upper & lower gastrointestinal system and the urinary system. A clinical presentation is also required with the same emphasis. Intended for students in the Radiologic Technology Program; enrollment is limited to students accepted in the program.

**FHGE: Non-GE Transferable: CSU**

**R T 53BL APPLIED RADIOGRAPHIC TECHNOLOGY LABORATORY II 1 Unit**

**Prerequisite:** R T 53AL.

**Grade Type:** Letter Grade Only

**Not Repeatable.**

**3 hours laboratory. (36 hours total per quarter)**

Second of three courses that includes laboratory participation and application of basic positioning, patient care, equipment manipulation, radiation protection, image analysis and technical radiographic experiments. Emphasis on shoulder girdle, hip/pelvis, esophagus, stomach, colon and urinary system as learned in the companion lecture course, R T 51B. Intended for students in the Radiologic Technology Program; enrollment is limited to students accepted in the program.

**FHGE: Non-GE Transferable: CSU**

**R T 53C APPLIED RADIOGRAPHIC TECHNOLOGY III 4 Units**

**Prerequisite:** R T 53B.

**Grade Type:** Letter Grade Only

**Not Repeatable.**

**16 hours clinical laboratory. This is a 10 week course. (160 hours total per quarter)**

Third of four courses that includes clinical participation and application of basic positioning, patient care, equipment manipulation, radiation protection and image analysis. Emphasis is placed on the Cervical, Thoracic and Lumbar Spines, Sacrum & Coccyx and Skull. A clinical presentation is also required with the same emphasis. Intended for students in the Radiologic Technology Program; enrollment is limited to students accepted in the program.

**FHGE: Non-GE Transferable: CSU**

**R T 53CL APPLIED RADIOGRAPHIC TECHNOLOGY LABORATORY III 1 Unit**

**Prerequisite:** R T 53BL.

**Grade Type:** Letter Grade Only

**Not Repeatable.**

**3 hours laboratory. (36 hours total per quarter)**

Third of three courses that includes laboratory participation and application of basic positioning, patient care, equipment manipulation, radiation protection, image analysis and technical radiographic experiments. Emphasis on vertebral column, sacrum and coccyx, ribs and skull as learned in the companion lecture course, R T 51C. Intended for students in the Radiologic Technology Program; enrollment is limited to students accepted in the program.

**FHGE: Non-GE Transferable: CSU**

**R T 53D APPLIED RADIOLOGIC TECHNOLOGY IV 9 Units**

**Prerequisite:** R T 53C.

**Grade Type:** Letter Grade Only

**Not Repeatable.**

**27 hours clinical laboratory. (324 hours total per quarter)**

Fourth of four courses that includes clinical participation and application of basic positioning, patient care, equipment manipulation, radiation protection and image analysis. Emphasis is placed on pediatric radiography, venipuncture and fluoroscopy. A clinical presentation is also required with the emphasis on pathology. Intended for students in the Radiologic Technology Program; enrollment is limited to students accepted in the program.

**FHGE: Non-GE Transferable: CSU**

**R T 54A BASIC PATIENT CARE FOR IMAGING TECHNOLOGY 2 Units**

**Prerequisite:** R T 50.

**Advisory:** Not open to students with credit in R T 50B.

**Grade Type:** Letter Grade Only

**Not Repeatable.**

**2 hours lecture. (24 hours total per quarter)**

Basic concepts of patient care, including consideration for the physical and psychological needs of the patient and family. Routine and emergency patient care procedures and techniques as well as infection control protocols. Intended for students in the Radiologic Technology Program; enrollment is limited to students accepted in the program.

**FHGE: Non-GE Transferable: CSU**

**R T 54B LAW & ETHICS IN MEDICAL IMAGING 2 Units**

**Prerequisites:** R T 54A; one of the following: ENGL 1A, 1AH, 1S & 1T or ESLL 26.

**Advisory:** Not open to students with credit in R T 50A.

**Grade Type:** Letter Grade Only

**Not Repeatable.**

**2 hours lecture. (24 hours total per quarter)**

A fundamental background in ethics, historical and philosophical basis of ethics, as well as elements of ethical behavior in regards to clinical practice. Misconduct, malpractice, legal and professional standards and the ASRT scope of practice. Intended for students in the Radiologic Technology Program; enrollment is limited to students accepted in the program.

**FHGE: Non-GE Transferable: CSU**

**R T 54C RADIOGRAPHIC PATHOLOGY 3 Units**

**Prerequisite:** R T 54B.

**Advisory:** Not open to students with credit in R T 51D.

**Grade Type:** Letter Grade Only

**Not Repeatable.**

**3 hours lecture. (36 hours total per quarter)**

Radiographic Pathology of the respiratory, osseous, fractures, urinary, gastrointestinal, hepatobiliary, central nervous, hemopoietic and endocrine systems, HSG's and associated pathologies. Intended for students in the Radiologic Technology Program; enrollment is limited to students accepted in the program.

**FHGE: Non-GE Transferable: CSU**

**R T 55A PRINCIPLES OF RADIOLOGIC TECHNOLOGY I 3 Units**

**Formerly:** R T 52A

**Prerequisites:** R T 50; CHEM 25 or 30A; MATH 220.

**Advisory:** Not open to students with credit in R T 52A.

**Grade Type:** Letter Grade Only

**Not Repeatable.**

**3 hours lecture. (36 hours total per quarter)**

Introduction to elementary principles of x-ray physics, technique, radiation protection and digital radiography. Intended for students in the Radiologic Technology Program; enrollment is limited to students accepted in the program.

**FHGE: Non-GE Transferable: CSU**

**R T 55B PRINCIPLES OF RADIOLOGIC TECHNOLOGY II 3 Units**

**Formerly:** R T 52C

**Prerequisite:** R T 55A.

**Advisory:** Not open to students with credit in R T 52C.

**Grade Type:** Letter Grade Only

**Not Repeatable.**

**3 hours lecture. (36 hours total per quarter)**

Continuation of R T 55A. Expansion of the principles of x-ray physics, technique and radiation protection. This course emphasizes the circuitry of the x-ray machine, automatic exposure control devices, quality management, radiographic quality and the resulting effect on radiation protection. Intended for students in the Radiologic Technology Program; enrollment is limited to students accepted in the program.

**FHGE: Non-GE Transferable: CSU**

**R T 55C PRINCIPLES OF RADIOLOGIC TECHNOLOGY III 3 Units**

**Formerly:** R T 52B

**Prerequisite:** R T 55B.

**Advisory:** Not open to students with credit in R T 52B.

**Grade Type:** Letter Grade Only

**Not Repeatable.**

**3 hours lecture. (36 hours total per quarter)**

Continuation of R T 55B, including physics and technique with the main focus on radiation protection of the patient and the occupational worker. Intended for students in the Radiologic Technology Program; enrollment is limited to students accepted in the program.

**FHGE: Non-GE Transferable: CSU**

**R T 61B RADIOLOGY RESEARCH PROJECT 1 Unit**

**Prerequisite:** R T 62A.

**Grade Type:** Letter Grade Only

**Not Repeatable.**

**1 hour lecture. (12 hours total per quarter)**

Collaborative research project on a highly specialized area of radiography or other imaging modality. Group presentation and scientific poster display board required. Specific topics to be determined by the instructor. Intended for students in the Radiologic Technology Program; enrollment is limited to students accepted in the program.

**FHGE: Non-GE Transferable: CSU**

**R T 62A ADVANCED MODALITIES IN IMAGING 3 Units**

**Prerequisite:** R T 55B.

**Grade Type:** Letter Grade Only

**Not Repeatable.**

**3 hours lecture. (36 hours total per quarter)**

Specialized radiographic procedures related to magnetic resonance imaging and computerized tomography. Computer applications related to image capture, display, storage, and distribution. Sectional anatomy of the head, neck, thorax, abdomen, pelvis, vertebral column, and extremities. Intended for students in the Radiologic Technology Program; enrollment is limited to students accepted in the program.

**FHGE: Non-GE Transferable: CSU**

**R T 62B SPECIAL PROCEDURES & EQUIPMENT 3 Units**

**Prerequisite:** R T 62A.

**Grade Type:** Letter Grade Only

**Not Repeatable.**

**3 hours lecture. (36 hours total per quarter)**

Continuation of R T 62A with emphasis on radiography of the skull, facial bones, mandible, and sinuses. Advanced radiographic procedures with emphasis on angiographic, cerebral, heart and interventional procedures, angiographic equipment, radiographic anatomy and pathology. Intended for students in the Radiologic Technology Program; enrollment is limited to students accepted in the program.

**FHGE: Non-GE Transferable: CSU**



**R T 62C      PROFESSIONAL DEVELOPMENT      2.5 Units**  
**IN RADIOLOGY**

**Prerequisite:** R T 62B.  
**Grade Type:** Letter Grade Only  
**Not Repeatable.**  
**2.5 hours lecture. (30 hours total per quarter)**  
 Professional development in radiography, continuing education, and advanced modality opportunities. Intended for students in the Radiologic Technology Program; enrollment is limited to students accepted in the program.  
**FHGE: Non-GE    Transferable: CSU**

**R T 63      ADVANCED RADIOGRAPHIC      3 Units**  
**PRINCIPLES**

**Prerequisite:** R T 62B.  
**Grade Type:** Letter Grade Only  
**Not Repeatable.**  
**3 hours lecture. (36 hours total per quarter)**  
 Special emphasis on reviewing the Content Specifications for the ARRT Examination in Radiography; radiation protection, equipment operation and quality control, image acquisition and evaluation, imaging procedures, patient care and education. Intended for students in the Radiologic Technology Program; enrollment is limited to students accepted in the program.  
**FHGE: Non-GE    Transferable: CSU**

**R T 63A      RADIOGRAPHIC CLINICAL      10.5 Units**  
**PRACTICUM I**

**Prerequisite:** R T 53D.  
**Grade Type:** Letter Grade Only  
**Not Repeatable.**  
**32 hours clinical laboratory. (384 hours total per quarter)**  
 First of three courses that includes clinical participation and application of basic positioning, patient care, equipment manipulation, radiation protection and image analysis. Emphasis on utilizing advanced modalities including MRI/CT. Intended for students in the Radiologic Technology Program; enrollment is limited to students accepted in the program.  
**FHGE: Non-GE    Transferable: CSU**

**R T 63B      RADIOGRAPHIC CLINICAL      10.5 Units**  
**PRACTICUM II**

**Prerequisite:** R T 63A.  
**Grade Type:** Letter Grade Only  
**Not Repeatable.**  
**32 hours clinical laboratory. (384 hours total per quarter)**  
 Second of three courses that includes clinical participation and application of basic positioning, patient care, equipment manipulation, radiation protection and image analysis. Emphasis on advanced radiographic examinations of the skull, mandible, orbits, nasal bones, facial bones, para-nasal sinuses, mastoids and on special procedures. Intended for students in the Radiologic Technology Program; enrollment is limited to students accepted in the program.  
**FHGE: Non-GE    Transferable: CSU**

**R T 63C      RADIOGRAPHIC CLINICAL      10.5 Units**  
**PRACTICUM III**

**Prerequisites:** R T 63B.  
**Grade Type:** Letter Grade Only  
**Not Repeatable.**  
**32 hours clinical laboratory. (384 hours total per quarter)**  
 Third of three courses that includes clinical participation and application of basic positioning, patient care, equipment manipulation, radiation protection and image analysis. Emphasis on radiographic techniques and positioning in trauma radiology. Intended for students in the Radiologic Technology Program; enrollment is limited to students accepted in the program.  
**FHGE: Non-GE    Transferable: CSU**

**R T 64      FLUOROSCOPY      4 Units**

**Prerequisite:** R T 55C or current certification in Radiologic Technology or Radiation Therapy Technology.  
**Grade Type:** Letter Grade Only  
**Not Repeatable.**  
**40 hours lecture, 15 hours laboratory. This course does not meet a full 12 weeks. (55 hours total per quarter)**  
 Principles of radiation protection and fluoroscopic equipment, application of special equipment, illumination and photometry, anatomy and physiology of the eye and relationship of internal organs. Intended for students in the Radiologic Technology Program; enrollment is limited to students accepted in the program.  
**FHGE: Non-GE    Transferable: CSU**

**R T 65      MAMMOGRAPHY      3 Units**

**Prerequisite:** R T 62A or current certification in Radiologic Technology.  
**Grade Type:** Letter Grade Only  
**Not Repeatable.**  
**2.5 hours lecture, 1.5 hours laboratory. (48 hours total per quarter)**  
 Technical and procedural aspects of mammography including breast anatomy, physiology, positioning, compression, quality assurance techniques, implant imaging and mass localization. Successful completion of this course entitles the student to a Certificate of Completion of a 40 hour course in mammography education. Intended for students in the Radiologic Technology Program; enrollment is limited to students accepted in the program.  
**FHGE: Non-GE    Transferable: CSU**

**R T 71      ADVANCED CLINICAL EXPERIENCE:      13 Units**  
**MAGNETIC RESONANCE IMAGING**

**Prerequisites:** Current ARRT and CRT Certification as a Radiologic Technologist.  
**Grade Type:** Letter Grade Only  
**Not Repeatable.**  
**40 hours clinical laboratory. (480 hours total per quarter)**  
 A practicum in a magnetic resonance department. Practical experience is implemented to expose the post-graduate radiologic technology student to the principles of MRI with emphasis on mastery of the knowledge, insight, and skills required to perform MRI procedures. Intended for students in the Radiologic Technology Program; enrollment is limited to students accepted in the program.  
**FHGE: Non-GE    Transferable: CSU**

**R T 72      VENIPUNCTURE      1.5 Units**

**Prerequisites:** R T 51C or current Certification in Radiologic Technology; current Health Care Provider CPR card.  
**Grade Type:** Letter Grade Only  
**Not Repeatable.**  
**1 hour lecture, 2 hours laboratory. (36 hours total per quarter)**  
 Principles and practices of intravenous injection. Includes theory, demonstration and application of venipuncture equipment and solutions, puncture techniques, complications, and post-puncture care. Meets state of California qualifications for didactic certification in venipuncture for radiologic technologists. Intended for students in the Radiologic Technology Program and/or currently certified Radiologic Technologists; enrollment is limited to students accepted in the program.  
**FHGE: Non-GE    Transferable: CSU**

**R T 200L      RADIOLOGIC TECHNOLOGY      1 Unit**  
**AS A CAREER**

**Non-degree applicable credit course.**  
**Grade Type:** Letter Grade Only  
**Not Repeatable.**  
**17 hours lecture. This is an 8 week course. (17 hours total per quarter)**  
 Introduction to the radiological sciences and its role in health care. Focus on the use of ionizing radiation in the diagnosis and treatment of disease and on the health professionals responsible for providing this medical specialty. Discussion of requirements for the Radiologic Technology Program. Three hours hospital observation included.  
**FHGE: Non-GE**

## RESPIRATORY THERAPY

Biological and Health Sciences

650.949.7538 foothill.edu/bio/programs/respthr

### RSPT 50A RESPIRATORY THERAPY PROCEDURES 4.5 Units

**Advisory:** Demonstrated proficiency in English by placement as determined by score on the English placement test OR through an equivalent placement process OR completion of ESLL 125 & ESLL 249.

**Grade Type:** Letter Grade Only  
**Not Repeatable.**

**3 hours lecture, 5 hours laboratory. (96 hours total per quarter)**

Basic hospital and respiratory therapy procedures. Vital signs, compressed gas equipment, oxygen therapy, medical asepsis, bedside pulmonary function testing, disaster and emergency procedures, back safety. Intended for students in the Respiratory Therapy program; enrollment is limited to students accepted in the program.

**FHGE:** Non-GE Transferable: CSU

### RSPT 50B INTRODUCTION TO PROCEDURES & HOSPITAL ORIENTATION 6 Units

**Prerequisite:** RSPT 50A.

**Grade Type:** Letter Grade Only  
**Not Repeatable.**

**3 hours lecture, 6.5 hours laboratory, 3 hours clinical laboratory. (150 hours total per quarter)**

Introduction to hospital and patient care, administration of hyperinflation therapy, airway pharmacology, bronchial hygiene therapy with chest physiotherapy techniques, introduction to non-invasive ventilation, basic and advanced airway care, infection control procedures of equipment, nutrition assessment. Intended for students in the Respiratory Therapy Program; enrollment is limited to students accepted in the program.

**FHGE:** Non-GE Transferable: CSU

### RSPT 50C THERAPEUTICS & INTRODUCTION TO MECHANICAL VENTILATION 5 Units

**Prerequisite:** RSPT 50B.

**Grade Type:** Letter Grade Only  
**Not Repeatable.**

**2 hours lecture, 3.5 hours laboratory, 6 hours clinical laboratory. (138 hours total per quarter)**

Practice of skills in the clinic setting. Topics to be covered include respiratory failure, introduction to invasive and non-invasive mechanical ventilation. This course is intended for students accepted and enrolled in the Respiratory Therapy Program; enrollment is limited to students accepted in the program.

**FHGE:** Non-GE Transferable: CSU

### RSPT 51A INTRODUCTION TO RESPIRATORY ANATOMY & PHYSIOLOGY 2 Units

**Prerequisites:** BIOL 40A, 40B & 40C; AHS 200 or medical terminology course of 2 units or greater.

**Grade Type:** Letter Grade Only  
**Not Repeatable.**

**2 hours lecture. (24 hours total per quarter)**

Anatomy of the respiratory system, ventilation, diffusion of pulmonary gases, circulatory system, and oxygen transport. Intended for students in the Respiratory Therapy Program; enrollment is limited to students accepted in the program.

**FHGE:** Non-GE Transferable: CSU

### RSPT 51B RESPIRATORY PHYSIOLOGY 3 Units

**Prerequisite:** RSPT 51A or equivalent.

**Grade Type:** Letter Grade Only

**Not Repeatable.**

**3 hours lecture. (36 hours total per quarter)**

Respiratory physiology, including normal and altered lung physiology. Ventilation-perfusion relationships. Control of ventilation, renal, aging, exercise, altitude, and high pressure effects on physiology. Arterial blood gas interpretation and acid-base physiology. Intended for students in the Respiratory Therapy Program; enrollment is limited to students accepted in the program.

**FHGE:** Non-GE Transferable: CSU

### RSPT 51C PATIENT ASSESSMENT & PULMONARY DISEASE 4 Units

**Prerequisite:** BIOL 41.

**Grade Type:** Letter Grade Only

**Not Repeatable.**

**4 hours lecture, 3 hours laboratory (laboratory meets 5 times per quarter). (63 hours total per quarter)**

Physiological approach to the etiology, management, and prognosis of the various respiratory diseases. Utilization of physical examination, chest X-ray and basic clinical laboratory tests in the diagnosis and treatment of pulmonary disease. Intended for students in the Respiratory Therapy Program.

**FHGE:** Non-GE Transferable: CSU

### RSPT 52 APPLIED SCIENCE FOR RESPIRATORY THERAPY 3 Units

**Prerequisites:** CHEM 25, 30A or equivalent; MATH 220.

**Grade Type:** Letter Grade Only

**Not Repeatable.**

**3 hours lecture. (36 hours total per quarter)**

Basic mathematics and science principles applicable to Respiratory Therapy. Includes algebra review, metric system, behavior of matter, forces, and acids and bases. Intended for students in the Respiratory Therapy Program; enrollment is limited to students accepted in the program.

**FHGE:** Non-GE Transferable: CSU

### RSPT 53A INTRODUCTION TO RESPIRATORY THERAPY PHARMACOLOGY 2 Units

**Prerequisite:** RSPT 50A.

**Grade Type:** Letter Grade Only

**Not Repeatable.**

**2 hours lecture. (24 hours total per quarter)**

An in-depth study of drug groups commonly used in the treatment of respiratory diseases. Intended for students in the Respiratory Therapy Program; enrollment is limited to students accepted in the program.

**FHGE:** Non-GE Transferable: CSU

### RSPT 53B ADVANCED RESPIRATORY THERAPY PHARMACOLOGY 2 Units

**Prerequisite:** RSPT 53A.

**Grade Type:** Letter Grade Only

**Not Repeatable.**

**2 hours lecture. (24 hours total per quarter)**

An in-depth study of drug groups commonly encountered in intensive respiratory care. Intended for students in the Respiratory Therapy Program; enrollment is limited to students accepted in the program.

**FHGE:** Non-GE Transferable: CSU

**RSPT 54      ORIENTATION TO  
RESPIRATORY CARE      2 Units**

**Corequisite:** RSPT 50A.

**Grade Type:** Letter Grade Only

**Not Repeatable.**

**2 hours lecture. (24 hours total per quarter)**

Orientation to the Respiratory Therapy Program and health care. Current issues in American medical care, professionalism, death, dying and loss, communication skills, cultural diversity, HIPAA, ethics, legal issues, and patient's rights. Intended for students in the Respiratory Therapy Program; enrollment is limited to students accepted in the program.

**FHGE: Non-GE    Transferable: CSU**

**RSPT 55A      MEDIATED STUDIES IN  
RESPIRATORY THERAPY I      .5 Units**

**Corequisite:** RSPT 50A.

**Grade Type:** Letter Grade Only

**Not Repeatable.**

**2 hours laboratory. (24 hours total per quarter)**

First of seven courses paralleling content taught in courses in the Respiratory Therapy Program. Focus on Oxygen equipment, Anatomy and Physiology, vital assessments and decision making. Develop and strengthen concepts taught in the concurrent lecture and laboratory sessions of the program. Intended for students in the Respiratory Therapy Program; enrollment is limited to students accepted in the program.

**FHGE: Non-GE    Transferable: CSU**

**RSPT 55B      MEDIATED STUDIES IN  
RESPIRATORY THERAPY II      .5 Units**

**Prerequisite:** RSPT 55A.

**Grade Type:** Letter Grade Only

**Not Repeatable.**

**2 hours laboratory. (24 hours total per quarter)**

Second of seven courses paralleling content taught in courses in the Respiratory Therapy Program. Develop and strengthen concepts taught in the concurrent lecture and laboratory sessions of the program. Media materials will provide an alternative learning resource for non-traditional students. Intended for students in the Respiratory Therapy Program; enrollment is limited to students accepted in the program.

**FHGE: Non-GE    Transferable: CSU**

**RSPT 55C      MEDIATED STUDIES IN  
RESPIRATORY THERAPY III      .5 Units**

**Prerequisite:** RSPT 55B.

**Grade Type:** Letter Grade Only

**Not Repeatable.**

**2 hours laboratory. (24 hours total per quarter)**

Third of seven courses paralleling content taught in courses in the Respiratory Therapy Program. Focus on Assessments and data evaluation. Develop and strengthen concepts taught in the concurrent lecture and laboratory sessions of the program. Intended for students in the Respiratory Therapy Program; enrollment is limited to students accepted in the program.

**FHGE: Non-GE    Transferable: CSU**

**RSPT 55D      MEDIATED STUDIES IN  
RESPIRATORY THERAPY IV      .5 Units**

**Prerequisite:** RSPT 55C.

**Grade Type:** Letter Grade Only

**Not Repeatable.**

**2 hours laboratory. (24 hours total per quarter)**

Fourth of seven instruction and evaluation in topics paralleling content in courses in the Respiratory Therapy Program. Content to include invasive and non-invasive ventilation strategies and management, arterial blood gases, and innovative approaches to the management of ARDS. Develop and strengthen concepts taught in the concurrent lecture and laboratory sessions of the program. Intended for students in the Respiratory Therapy Program; enrollment is limited to students accepted in the program.

**FHGE: Non-GE    Transferable: CSU**

**RSPT 55E      MEDIATED STUDIES IN  
RESPIRATORY THERAPY V      .5 Units**

**Prerequisite:** RSPT 55D.

**Grade Type:** Letter Grade Only

**Not Repeatable.**

**2 hours laboratory. (24 hours total per quarter)**

Fifth of seven instruction and evaluation in topics paralleling content taught in courses in the Respiratory Therapy Program. Topics include neonatal and pediatric diseases, ECG and Hemodynamic monitoring. Develop and strengthen concepts taught in the concurrent lecture and laboratory sessions of the program. Media materials will provide an alternative learning resource for non-traditional students. Intended for students in the Respiratory Therapy Program; enrollment is limited to students accepted in the program.

**FHGE: Non-GE    Transferable: CSU**

**RSPT 55F      MEDIATED STUDIES IN  
RESPIRATORY THERAPY VI      .5 Units**

**Prerequisite:** RSPT 55E.

**Grade Type:** Letter Grade Only

**Not Repeatable.**

**2 hours laboratory. (24 hours total per quarter)**

Sixth of seven media instruction and evaluation in topics paralleling content taught in courses in the Respiratory Therapy Program. Topics covered include: COPD/Mechanical Ventilation, Head Injury, Acute Congestive Heart Failure, Near Drowning, Neonatal Respiratory Distress Syndrome, Hypothermia with Cardiac Arrest, COPD/Home Care & Pulmonary Rehabilitation. Intended for students in the Respiratory Therapy Program; enrollment is limited to students accepted in the program.

**FHGE: Non-GE    Transferable: CSU**

**RSPT 55G      MEDIATED STUDIES IN  
RESPIRATORY THERAPY VII      .5 Units**

**Prerequisite:** RSPT 55F.

**Grade Type:** Letter Grade Only

**Not Repeatable.**

**2 hours laboratory. (24 hours total per quarter)**

Seventh of seven media instruction and evaluation in topics paralleling content taught in courses in the Respiratory Therapy Program. Students will take practice exams of the national entry level and registry examinations. Content will also include Advanced PFT and Basic Spirometry. Intended for students in the Respiratory Therapy Program; enrollment is limited to students accepted in the program.

**FHGE: Non-GE    Transferable: CSU**

**RSPT 60B      ADVANCED CARDIAC LIFE SUPPORT      2 Units**

**Grade Type:** Letter Grade Only

**Not Repeatable.**

**2 hours lecture. (24 hours total per quarter)**

Preparation for Advanced Cardiac Life Support Certification for health care providers who will be directing or participating in the management of cardiopulmonary arrest or other cardiovascular emergencies. Students will practice skills through active participation in simulated cases in order to enhance skills associated with diagnosis and treatment of cardiopulmonary arrest, acute arrhythmia, stroke, and acute coronary syndromes (ACS). Intended for students in the Respiratory Therapy Program; enrollment is limited to students accepted in the program.

**FHGE: Non-GE    Transferable: CSU**

**RSPT 60C      PULMONARY DIAGNOSTICS      3 Units**

**Prerequisite:** RSPT 51C.

**Grade Type:** Letter Grade Only

**Not Repeatable.**

**2.5 hours lecture, 2 hours laboratory. (54 hours total per quarter)**

Selection, performance, and interpretation of tests used to diagnose cardiopulmonary abnormalities. Intended for students in the Respiratory Therapy Program; enrollment is limited to students accepted into the program.

**FHGE: Non-GE    Transferable: CSU**

**RSPT 61A ADULT MECHANICAL VENTILATION 4 Units****Prerequisites:** RSPT 50C and 51C.**Grade Type:** Letter Grade Only**Not Repeatable.****3 hours lecture, 3 hours laboratory. (72 hours total per quarter)**

Develops and enhances the concepts and skills essential to meet the needs of patients placed on invasive and non-invasive ventilation. Overview of modes of ventilation, humidification and medication delivery. Includes laboratory exercises of commonly used ventilators and patient-ventilator simulations. For continuing education purposes, new ventilators and state-of-the-art theories on ventilation will be presented based upon current research. Intended for students in the Respiratory Therapy Program; enrollment is limited to students accepted in the program.

**FHGE: Non-GE Transferable: CSU****RSPT 61B NEONATAL RESPIRATORY CARE 3 Units****Prerequisite:** RSPT 61A.**Grade Type:** Letter Grade Only**Not Repeatable.****2 hours lecture, 3 hours laboratory. (60 hours total per quarter)**

In depth look at Neonatal Respiratory Care. Examination and assessment of the neonate. Neonatal Respiratory diseases and disorders including treatment and management. Preparation for the Neonatal Resuscitation Program certification. Intended for students in the Respiratory Therapy Program; enrollment is limited to students accepted in the program.

**FHGE: Non-GE Transferable: CSU****RSPT 61C HOME & REHABILITATIVE RESPIRATORY CARE 2 Units****Grade Type:** Letter Grade Only**Not Repeatable.****2 hours lecture. (24 hours total per quarter)**

Introduction to rehabilitative respiratory care. Discussion of respiratory therapy procedures and equipment used in the treatment of home care patients. Intended for students in the Respiratory Therapy Program; enrollment is limited to students accepted in the program.

**FHGE: Non-GE Transferable: CSU****RSPT 61D PEDIATRIC RESPIRATORY CARE 2 Units****Prerequisite:** RSPT 61B.**Grade Type:** Letter Grade Only**Not Repeatable.****2 hours lecture. (24 hours total per quarter)**

In-depth look at Pediatric respiratory care. Examination and assessment of the pediatric patient. Pediatric Respiratory diseases and disorders including treatment and management. Preparation for the pediatric advanced life support certification. Intended for students in the Respiratory Therapy Program; enrollment is limited to students accepted in the program.

**FHGE: Non-GE Transferable: CSU****RSPT 62 MANAGEMENT, RESUME & NATIONAL BOARD EXAMINATION 1 Unit****Grade Type:** Letter Grade Only**Not Repeatable.****1 hour lecture. (12 hours total per quarter)**

Management and leadership styles. Review of effective communication skills. Current health care economics, job outlook and interviewing skills. Resume, cover letter and thank you letter preparation. Students will be introduced to the NBRC Board exam detailed content outlines. Licensure and Exam applications and procedure for applying. Students will need to complete a self evaluation paper that lists areas they need to focus on. Students take the National Board for Respiratory Care Mock Examination. Intended for students in the Respiratory Therapy Program; enrollment is limited to students accepted in the program.

**FHGE: Non-GE Transferable: CSU****RSPT 63A ADVANCED PATHOPHYSIOLOGY & PATIENT MANAGEMENT 3 Units****Prerequisite:** RSPT 51C.**Grade Type:** Letter Grade Only**Not Repeatable.****3 hours lecture. (36 hours total per quarter)**

The assessment and treatment of patients with Cardiopulmonary Disease. Structured to help build higher order critical thinking and problem solving skills. Through the use of case studies and clinical simulations students will place emphasis on information gathering and decision making for respiratory care patients. Helpful for NBRC Clinical Simulation Examination preparation. Intended for students in the Respiratory Therapy Program; enrollment is limited to students accepted in the program.

**FHGE: Non-GE Transferable: CSU****RSPT 65 COMPUTER PATIENT SIMULATIONS .5 Units****Grade Type:** Letter Grade Only**Not Repeatable.****2 hours laboratory. (24 hours total per quarter)**

Information gathering and decision making in the management of patients with acute and chronic respiratory conditions. Intended for students in the Respiratory Therapy program; enrollment is limited to students accepted in the program.

**FHGE: Non-GE Transferable: CSU****RSPT 70A CLINICAL ROTATION I 2 Units****Prerequisite:** RSPT 50C.**Grade Type:** Letter Grade Only**Not Repeatable.****6 hours clinical laboratory. (72 hours total per quarter)**

Exposure to hospital departments. Clinical application of respiratory therapy procedures. Interpretation of basic diagnostic data and correlation to applied therapies. Intended for students in the Respiratory Therapy Program; enrollment is limited to students accepted in the program.

**FHGE: Non-GE Transferable: CSU****RSPT 70B CLINICAL ROTATION II 8 Units****Prerequisites:** RSPT 61A and 70A.**Grade Type:** Letter Grade Only**Not Repeatable.****24 hours clinical laboratory. (288 hours total per quarter)**

Continuation of RSPT 70A with performance of more advanced respiratory therapy techniques. Interpretation of increasing amounts of clinical data and a correlation to applied therapies. Participation in cardiopulmonary resuscitations. Intended for students in the Respiratory Therapy Program; enrollment is limited to students accepted in the program.

**FHGE: Non-GE Transferable: CSU****RSPT 70C CLINICAL ROTATION III 8 Units****Prerequisite:** RSPT 70B.**Grade Type:** Letter Grade Only**Not Repeatable.****24 hours clinical laboratory. (288 hours total per quarter)**

Continuation of RSPT 70B. Clinical application of theory relating to monitoring and management of neonate, pediatric, and adult intensive care unit patient. Intended for students in the Respiratory Therapy Program; enrollment is limited to students accepted in the program.

**FHGE: Non-GE Transferable: CSU**

**RSPT 70D CLINICAL ROTATION IV 8 Units****Prerequisite:** RSPT 70C.**Grade Type:** Letter Grade Only**Not Repeatable.****24 hours clinical laboratory. (288 hours total per quarter)**

Continuation of RSPT 70C. Further clinical experience with ventilation and special procedures of surgical, medical, neonatal, and pediatric intensive care, offered as options for remediation. Assignment dependent upon demonstrated student needs. Mini-rotations offered to qualified students, depending on interest. Intended for students in the Respiratory Therapy Program; enrollment is limited to students accepted in the program.

**FHGE:** Non-GE **Transferable:** CSU**RSPT 82 ORIENTATION TO INTERVENTIONAL PULMONOLOGY 2 Units****Grade Type:** Letter Grade Only**Not Repeatable.****2 hours lecture. (24 hours total per quarter)**

Orientation and overview of Interventional Pulmonology as a respiratory care specialty.

**FHGE:** Non-GE **Transferable:** CSU**RSPT 83 CASE-BASED ANALYSIS & CRITICAL THINKING IN DIAGNOSTIC INTERVENTIONAL PULMONOLOGY 2 Units****Grade Type:** Letter Grade Only**Not Repeatable.****2 hours lecture. (24 hours total per quarter)**

Case based reasoning and critical thinking in the field of Interventional Pulmonology. Content will include critical diagnostic thinking, evidence-based medicine and quantitative studies in respiratory care.

**FHGE:** Non-GE **Transferable:** CSU**RSPT 84 FUNDAMENTALS OF PULMONARY DISEASE 3 Units****Grade Type:** Letter Grade Only**Not Repeatable.****3 hours lecture. (36 hours total per quarter)**

Review of pulmonary anatomy and physiology. Fundamentals of pulmonary diseases and pathology including cancer staging.

**FHGE:** Non-GE **Transferable:** CSU**RSPT 85 INTERVENTIONAL PULMONOLOGY THEORY & APPLICATION 3 Units****Grade Type:** Letter Grade Only**Not Repeatable.****3 hours lecture. (36 hours total per quarter)**

Provides the general principles of Interventional Pulmonology. Disease specific application including diagnostic and therapeutic interventions, techniques and procedures will be introduced.

**FHGE:** Non-GE **Transferable:** CSU**RSPT 86 INTERVENTIONAL PULMONOLOGY PROCEDURES 3 Units****Grade Type:** Letter Grade Only**Not Repeatable.****2 hours lecture, 3 hours laboratory. (60 hours total per quarter)**

Basic and advanced interventional pulmonology procedures. Procedures to be covered will include bronchoscopy, thoracoscopy, endoscopy, airway access procedures and novel techniques.

**FHGE:** Non-GE **Transferable:** CSU**RSPT 87A INTERVENTIONAL PULMONOLOGY CLINICAL INTERNSHIP I 2 Units****Grade Type:** Letter Grade Only**Not Repeatable.****6 hours clinical laboratory. (72 hours total per quarter)**

Clinical application of basic interventional pulmonology procedures. Interpretation of basic diagnostic data and correlation to applied therapies. Procedures will include bronchoscopy for diagnostic and therapeutic interventions such as alveolar lavage.

**FHGE:** Non-GE **Transferable:** CSU**RSPT 87B INTERVENTIONAL PULMONOLOGY CLINICAL INTERNSHIP II 2 Units****Grade Type:** Letter Grade Only**Not Repeatable.****6 hours clinical laboratory. (72 hours total per quarter)**

Interpretation of diagnostic data and correlation to applied therapies. In addition to clinical application of procedures covered in RSPT 87A, advanced procedures may include (a) balloon dilation, (b) stent placement, (c) lung volume reduction and (d) foreign body removal.

**FHGE:** Non-GE **Transferable:** CSU**RSPT 88 INTERVENTIONAL PULMONOLOGY RESEARCH PROJECT 1 Unit****Grade Type:** Letter Grade Only**Not Repeatable.****1 hour lecture. (12 hours total per quarter)**

Research project on a specialized area of interventional pulmonology. Specific topics to be determined by the instructor.

**FHGE:** Non-GE **Transferable:** CSU**RSPT 200L INTRODUCTION TO RESPIRATORY THERAPY 1 Unit****Non-degree applicable credit course.****Advisory:** Students are not required to have been admitted to the Respiratory Therapy Program.**Grade Type:** Letter Grade Only**Not Repeatable.****1 hour lecture, 1 hour laboratory. (24 hours total per quarter)**

Introduction to the career of respiratory therapy. Role of the respiratory therapist, areas of specialization in the field, educational requirements and future outlook. Clinical tasks and skills will also be introduced.

**FHGE:** Non-GE**SHEET METAL JOURNEYPERSON**

Apprenticeship

650.949.7142 [foothill.edu/apprenticeships](http://foothill.edu/apprenticeships)**JRYQ 100 APPLICANT INTRODUCTION TO SHEET METAL 3 Units****Prerequisite:** Must be a current applicant to the Sheet Metal Building Trade Apprenticeship program, who has successfully completed application steps to be eligible for this class.**Grade Type:** Letter Grade, the student may select Pass/No Pass**Not Repeatable.****40 hours total: 36 hours lecture, 4 hours laboratory.**

Pre-entry level orientation to the Sheet Metal Apprenticeship Program. Basic instruction on the sheet metal industry, career options, communication skills, trade math, green building, materials and equipment safety.

**FHGE:** Non-GE

**JRYQ 113 JOURNEY-LEVEL INTRODUCTION TO WELDING 1.5 Units**

**Advisory:** Completion of recognized sheet metal apprenticeship or equivalent and recent employment as a journeyperson in the sheet metal industry.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**40 hours total: 16 hours lecture, 24 hours laboratory.**

This course begins with an overview of common welding safety hazards and personal protective equipment for welding. The Gas Metal Arc Welding process is introduced and practiced by students as commonly used in the sheet metal industry. Machine set-up and basic skills are stressed.

**FHGE: Non-GE**

**JRYQ 114 JOURNEY-LEVEL WELDING II: GMAW & OTHER PROCESSES 1.5 Units**

**Prerequisite:** Completion of recognized sheet metal apprenticeship or equivalent and recent employment as a journeyperson in the sheet metal industry.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**40 hours total: 12 hours lecture, 28 hours laboratory.**

This course continues with development of Gas Metal Arc Welding and Flux Core Arc Welding skills. In addition, the SMAW welding process and metallurgy are introduced. Progress in student welding skill development is essential.

**FHGE: Non-GE**

**JRYQ 123 JOURNEY-LEVEL RESIDENTIAL SHEET METAL 2 Units**

**Advisory:** Completion of recognized sheet metal apprenticeship or equivalent and recent employment as a journeyperson in the sheet metal industry.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**40 hours total: 18 hours lecture, 22 hours laboratory.**

An introduction to sheet metal work specific to residential construction including: the various types of residential heating, ventilation and air conditioning systems, combustion theory, basic air distribution, furnace construction, filters, humidifiers, installation techniques, maintenance procedures and roof drainage system requirements.

**FHGE: Non-GE**

**JRYQ 125 JOURNEY DETAILING INTRODUCTION 3 Units**

**Prerequisite:** Completion of recognized sheet metal apprenticeship or equivalent and recent employment as a journeyperson in the sheet metal industry.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**40 hours total: 36 hours lecture, 4 hours laboratory.**

Detailing in the sheet metal industry is a specialized skill that requires attention to detail when working with drawings and specifications. In this course, students will compile detail information from plans, specs, submittals, standards, field measurements, and codes.

**FHGE: Non-GE**

**JRYQ 126 JOURNEY-LEVEL FOREMAN TRAINING 2.5 Units**

**Prerequisite:** Completion of recognized sheet metal apprenticeship or equivalent and recent employment as a journeyperson in the sheet metal industry.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**40 hours total: 32 hours lecture, 8 hours laboratory.**

This course is for journey-level sheet metal workers who want to become supervisors, site managers, leads and foreman. In this course, students will be able to identify the roles of the foreman, responsibilities of a foreman, and reasons to become a foreman. Students will practice self-evaluation, successful foreman attributes, managing and leading others, and project management. They will learn to start a project and see it through to successful completion.

**FHGE: Non-GE**

**JRYQ 127 JOURNEY BASIC AUTOCAD 1.5 Units**

**Prerequisite:** Completion of recognized sheet metal apprenticeship or equivalent and recent employment as a journeyperson in the sheet metal industry.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**40 hours total: 12 hours lecture, 28 hours laboratory.**

Basic AutoCAD class, students learn how to follow the proper protocols for computer lab use and perform essential computer file management operations. The students will navigate through the basic AutoCAD screen and command menus. The students will demonstrate the basic use of the AutoCAD program by creating and plotting a drawing assignment within parameters and given template. The students will be able to demonstrate how AutoCAD is used in the Sheet Metal Industry.

**FHGE: Non-GE**

**JRYQ 128 JOURNEY-LEVEL HVAC ENERGY CONSERVATION & ENVIRONMENTAL TECHNOLOGY 2.5 Units**

**Prerequisite:** Completion of recognized sheet metal apprenticeship or equivalent and recent employment as a journeyperson in the sheet metal industry.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**40 hours total: 30 hours lecture, 10 hours laboratory.**

This course is an introduction to Energy and Environmental Technologies for the sheet metal and HVAC industry. It includes an introduction to California Title 24 requirements for HVAC systems, duct system testing, assessing utility bill and equipment nameplate data, the LEED point system and basic heat transfer calculations. It will also include an overview of upcoming energy initiatives in California.

**FHGE: Non-GE**

**JRYQ 130 JOURNEY-LEVEL ADVANCED WELDING 1.5 Units**

**Prerequisite:** Completion of recognized sheet metal apprenticeship or equivalent and recent employment as a journeyperson in the sheet metal industry.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**40 hours total: 14 hours lecture, 26 hours laboratory.**

This course teaches advanced techniques used in Oxy-Fuel/ Plasma cutting, GMAW, and GTAW on various types and thicknesses of base material.

**FHGE: Non-GE**

**JRYQ 131 CAD DETAIL WITH THIRD-PARTY SOFTWARE 1 Unit**

**Prerequisite:** Completion of recognized sheet metal apprenticeship or equivalent and recent employment as a journeyperson in the sheet metal industry.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**40 hours total: 10 hours lecture, 30 hours laboratory.**

Sheet Metal Journey-level training in basic computer-aided design (CAD) drawing skills required. Use of CAD DUCT or similar specialized 3rd party sheet metal detailing software. Use software tools to set up drawings. 3-D duct detailing program with emphasis on electronic coordination. Focuses on file management and drawing protocol. Utilize structural and architectural backgrounds. Design ducting within the CAD drawing. Use CAD DUCT or similar software for location and elevation, as well as collision checks. Note: Other industry recognized third party software may be utilized in lieu of CAD Duct, such as "Benchmark Draft" software, for similar lessons.

**FHGE: Non-GE**

**JRYQ 132 INTERMEDIATE CAD DETAIL THIRD-PARTY 1 Unit**

**Prerequisite:** Completion of recognized sheet metal apprenticeship or equivalent and recent employment as a journeyperson in the sheet metal industry.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**40 hours total: 10 hours lecture, 30 hours laboratory.**

This is a continuation of 3-D duct detailing program for electronic coordination. Emphasis is on accessing, editing and recovering files with the CAD DUCT or similar 3rd party sheet metal detailing software system. Students will use format standards, tag files and program utilities. Using contract documents, students will work through the steps necessary to create a job file.

**FHGE: Non-GE**

**JRYQ 133 JOURNEY-LEVEL ADVANCED ARCHITECTURAL 1.5 Units**

**Advisory:** Completion of recognized sheet metal apprenticeship or equivalent and recent employment as a journeyperson in the sheet metal industry.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**40 hours total: 12 hours lecture, 28 hours laboratory.**

Students will develop advanced skills to layout architectural custom flashing and cornices. Work with the newest metal roofing material. Work with copper and other materials to layout and fabricate specialized architectural items.

**FHGE: Non-GE**

**JRYQ 134 JOURNEY-LEVEL ADVANCED LAYOUT 1 Unit**

**Advisory:** Completion of recognized sheet metal apprenticeship or equivalent and recent employment as a journeyperson in the sheet metal industry.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**40 hours total: 10 hours lecture, 30 hours laboratory.**

Students will advance methods of pattern development using a calculator and manual methods. Use math formulas relating to sheet metal layout, fabrication and shop procedures with the ITI Sheet Metal Pro Calculator. Apply geometric construction techniques to advanced patterns and jobsite layout.

**FHGE: Non-GE**

**JRYQ 135 PROJECT MANAGEMENT FOR JOURNEY LEVEL 2 Units**

**Prerequisite:** Completion of recognized sheet metal apprenticeship or equivalent and recent employment as a journeyperson in the sheet metal industry.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**40 hours total: 26 hours lecture, 14 hours laboratory.**

Topics covered include development of skills in supervision, management of various types of projects, performing take offs directly from contract drawings and creating an detailed estimate of a specific project.

**FHGE: Non-GE**

**JRYQ 136 SERVICE BASICS FOR SHEET METAL WORKER JOURNEY LEVEL 2 Units**

**Prerequisite:** Completion of recognized sheet metal apprenticeship or equivalent and recent employment as a journeyperson in the sheet metal industry.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**40 hours total: 26 hours lecture, 14 hours laboratory.**

This course covers development of the basic skills necessary for a sheet metal worker to service a basic HVAC building system.

**FHGE: Non-GE**

**JRYQ 137 JOURNEY-LEVEL HVAC PROJECT 2.5 Units**

**Prerequisite:** Completion of recognized sheet metal apprenticeship or equivalent and recent employment as a journeyperson in the sheet metal industry.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**40 hours total: 34 hours lecture, 6 hours laboratory.**

Students design, fabricate, and install a typical HVAC system from concept design drawing to the finished installed project.

**FHGE: Non-GE**

**JRYQ 138 JOURNEY-LEVEL ARCHITECTURAL- INDUSTRIAL PROJECT 2.5 Units**

**Prerequisite:** Completion of recognized sheet metal apprenticeship or equivalent and recent employment as a journeyperson in the sheet metal industry.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**40 hours total: 34 hours lecture, 6 hours laboratory.**

Students will design, fabricate, and install a typical Architectural, Industrial or an Ornamental project from concept design drawing to the finished installed project.

**FHGE: Non-GE**

**JRYQ 139 INTERMEDIATE AUTOCAD FOR JOURNEY LEVEL 1 Unit**

**Prerequisite:** Completion of recognized sheet metal apprenticeship or equivalent and recent employment as a journeyperson in the sheet metal industry.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**40 hours total: 10 hours lecture, 30 hours laboratory.**

Course builds upon basic AutoCAD knowledge to emphasize more advanced AutoCAD skills used in the sheet metal industry. Working with reference drawings, creating templates per shop practice, tagging items with information, preparing for downloads and reports, inserting schedules and blocks, and drawing three-dimensional and complex two-dimensional shop drawings are practiced.

**FHGE: Non-GE**

## SOCIAL SCIENCE

Business and Social Sciences  
650.949.7322 foothill.edu/bss

### SOSC 1 INTRODUCTION TO GLOBAL STUDIES 4 Units

**Advisory:** Demonstrated proficiency in English by placement as determined by score on the English placement test OR through an equivalent placement process OR completion of ESLL 125 & ESLL 249.

**Grade Type:** Letter Grade Only  
**Not Repeatable.**

**4 hours lecture. (48 hours total per quarter)**

This course provides students with an introduction to Global Studies. Students are offered an interdisciplinary view of globalization and its impacts through an examination of social, cultural, political, economic, and environmental contexts. The course emphasizes the interdependence and connections between global institutions, populations, and individuals.  
**FHGE: Non-GE Transferable: UC/CSU**

### SOSC 2 GLOBAL ISSUES 4 Units

**Advisory:** Demonstrated proficiency in English by placement as determined by score on the English placement test OR through an equivalent placement process OR completion of ESLL 125 & ESLL 249.

**Grade Type:** Letter Grade Only  
**Not Repeatable.**

**4 hours lecture. (48 hours total per quarter)**

This course offers an introduction to the origins, current dilemmas, and future trends of major issues confronting the global community such as energy and resource depletion, food and population, war and terrorism, nuclear arms, human rights, economic interdependence, and international inequality. The role of global institutions and global citizenship will be considered as they relate to global issues.  
**FHGE: Non-GE Transferable: UC/CSU**

### SOSC 20 CROSS-CULTURAL PERSPECTIVES FOR A MULTICULTURAL SOCIETY 4 Units

**Grade Type:** Letter Grade, the student may select Pass/No Pass  
**Not Repeatable.**

**4 hours lecture. (48 hours total per quarter)**

Analysis of the multi-ethnic forms of cultural domination and its diverse manifestation in society, emphasizing European and Third World cultures. Examination of the values and practices of democratic participation in social institutions in those cultures. Review theories, concepts and research applicable to majority-minority issues.  
**FHGE: Non-GE Transferable: UC/CSU**

### SOSC 70R INDEPENDENT STUDY IN 1 Unit

### SOSC 71R SOCIAL SCIENCE 2 Units

### SOSC 72R 3 Units

### SOSC 73R 4 Units

**Grade Type:** Letter Grade, the student may select Pass/No Pass  
**Not Repeatable.**

**3-12 hours laboratory per week. (36-144 hours total per quarter)**

Provides an opportunity for the student to expand their studies in Social Science beyond the classroom by completing a project or an assignment arranged by agreement between the student and instructor. The student is required to contract with the instructor to determine the scope of assignment and the unit value assigned for successful completion. Students may take a maximum of 6 units of Independent Study per department.  
**FHGE: Non-GE Transferable: CSU**

### SOSC 79 INTRODUCTION TO COMMUNITY/ CIVIC ENGAGEMENT 1 Unit

**Grade Type:** Letter Grade, the student may select Pass/No Pass  
**Not Repeatable.**

**1 hour lecture. (12 hours total per quarter)**

Introduction to community service as it relates to community organizations, businesses or civic institutions allowing students to gain skills in advocacy and civic engagement through community service experiences, research and reflection. Students explore experiential education, theories of service and service learning, strategies for facilitation and effective practice. The course integrates a practical experience in leading service learning projects. The course allows students to balance action with critical reflection in service learning practice.  
**FHGE: Non-GE Transferable: CSU**

## SOCIOLOGY

Business and Social Sciences  
650.949.7322 foothill.edu/bss

### SOC 1 INTRODUCTION TO SOCIOLOGY 5 Units

**Advisory:** Not open to students with credit in SOC 1H.

**Grade Type:** Letter Grade, the student may select Pass/No Pass  
**Not Repeatable.**

**5 hours lecture. (60 hours total per quarter)**

Introduction to the field of sociology; the scientific study of human society and the contemporary world, and the interaction of individuals and groups in society. Analysis of major theories, concepts, methods, social institutions, and social processes. Development of a sociological imagination and social context analysis. Society in its social class, racial and gendered dynamics.  
**FHGE: Social & Behavioral Sciences Transferable: UC/CSU**

### SOC 1H HONORS INTRODUCTION TO SOCIOLOGY 5 Units

**Prerequisite:** Honors Institute participant.

**Advisory:** Not open to students with credit in SOC 1.

**Grade Type:** Letter Grade Only  
**Not Repeatable.**

**5 hours lecture. (60 hours total per quarter)**

Introduction to the field of sociology; the scientific study of human society and the contemporary world, and the interaction of individuals and groups in society. Analysis of major theories, concepts, methods, social institutions, and social processes. Development of a sociological imagination and social context analysis. Society in its social class, racial and gendered dynamics. As an honors course, it is focused on reading and critically analyzing sociological literature and researching specific sociological topics.  
**FHGE: Social & Behavioral Sciences Transferable: UC/CSU**

### SOC 7 STATISTICS FOR THE BEHAVIORAL SCIENCES 5 Units

**Prerequisites:** One of the following: PSYC 1, 1H, SOC 1, 1H; and satisfactory score on the mathematics placement test or MATH 105 or MATH 108.

**Advisory:** UC will grant transfer credit for a maximum of one course from the following: PSYC 7, SOC 7, MATH 10 or 17-students are strongly encouraged to meet with a counselor for appropriate course selection; not open to students with credit in PSYC 7.

**Grade Type:** Letter Grade, the student may select Pass/No Pass  
**Not Repeatable.**

**5 hours lecture. (60 hours total per quarter)**

For students majoring in psychology, sociology, and other behavioral sciences. Introduction to the basic statistical techniques and design methodologies used in behavioral sciences. Topics include descriptive statistics; probability and sampling distributions; statistical inference and power; linear correlation and regression; chi-square; t-tests, and ANOVA. Computations will be completed by hand and with the use of statistical software. Emphasis on the interpretation and relevance of statistical findings and the application of statistical concepts to real-world problems in the behavioral and social sciences.  
**FHGE: Communication & Analytical Thinking Transferable: UC/CSU**



**SOC 8 POPULAR CULTURE 4 Units****Grade Type: Letter Grade, the student may select Pass/No Pass Not Repeatable.****4 hours lecture. (48 hours total per quarter)**

Theoretical and methodological overview of American popular culture. A critical examination of the socio-historical development and contemporary forms of popular culture in America. The relationship of popular culture to individual, group and mass identity formation. Analysis of popular culture and its racial and class dimensions.

**FHGE: American Cultures & Communities Transferable: UC/CSU****SOC 10 RESEARCH METHODS & DESIGNS 5 Units****Prerequisites: PSYC 1 or 1H; and PSYC 7, SOC 7, or MATH 10.****Advisory: One of the following: ENGL 1A, 1AH or IS & IT; not open to students with credit in PSYC 10.****Grade Type: Letter Grade Only****Not Repeatable.****4 hours lecture, 3 hours laboratory. (84 hours total per quarter)**

Survey of the various quantitative and qualitative research methods. Emphasis on the research design, planning, experimental procedures, and the collection, analysis, interpretation, and reporting of data. Laboratory emphasis on group work, data entry, and analysis of data with statistical software.

**FHGE: Social & Behavioral Sciences Transferable: UC/CSU****SOC 11 INTRODUCTION TO SOCIAL WELFARE 5 Units****Grade Type: Letter Grade, the student may select Pass/No Pass Not Repeatable.****5 hours lecture. (60 hours total per quarter)**

Sociological perspective of social welfare and the social services system as a field of study and profession. Historical overview of social problems and development of the professional fields. Focus on range of sociological theory to explain development of social services systems, their core concepts, value systems and methods.

**FHGE: Social & Behavioral Sciences Transferable: UC/CSU****SOC 14 SOCIOLOGY OF CRIME 4 Units****Grade Type: Letter Grade, the student may select Pass/No Pass Not Repeatable.****4 hours lecture. (48 hours total per quarter)**

Examines the social context of crime and deviance. Topics may include theories of crime and deviance; the criminal justice system; white collar, organized, and street crime; social class, race, ethnicity, sex, gender, and crime; and legal implications of crime and deviance. Socioeconomic and multicultural issues emphasized throughout the course. Sociological concepts of deviance and social control. Theories of structural conditions contributing to conformity and non-conformity will be explored.

**FHGE: Non-GE Transferable: UC/CSU****SOC 15 LAW & SOCIETY 4 Units****Grade Type: Letter Grade, the student may select Pass/No Pass Not Repeatable.****4 hours lecture. (48 hours total per quarter)**

Introduction to the relationship of law, society and the individual. Institutional analysis of factors underlying the creation, maintenance, and change of legal systems. Theories of jurisprudence and practical problems of law enforcement and the administration of justice.

**FHGE: Social & Behavioral Sciences Transferable: UC/CSU****SOC 19 ALCOHOL & DRUG ABUSE 4 Units****Grade Type: Letter Grade, the student may select Pass/No Pass Not Repeatable.****4 hours lecture. (48 hours total per quarter)**

Introduction to problems of substance abuse. History and classification of alcohol and drug abuse. Equips human service workers and general public with knowledge about issues involved in alcohol and drug abuse. Intervention and rehabilitation programs as well as public policy paradigms are examined.

**FHGE: Lifelong, SocBeh Transferable: UC/CSU****SOC 20 MAJOR SOCIAL PROBLEMS 4 Units****Grade Type: Letter Grade, the student may select Pass/No Pass Not Repeatable.****4 hours lecture. (48 hours total per quarter)**

An identification and analysis of contemporary social problems including (1) the role of power and ideology in the definition of social problems, (2) their causes and consequences, (3) evaluations of proposed solutions, and (4) methods of intervention. Topics will vary.

**FHGE: Social & Behavioral Sciences Transferable: UC/CSU****SOC 23 RACE & ETHNIC RELATIONS 4 Units****Grade Type: Letter Grade, the student may select Pass/No Pass Not Repeatable.****4 hours lecture. (48 hours total per quarter)**

Focus on the meaning of race and ethnicity as it relates to intergroup relations in the U.S.A. Inclusive analysis of concepts, theories, socio-legal effects of the Civil Rights Movement, public policy and its impact on diverse racial and ethnic populations in the U.S.A. Historical and sociological assessment of majority-minority relations with emphasis on the perspectives of African-Americans, Hispanic/Latino-Americans, Asian-Americans and the indigenous Native American tribes. Demographic implications of race and ethnic relations on U.S.A.'s economic, political and educational institutions. Relationship among race, ethnicity and poverty.

**FHGE: Amer, SocBeh Transferable: UC/CSU****SOC 28 SOCIOLOGY OF GENDER 4 Units****Grade Type: Letter Grade, the student may select Pass/No Pass Not Repeatable.****4 hours lecture. (48 hours total per quarter)**

Application of sociological theories, concepts and perspectives to an understanding of gender. Focuses on how individuals think and act as gendered beings and how gender becomes an organizing principle in social life. Topics include the social construction of gender, theories of gender socialization, femininities and masculinities, gendered interactions and doing gender, how race, class, nation and sexuality shapes gender, and gender inequality within social institutions, including politics, the economy, family, religion, education and health care.

**FHGE: Social & Behavioral Sciences Transferable: UC/CSU****SOC 30 SOCIAL PSYCHOLOGY 4 Units****Advisory: College-level reading and writing ability; not open to students with credit in PSYC 30.****Grade Type: Letter Grade Only****Not Repeatable.****4 hours lecture. (48 hours total per quarter)**

Survey of human behavior in relation to the social environment. Focus on human interaction and the shaping of diverse and commonly-shared attitudes, beliefs and worldviews by society, culture and social groups. Emphasis on how individuals are influenced behaviorally, emotionally, and cognitively. Topics include but not limited to the self, social cognition, aggression, interpersonal attraction, attitudes, social influence, prejudice and discrimination, gender, person perception, cultural norms, and conflict and peace-making.

**FHGE: Social & Behavioral Sciences Transferable: UC/CSU****SOC 40 ASPECTS OF MARRIAGE & FAMILY 4 Units****Grade Type: Letter Grade, the student may select Pass/No Pass Not Repeatable.****4 hours lecture. (48 hours total per quarter)**

Survey of empirical studies conducted by family sociologists from varied theoretical orientations. Focus on social influences affecting the American expressions of intimate life styles related to relationships, marriage and family systems. Exposure to the methods of social research.

**FHGE: Lifelong, SocBeh Transferable: UC/CSU**

**SOC 54H HONORS INSTITUTE SEMINAR IN SOCIOLOGY** 1 Unit

**Prerequisite:** Honors Institute participant.  
**Advisory:** Not open to students with credit in SOC 34 or 34H.  
**Grade Type:** Letter Grade, the student may select Pass/No Pass  
**Not Repeatable.**  
**1 hour lecture. (12 hours total per quarter)**  
A seminar in directed readings, discussions and projects in Sociology. Specific topics to be determined by the instructor.  
**FHGE: Non-GE Transferable: CSU**

**SOC 70R INDEPENDENT STUDY** 1 Unit  
**SOC 71R IN SOCIOLOGY** 2 Units  
**SOC 72R** 3 Units  
**SOC 73R** 4 Units

**Grade Type:** Letter Grade, the student may select Pass/No Pass  
**Not Repeatable.**  
**3-12 hours laboratory per week. (36-144 hours total per quarter)**  
Provides an opportunity for the student to expand their studies in Sociology beyond the classroom by completing a project or an assignment arranged by agreement between the student and instructor. The student is required to contract with the instructor to determine the scope of assignment and the unit value assigned for successful completion. Students may take a maximum of 6 units of Independent Study per department.  
**FHGE: Non-GE Transferable: CSU**

## SPANISH

Language Arts  
650.949.7131 foothill.edu/la

For information on clearing a foreign language prerequisite, please contact the Language Arts division office at (650) 949-7250.

**SPAN 1 ELEMENTARY SPANISH I** 5 Units

**Grade Type:** Letter Grade, the student may select Pass/No Pass  
**Not Repeatable.**  
**5 hours lecture. (60 hours total per quarter)**  
Development and practice of elementary speaking, listening, reading and writing skills in everyday language functions, with Spanish as the primary language of instruction. Language laboratory practice to reinforce pronunciation, grammar and syntax. Study of basic geographical, historical and cultural aspects of Spanish-speaking world areas.  
**FHGE: Non-GE Transferable: UC/CSU**

**SPAN 2 ELEMENTARY SPANISH II** 5 Units

**Prerequisite:** SPAN 1 or equivalent.  
**Grade Type:** Letter Grade, the student may select Pass/No Pass  
**Not Repeatable.**  
**5 hours lecture. (60 hours total per quarter)**  
Further development and practice of elementary speaking, listening, reading and writing skills in everyday language function, with Spanish as the primary language of instruction. Language laboratory practice to reinforce pronunciation, grammar and syntax. Study of basic geographical, historical and cultural aspects of Spanish-speaking world areas.  
**FHGE: Non-GE Transferable: UC/CSU**

**SPAN 3 ELEMENTARY SPANISH III** 5 Units

**Prerequisite:** SPAN 2 or equivalent.  
**Grade Type:** Letter Grade, the student may select Pass/No Pass  
**Not Repeatable.**  
**5 hours lecture. (60 hours total per quarter)**  
Further development and practice of elementary speaking, listening, reading and writing skills in everyday language functions, with focus on greater structural accuracy and communicative competence, and with Spanish as the language of instruction. Language laboratory practice to reinforce pronunciation, grammar and syntax. Study of basic geographical, historical and cultural aspects of Spanish-speaking world areas.  
**FHGE: Non-GE Transferable: UC/CSU**

**SPAN 4 INTERMEDIATE SPANISH I** 5 Units

**Prerequisite:** SPAN 3 or equivalent.  
**Grade Type:** Letter Grade, the student may select Pass/No Pass  
**Not Repeatable.**  
**5 hours lecture. (60 hours total per quarter)**  
Introduction to the reading and discussion of texts dealing with the literature, arts, geography, history and culture of the Spanish-speaking world. Review and further development of the grammatical structures of first-year Spanish with emphasis on building communicative competence and expanding vocabulary about familiar topics and idiomatic usage. Emphasis on present indicative and subjunctive. Writing and reading assignments based upon topics discussed in class.  
**FHGE: Humanities Transferable: UC/CSU**

**SPAN 5 INTERMEDIATE SPANISH II** 5 Units

**Prerequisite:** SPAN 4 or equivalent.  
**Grade Type:** Letter Grade, the student may select Pass/No Pass  
**Not Repeatable.**  
**5 hours lecture. (60 hours total per quarter)**  
Further expansion of the reading and discussion of texts dealing with the literature, arts, geography, history and culture of the Spanish-speaking world. Review and further development of the grammatical structures of first-year Spanish with emphasis on building communicative competence and expanding concrete vocabulary about new topics, and idiomatic usage. Emphasis on past tenses and past subjunctive. Writing and reading assignments based upon topics discussed in class.  
**FHGE: Humanities Transferable: UC/CSU**

**SPAN 6 INTERMEDIATE SPANISH III** 5 Units

**Prerequisite:** SPAN 5.  
**Grade Type:** Letter Grade, the student may select Pass/No Pass  
**Not Repeatable.**  
**5 hours lecture. (60 hours total per quarter)**  
Extensive reading and discussion of texts dealing with the literature, arts, geography, history and culture of the Spanish-speaking world, with emphasis on literature and art. Practice of advanced grammatical structures, and expansion of abstract vocabulary, and idiomatic usage. Writing and reading assignments based upon topics discussed in class.  
**FHGE: Humanities Transferable: UC/CSU**

**SPAN 10A SPANISH FOR HERITAGE SPEAKERS** 5 Units

**Advisory:** Student should be a heritage Spanish speaker, fluent in speaking and reading.  
**Grade Type:** Letter Grade, the student may select Pass/No Pass  
**Not Repeatable.**  
**5 hours lecture. (60 hours total per quarter)**  
Reading and writing in Spanish, targeted to Spanish speakers. Readings pertinent to the life and culture of Hispanics in the U.S.; compositions exploring both personal and political issues. Satisfies IGETC Area 6A and CSU GE Area C2.  
**FHGE: American Cultures & Communities Transferable: UC/CSU**

**SPAN 13A INTERMEDIATE CONVERSATION I** 4 Units

**Prerequisite:** SPAN 3.  
**Advisory:** May be taken concurrently with SPAN 4.  
**Grade Type:** Letter Grade, the student may select Pass/No Pass  
**Not Repeatable.**  
**4 hours lecture. (48 hours total per quarter)**  
Review and development of oral and listening communication skills in the targeted functions studied in first-year Spanish with attention to fluency, vocabulary, idiom, and pronunciation. Emphasis on the difference between spoken and literary Spanish as well as the variation in language depending upon the topic, the setting, and the country. Discussion and analysis of cultural and historical issues based on authentic texts, current news broadcasts, and/or films.  
**FHGE: Humanities Transferable: UC/CSU**

**SPAN 13B INTERMEDIATE CONVERSATION II 4 Units****Prerequisite:** SPAN 13A.**Advisory:** May be taken concurrently with SPAN 5.**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.**4 hours lecture. (48 hours total per quarter)**

Continuation of SPAN 13A. Review and development of oral and listening communication skills in the targeted functions studied in first-year Spanish with attention to fluency, vocabulary, idiom, and pronunciation. Emphasis on the difference between spoken and literary Spanish as well as the variation in language depending upon the topic, the setting, and the country. Discussion and analysis of cultural historical and political issues based on authentic texts, current news broadcasts, and/or films. Develop critical thinking skills by comparing different viewpoints and different values of diverse cultures.

**FHGE:** Humanities **Transferable:** UC/CSU**SPAN 14A ADVANCED CONVERSATION I 4 Units****Prerequisite:** SPAN 13B.**Advisory:** May be taken concurrently with SPAN 5.**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.**4 hours lecture. (48 hours total per quarter)**

Continuation of SPAN 13B. Gives students practice in oral/aural communication skills in an environment of increasingly challenging language situations. Practice on idioms and vocabulary as different from the usage of formal, written and literary language. Work on differentiating and choosing the culturally appropriate register for a given situation. Discussion of the cultural manifestations and history of the Spanish-speaking world, including that of the Latino population of the U.S.

**FHGE:** Humanities **Transferable:** UC/CSU**SPAN 14B ADVANCED CONVERSATION II 4 Units****Prerequisite:** SPAN 14A.**Advisory:** May be taken concurrently with SPAN 6.**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.**4 hours lecture. (48 hours total per quarter)**

Continuation of SPAN 14A. Gives students practice in aural/oral communication skills in an environment of increasingly challenging language situations. Evaluation and response to real, current material: politics, literature, art, music, film. Critical analysis of the cultural manifestations and history of the Spanish-speaking world, including the Latino population of the U.S. Evaluation of the cultural values inherent in conversation. Integration of cultural competency into conversation skills: what's appropriate in a given culture (in terms of register, vocabulary and values) and in a given setting within that culture.

**FHGE:** Humanities **Transferable:** UC/CSU**SPAN 25A ADVANCED COMPOSITION & READING I 4 Units****Prerequisite:** SPAN 6.**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.**4 hours lecture. (48 hours total per quarter)**

Extensive reading and analysis of original Spanish literary and non-literary sources from Spanish speaking countries and the Hispanic communities in the United States such as newspapers, reports, films and music. Intensive discussion and writing based on these readings to promote a critical appreciation of Hispanic culture, society and history. Understanding of the use of advanced grammar in writing communication. Instruction in Spanish.

**FHGE:** Non-GE **Transferable:** UC/CSU**SPAN 25B ADVANCED COMPOSITION & READING II 4 Units****Prerequisite:** SPAN 25A.**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.**4 hours lecture. (48 hours total per quarter)**

Continuation of SPAN 25A. Extensive reading and analysis of texts with emphasis on literary works such as short stories, essays and poems. Critical analysis of the major political, historical and social issues exposed in these texts. Writing of extended term papers and compositions using advanced grammar. Understanding and appreciating the ambiguities, vagaries and value inherent in the target language. Instruction in Spanish.

**FHGE:** Non-GE **Transferable:** UC/CSU**SPAN 51 SPANISH FOR HEALTH CARE WORKERS 5 Units****Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.**5 hours lecture. (60 hours total per quarter)**

An introduction to basic medical terminology in Spanish, including parts of the body, common ailments, taking a patient's medical history and understanding cultural differences related to health. Students gain basic conversational skills useful in a medical setting.

**FHGE:** Non-GE **Transferable:** CSU**SPAN 110 ELEMENTARY SPANISH CONVERSATION I 3 Units****Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.**3 hours lecture. (36 hours total per quarter)**

Practice of spoken Spanish with an emphasis on developing oral and listening communication skills. Attention will be given to pronunciation, vocabulary and accurate use of basic grammar.

**FHGE:** Non-GE**SPAN 111 ELEMENTARY SPANISH CONVERSATION II 3 Units****Prerequisite:** SPAN 110.**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.**3 hours lecture. (36 hours total per quarter)**

This is the second of a two-part course sequence. Continued practice of spoken Spanish with an emphasis on developing oral and listening communication skills. Attention will be given to pronunciation, vocabulary and accurate use of basic grammar.

**FHGE:** Non-GE**SPAN 192 TRAINING FOR SPANISH TUTORS 1 Unit****Prerequisite:** SPAN 3 or equivalent.**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.**1 hour lecture. (12 hours total per quarter)**

Course for students who are being trained to offer Spanish language tutorial services.

**FHGE:** Non-GE

## SPECIAL EDUCATION

Business and Social Sciences  
650.949.7322 foothill.edu/bss

### SPED 1 INTRODUCTION TO DISABILITIES 4 Units

Formerly: SPED 61

**Advisory:** Demonstrated proficiency in English by placement as determined by score on the English placement test OR through an equivalent placement process OR completion of ESLL 125 & ESLL 249; when offered as an online course, the student should be proficient with the use of a computer, Internet and email; not open to students with credit in SPED 61.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**4 hours lecture. (48 hours total per quarter)**

Overview of all major categories and characteristics of disabilities. Physical, sensory, developmental and learning disabilities discussed. Cultural/experiential aspects of disabilities from the perspectives of disabled individuals explored through readings and guest speakers. Contrasts disabled with non-disabled culture including cross-cultural perspectives of the disabled experience. Emphasis placed on recognition of strengths and abilities to provide strategies for instruction and accommodations.

**FHGE:** Amer, Lifelong **Transferable:** UC/CSU

### SPED 2 PSYCHOLOGICAL ASPECTS OF DISABILITY 4 Units

Formerly: SPED 62

**Advisory:** Demonstrated proficiency in English by placement as determined by score on the English placement test OR through an equivalent placement process OR completion of ESLL 125 & ESLL 249; familiarity with the internet & word processing; not open to students with credit in SPED 62.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**4 hours lecture. (48 hours total per quarter)**

Psychological aspects of disability, including psychosocial, cultural, and physical considerations of disability and illness. Examines the effects of illness and disability on the individual, family, and society as a whole. Focuses on the historical and current perspectives on illness and disability, the interventions and resources available, and future trends in the field. Discussions include a wide range of disabilities.

**FHGE:** Social & Behavioral Sciences **Transferable:** UC/CSU

### SPED 8 INTRODUCTION TO COLLEGE & ACCOMMODATIONS 1.5 Units

Formerly: SPED 80

**Advisory:** Not open to students with credit in CNSL 5 or SPED 80.

**Grade Type:** Pass/No Pass Only Not Repeatable.

**1.5 hours lecture. (18 hours total per quarter)**

Orientation to college for the first time college student. Includes Foothill College academic policies, resources, campus, programs and services; transition concerns from high school to post-secondary for students requiring special classroom accommodations related to disabilities; California system of higher education; educational goals and program planning. This course satisfies the college orientation requirement for new students.

**FHGE:** Non-GE **Transferable:** UC/CSU

### SPED 65 FUNDAMENTALS OF ATTENTION-DEFICIT DISORDERS 4 Units

**Advisory:** Demonstrated proficiency in English by placement as determined by score on the English placement test OR through an equivalent placement process OR completion of ESLL 125 & ESLL 249.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**4 hours lecture. (48 hours total per quarter)**

An overview of attention deficit disorders, subtypes, etiology, presenting symptoms, interventions and management, classroom teaching strategies, medical treatment strategies, workplace and educational accommodations, and disability law ramifications. Intended for individuals with ADD and their families, educators, or any interested student.

**FHGE:** Non-GE **Transferable:** CSU

## THEATRE ARTS

Fine Arts and Communication

650.949.7262

Foothill offers theatre arts activity courses in four different family categories. No single course may be repeated. Enrollment is limited to six courses per family within the Foothill-De Anza Community College District. Please refer to the De Anza College Catalog for the corresponding families and courses.

**Acting Family:** THTR 20A, 20B, 20C, 43C, 48E & 63A

**Production-Performance Family:** THTR 44A, 44B, 46A, 46B, 49A, 49B, 49C & 49D

**Production-Technical Family:** THTR 45A, 45B, 45C, 45D, 45E & 45F

**Theatre Voice Family:** MUS 47A or THTR 47A, MUS 47B or THTR 47B, MUS 47C or THTR 47C, MUS 47D or THTR 47D, THTR 48A, MUS 48B or THTR 48B, MUS 48C or THTR 48C & THTR 48F

### THTR 1 INTRODUCTION TO THEATRE 4 Units

**Advisory:** Not open to students with credit in DRAM 1.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**4 hours lecture. (48 hours total per quarter)**

Live performance in an electronic age - an overview of the status of live theatre including its historical, cultural and spiritual roots. Focuses on the relationship of theatre to various cultures throughout history, and on the contributions of significant individual artists. Introduces the elements of the production process including playwriting, acting, directing, design, and criticism. Survey different periods, styles and genres of theatre through play reading, discussion, films and viewing and critiquing live theatre. Required attendance of theatre productions.

**FHGE:** Humanities **Transferable:** UC/CSU

### THTR 2A HISTORY OF DRAMATIC LITERATURE: CLASSICAL TO MOLIÈRE 4 Units

**Prerequisite:** Demonstrated proficiency in English by placement as determined by score on the English placement test OR through an equivalent placement process OR completion of ESLL 125 & ESLL 249.

**Advisory:** Not open to students with credit in DRAM 2A or ENGL 42A.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**4 hours lecture. (48 hours total per quarter)**

The study of the history of theatre from its Origins in the East and West through the 17th Century. The history and development of theatre and drama are studied through reading and analyzing representative masterpieces of dramatic literature from Aeschylus to Molière in relationship to cultural, political and social conditions of the time.

**FHGE:** Humanities **Transferable:** UC/CSU

**THTR 2B HISTORY OF DRAMATIC LITERATURE: MOLIERE TO MODERN** 4 Units

**Prerequisite:** Demonstrated proficiency in English by placement as determined by score on the English placement test OR through an equivalent placement process OR completion of ESLL 125 & ESLL 249.

**Advisory:** Not open to students with credit in DRAM 2B or ENGL 42B.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**4 hours lecture. (48 hours total per quarter)**

The study of the history of theatre from the Restoration through current trends. The history and development of theatre and drama are studied through reading and analyzing representative masterpieces of dramatic literature from the 17th Century to the present day in relationship to the cultural, political and social conditions of the time.

**FHGE: Humanities Transferable: UC/CSU**

**THTR 2F HISTORY OF AMERICAN MUSICAL THEATRE** 4 Units

**Advisory:** Not open to students with credit in MUS 2F.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**4 hours lecture, 1 hour laboratory. (60 hours total per quarter)**

An introductory survey of the history of the American musical theatre genre. Includes roots in British music halls, Viennese operetta and African American jazz through the golden age of the musical and up to the contemporary Broadway stage. Emphasis will be placed on genres and styles, as well as the key composers, lyricists, librettists, directors, producers, designers, choreographers and performers. Examines how the musical mirrors contemporary social and political events.

**FHGE: Humanities Transferable: UC/CSU**

**THTR 7 INTRODUCTION TO DIRECTING** 4 Units

**Prerequisite:** THTR 20A.

**Advisory:** Not open to students with credit in DRAM 7 or 52.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**3 hours lecture, 3 hours laboratory. (72 hours total per quarter)**

The qualifications of the director; the choice of plays for production; auditions and methods of casting; preparation of the play script; building the rehearsal schedule; fundamentals of composition, movement, stage business and characterization as applied to the directing of plays.

**FHGE: Non-GE Transferable: UC/CSU**

**THTR 8 MULTICULTURAL THEATRE ARTS IN MODERN AMERICA** 4 Units

**Advisory:** Not open to students with credit in DRAM 8.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**4 hours lecture. (48 hours total per quarter)**

A comparative study of the important post-modern American theatre movements from the 1950s to the present day examining the specific cultural traditions of these performances. Focus will be on the performance artists and major influences of African Americans, Asian Americans, Native Americans, European Americans, and Chicano/Latino Americans and the cultural movements that inspired these performances.

**FHGE: Amer, Human Transferable: UC/CSU**

**THTR 12A STAGE & SCREEN** 4 Units

**Grade Type:** Letter Grade Only

**Not Repeatable.**

**3 hours lecture, 3 hours laboratory. (72 hours total per quarter)**

An analysis of narrative and plot dissemination through an overview comparison between the popular mediums of live performance and film or video. Ranging from ancient civilizations to the contemporary, source material will be drawn from a broad perspective of culturally diverse works with a specific eye towards comparing the personal and audience impact, the advantages and disadvantages, inherent between the two mediums by analyzing the values and properties of both through shared works of origin.

**FHGE: Humanities Transferable: UC/CSU**

**THTR 20A ACTING I** 4 Units

**Advisory:** This course is included in the Acting family of activity courses; not open to students with credit in DRAM 20A.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**4 hours lecture, 1 hour laboratory. (60 hours total per quarter)**

Introduction to the craft of acting, including theory and technique emphasizing body movement, voice production, articulation, characterization principles of motivation, scene analysis, cultural empathy through standard theatre games, exercises, monologues, scenes and the background research thereof.

**FHGE: Non-GE Transferable: UC/CSU**

**THTR 20B ACTING II** 4 Units

**Prerequisite:** THTR 20A.

**Advisory:** This course is included in the Acting family of activity courses; not open to students with credit in DRAM 20B.

**Grade Type:** Letter Grade Only Not Repeatable.

**4 hours lecture, 1 hour laboratory. (60 hours total per quarter)**

Further development of concepts introduced in THTR 20A, with emphasis to expanding the students' performance potential through probing greater depths of character analysis and text interpretation.

**FHGE: Non-GE Transferable: UC/CSU**

**THTR 20C ACTING III** 4 Units

**Prerequisite:** THTR 20A.

**Advisory:** THTR 20B or equivalent highly recommended; this course is included in the Acting family of activity courses; not open to students with credit in DRAM 20C.

**Grade Type:** Letter Grade Only

**Not Repeatable.**

**4 hours lecture, 1 hour laboratory. (60 hours total per quarter)**

Further development of concepts introduced in THTR 20A and 20B with focus on the performance of selected scenes from works of specific periods to acquaint students with the breadth of theatre performance genres.

**FHGE: Non-GE Transferable: UC/CSU**

**THTR 21A SCENERY & PROPERTY CONSTRUCTION** 4 Units

**Advisory:** Not open to students with credit in DRAM 21A.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**2 hours lecture, 6 hours laboratory. (96 hours total per quarter)**

The theory and practice of creating and using scenery and properties for dramatic presentations. Students will learn basic vocabulary, processes, tools and materials used in the production of scenery and properties for the stage. Practical application and safe use of basic woodworking tools used for creating scenery and properties for Theatre Arts productions.

**FHGE: Non-GE Transferable: UC/CSU**

**THTR 21B INTERMEDIATE SCENERY & PROPERTY CONSTRUCTION** 4 Units

**Prerequisite:** THTR 21A.

**Advisory:** Not open to students with credit in DRAM 21B.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**2 hours lecture, 6 hours laboratory. (96 hours total per quarter)**

Continuation of THTR 21A. The theory and practice of creating and using scenery and properties for dramatic presentations. Students will learn vocabulary, processes, tools and materials specific to areas of the production of scenery and properties for the stage. Practical application and safe use of advanced woodworking tools used for creating scenery and properties for Theatre Arts productions. Introduction of designing and working safely with alternative materials, basic electrical and lighting functions and sound reinforcement.

**FHGE: Non-GE Transferable: UC/CSU**

**THTR 21C      ADVANCED SCENERY & PROPERTIES CONSTRUCTION      4 Units**

**Prerequisite:** THTR 21B.

**Advisory:** Not open to students with credit in DRAM 21C.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**2 hours lecture, 6 hours laboratory. (96 hours total per quarter)**

Continuation of THTR 21B. Theory of and practice creating and using scenery and properties for department dramatic presentations. Safe use of tools, materials, and construction techniques used in the construction of scenery and properties for the stage. Introduction to the use of metal in the production of scenery and properties for the stage. Safe rigging concepts, tools and practices for the stage. Leadership experience in a collaborative theatre environment.

**FHGE:** Non-GE    **Transferable:** UC/CSU

**THTR 25      INTRODUCTION TO FASHION & COSTUME CONSTRUCTION      4 Units**

**Advisory:** Not open to students with credit in THTR 75.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**3 hours lecture, 3 hours laboratory. (72 hours total per quarter)**

An introduction to sewing techniques, pattern cutting, costume room equipment and the design and fabrication of clothing and costumes for the theatre and stage.

**FHGE:** Non-GE    **Transferable:** UC/CSU

**THTR 25B      FASHION & COSTUME CONSTRUCTION II      4 Units**

**Prerequisite:** THTR 25.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**3 hours lecture, 3 hours laboratory. (72 hours total per quarter)**

Continuation of THTR 25 with an exploration into more complex sewing techniques and machinery use. Further practice in the fabrication of clothing and costumes for the theatre, including pattern adjustment and measuring, basic pattern making, sewing knits, advanced fitting and alteration techniques and specialty machine usage.

**FHGE:** Non-GE    **Transferable:** UC/CSU

**THTR 25C      FASHION & COSTUME CONSTRUCTION III      4 Units**

**Prerequisite:** THTR 25B.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**3 hours lecture, 3 hours laboratory. (72 hours total per quarter)**

Continuation of THTR 25B with a practical focus on creating costumes from designs for a theatrical production. Further use and practice with complex sewing projects and patterning skills to include drafting and fitting a body block, then creating a pattern from it, basic draping techniques and advanced materials usage with specialty materials for complex theatrical headgear, wigs, and costumes.

**FHGE:** Non-GE    **Transferable:** UC/CSU

**THTR 26      INTRODUCTION TO FASHION HISTORY & COSTUME DESIGN      4 Units**

**Advisory:** Not open to students with credit in DRAM 76 or THTR 76.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**4 hours lecture. (48 hours total per quarter)**

A survey of western historic fashion and costume for women and men from ancient times to the present, including the cultural and political events that shaped each era and its clothing. An introduction to the design elements: color, line, form texture and silhouette and a brief introduction to the use of graphic techniques in the presentation of fashion and costume designs. Analysis of the artistic styles of each era as they relate to understanding costume detail and stylization.

**FHGE:** Humanities    **Transferable:** UC/CSU

**THTR 27      LIGHTING DESIGN & TECHNOLOGY      4 Units**

**Advisory:** Not open to students with credit in THTR 77.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**3 hours lecture, 3 hours laboratory. (72 hours total per quarter)**

A survey of lighting design for the theatre, film and television. An introduction to the basic elements of electrical wiring, lighting instruments, lighting control devices, and lighting special effects. Basic lighting design principles of color, intensity, direction and movement. Use of computer to design simple stage lighting plans.

**FHGE:** Non-GE    **Transferable:** UC/CSU

**THTR 31      MANAGEMENT FOR THE THEATRE & STAGE      4 Units**

**Advisory:** Not open to students with credit in DRAM 71, THTR 71 or 71X.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**4 hours lecture. (48 hours total per quarter)**

An introduction to the process and techniques of theatre management. Presentations and models of the business and management side of a theatre production focusing specifically on the roles of the general manager, production manager, and stage manager.

**FHGE:** Non-GE    **Transferable:** UC/CSU

**THTR 32      CAD DRAFTING FOR THE THEATRE, FILM & TELEVISION      4 Units**

**Advisory:** Completion of or concurrent enrollment in ART 4A advised or previous experience in drawing or mechanical drafting; not open to students with credit in THTR 72B.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**3 hours lecture, 3 hours laboratory. (72 hours total per quarter)**

Survey of computer drafting techniques for the theatre, film and television. Introduction to the basic elements of graphic expression and techniques used in presenting stage designs for designers and technicians working in the performing arts. Use of computer technology to present ground plans, elevations and working drawings for theatre designs.

**FHGE:** Non-GE    **Transferable:** UC/CSU

**THTR 32A      ADVANCED CAD DRAFTING FOR THE THEATRE, FILM & TELEVISION      4 Units**

**Prerequisite:** THTR 32 or permission of instructor.

**Advisory:** Not open to students with credit in DRAM 72 or THTR 72C.

**Grade Type:** Letter Grade, the student may select Pass/No Pass Not Repeatable.

**3 hours lecture, 3 hours laboratory. (72 hours total per quarter)**

Continuation of THTR 32, with an emphasis on more complex scenic designs and visualization techniques for the theatre, film and television. Introduction to advanced elements of graphic expression and visualization used in presenting stage designs for designers and technicians working in the performing arts. Use of computer technology to present ground plans, elevations and working drawings for multi-set productions as well as scenic and lighting visualizations.

**FHGE:** Non-GE    **Transferable:** UC/CSU

**THTR 38D      STAGE COMBAT      2 Units**

**Advisory:** Course includes rigorous physical activity; not open to students with credit in DRAM 58 or THTR 58.

**Grade Type:** Letter Grade Only Not Repeatable.

**1.5 hours lecture, 1.5 hours laboratory. (36 hours total per quarter)**

Introduction to the concepts and practice of choreographed hand-to-hand and small weapons combat for stage and camera using techniques with emphasis on safety concepts and universal industry maneuver standards required for all stage combat circumstances.

**FHGE:** Non-GE    **Transferable:** UC/CSU

**THTR 40A BASIC THEATRICAL MAKEUP** 4 Units  
**Advisory:** Not open to students with credit in DRAM 40A.  
**Grade Type:** Letter Grade, the student may select Pass/No Pass  
**Not Repeatable.**  
**3 hours lecture, 3 hours laboratory. (72 hours total per quarter)**  
 A practical introduction to the techniques of applying theatrical make-up for the stage.  
**FHGE: Non-GE Transferable: UC/CSU**

**THTR 40B THEATRICAL MAKEUP FOR PRODUCTION** 4 Units  
**Prerequisite:** THTR 40A.  
**Advisory:** Not open to students with credit in DRAM 40B.  
**Grade Type:** Letter Grade, the student may select Pass/No Pass  
**Not Repeatable.**  
**3 hours lecture, 3 hours laboratory. (72 hours total per quarter)**  
 Continuation of work in THTR 40A with emphasis in more advanced techniques and practical application experience for the stage.  
**FHGE: Non-GE Transferable: UC/CSU**

**THTR 42 INTRODUCTION TO THEATRE DESIGN** 4 Units  
**Advisory:** ART 4A, THTR 21A or equivalent; not open to students with credit in DRAM 42C or THTR 42A.  
**Grade Type:** Letter Grade, the student may select Pass/No Pass  
**Not Repeatable.**  
**3 hours lecture, 3 hours laboratory. (72 hours total per quarter)**  
 A survey of the theory and practice of theatrical design using traditional and digital tools. Introduces basic concepts applicable to scenery, lighting, sound, costumes, makeup and properties. Coursework includes research and analysis, sketching and drafting, rendering and model making and the use of computer graphics software and equipment to create three-dimensional designs for the performing arts, film, and television. Introduction of equipment and construction techniques through demonstration and laboratory experience.  
**FHGE: Non-GE Transferable: UC/CSU**

**THTR 43A SCRIPT ANALYSIS** 4 Units  
**Advisory:** THTR 20A.  
**Grade Type:** Letter Grade Only  
**Not Repeatable.**  
**4 hours lecture. (48 hours total per quarter)**  
 Presentation of the fundamental building blocks of understanding play scripts through an in-depth methodology of reading and analysis. Exploration of the foundational elements of Modern Realistic theatrical texts from study to analysis of text as intended for production. Groundwork provides the basis by which subsequent exploration of production possibilities, challenges and genres can be developed.  
**FHGE: Non-GE Transferable: UC/CSU**

**THTR 43C FOUNDATIONS IN CLASSICAL ACTING** 6 Units  
**Prerequisite:** THTR 20A.  
**Advisory:** This course is included in the Acting family of activity courses.  
**Grade Type:** Letter Grade Only  
**Not Repeatable.**  
**5 hours lecture, 3 hours laboratory. (96 hours total per quarter)**  
 Introduction to the specific acting challenges presented by performing classical scripts, pre-18th century. Incorporate skills of language analysis, verbal acumen and physical interpretation including exploration of body awareness, flexibility, alignment, balance, muscle isolation and coordination into performance preparation and execution as they specifically relate to performing classical texts.  
**FHGE: Non-GE Transferable: UC/CSU**

**THTR 43E IMPROVISATION** 4 Units  
**Prerequisite:** THTR 20A.  
**Advisory:** This course is included in the Acting family of activity courses.  
**Grade Type:** Letter Grade Only  
**Not Repeatable.**  
**3 hours lecture, 3 hours laboratory. (72 hours total per quarter)**  
 Presentation of the fundamentals and graduating skills of organic performance without script or text. Practical application of the theories of improvisational basic skills, universally translated to virtually all forms of improvisation, towards performance.  
**FHGE: Non-GE Transferable: UC/CSU**

**THTR 44A PRODUCTION PROJECTS I** 4 Units  
**Advisory:** Enrollment subject to audition and instructor assignment; this course is included in the Production-Performance family of activity courses; not open to students with credit in THTR 44.  
**Grade Type:** Letter Grade, the student may select Pass/No Pass  
**Not Repeatable.**  
**2 hours lecture, 6 hours laboratory. (96 hours total per quarter)**  
 An intensive training experience in all areas of theatre, culminating in a practical theatre production consisting of short plays. Areas of study and investigation include acting techniques, voice and diction, oral interpretation, movement and dance, theatre literature and history, stage management and other technologies related to production. Culminates in a full-scale public performance, with students participating in all areas of production.  
**FHGE: Non-GE Transferable: UC/CSU**

**THTR 44B PRODUCTION PROJECTS II** 4 Units  
**Advisory:** Enrollment subject to audition and instructor assignment; this course is included in the Production-Performance family of activity courses; not open to students with credit in THTR 44X.  
**Grade Type:** Letter Grade, the student may select Pass/No Pass  
**Not Repeatable.**  
**2 hours lecture, 6 hours laboratory. (96 hours total per quarter)**  
 Advanced practical work in stage directing, leadership roles, and featured performance work necessary for the full development of a theatrical production. Students take active roles in all creative and technical aspects involved in producing a full-scale public performance which consists of a compilation of short plays.  
**FHGE: Non-GE Transferable: CSU; UC Pending**

**THTR 45A TECHNICAL THEATRE IN PRODUCTION I** 4 Units  
**Formerly:** THTR 99A  
**Advisory:** Completion of or concurrent enrollment in THTR 21A; students must meet with the instructor during the first week of the quarter to schedule hours and responsibilities; this course is included in the Production-Technical family of activity courses; not open to students with credit in THTR 99A.  
**Grade Type:** Letter Grade, the student may select Pass/No Pass  
**Not Repeatable.**  
**1 hour lecture, 9 hours laboratory. (120 hours total per quarter)**  
 Students will gain practical experience in the application of production responsibilities in any of the following: stage management, house management, construction, scenery, properties, costume, lighting, sound, and running crews.  
**FHGE: Non-GE Transferable: UC/CSU**

**THTR 45B TECHNICAL THEATRE IN PRODUCTION II 4 Units**

Formerly: THTR 99B  
Prerequisite: THTR 45A.  
Advisory: Students must meet with the instructor during the first week of the quarter to arrange hours and assignments; this course is included in the Production-Technical family of activity courses; not open to students with credit in THTR 99B.  
Grade Type: Letter Grade, the student may select Pass/No Pass Not Repeatable.  
1 hour lecture, 9 hours laboratory. (120 hours total per quarter)  
Students will gain a practical experience in the application of production responsibilities in any of the following theatre technical areas: construction, scenery, properties, costume, lighting, sound, special effects and running crews based on the students level of experience and the demands of the current department productions. Students will assume greater responsibility for the planning and scheduling of work in their assigned area.  
FHGE: Non-GE Transferable: UC/CSU

**THTR 45C TECHNICAL THEATRE IN PRODUCTION III 4 Units**

Formerly: THTR 99C  
Prerequisite: THTR 45B.  
Advisory: Students must meet with the instructor during the first week of the quarter to arrange hours and assignments; this course is included in the Production-Technical family of activity courses; not open to students with credit in THTR 99C.  
Grade Type: Letter Grade, the student may select Pass/No Pass Not Repeatable.  
1 hour lecture, 9 hours laboratory. (120 hours total per quarter)  
Continuation of THTR 45B. Students will gain additional practical experience in the application of production responsibilities in any of the following: construction, scenery, properties, costume, lighting, sound, and running crews. Students will assume greater responsibility for the design and implementation of technical elements for a theatrical production as department heads or group leaders.  
FHGE: Non-GE Transferable: UC/CSU

**THTR 45D TECHNICAL THEATRE IN PRODUCTION IV 4 Units**

Formerly: THTR 99D  
Prerequisite: THTR 45C.  
Advisory: Completion of or concurrent enrollment in THTR 21A; students must meet with the instructor during the first week of the quarter to arrange hours and assignments; this course is included in the Production-Technical family of activity courses; not open to students with credit in THTR 99D.  
Grade Type: Letter Grade, the student may select Pass/No Pass Not Repeatable.  
1 hour lecture, 9 hours laboratory. (120 hours total per quarter)  
Continuation of THTR 45C. Students will gain practical experience in the application of production techniques and organization in any or all of the following areas: construction, scenery, properties, costume, lighting, sound, and production crews.  
FHGE: Non-GE Transferable: UC/CSU

**THTR 45E TECHNICAL THEATRE MANAGEMENT IN PRODUCTION 6 Units**

Formerly: THTR 99E  
Advisory: Completion of or concurrent enrollment in THTR 21A and 45A; lab hours will occur on specific evenings and weekends during the quarter; required meeting with instructor during first week of quarter to assign responsibilities and hours per production schedule; this course is included in the Production-Technical family of activity courses; not open to students with credit in THTR 99E.  
Grade Type: Letter Grade, the student may select Pass/No Pass Not Repeatable.  
2 hours lecture, 12 hours laboratory. (168 hours total per quarter)  
Students will gain practical experience in the application of production management responsibilities in any of the following: stage management, house management, production management, or technical department management.  
FHGE: Non-GE Transferable: UC/CSU

**THTR 45F TECHNICAL THEATRE MANAGEMENT IN PRODUCTION II 6 Units**

Formerly: THTR 99F  
Prerequisite: THTR 45E.  
Advisory: This course is included in the Production-Technical family of activity courses; not open to students with credit in THTR 99F.  
Grade Type: Letter Grade, the student may select Pass/No Pass Not Repeatable.  
2 hours lecture, 12 hours laboratory. (168 hours total per quarter)  
Students will gain practical experience in the application of theatre management responsibilities in any of the following: stage management, house management, production management, or technical department management. Students in this class will be expected to assume responsibility for assembling and organizing the work of several groups or departments in the successful creation of a large theatrical production.  
FHGE: Non-GE Transferable: UC/CSU

**THTR 46A THEATRE DEVELOPMENT WORKSHOP I 2 Units**

Advisory: This course is included in the Production-Performance family of activity courses; not open to students with credit in THTR 50.  
Grade Type: Letter Grade, the student may select Pass/No Pass Not Repeatable.  
1 hour lecture, 3 hours laboratory. (48 hours total per quarter)  
This course teaches the full development of an organic, original production from inception to performance. Under the guidance and supervision of the instructor who initiates the process, students will all contribute to produce a full-length production consisting of several student-generated short plays. Beginning students will focus as actors and production support as needed. The quarter culminates with several public performances.  
FHGE: Non-GE Transferable: UC/CSU

**THTR 46B THEATRE DEVELOPMENT WORKSHOP II 2 Units**

Advisory: This course is included in the Production-Performance family of activity courses; not open to students with credit in THTR 50B.  
Grade Type: Letter Grade, the student may select Pass/No Pass Not Repeatable.  
1 hour lecture, 3 hours laboratory. (48 hours total per quarter)  
Delves into the full development of an organic, original production from inception to performance. Students will produce a full-length production consisting of several student-generated short plays. Focus on writing skills and creative contributions to the shows content. Student responsibilities may extend to additional areas of acting and production support. The quarter culminates with several public performances.  
FHGE: Non-GE Transferable: UC/CSU



**THTR 46C THEATRE DEVELOPMENT WORKSHOP III 2 Units**

**Grade Type: Letter Grade, the student may select Pass/No Pass Not Repeatable.**

**1 hour lecture, 3 hours laboratory. (48 hours total per quarter)**

Delves into the full development of an organic, original production from inception to performance. Students will produce a full-length production consisting of several student-generated short plays. Focus on design, directing and production coordination of all artistic elements of the show. Student responsibilities may extend to additional areas of acting and other production support. The quarter culminates with several public performances.

**FHGE: Non-GE Transferable: UC/CSU**

**THTR 46D THEATRE DEVELOPMENT WORKSHOP IV 2 Units**

**Grade Type: Letter Grade, the student may select Pass/No Pass Not Repeatable.**

**1 hour lecture, 3 hours laboratory. (48 hours total per quarter)**

Presentation of the necessary leadership and organizational skills for the full development of an organic, original production from inception to performance. Advanced students will be charged to produce a full-length production consisting of several student-generated short plays. Student responsibilities will extend to the areas of group coordination and organization in writing, acting, directing, lighting design, costume design, scenery and properties design, sound design, stage management and technical responsibilities, make-up design and publicity. The quarter culminates with several public performances.

**FHGE: Non-GE Transferable: UC/CSU**

**THTR 47A INTRODUCTION TO MUSICAL THEATRE PRODUCTION 6 Units**

**Formerly: THTR 47**

**Advisory: Enrollment subject to audition and instructor assignment; this course is included in the Theatre Voice family of activity courses; not open to students with credit in MUS 47A or THTR 47.**

**Grade Type: Letter Grade, the student may select Pass/No Pass Not Repeatable.**

**18 hours laboratory. (216 hours total per quarter)**

This course will introduce the fundamentals of musical theatre performance through the rehearsal and performance of a fully staged musical theatre production. Students are required to attend rehearsals and performances.

**FHGE: Non-GE Transferable: UC/CSU**

**THTR 47B INTERMEDIATE MUSIC THEATRE PRODUCTION WORKSHOP 6 Units**

**Advisory: Enrollment subject to audition and instructor assignment; this course is included in the Theatre Voice family of activity courses; not open to students with credit in MUS 47B or THTR 47X.**

**Grade Type: Letter Grade, the student may select Pass/No Pass Not Repeatable.**

**18 hours laboratory. (216 hours total per quarter)**

This course will develop technical skills required at the intermediate level of musical theatre performance through the rehearsal and performance of a fully staged musical theatre production. Students are required to attend rehearsals and performances.

**FHGE: Non-GE Transferable: UC/CSU**

**THTR 47C ADVANCED MUSIC THEATRE PRODUCTION WORKSHOP 6 Units**

**Prerequisite: MUS 47B or THTR 47B.**

**Advisory: Enrollment subject to audition and instructor assignment; this course is included in the Theatre Voice family of activity courses; not open to students with credit in MUS 47C.**

**Grade Type: Letter Grade, the student may select Pass/No Pass Not Repeatable.**

**18 hours laboratory. (216 hours total per quarter)**

Assists the student to develop technical skills required at the advanced level of musical theatre performance through the rehearsal and performance of a fully staged musical theatre production.

**FHGE: Non-GE Transferable: UC/CSU**

**THTR 47D ADVANCED MUSIC THEATRE PRODUCTION WORKSHOP II 6 Units**

**Prerequisite: MUS 47C or THTR 47C.**

**Advisory: Enrollment subject to audition and instructor assignment; this course is included in the Theatre Voice family of activity courses; not open to students with credit in MUS 47D.**

**Grade Type: Letter Grade, the student may select Pass/No Pass Not Repeatable.**

**18 hours laboratory. (216 hours total per quarter)**

This course will assist the student to develop technical skills required at the advanced level of musical theatre in the areas of stage direction or choreography through the rehearsal and performance of a fully staged musical theatre production.

**FHGE: Non-GE Transferable: UC/CSU**

**THTR 48A VOCAL PRODUCTION & SPEECH 4 Units**

**Advisory: This course is included in the Theatre Voice family of activity courses.**

**Grade Type: Letter Grade Only**

**Not Repeatable.**

**3 hours lecture, 3 hours laboratory. (72 hours total per quarter)**

An introduction to the fundamentals of vocal production and the application of those principles to speech for performance intent. Topics will include the basics of physiology of sound production, breath support, use of natural resonators, warm-up techniques, diction and text communication, dialect recognitions and employment. These fundamental techniques will be applied to a broad cultural landscape of dramatic literature at basic levels.

**FHGE: Non-GE Transferable: UC/CSU**

**THTR 48B SINGING TECHNIQUE FOR MUSICAL THEATRE 4 Units**

**Advisory: MUS 13A, 13B and 13C; this course is included in the Theatre Voice family of activity courses; not open to students with credit in MUS 48B.**

**Grade Type: Letter Grade Only**

**Not Repeatable.**

**3 hours lecture, 3 hours laboratory. (72 hours total per quarter)**

Practical introduction to the fundamentals of singing for musical theatre repertoire. Students will explore the principals of healthy vocal production in solo and/or ensemble singing to develop the singing voice through exercises and repertoire from the Standard American Musical Theatre. Songs will be developed with strong emphasis on character development and communication.

**FHGE: Non-GE Transferable: UC/CSU**

**THTR 48C MUSICAL THEATRE REPERTOIRE FOR SINGERS 4 Units**

**Prerequisite: MUS 48B or THTR 48B.**

**Advisory: MUS 13C; this course is included in the Theatre Voice family of activity courses; not open to students with credit in MUS 48C.**

**Grade Type: Letter Grade Only**

**Not Repeatable.**

**3 hours lecture, 3 hours laboratory. (72 hours total per quarter)**

Vocal techniques and styles as utilized in musical theater. Instruction includes development of singing skills, basic body movement, acting technique, interpretation of Broadway song literature in a staged performance. Students are required to prepare a final project excerpted from a standard works. Attendance at all scheduled performances is required.

**FHGE: Non-GE Transferable: UC/CSU**

**THTR 48F MUSICAL THEATRE REPERTOIRE FOR SINGERS II 4 Units**

**Prerequisite:** MUS 48C or THTR 48C or instructor approval.  
**Advisory:** This course is included in the Theatre Voice family of activity courses.  
**Grade Type:** Letter Grade Only  
**Not Repeatable.**

**3 hours lecture, 3 hours laboratory. (72 hours total per quarter)**  
This course is designed to develop further technical skills in singing and acting techniques applied to more complex and broader ranging musical theatre repertoire, including staged duets, trios and full ensemble numbers spanning Golden Age staged through contemporary Broadway. Attendance at all scheduled performances is required.  
**FHGE: Non-GE Transferable: UC/CSU**

**THTR 49A PERFORMANCE PRODUCTION I 6 Units**

**Advisory:** Enrollment subject to audition and instructor assignment; this course is included in the Production-Performance family of activity courses; not open to students with credit in THTR 49.  
**Grade Type:** Letter Grade, the student may select Pass/No Pass  
**Not Repeatable.**

**1 hour lecture, 15 hours laboratory. (192 hours total per quarter)**  
Supervised participation as a performer in scheduled non-musical productions of the Theatre Arts Department with a designated emphasis towards confidence in performing as well as integrative familiarity in the full process of mounting a production for public performance. Culminates in a fully staged theatrical production.  
**FHGE: Non-GE Transferable: UC/CSU**

**THTR 49B PERFORMANCE PRODUCTION II 6 Units**

**Advisory:** Enrollment subject to audition and instructor assignment; this course is included in the Production-Performance family of activity courses; not open to students with credit in THTR 49X.  
**Grade Type:** Letter Grade, the student may select Pass/No Pass  
**Not Repeatable.**

**1 hour lecture, 15 hours laboratory. (192 hours total per quarter)**  
Supervised performance participation in scheduled productions of the theatre arts department with a specific target towards text interpretation and commitment to characterization through live public performance. Culminates in a fully staged theatrical production.  
**FHGE: Non-GE Transferable: UC/CSU**

**THTR 49C PERFORMANCE PRODUCTION III 6 Units**

**Advisory:** Enrollment subject to audition and instructor assignment; this course is included in the Production-Performance family of activity courses; not open to students with credit in THTR 49Y.  
**Grade Type:** Letter Grade, the student may select Pass/No Pass  
**Not Repeatable.**

**1 hour lecture, 15 hours laboratory. (192 hours total per quarter)**  
Supervised participation as a performer in scheduled non-musical productions of the theatre arts department with a designated emphasis towards advanced vocal acumen and heightened physical embodiment through live public performance. Culminates in a fully staged theatrical production.  
**FHGE: Non-GE Transferable: UC/CSU**

**THTR 49D PERFORMANCE PRODUCTION IV 6 Units**

**Advisory:** Enrollment subject to audition and instructor assignment; this course is included in the Production-Performance family of activity courses.  
**Grade Type:** Letter Grade, the student may select Pass/No Pass  
**Not Repeatable.**

**1 hour lecture, 15 hours laboratory. (192 hours total per quarter)**  
Supervised performance participation in scheduled productions of the theatre arts department with specific inclusion through a rehearsal into live public performance context of augmented, nuanced acting skill premises and enhanced script interpretation of cultural and socio-economic circumstances. Culminates in a fully staged theatrical production.  
**FHGE: Non-GE Transferable: UC/CSU**

**THTR 57 ACTOR MARKETING STRATEGIES 4 Units**

**Advisory:** THTR 20A; not open to students with credit in THTR 43G.  
**Grade Type:** Letter Grade Only  
**Not Repeatable.**

**4 hours lecture. (48 hours total per quarter)**  
Developing effective marketing strategies for a career in theatre. The actor's process in preparation for theatrical auditions, selection of appropriate audition performance pieces for the presentation of self in various audition settings, and the development of industry standard self-promotion materials.  
**FHGE: Non-GE Transferable: CSU**

**THTR 63A FILM & TELEVISION ACTING WORKSHOP 4 Units**

**Prerequisite:** THTR 20A.  
**Advisory:** This course is included in the Acting family of activity courses.

**Grade Type:** Letter Grade Only  
**Not Repeatable.**  
**3 hours lecture, 3 hours laboratory. (72 hours total per quarter)**  
Application of concepts developed in the stage acting classes with the necessary adaptations required for film and television auditioning and performance. Work with the variety of styles currently used in film and television, including commercial, dramatic, documentary and industrial. Class time will be divided between lecture, workshops and on-camera performance time to learn and experiment with the subject matter.  
**FHGE: Non-GE Transferable: CSU**

**THTR 70R INDEPENDENT STUDY 1 Unit**

**THTR 71R IN THEATRE ARTS 2 Units**

**THTR 72R 3 Units**

**THTR 73R 4 Units**

**Grade Type:** Letter Grade, the student may select Pass/No Pass  
**Not Repeatable.**

**3-12 hours laboratory per week. (36-144 hours total per quarter)**  
Provides an opportunity for the student to expand their studies in Theatre Arts beyond the classroom by completing a project or an assignment arranged by agreement between the student and instructor. The student is required to contract with the instructor to determine the scope of assignment and the unit value assigned for successful completion. Students may take a maximum of 6 units of Independent Study per department.  
**FHGE: Non-GE Transferable: CSU**

**THTR 81 CONTEMPORARY ISSUES IN PERFORMANCE SEMINAR 4 Units**

**Grade Type:** Letter Grade, the student may select Pass/No Pass  
**Not Repeatable.**

**4 hours lecture. (48 hours total per quarter)**  
A seminar in directed readings, discussions, performance analysis and projects encompassing contemporary performance trends, events and issues, and the business of the entertainment industry. Specific topics to be determined by the instructor.  
**FHGE: Non-GE Transferable: CSU**

**VETERINARY TECHNOLOGY**

Biological and Health Sciences

650.949.7538 [foothill.edu/bio/programs/vettech](http://foothill.edu/bio/programs/vettech)**V T 50A CURRENT TOPICS IN VETERINARY TECHNOLOGY I 1 Unit****Advisory: Not open to students with credit in V T 50.****Grade Type: Letter Grade Only****Not Repeatable.****1 hour lecture. (12 hours total per quarter)**

Provides enrichment of the core curriculum of the Veterinary Technology Program. Presenters will include veterinarians, veterinary specialists, veterinary technicians, animal care and management professionals, business professionals, and educators. Lectures, lecture-demonstrations, multimedia presentations, live demonstrations, or hands-on workshops presented once monthly by the instructor or professionals in veterinary medicine, veterinary technology, or other animal health-related fields. Content consists of relevant topics related to concurrent coursework in the program curriculum. Intended for students in the Veterinary Technology Program; enrollment is limited to students accepted in the program.

**FHGE: Non-GE Transferable: CSU****V T 50B CURRENT TOPICS IN VETERINARY TECHNOLOGY II 1 Unit****Grade Type: Letter Grade Only****Not Repeatable.****1 hour lecture. (12 hours total per quarter)**

Provides enrichment of the core curriculum of the Veterinary Technology Program. Presenters will include veterinarians, veterinary specialists, veterinary technicians, animal care and management professionals, business professionals, and educators. Lectures, lecture-demonstrations, multimedia presentations, live demonstrations, or hands-on workshops presented once monthly by the instructor or professionals in veterinary medicine, veterinary technology, or other animal health-related fields. Content consists of relevant topics related to concurrent coursework. Intended for students in the Veterinary Technology Program; enrollment is limited to students accepted in the program.

**FHGE: Non-GE Transferable: CSU****V T 50C CURRENT TOPICS IN VETERINARY TECHNOLOGY III 1 Unit****Grade Type: Letter Grade Only****Not Repeatable.****1 hour lecture. (12 hours total per quarter)**

Provides enrichment of the core curriculum of the Veterinary Technology Program. Presenters will include veterinarians, veterinary specialists, veterinary technicians, animal care and management professionals, business professionals, and educators. Lectures, lecture-demonstrations, multimedia presentations, live demonstrations, or hands-on workshops presented once monthly by the instructor or professionals in veterinary medicine, veterinary technology, or other animal health-related fields. Content consists of relevant topics related to concurrent coursework. Intended for students in the Veterinary Technology Program; enrollment is limited to students accepted in the program.

**FHGE: Non-GE Transferable: CSU****V T 50D CURRENT TOPICS IN VETERINARY TECHNOLOGY IV 1 Unit****Grade Type: Letter Grade Only****Not Repeatable.****1 hour lecture. (12 hours total per quarter)**

Provides enrichment of the core curriculum of the Veterinary Technology Program. Presenters include veterinarians, veterinary specialists, veterinary technicians, animal care and management professionals, business professionals, and educators. Lectures, lecture-demonstrations, multimedia presentations, live demonstrations, or hands-on workshops presented once monthly by the instructor or professionals in veterinary medicine, veterinary technology, or other animal health-related fields. Content consists of relevant topics related to concurrent coursework. Intended for students in the Veterinary Technology Program; enrollment is limited to students accepted in the program.

**FHGE: Non-GE Transferable: CSU****V T 50E CURRENT TOPICS IN VETERINARY TECHNOLOGY V 1 Unit****Grade Type: Letter Grade Only****Not Repeatable.****1 hour lecture. (12 hours total per quarter)**

Provides enrichment of the core curriculum of the Veterinary Technology Program. Lectures, lecture-demonstrations, multimedia presentations, live demonstrations, or hands-on workshops presented once monthly by the instructor or professionals in veterinary medicine, veterinary technology, or other animal health-related fields. Content consists of relevant topics related to concurrent coursework. Presenters include veterinarians, veterinary specialists, veterinary technicians, animal care and management professionals, business professionals, and educators. Intended for students in the Veterinary Technology Program; enrollment is limited to students accepted in the program.

**FHGE: Non-GE Transferable: CSU****V T 50F CURRENT TOPICS IN VETERINARY TECHNOLOGY VI 1 Unit****Grade Type: Letter Grade Only****Not Repeatable.****1 hour lecture. (12 hours total per quarter)**

Provides enrichment of the core curriculum of the Veterinary Technology Program. Content consists of relevant topics related to concurrent coursework. Lectures, lecture-demonstrations, multimedia presentations, live demonstrations, or hands-on workshops presented once monthly by the instructor or professionals in veterinary medicine, veterinary technology, or other animal health-related fields. Presenters include veterinarians, veterinary specialists, veterinary technicians, animal care and management professionals, business professionals, and educators. Intended for students in the Veterinary Technology Program; enrollment is limited to students accepted in the program.

**FHGE: Non-GE Transferable: CSU****V T 51 INTRODUCTION TO VETERINARY TECHNOLOGY 2 Units****Grade Type: Letter Grade Only****Not Repeatable.****2 hours lecture. (24 hours total per quarter)**

Introduction to the profession of veterinary technology. Orientation to the program requirements and curriculum. Overview of program structure and student services. Review and practice of library skills. Prerequisite course for several courses in veterinary technology program. Survey of the role of the veterinary assistant and registered veterinary technician in the workplace. Survey of employment opportunities and areas of specialization. Ethics and professionalism. Laws and regulations governing veterinary technicians. Introduction to basic animal care skills and clinical procedures.

**FHGE: Non-GE Transferable: CSU****V T 52A VETERINARY ASSISTING I 5 Units****Grade Type: Letter Grade Only****Not Repeatable.****5 hours lecture. (60 hours total per quarter)**

First in a two-course series in the theory and practice of veterinary assisting focusing on the knowledge, skills, and attitudes required for competent support to the veterinarian (DVM) and to the registered veterinary technician (RVT). Emphasis is on the practical aspects of front office management, working as part of the veterinary health care team. Entirely online and may be taken as a stand-alone class or may be combined with V T 52B and V T 88A to earn an Online Veterinary Assisting Career Certificate.

**FHGE: Non-GE Transferable: CSU**

**VT 52B VETERINARY ASSISTING II 5 Units****Grade Type: Letter Grade Only  
Not Repeatable.****5 hours lecture. (60 hours total per quarter)**

Second in a two-course series in the theory and practice of veterinary assisting focusing on the knowledge, skills, and attitudes required for competent paraprofessional support to the veterinarian (DVM) and to the registered veterinary technician (RVT). Prepare for an exciting career as a Veterinary Assistant by learning the essential knowledge and hands-on skills. Emphasis is on the practical aspects of front office management, working as part of the veterinary health care team, basic animal care, and fundamentals of patient management under direct supervision. Entirely online and may be taken as a stand-alone class or may be combined with VT 52A and VT 88A to earn an Online Veterinary Assisting Career Certificate.

**FHGE: Non-GE Transferable: CSU****VT 53A MEDICAL TERMINOLOGY 2 Units****Grade Type: Letter Grade Only  
Not Repeatable.****2 hours lecture. (24 hours total per quarter)**

A guided self-study of medical terminology as a fundamental communication skill. Basic word parts and rules of word construction. A review of common medical terms pertaining to the different body systems, with emphasis on those terms peculiar to veterinary medicine. Intended for students in the Veterinary Technology Program; enrollment is limited to students accepted in the program.

**FHGE: Non-GE Transferable: CSU****VT 53B MEDICAL CALCULATIONS 2 Units****Grade Type: Letter Grade Only  
Not Repeatable.****2 hours lecture. (24 hours total per quarter)**

Applied mathematics as a fundamental communication and technical skill. Review of calculations involving fractions, decimals, ratios and proportions, unit conversions, and algebraic equations. Clinical medical calculations utilized in preparation and administration of drugs, dosage determinations, intravenous fluid infusion, and prescription dispensing. Intended for students in the Veterinary Technology Program; enrollment is limited to students accepted in the program.

**FHGE: Non-GE Transferable: CSU****VT 53C INTRODUCTION TO LARGE ANIMAL CARE 2 Units****Prerequisite: VT 54A.****Grade Type: Letter Grade Only  
Not Repeatable.****2 hours lecture. (24 hours total per quarter)**

Introduction to principles of husbandry and veterinary nursing care of common domestic large animal species. Breed identification; housing and restraint; physical examination; administration of medication and therapeutics; nutrition and feeding; common diseases; common large animal clinical procedures. Intended for students in the Veterinary Technology Program; enrollment is limited to students accepted in the program.

**FHGE: Non-GE Transferable: CSU****VT 54A COMPARATIVE VETERINARY ANATOMY & PHYSIOLOGY FOR THE VETERINARY TECHNICIAN 5 Units****Prerequisite: VT 51 or equivalent.****Advisory: One of the following: ENGL 1A, 1AH, 1S & 1T or ESLL 26 or equivalent; CHEM 30A or equivalent.****Grade Type: Letter Grade Only****Not Repeatable.****4 hours lecture, 3 hours laboratory. (84 hours total per quarter)**

Comparative veterinary anatomy and physiology for veterinary technicians. Clinically relevant veterinary anatomy and physiology including a discussion of the similarities and differences among the major domestic species. Emphasis is placed on the normal structure and function of the major organ systems as the foundation for understanding pathology and the pathophysiology of disease. Intended for students in the Veterinary Technology Program; enrollment is limited to students accepted in the program.

**FHGE: Non-GE Transferable: CSU****VT 54B COMPARATIVE VETERINARY ANATOMY & PHYSIOLOGY FOR THE VETERINARY TECHNICIAN 5 Units****Prerequisites: VT 54A; VT 51 or equivalent.****Advisory: One of the following: ENGL 1A, 1AH, 1S & 1T or ESLL 26 or equivalent; CHEM 30A or equivalent.****Grade Type: Letter Grade Only****Not Repeatable.****4 hours lecture, 3 hours laboratory. (84 hours total per quarter)**

Comparative anatomy and physiology for veterinary technicians. Clinically relevant anatomy and physiology of the major domestic animals and includes a discussion of the similarities and differences among the species. Emphasis is placed on the normal structure and function of the major organ systems as the foundation for understanding pathology and pathophysiology of disease. Intended for students in the Veterinary Technology Program; enrollment is limited to students accepted in the program.

**FHGE: Non-GE Transferable: CSU****VT 55 ANIMAL MANAGEMENT & CLINICAL SKILLS I 4 Units****Prerequisite: BIOL 41.****Grade Type: Letter Grade Only****Not Repeatable.****3 hours lecture, 3 hours laboratory. (72 hours total per quarter)**

Intended for the pre-clinical training of veterinary technology students. The following topics are covered: occupational health and safety, animal handling and restraint, administration of medication, assessing dehydration and basic fluid administration, introduction to anesthetic equipment, procedures and recovery, principles of aseptic technique, sanitation, disinfection and sterilization, introduction to principles of surgical nursing and instrumentation, and euthanasia, grief and pet loss support. Intended for students in the Veterinary Technology Program; enrollment is limited to students accepted in the program.

**FHGE: Non-GE Transferable: CSU****VT 56 ANIMAL MANAGEMENT & CLINICAL SKILLS II 4 Units****Prerequisite: VT 55.****Grade Type: Letter Grade Only****Not Repeatable.****3 hours lecture, 3 hours laboratory. (72 hours total per quarter)**

Intended for the pre-clinical training of veterinary technology students. Survey of basic responsibilities and technical duties of veterinary technicians. Clinical nutrition and feeding of the dog and cat. Basic principles and techniques of wound healing, bandage and suture material. Basic electrocardiography. Venipuncture for catheter placement, blood collection, and intravenous administration of fluids and medications. Troubleshooting of intravenous catheter set-ups. Bandaging and splinting. Introduction to anesthesia: stages of anesthesia, components of anesthetic equipment. Introduction to basic operating room skills and procedures. Intended for students in the Veterinary Technology Program; enrollment is limited to students accepted in the program.

**FHGE: Non-GE Transferable: CSU**

**V T 60 VETERINARY OFFICE PRACTICE 2 Units**  
**Prerequisite:** V T 53A.  
**Grade Type: Letter Grade Only**  
**Not Repeatable.**  
**2 hours lecture. (24 hours total per quarter)**  
 Principles and practice of veterinary office management for veterinary technology students. Client relations, receptionist skills, telephone techniques, interpersonal skills, and personnel management. Generation and maintenance of correspondence, medical records, legal forms, and hospital logs. Basic bookkeeping, accounting, and financial management principles. Marketing and public relations. Professional ethics and professionalism. Use of computers for data entry, patient record management and inventory control. Use of practice management software. State and federal laws as they apply to the veterinary practice. Intended for students in the Veterinary Technology Program; enrollment is limited to students accepted in the program.  
**FHGE: Non-GE Transferable: CSU**

**V T 61 ANIMAL DISEASES 6 Units**  
**Prerequisite:** BIOL 41.  
**Grade Type: Letter Grade Only**  
**Not Repeatable.**  
**6 hours lecture. (72 hours total per quarter)**  
 Advanced study of the common diseases of domestic animals with emphasis on the dog and cat. Practical medical microbiology, clinical immunology, and mechanisms of disease; the host-parasite relationship and adaptive and maladaptive responses of the host. Etiology, pathogenesis, clinical signs and clinical nursing management of selected immunological, viral, bacterial, fungal, and parasitic diseases. Etiology, pathogenesis, clinical signs and clinical management of selected developmental, degenerative, nutritional, metabolic, endocrine, immune-mediated, and neoplastic diseases. Principles of vaccination, disease prevention, public health, client education, and zoonosis. Diagnostic techniques, including gross and microscopic identification of common veterinary pathogens. Intended for students in the Veterinary Technology Program; enrollment is limited to students accepted in the program.  
**FHGE: Non-GE Transferable: CSU**

**V T 66 EXOTIC ANIMAL CARE 2 Units**  
**Prerequisite:** V T 54B.  
**Advisory: One of the following: ENGL 1A, 1AH, 1S & 1T or ESLL 26 or equivalent.**  
**Grade Type: Letter Grade Only**  
**Not Repeatable.**  
**2 hours lecture. (24 hours total per quarter)**  
 Basic understanding of the care, husbandry, clinical procedures, and medical concerns of rabbits, ferrets, guinea pigs, chinchillas, small rodents, birds, snakes, lizards, turtles. Emphasis on clinically relevant materials and activities. Intended for students in the Veterinary Technology Program; enrollment is limited to students accepted in the program.  
**FHGE: Non-GE Transferable: CSU**

**V T 70 FUNDAMENTALS OF VETERINARY DIAGNOSTIC IMAGING 4 Units**  
**Prerequisite:** V T 54B.  
**Grade Type: Letter Grade Only**  
**Not Repeatable.**  
**3 hours lecture, 3 hours laboratory. (72 hours total per quarter)**  
 Introduction to the principles of veterinary radiography and ultrasonography for veterinary technician students, including radiographic and ultrasonographic terminology. Physics of X-ray and ultrasound production and interaction with matter. Explanation of MRI, CT, and nuclear medicine appropriate to the veterinary technician. Occupational safety and radiation protection. Proper use and maintenance of standard and digital x-ray equipment. Radiographic exposure factors, technique chart development and usage, and patient positioning required for production of diagnostic radiographs. Processing of radiographic film. Discussion of equipment, materials and special radiographic studies common in veterinary practice. Radiographic exposure troubleshooting and common artifacts. Intended for students in the Veterinary Technology Program; enrollment is limited to students accepted in the program.  
**FHGE: Non-GE Transferable: CSU**

**V T 70R INDEPENDENT STUDY IN 1 Unit**  
**V T 71R VETERINARY TECHNOLOGY 2 Units**  
**V T 72R 3 Units**  
**V T 73R 4 Units**  
**Grade Type: Letter Grade, the student may select Pass/No Pass**  
**Not Repeatable.**  
**3-12 hours laboratory per week. (36-144 hours total per quarter)**  
 Provides an opportunity for the student to expand their studies in Veterinary Technology beyond the classroom by completing a project or an assignment arranged by agreement between the student and instructor. The student is required to contract with the instructor to determine the scope of assignment and the unit value assigned for successful completion. Students may take a maximum of 6 units of Independent Study per department.  
**FHGE: Non-GE Transferable: CSU**

**V T 72 PRINCIPLES OF VETERINARY DENTISTRY 2.5 Units**  
**Prerequisite:** V T 70.  
**Grade Type: Letter Grade Only**  
**Not Repeatable.**  
**2 hours lecture, 2 hours laboratory. (48 hours total per quarter)**  
 Basic principles of veterinary dentistry for the veterinary technology student. Includes dental anatomy, physiology, pathophysiology, charting and instrumentation. Techniques of routine dental prophylaxis and aspects of anesthesia specific to dental patients. Discussion of periodontal disease, modes of therapy, client education and preventive care. Introduction to common dental disorders, simple extractions, and dental radiography. Course includes hands-on laboratory sessions using veterinary dental equipment, models, and live animal patients. Care and use of common instruments and equipment. Comparative dentistry: dental formulas and clinical applications of dental disease in a variety of domestic and wild animals. Intended for students in the Veterinary Technology Program; enrollment is limited to students accepted in the program.  
**FHGE: Non-GE Transferable: CSU**

**V T 75A ANIMAL CARE SKILLS I 1 Unit**  
**Prerequisite:** V T 51.  
**Grade Type: Letter Grade Only**  
**Not Repeatable.**  
**3 hours laboratory. (36 hours total per quarter)**  
 Practical application of animal care skills and principles of animal care and management. Opportunity to participate in the health care team involved in the care, management and husbandry of program livestock, companion animals and laboratory animals. Emphasis will be on the basic principles and application of clinical facility management, care of resident teaching animals, and routine maintenance duties. Intended for students in the Veterinary Technology Program; enrollment is limited to students accepted in the program.  
**FHGE: Non-GE Transferable: CSU**

**V T 75B ANIMAL CARE SKILLS II 1 Unit**  
**Prerequisite:** V T 75A.  
**Grade Type: Letter Grade Only**  
**Not Repeatable.**  
**3 hours laboratory. (36 hours total per quarter)**  
 Continuation of V T 75A. Practical application of animal care skills and principles of animal care and management using techniques and knowledge learned in the veterinary technology classes. Students expand their animal care knowledge, skills, and abilities to include skills needed to be successful in clinical internships in the spring quarter. Students are expected to apply knowledge of medical terminology, anatomy and physiology to animal care duties. There is an emphasis on professional behavior, medical record keeping, and clinical procedures with dogs and cats. Intended for students in the Veterinary Technology Program; enrollment is limited to students accepted in the program.  
**FHGE: Non-GE Transferable: CSU**

**V T 75C ANIMAL CARE SKILLS III 1 Unit****Prerequisite:** V T 75B.**Grade Type:** Letter Grade Only**Not Repeatable.****3 hours laboratory. (36 hours total per quarter)**

Third in the series of courses on animal care and handling. Focus on large animal species husbandry and health. Physical examination, nutritional needs, common procedures, economics of horses, and food and fiber species. Restraint, behavior, and handling of large domestic animals. Opportunity to practice skills on live animals during field trips. Intended for students in the Veterinary Technology Program; enrollment is limited to students accepted in the program.

**FHGE: Non-GE Transferable: CSU****V T 81 CLINICAL PATHOLOGY METHODS 5 Units****Prerequisite:** BIOL 41.**Grade Type:** Letter Grade Only**Not Repeatable.****4 hours lecture, 3 hours laboratory. (84 hours total per quarter)**

Fundamental studies of laboratory techniques and procedures involved in evaluating veterinary clinical samples. Areas of study include hematology, urinalysis, coagulation assessment, blood biochemistry and immunological testing, serology, clinical parasitology, and cytology. The veterinary technician's role in sample collection, sample storage and handling, and performance of analytic procedures will be emphasized. Skills are developed in the use of laboratory equipment, laboratory safety and management, and quality control and quality assurance. Intended for students in the Veterinary Technology Program; enrollment is limited to students accepted in the program.

**FHGE: Non-GE Transferable: CSU****V T 83 PHARMACOLOGY FOR TECHNICIANS 4 Units****Prerequisite:** V T 54B.**Grade Type:** Letter Grade, the student may select Pass/No Pass**Not Repeatable.****4 hours lecture. (48 hours total per quarter)**

Introduction to the basic principles of veterinary pharmacology. Preparation and dispensing of medications. Overview of the actions and interactions of the major classes of drugs, with emphasis on common veterinary uses of specific drugs. Intended for students in the Veterinary Technology Program; enrollment is limited to students accepted in the program.

**FHGE: Non-GE Transferable: CSU****V T 84 ANESTHESIOLOGY FOR TECHNICIANS 5 Units****Prerequisites:** V T 83 and 91.**Grade Type:** Letter Grade Only**Not Repeatable.****3 hours lecture, 6 hours laboratory. (108 hours total per quarter)**

Principles and practice of veterinary anesthesia for the veterinary technician. Anatomy and physiology of the respiratory, cardiovascular, and nervous systems relevant to anesthesia. Pharmacology, indications, contraindications and adverse effects of common pre-anesthetic and anesthetic agents. The veterinary technician's role in patient assessment, preparation, induction, monitoring, and maintenance of anesthesia. Anesthesia events, surgical assisting, and post-anesthetic nursing will be performed in the laboratory. Intended for students in the Veterinary Technology Program; enrollment is limited to students accepted in the program.

**FHGE: Non-GE Transferable: CSU****V T 85 VETERINARY EMERGENCY & CRITICAL CARE 4 Units****Prerequisite:** V T 84.**Grade Type:** Letter Grade Only**Not Repeatable.****3 hours lecture, 3 hours laboratory. (72 hours total per quarter)**

Theoretical and practical aspects of assisting the veterinarian in the management of medical and traumatic emergencies. Recognition and assessment of cardiovascular shock, respiratory crisis, gastrointestinal emergency, and musculoskeletal trauma. Principles and techniques of fluid therapy and administration of emergency drugs. Application of treatment protocols for shock, cardiopulmonary arrest, gastrointestinal crisis, wounds and fractures, toxicoses, and dystocia. Nutrition of critical care patients. Maintenance of emergency medical equipment and supplies. Intended for students in the Veterinary Technology Program; enrollment is limited to students accepted in the program.

**FHGE: Non-GE Transferable: CSU****V T 86 LABORATORY ANIMAL TECHNOLOGY 4 Units****Prerequisite:** V T 55.**Grade Type:** Letter Grade Only**Not Repeatable.****4 hours lecture. (48 hours total per quarter)**

Study of the husbandry, care, management, and nursing care of rabbits, rodents kept as companion animals. Orientation to the humane and ethical use of animals in research and to the animal advocate and nursing roles of the veterinary technician in a biomedical research animal facility. Regulations affecting the use of animals in research are discussed. Proper methods of restraint and handling; husbandry and housing; feeding and nutrition; medical and surgical nursing techniques for the common species of "laboratory animals" (e.g., rodents, rabbits, nonhuman primates, reptiles and amphibians, etc.). Introduction to diagnostic and therapeutic techniques and common diseases of laboratory animals. Appropriate anesthesia, analgesia and euthanasia methods will be discussed. Intended for students in the Veterinary Technology Program; enrollment is limited to students accepted in the program.

**FHGE: Non-GE Transferable: CSU****V T 87A ADVANCED ANIMAL CARE SKILLS I 1 Unit****Prerequisite:** V T 75C.**Grade Type:** Letter Grade Only**Not Repeatable.****3 hours laboratory. (36 hours total per quarter)**

Practical application of animal care skills and principles of animal care and management, integrating advanced techniques and knowledge gained through classroom instruction. Opportunity to participate in the health care team in a supervisory role with increased organizational responsibility. Emphasis on nursing care for common clinical signs. Intended for students in the Veterinary Technology Program; enrollment is limited to students accepted in the program.

**FHGE: Non-GE Transferable: CSU****V T 87B ADVANCED ANIMAL CARE SKILLS II 1 Unit****Prerequisite:** V T 87A.**Grade Type:** Letter Grade Only**Not Repeatable.****3 hours laboratory. (36 hours total per quarter)**

Continuation of V T 87A. Continuing instruction of second-year students in basic principles of facilities management and maintenance care of resident animals. Supervisory responsibilities will expand to include the formulation of work schedules, performing diagnostic and therapeutic procedures on resident animals. Focus is on nursing care of chronic diseases in common domestic animals. Students are expected to apply what was learned in pharmacology and clinical pathology to case studies in this course. Intended for students in the Veterinary Technology Program; enrollment is limited to students accepted in the program.

**FHGE: Non-GE Transferable: CSU**

**V T 88      CLINICAL PRECEPTORSHIP I      2.5 Units****Corequisite:** V T 52A.**Grade Type: Letter Grade, the student may select Pass/No Pass  
Not Repeatable.****7.5 hours clinic. (90 hours total per quarter)**

Formal, structured off-campus clinical experience in licensed veterinary facilities, which serve as a means of instructing the student in practical, hands-on, clinical skills in all aspects of veterinary assisting. The student is under the direct supervision of one or more licensed veterinarians and/or credentialed veterinary technicians. The site of the preceptorship is approved by the veterinary technology program in consultation with the student and the veterinary professionals. Opportunity for learning and practical application of the knowledge, skills and attitudes required of a veterinary assistant. Exposure to varied methodologies and practice philosophies in a variety of clinical settings. Emphasis is on the role of the veterinary assistant in the veterinary health care team.

**FHGE: Non-GE    Transferable: CSU****V T 89      CLINICAL INTERNSHIP I      3 Units****Prerequisites:** V T 55 and 56.**Grade Type: Letter Grade Only  
Not Repeatable.****10 hours clinic. (120 hours total per quarter)**

Off-campus practical clinical work experience in veterinary facilities supervised by licensed veterinarians and registered veterinary technicians. Integration into a veterinary health care team and exposure to varied methodologies and practice philosophies in a variety of clinical settings. Practical application of knowledge, skills, and attitudes acquired in the first year program course work: clinical application of anatomy and physiology; medical terminology and medical math; chemistry and microbiology; interpersonal skills and office practices. Supervised hands-on training in basic medical and surgical nursing. Opportunity to practice and attain entry level competency in essential clinical skills. Intended for students in the Veterinary Technology Program; enrollment is limited to students accepted in the program.

**FHGE: Non-GE    Transferable: CSU****V T 91      CLINICAL INTERNSHIP II      3 Units****Prerequisite:** V T 89.**Grade Type: Letter Grade Only  
Not Repeatable.****10 hours clinic. (120 hours total per quarter)**

Off-campus practical clinical work experience in veterinary facilities supervised by licensed veterinarians and veterinary technicians. Students begin to follow directions from doctors and staff with increasing independence and exhibit good judgment and critical thinking skills. Second quarter interns are typically enrolled in pharmacology, clinical pathology and diagnostic imaging. The student must start to integrate and apply the knowledge and skills from these areas of learning into their practice at the internship site. This course documents the 115 hours of practical work experience in a veterinary medical clinical setting required for the students. Intended for students in the Veterinary Technology Program; enrollment is limited to students accepted in the program.

**FHGE: Non-GE    Transferable: CSU****V T 92      CLINICAL INTERNSHIP III      3 Units****Prerequisite:** V T 91.**Grade Type: Letter Grade Only  
Not Repeatable.****10 hours clinic. (120 hours total per quarter)**

Off-campus practical clinical work experience in veterinary facilities supervised by licensed veterinarians and registered veterinary technicians. Students must assume more responsibility; act independently with more confidence and proficiency; apply principles of critical thinking to clinical practice and troubleshoot with confidence and good judgment. Practical application of knowledge, skills, and attitudes acquired in the concurrent second year program course work. The student assumes more responsibility for radiology and clinical pathology, medical nursing and common clinical procedures. Emphasis on developing competencies around anesthesiology, surgical nursing, and animal diseases. This course meets 115 hours of practical work experience in a veterinary medical clinical setting required. Intended for students in the Veterinary Technology Program; enrollment is limited to students accepted in the program.

**FHGE: Non-GE    Transferable: CSU****V T 93      CLINICAL INTERNSHIP IV      3 Units****Prerequisite:** V T 84.**Grade Type: Letter Grade Only  
Not Repeatable.****10 hours clinic. (120 hours total per quarter)**

Off-campus practical clinical work experiences in veterinary facilities supervised by licensed veterinarians and registered veterinary technicians. High-level practical application of knowledge, skills, and abilities acquired in the concurrent second year program course work. In addition to competently performing all essential clinical skills and duties delegated to the veterinary technician, the student will begin to take responsibility for client education, development of patient care plans, providing nursing care to critical care and emergency patients, performing advanced sampling techniques, conducting special diagnostic studies and performing more complex therapeutics. This course meets 115 hours of practical work experience in a veterinary medical clinical setting required. Intended for students in the last quarter of the Veterinary Technology Program; enrollment is limited to students accepted in the program.

**FHGE: Non-GE    Transferable: CSU****V T 95      VETERINARY TECHNICIAN  
PROFICIENCY      2 Units****Prerequisite:** V T 84.**Grade Type: Letter Grade Only  
Not Repeatable.****2 hours lecture. (24 hours total per quarter)**

Review of pertinent subject matter in preparation for the California State Veterinary Technician Examination and the Veterinary Technician National Examination. Guided review and discussion of exam application process. Intended for students in the Veterinary Technology Program; enrollment is limited to students accepted in the program.

**FHGE: Non-GE    Transferable: CSU**

## VITICULTURE

Biological and Health Sciences  
650.949.7249

### VITI 90B VINEYARD ESTABLISHMENT 2 Units

Grade Type: Letter Grade Only  
Not Repeatable.

2 hours lecture. (24 hours total per quarter)

Buying grapevines at a nursery and planting them is but one step in the integrated process of establishing a vineyard. Regional differences, vine growing theories, and historical development are presented, along with variety selection and a discussion of how grapevines grow. The establishment process begins with site evaluation, soil preparation and physical layout. Trellis systems, drip irrigation, cover crops, and deer fences are illustrated. Various types of controls for potential pests and diseases are revealed. And, of course, the vines themselves are described from planting, through training, and into harvest. This course is intended for students in the viticulture program but members of the public and professional community are welcome to enroll.

FHGE: Non-GE Transferable: CSU

### VITI 90C VINEYARD MANAGEMENT 2 Units

Grade Type: Letter Grade Only  
Not Repeatable.

2 hours lecture. (24 hours total per quarter)

Fertilization needs, irrigation practices, frost protection systems, ground cover requirements, and grape harvest are detailed. Pests, diseases, and other disorders are illustrated to facilitate troubleshooting problematic vineyards. Integrated pest management, organic, and biodynamic practices are forms of control presented. Cultural operations designed to reduce potential problems and the use of pesticides are discussed. License and certificate holders may receive continuing education hours from the California Department of Agriculture. This course is intended for students in the viticulture program but members of the public and professional community are welcome to enroll.

FHGE: Non-GE Transferable: CSU

### VITI 90D VINE PRUNING 1 Unit

Grade Type: Letter Grade Only  
Not Repeatable.

1 hour lecture. (12 hours total per quarter)

The annual growth cycle and growth habits of grapevines are detailed and applied to vineyard practices specific to the vines themselves. Follow the three year process from planting and through the training process until the vines are mature. Students will travel to a local vineyard to prune actual grapevines under supervision. Pruning shears are required, work clothes and boots are recommended. This course is intended for students in the viticulture program but members of the public and professional community are welcome to enroll.

FHGE: Non-GE Transferable: CSU

## WOMEN'S STUDIES

Business and Social Sciences  
650.949.7322 foothill.edu/bss

### WMN 5 INTRODUCTION TO WOMEN'S STUDIES 4 Units

Advisory: Demonstrated proficiency in English by placement as determined by score on the English placement test OR through an equivalent placement process OR completion of ESLL 125 & ESLL 249.

Grade Type: Letter Grade, the student may select Pass/No Pass  
Not Repeatable.

4 hours lecture. (48 hours total per quarter)

Examination and development of the goals, major documents, history, achievements, and evolution of the current women's movement in light of the impact and contributions of women, in comparison to those of men, of various cultural and ethnic heritage. Includes appraisal of the effects of multiculturalism and the women's movement on politics, jobs, education, science, family structure, and the arts.

FHGE: Amer, SocBeh Transferable: UC/CSU

### WMN 11 WOMEN IN GLOBAL PERSPECTIVE 4 Units

Advisory: Demonstrated proficiency in English by placement as determined by score on the English placement test OR through an equivalent placement process OR completion of ESLL 125 & ESLL 249.

Grade Type: Letter Grade, the student may select Pass/No Pass  
Not Repeatable.

4 hours lecture. (48 hours total per quarter)

Examination and analysis of the historical roles of women globally and the impact and influence of these historical developments on modern society internationally and domestically.

FHGE: Non-GE Transferable: UC/CSU

### WMN 21 PSYCHOLOGY OF WOMEN: SEX & GENDER DIFFERENCES 4 Units

Advisory: Demonstrated proficiency in English by placement as determined by score on the English placement test OR through an equivalent placement process OR completion of ESLL 125 & ESLL 249; not open to students with credit in PSYC 21 or SOC 21.

Grade Type: Letter Grade, the student may select Pass/No Pass  
Not Repeatable.

4 hours lecture. (48 hours total per quarter)

Survey of gender issues based upon psychological and sociological theories and research. Examination of sex differences and sex role stereotyping in a global, multi-cultural approach. Appraisal of effects of biology, culture, and society in creating sex and gender differences. Consideration of major theories of gender development. Focus on biology, socialization, mass media, communication, personality, abilities, work, family, sex, and violence.

FHGE: Social & Behavioral Sciences Transferable: UC/CSU

### WMN 70R INDEPENDENT STUDY IN WOMEN'S STUDIES 1 Unit

### WMN 71R 2 Units

### WMN 72R 3 Units

### WMN 73R 4 Units

Grade Type: Letter Grade, the student may select Pass/No Pass  
Not Repeatable.

3-12 hours laboratory per week. (36-144 hours total per quarter)

Provides an opportunity for the student to expand their studies in the Women's Studies discipline beyond the classroom by completing a project or an assignment arranged by agreement between the student and instructor. The student is required to contract with the instructor to determine the scope of assignment and the unit value assigned for successful completion. Students may take a maximum of 6 units of Independent Study per department.

FHGE: Non-GE Transferable: CSU





# Faculty & Staff

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Foothill College Administration

Faculty & Administrators

Emeritus Faculty

Classified Staff

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Foothill College in Los Altos Hills, and De Anza College in Cupertino, are part of the Foothill-De Anza Community College District. The district is governed by a five-member board of trustees elected to staggered four-year terms by voters within the district. A student trustee from each college serves as representative to the board. Student trustees are elected annually by the associated students group of each college.

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# Foothill College Administration



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Foothill College

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Director, Marketing & Public Relations

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Director, Krause Center for Innovation

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Director, Equity Programs

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Executive Director, Family Engagement Institute

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Dean, Disabled Student Services & Veterans Programs

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Director, Science Learning Institute

**Romeo Paule, B.S.**  
Director, Campus Bookstore

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Division Dean, Fine Arts & Communication/Kinesiology & Athletics

**Carmen Ponce**  
Assistant Director, Stretch to Kindergarten & Early Learning Program  
Family Engagement Institute

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Division Dean, Biological & Health Sciences

**Paul Starer, M.A.**  
Division Dean, Language Arts & Learning Resource Center

**Ram Subramaniam**  
Division Dean, Physical Sciences, Mathematics & Engineering

**Michael Teijeiro, M.A.**  
Director, Athletics

**Lan Truong, M.A.**  
Division Dean, Counseling

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**Vacant**  
Dean, International Student Programs

**Vacant**  
Acting Dean, Student Affairs & Activities

**Vacant**  
Director, Business & Educational Partnerships

**Vacant**  
Director, Extended Opportunity Program & Services (EOPS) & Community Programs

## Faculty & Administrators

- Agyare, Micaela (2012)  
Library  
B.A., Scripps College; M.A., University of Arizona
- Anderson, Jeffrey (2013)  
Mathematics  
B.S., University of California, Santa Barbara; M.A., Ph.D., University of California, Davis
- Anderson, Mark K. (1989)  
Music Technology  
B.S., South Oregon State University; M.A., University of Denver
- Armerding, Benjamin (2014)  
English  
B.A., M.A., San Francisco State University
- Armstrong, Kathleen (2002)  
Chemistry  
B.S., San Diego State University; M.S., Ph.D., University of California, San Diego
- Arreola-Trigonis, Anabel (2006)  
Counseling  
B.A., M.A., San Jose State University
- Bacon, Hilary (2016)  
Counseling  
B.A., M.A., Chapman University
- Baker, Judith (2006)  
Dean, Foothill Online Learning  
B.A., College of William & Mary; M.S.W., Virginia Commonwealth University; Ph.D., University of Texas at Austin
- Balducci, Lauren (2006)  
Associate Vice President, Student Services  
B.A., Alfred University; M.S., State University of New York
- Barkley, Elizabeth (1984)  
Music  
A.A., Riverside Community College; B.A., M.A., University of California, Riverside; Ph.D., University of California, Berkeley
- Batham, Stephen (2012)  
History  
A.A., College of the Canyons; B.A., M.A., California State University, Northridge
- Bergmann, Janis (1998)  
Theatre Arts  
B.A., University of California, Los Angeles; M.A., San Jose State University
- Bertani, Laurie (2001)  
Counseling  
B.A., Sonoma State University; M.A., San Jose State University
- Bissell, Jeffrey (2006)  
Kinesiology & Athletics/  
Aquatics Coach  
B.A., M.A., California State University, Chico
- Brook, Jennifer (2014)  
Director, International Student Recruitment & Marketing  
B.A., University of Toronto; M.A., Lewis University; M.A., Hawaii Pacific University
- Brown, Carolyn (1996)  
Graphic & Interactive Design  
B.S., University of Pennsylvania; M.A., San Francisco State University
- Brumbaugh, Kyle (2015)  
Director, Professional Learning Network  
Krause Center for Innovation  
B.A., San Francisco State University; M.S., Saint Mary's College of California
- Cammin, Falk Renate (1989)  
Humanities, English for Second Language Learners  
M.A., The School for International Training; M.A., San Francisco State University; Ph.D., Stanford University
- Campbell, Rachelle (2010)  
Radiologic Technology Program  
A.A., Santa Rosa Junior College; B.S., M.S., California State University, Northridge
- Carey, Milissa (2010)  
Music  
B.A., San Francisco Conservatory of Music; M.A., University of Southern California
- Cascarano, Frank (2004)  
Physics  
B.S., University of California, Davis; M.S., University of California, San Diego
- Cembellin, Zachary (2012)  
Mathematics  
B.S., California State University, Chico; M.S., California State University, East Bay
- Chase, Annie (2016)  
Physics  
B.S., Saint Mary's College
- Cheung, Marilyn (2014)  
Director, International Student Recruitment & Partner Relations  
B.S., M.S. University of California, Los Angeles
- Coffin, Elvira (1994)  
Spanish  
B.A., M.A., Monterey Institute of International Studies
- Connell, Samuel (2006)  
Anthropology  
B.A., University of Pennsylvania; M.S., Ph.D., University of California, Los Angeles
- Cooper, Sara (2014)  
Biology  
B.A., University of Colorado, Boulder; Ph.D., Stanford University
- Cormia, Robert (2001)  
Computer Information Systems  
B.S., California State University, Hayward
- Craig, Jody (1999)  
Kinesiology & Athletics, Women's Basketball Coach  
B.S., California Polytechnic State University, San Luis Obispo; M.A., Saint Mary's College
- Crespo-Martin, Patricia (2001)  
Spanish  
B.A., Universidad de Salamanca; M.A., Florida State University
- Cunningham, Tracee (2015)  
Counselor  
B.A., University of California, Santa Barbara; M.A., San Jose State University
- Daley, Richard (1993)  
Chemistry  
B.S., California State University, Hayward; Ph.D., University of California, Los Angeles
- Dauer, Lesley (2000)  
English  
B.A., Middlebury College; M.F.A., University of Massachusetts, Amherst; Ed.M., Harvard University
- Davison, Dolores (2000)  
History, Women's Studies  
B.A., University of California, Davis; M.A., University of Oregon
- Day, Bernadette (Bernie) (2001)  
Articulation  
B.A., University of California, Berkeley; M.S., San Diego State University
- Delgado, Leticia (2001)  
Counseling  
B.S., M.A., San Jose State University
- Denver, Cathy (2000)  
Counseling  
B.A., California State University, Chico; M.A., California Polytechnic State University, San Luis Obispo
- Der Bing, Clifton (2016)  
Counseling  
B.A., California State University, East Bay  
M.A., Psy.D., Alliant International University
- Donato, Alexis (2015)  
Psychological Counselor  
A.A., Saddleback College; B.A., California State University, Northridge; M.A., Gallaudet University
- Drake, Lisa (2010)  
Accounting  
B.A., San Francisco State University
- Duncan, Kathleen (1993)  
Biology  
B.S., M.S., San Jose State University
- Edwards, Amelia (2010)  
Biology  
B.S., California Polytechnic State University, San Luis Obispo; M.S., Ph.D., University of California, San Diego
- Edwards, Kelly (2007)  
Kinesiology & Athletics, Football Coach  
B.S., San Jose State University; M.A., National University
- Emanuel, LeeAnn (2010)  
Counseling  
B.A., University of California, Santa Cruz; M.A., San Jose State University
- Erickson, Karen (2000)  
Biology  
B.S., San Francisco State University; M.S., University of California, Davis
- Escamilla, Kimberly (2015)  
English  
B.A., M.A., California State University, East Bay; B.F.A., New England College
- Escoto, Isaac A. (2008)  
Counseling  
B.A., University of California, Davis; M.A., San Jose State University
- Eshman, Lisa (2014)  
Director, Veterinary Technology Program  
B.S., Stanford University; D.V.M., Tufts University School of Veterinary Medicine
- Evans, Brian (2002)  
Economics  
B.A., University of California, San Diego; M.A., University of Hawaii
- Fernandez, Hilda (2011)  
English  
B.A., M.A., University of California, Santa Cruz
- Finnegan, Jordana (2005)  
English  
B.A., M.A., Ph.D., University of Oregon
- Flannery, Owen (2007)  
Kinesiology & Athletics, Women's Soccer Coach  
B.S., San Jose State University; M.A., John F. Kennedy University
- Fong, Jordan (2016)  
Art  
B.A., University of California, Santa Barbara  
M.A., Academy of Art University
- Fong, Valerie (2005)  
English  
B.A., University of California, Santa Cruz; M.A. California State University, Hayward

- Fox, John (2010)  
Sociology  
A.A., Cabrillo College; B.A.,  
University of California, Santa  
Cruz; Ph.D., University of  
Massachusetts, Amherst
- Francisco, Marnie (1991)  
Mathematics  
B.S., M.S., University of Oregon
- Freeman, Cleve  
Counseling  
B.A., California State University,  
Long Beach; M.S., San Francisco  
University State
- Freeman, Liane (2012)  
Director, Strategy & Marketing,  
Krause Center for Innovation  
B.A., M.A., San Jose  
State University
- Galoyan, Naziko (2005)  
Dean, Enrollment Services  
A.A., Foothill College; B.A., San  
Francisco State University; M.A.,  
San Jose State University
- Gibbs, Patricia (1999)  
Sociology  
B.A., University of British  
Columbia, Canada; M.A., University  
of Alberta, Canada; M.A., Ph.D.,  
University of Hawaii at Manoa
- Gilstrap, Evan (2015)  
Counseling  
B.A., San Diego State University;  
M.A., University of San Diego
- Girardelli, Dawnalynn (2013)  
Dean, Sunnyvale Center  
B.A., M.S., California State  
University, East Bay
- Gomes, Hilary (2001)  
Art  
B.F.A., Cooper Union; M.F.A.,  
University of Iowa
- Gong, III, Sing (Bubba) (1989)  
Kinesiology & Athletics  
B.A., M.A., Stanford University
- Gough, Thomas (2004)  
Theatre Arts  
B.A., Santa Clara University;  
M.F.A., University of  
California, Davis
- Gray, Nicole (1996)  
Mathematics  
A.B., Dartmouth College; M.S.,  
University of Illinois
- Ha, Katherine Manchester (2013)  
Language Arts Supplemental  
Learning  
B.A., University of Mississippi;  
M.A., Western Governors  
University
- Haight, Elaine E. (1990)  
Computer Information Systems  
B.A., University of California,  
Berkeley; M.S., Stanford University
- Hanning, Brenda (2009)  
Director, Respiratory  
Therapy Program  
A.A., Foothill College; B.S.,  
California State University, Fresno
- Hansen, Theresa (Tess) (1991)  
English  
B.A., Santa Clara University;  
M.A., Stanford University; M.A.,  
University of Iowa
- Hanstein, Andrea (2014)  
Director, Marketing & Public  
Relations  
B.A., M.A., University of Southern  
California
- Harral, Kevin (2007)  
Director, Financial Aid  
B.S., University of California,  
Davis; M.A., San Francisco State  
University
- Hartwell, Robert (2004)  
Music  
B.A., Sonoma State University;  
M.A., San Francisco State  
University; Ed.D.,  
Columbia University
- Heiser, Meredith (1991)  
Political Science  
B.A., Stanford University; Diploma,  
Freie Univesitaet of Berlin,  
Germany; M.A., Boston University;  
Ph.D., Johns Hopkins University
- Herman, Allison (2013)  
English  
B.A., University of California,  
Berkeley; M.A., San Francisco  
State University
- Herman, Ronald (1997)  
Photography  
B.F.A., University of Cincinnati;  
M.F.A., University of Notre Dame
- Holcroft, Carolyn (2002)  
Biology  
B.S.N., Ph.D., University of Kansas
- Holland, Joy (2015)  
Art  
B.F.A., Temple University; M.F.A.,  
University of California, Los  
Angeles
- Holland, Mary (2010)  
Chemistry  
B.A., Anderson University; Ph.D.,  
Indiana University
- Hueg, Kurt (1995)  
Division Dean, Business &  
Social Sciences  
B.A., University of California, Los  
Angeles; M.B.A.,  
Santa Clara University
- Huerta, Susie (2005)  
English  
B.A., University of California,  
Berkeley; M.A., University of  
California, Santa Cruz
- Huseman, David William (2012)  
Director, Emergency Medical  
Technician/Paramedic Program  
A.A., Diablo Valley College; B.S.,  
Columbia Southern University
- Jardali, Najwa (1991)  
English for Second Language  
Learners  
B.A., University of California,  
Santa Barbara; M.A., San Francisco  
State University
- Jimenez, Eleazar (2015)  
Counseling  
B.S., M.A., San Jose State  
University
- Jinnah, Fatima (2007)  
Counseling  
B.A., University of California,  
Berkeley; M.S., San Francisco  
State University
- Jordahl, Kate (1997)  
Photography  
B.A., University of Delaware;  
M.F.A., Ohio University
- Josselyn, Carol (1987)  
Communication Studies, English  
B.A., Occidental College; M.A.,  
Southern Illinois University; Ph.D.,  
University of Washington
- Kerbey, Nicole (2012)  
Child Development  
B.A., M.A., San Jose  
State University
- Key, Sharon (1994)  
Radiologic Technology  
B.S., M.S., University of Alabama
- Knight, Steven (2016)  
Director, Diagnostic Medical  
Sonography  
B.S., University of Guelph
- Knobel, Marc (2000)  
Mathematics  
A.A., De Anza College; B.A., M.S.,  
San Jose State University
- Korniakov, Alexander (2016)  
Accounting  
M.S., Ph.D., New York University
- Krause, Linda Gay (1998)  
Director, Krause Center for  
Innovation (KCI)  
B.A., Pennsylvania State University;  
M.A., University of Virginia
- Kuehnl, Eric (2012)  
Music Technology  
B.A., Oberlin Conservatory of  
Music; M.F.A., California Institute  
of the Arts
- Lam, Phuong My (2000)  
Mathematics  
B.S., Santa Clara University;  
M.S., California State University,  
Hayward
- LaManque, Andrew (2002)  
Associate Vice President,  
Instruction  
B.S., SUNY Geneseo; M.S., Ph.D.,  
SUNY Albany
- Lancaster, Rachel (2016)  
English for Second Language  
Learners  
B.A., Adrian College  
M.A., University of Toledo
- Lane, Kimberly (2002)  
Counseling  
B.A., Kent State University;  
M.S.S.A., Case Western  
Reserve University
- Lang, Gary (1988)  
Kinesiology & Athletics  
B.S., California State University,  
Sacramento; M.S.,  
University of Arizona
- Lankford, Scott (1989)  
English  
B.A., Williams College; M.A., Ph.D.,  
Stanford University
- Larson, Londa (1995)  
Chemistry  
B.S., California State University,  
Hayward; Ph.D., University of  
California, Los Angeles
- Lee, Andrew (2005)  
Counseling  
B.A., University of California,  
Berkeley; M.A., San Jose  
State University
- Lee, Debbie (2007)  
Mathematics  
B.A., M.A., San Francisco  
State University
- Lee, Keith (1996)  
Photography  
B.A., University of California, Los  
Angeles; M.F.A., School of the Art  
Institute of Chicago
- Lew, Debra (2001)  
Counseling  
B.A., University of California, Los  
Angeles; M.S., California State  
University, Los Angeles
- Lew, Laurence (2015)  
Business  
B.S., M.B.A., University of  
California, Los Angeles
- Lewis, Brian (2001)  
English  
B.A., University of California, Santa  
Barbara; M.A., San Francisco State  
University
- Liang, Jiin (2016)  
Physical Sciences, Mathematics,  
and Engineering  
B.S., National Taiwan University  
Ph.D., Harvard University
- Lin, Eta (2007)  
Psychology  
B.A., M.A., Ph.D., University of  
California, Santa Barbara
- Liner, Thomas (2000)  
Kinesiology & Athletics, Men's  
Soccer Coach  
B.A., California State University,  
Chico
- Mac Neil, Donald (2008)  
Kinesiology & Athletics  
B.A., M.A., San Francisco State  
University

- MacDougall, Maureen (1999)  
Veterinary Technology  
B.S., Manhattan College; M.S.,  
Pennsylvania State University;  
D.V.M., Purdue University
- Macias, Dixie (1990)  
Kinesiology & Athletics, Men's  
Tennis Coach  
B.S., San Jose State University;  
M.A., Stanford University
- Mancuso, Natasha (2015)  
Business  
B.A., University of Louisville; M.A.,  
University of Connecticut; Ph.D.,  
University of Phoenix
- Marasco, David (2004)  
Physics  
B.A., B.S., University of  
California, San Diego; M.S., Ph.D.,  
Northwestern University
- Martinez, Ricardo A. (1994)  
Mathematics  
B.S., California State University,  
Chico; M.S., California State  
University, Hayward
- Maurer, Kathryn (2011)  
Anthropology  
B.A., American College of Greece,  
Athens; M.A., Ph.D., University of  
California, Los Angeles
- Mazloom, Bita (2015)  
Computer Science  
B.S, M.S, Ph.D., University of  
California, Santa Barbara
- McCormick, David (2014)  
English for Second Language  
Learners  
B.A., Western Michigan University;  
M.A., Monterey Institute of  
International Studies
- McGriff, Steven (2008)  
KCI Teacher-in-Residence  
B.A., Stanford University; M.A.,  
San Jose State University; Ph.D.,  
Penn State University
- McLeod, Bruce (2006)  
Theatre Arts  
B.A., Western Washington  
University
- Meezan, Karen (2000)  
Geography  
B.S., Stanford University; M.Phil.,  
University of Cambridge
- Meacham, Dokesha (2016)  
Counseling  
B.A., M.A., San Jose State  
University
- Melia, Martin (2001)  
Biology  
B.A., University of California,  
Berkeley; M.A., San Francisco State  
University
- Menendez, Natalia A. (1991)  
English, Composition, Literature  
B.A., M.A., University of California,  
Berkeley
- Mills, Richard (2012)  
English  
B.A., University of California,  
Berkeley; M.A., San Francisco State  
University
- Miyasaki, Cara (1991)  
Director, Dental Assisting Program  
A.S., Foothill College; B.S., M.S.,  
University of California, San  
Francisco
- Morasci, Richard (1996)  
English for Second Language  
Learners  
B.A., University of California,  
Berkeley; M.A., San Francisco State  
University
- Morris, Patrick (2001)  
Mathematics  
B.A., North Dakota State  
University; M.S., San Jose State  
University
- Mudge, Rachel (2004)  
Mathematics  
B.A., Scripps College; M.S., Santa  
Clara University
- Munoz, Sarah (2008)  
Mathematics  
B.S., University of California, Davis;  
M.S., California State University,  
East Bay
- Murphy, William (2002)  
Computer Networking  
B.S., M.S., University of California,  
Berkeley; J.D., Santa Clara  
University
- Nava, José (1998)  
Accounting  
B.A., University of California,  
Los Angeles; M.A., University of  
California, Berkeley
- Nava, Tobias (2005)  
Counseling  
B.A., M.A., San Jose State  
University
- Nguyen, Rosa (2013)  
Chemistry  
B.S, Ph.D University of California,  
Santa Cruz
- Nguyen, Thuy Thi (2016)  
President  
B.A., Yale University; J.D.,  
University of California, Los  
Angeles
- Ni, Preston (1991)  
Communication Studies  
B.S., M.S.B.A., San Francisco State  
University
- Nikolchev, Betsy (2012)  
Executive Director, Family  
Engagement Institute  
B.A., University of California,  
Berkeley
- Ong, Teresa (2007)  
Dean, Disabled Student Services &  
Veterans Programs  
B.A., National University of  
Singapore; M.A., New York  
University; M.A., University of San  
Francisco
- O'Loughlin, Rita A. (1989)  
Kinesiology & Athletics  
A.A., Orange Coast College; B.A.,  
California State University, Chico;  
M.S., California State University,  
Hayward
- Palma, Michelle (2014)  
Geography  
B.A., University of California, Los  
Angeles; M.A, Ph.D., University of  
Georgia
- Pantchenko, Oxana (2015)  
Director, Science Learning Institute  
Physical Sciences, Mathematics and  
Engineering  
B.S, M.S., Ph.D., University of  
California, Santa Cruz
- Parikh, Sarah (2011)  
Engineering/Physics  
B.S., University of Texas, Austin;  
M.S., Ph.D., Stanford University
- Park Lee, Young Hee (2008)  
Mathematics  
B.S., Kyungnam University, Korea;  
M.S., Ph.D., Korea Advanced  
Institute of Science & Technology
- Patyk, Jay (2000)  
Economics  
B.A., M.A., San Jose State  
University
- Pennington, Simon (2006)  
Acting Division Dean, Fine Arts  
& Communication/Kinesiology &  
Athletics  
B.A., San Jose State University;  
M.A., University of East Anglia,  
Norwich, England
- Perino, Kathryn (1994)  
Mathematics  
B.S., California Polytechnic State  
University, San Luis Obispo; M.S.,  
Eastern Washington University
- Piparo, Elaine (2001)  
Counseling  
B.A., University of California,  
Berkeley; M.S., San Francisco State  
University
- Pitts, Amanda (2014)  
Chemistry  
B.S., Baylor University; Ph.D., Texas  
A & M University
- Ponce, Carmen Meza (2012)  
Director, Stretch to Kindergarten &  
Early Learning Programs  
B.A., Instituto Superior Pedagógico  
Nacional de Educacion Inicial, Peru
- Pratt, Keith (1998)  
English for Second Language  
Learners  
B.A., California State University,  
Hayward; M.A., San Jose State  
University; M.A., San Francisco  
State University
- Rakow, Ikuko (2001)  
Japanese  
B.A., M.A., Tokyo University of  
Foreign Studies; Ph.D., University  
of California, Santa Barbara
- Rao, Sandhya (2011)  
Chemistry  
B.S., University of California, Los  
Angeles; M.A., Harvard University;  
Ph.D., University of California,  
Berkeley
- Reed, Eric (2013)  
PSME Supplemental Learning  
Instructor, STEM Center Director  
B.S., University of California,  
Berkeley; M.S., California State  
University, East Bay; M.S., Georgia  
Institute of Technology
- Rideaux, Tiffany (2014)  
Psychology  
B.A., Stanford University; M.S.,  
Psy.D., Palo Alto University
- Ripp, Kathryn (2004)  
Kinesiology & Athletics, Women's  
Volleyball Coach  
B.A., University of Pacific; M.A.,  
Saint Mary's College
- Rivera-Montanez, Julio (2001)  
Spanish  
B.A., University of Puerto Rico;  
M.A., Brown University
- Ruble, Andrew (2008)  
Art, Ceramics  
B.F.A., Kansas City Art Institute;  
M.F.A., Louisiana State University
- Sauter, David (2000)  
Environmental Horticulture &  
Design  
B.S.L.A., Iowa State University;  
M.A., University of Iowa
- Schultheis, Lisa (2002)  
Biology  
B.S., University of Arizona; Ph.D.,  
University of California, Berkeley
- Schultz, Gillian (2007)  
Biology  
B.A., University of Rochester; M.S.,  
Ph.D., University of California,  
Riverside
- Serna, Leticia (2001)  
Counseling  
B.S., San Jose State University;  
M.S., California State University,  
Hayward
- Seyedin, Sara (1998)  
Accounting  
B.A., National University of Iran;  
M.P.A., University of Colorado;  
M.B.A., San Jose State University;  
Ph.D., University of Northern  
Colorado
- Shepard, Thomas (2014)  
Acting Dean, Student Affairs &  
Activities  
B.A., Cazenovia College; M.Ed.,  
Abilene Christian University
- Shewfelt, Barbara (1989)  
Kinesiology & Athletics  
M.F.A., New York University; M.S.,  
Stanford University

- Silverman, Lori (2000)  
Mathematics  
B.S., University of California,  
San Diego; M.S., San Jose State  
University; Ph.D., Walden  
University
- Sinclair, Jennifer (2010)  
Mathematics  
B.A., M.A., San Francisco State  
University
- Slede, Lisa (2015)  
Counseling  
B.A., University of Colorado;  
M.F.A., Monterey Institute; M.A.,  
Santa Clara University
- Small, Daphne (2001)  
Director, Student Activities  
B.A., University of California, Santa  
Barbara; M.A., San Jose State  
University
- Solvason, Nanette (2012)  
Division Dean, Biological & Health  
Sciences  
B.S., M.S., Ph.D., University of  
Alabama, Birmingham
- Spragge, Phyllis (1998)  
Director, Dental Hygiene  
A.S., College of the Redwoods;  
A.S., Foothill College; A.S., Cañada  
College; B.A., St. Mary's College;  
M.A., San Jose State University
- St. Onge-Cole, Shaelyn (2016)  
Veterinary Technology  
A.A. Veterinary Technology,  
Carrington College
- Stanley, Matthew (2015)  
Kinesiology and Athletics, Men's  
Basketball Coach  
B.A., Lewis & Clark College; M.A.,  
California State University, Chico
- Starer, Paul (1999)  
Division Dean, Language Arts  
B.A., University of California, Santa  
Cruz; M.A., San Francisco State  
University
- Stefonik, Benjamin (2010)  
Psychology  
B.A., University of Wisconsin, Eau  
Claire; M.A., San Francisco State  
University
- Su, Angela (2010)  
Pharmacy Technology  
B.S., Purdue University
- Subramaniam, Ram (2016)  
Division Dean, Physical Sciences,  
Mathematics & Engineering  
B.S., Birla Institute of Technology  
& Science  
Ph.D., University of Kentucky
- Svetich, Kella (2005)  
English  
B.A., M.A., University of Nevada,  
Reno; Ph.D., University of  
California, Davis
- Swett, Denise (2007)  
Vice President, Student Services  
B.A., M.P.A., San Jose State  
University; Ed.D., University of San  
Francisco
- Szponar, Pawal (2015)  
Systems Librarian  
B.A., M.S., University of Illinois
- Tambling, Bruce (2007)  
Music Technology  
B.A., Charter Oak State College
- Tapia, Brian (2006)  
Philosophy  
B.A., M.A., San Diego State  
University
- Tejerio, Michael (2013)  
Athletic Director  
B.A., University of San Francisco;  
M.A., Saint Mary's College
- Thao, Jue (2010)  
Counseling  
B.A., University of California,  
Davis; M.S., California State  
University, Sacramento
- Thomas, Jeanne (2007)  
Child Development  
B.A., San Jose State University;  
M.A., Pacific Oaks College
- Thomas, Mary (2001)  
Librarian  
B.A., University of California,  
Davis; M.L.S., University of  
California, Los Angeles
- Treanor, Shirley (1988)  
Health  
A.A., Prince George's Community  
College; B.S., Maryland University  
College Park; Advanced  
Respiratory Therapy Certificate,  
University of Chicago; M.S., San  
Francisco State University; Ed.D.,  
University of San Francisco
- Tripp Caldwell, Kristin (2001)  
Video Arts  
B.F.A., University of North Texas;  
M.F.A., School of Visual Arts,  
New York
- Truong, Lan (2015)  
Division Dean, Counseling  
B.A., University of California, Santa  
Barbara; M.A., California State  
University, Long Beach
- Tuttle, Nicholas (2014)  
Psychology  
B.A., University of Nebraska; M.A.,  
San Jose State University
- Urrutia, Rebecca (2000)  
Disabled Student Services  
B.S., San Jose State University;  
M.A., University of San Francisco
- Uyeda, Diane (2004)  
English for Second  
Language Learners  
B.A., Occidental College, Los  
Angeles; M.A., University of  
Washington
- Velasco, Lauren Popell (2000)  
Communication Studies, Forensics  
B.A., Bates College; M.A.,  
Stanford University
- Venkataraman, Anand (2015)  
Computer Science  
A.A., B.A., Ph.D., Massey University
- Villanueva, Tracy (2015)  
EMS/Paramedic  
A.A., Monterey Peninsula College
- Villanueva, Voltaire (2007)  
Counseling  
B.A., M.A., San Francisco State  
University; M.A.,  
University of San Francisco;  
Ed.D., Drexel University
- Violett, Glenn (2006)  
Business  
B.S., M.B.A.,  
Golden Gate University
- Visas, Brenda (2008)  
Director, Facilities & Special  
Projects  
B.S., San Jose State University
- Voyce, Warren (2007)  
Athletic Trainer, Kinesiology &  
Athletics  
B.S., M.S., California State  
University, East Bay
- Wang, Xiujuan (1991)  
Physical Sciences, Mathematics and  
Engineering  
B.S., Zhejiang University,  
Peoples Republic of China; M.S.,  
University of Toledo
- Weber, Janet (2014)  
Disabled Student Services  
B.A., University of California,  
Santa Cruz; M.A., San Jose State  
University
- Westling, Joshua (2014)  
Respiratory Therapy Program  
B.S., Charter Oak State College;  
M.S., California State University,  
East Bay
- Wheeler, Bonny (2000)  
Radiologic Technology Program  
B.A., M.A., San Jose  
State University
- White, Samuel (2013)  
English  
B.A., University of Phoenix; M.A.,  
Notre Dame de Namur University
- Will, Marguerite (Mimi) (1976)  
Computer Information Systems  
B.A., M.A., San Francisco State  
University; M.A., San Jose  
State University
- Williams, Sarah A. (2013)  
Mathematics  
B.A., Pomona College; Ph.D.,  
University of California, Davis
- Wong, Russell (2006)  
Adaptive Learning  
B.A., University of San Francisco;  
M.A., Santa Clara University
- Woolcock, Joseph (1987)  
Political Science  
B.A., Boston College; M.A., Ph.D.,  
Stanford University
- Wu, Tilly Liu (2000)  
Counseling  
B.S., M.A., San Jose  
State University
- Yamamoto, Judy (2008)  
Dental Radiology  
B.A., M.S., San Francisco State  
University; B.S., University of  
California, San Francisco
- Ziegenhorn, William (2004)  
History  
B.A., University of California,  
Davis; M.A., San Jose  
State University
- Zwack, Teresa (2010)  
Mathematics  
B.A., University of California,  
Santa Cruz; M.A., California State  
University, East Bay

## Emeritus Faculty

Adams, Katherine (1988)

Counseling  
A.A., Foothill College; B.S.,  
College of Notre Dame; M.A.,  
Santa Clara University; Ed.D.,  
University of San Francisco

Adams, Lily (1987)

Counseling  
B.A., University of the East; M.Ed.,  
Ph.D., Loyola University

Alfsen, Karen (1985)

English for Second Language Learners  
B.A., M.A., California State,  
Hayward; M.A., San Francisco State  
University

Anderson, Dorothy A. (1961)

Business  
B.S., University of Nebraska; M. A.,  
Stanford University

Arca, Rosemary (1991)

Reading, Composition, Academic  
Skills  
B.A., M.A., Santa Clara University;  
M.A., San Francisco State  
University

Atchison, James A. (1964)

Psychology  
B.A., Saint Mary's College; M.A.,  
New Mexico Highlands University;  
C.G. Institute, Zurich, Switzerland

Austin, Kathleen Ramos (1990)

Director, Diagnostic Medical  
Sonography Program  
B.S., University of Phoenix

Barnett, Elyse (1992)

Anthropology  
B.A., Brandeis; Ph.D., Stanford  
University

Becchine, Virginia E. (1976)

Director, Respiratory Therapy  
A.S., Foothill College; B.A.,  
Montclair State University; M.A.,  
Santa Clara University

Beers, George (1981)

Dean, International Programs  
B.S., M.S., Indiana University

Bell, Mary D. (1992)

French  
B.A., University of California, Los  
Angeles; M.A., Tulane University

Berry, John (1985)

Computer Information Systems  
B.A., University of California,  
Santa Cruz; M.A., Colorado State  
University

Berthiaume, R. Dennis (Denny)  
(1970)

English  
B.A., M.A., San Diego State  
University

Bonneau, B. Leon (1968)

Astronomy  
B.A., San Jose State University;  
M.A., California State University,  
Northridge; M.Ed., San Francisco  
State University

Broadwin, John (1990)

Librarian  
B.A., Stanford University; M.L.S.,  
University of California, Los  
Angeles

Broussard, Charles C. (1967)

Counseling  
B.A., Louisiana State University;  
M.A., San Francisco State  
University

Bruguera, Jorge (1972)

Reference Librarian  
B.A., University of Pittsburgh;  
M.L.S. Carnegie Institute of  
Technology

Bryan, William J. (1965)

Music  
B.S., St. Louis Institute of Music;  
M.S.Ed., University of Southern  
California

Carr, Janice (1989)

Mathematics  
A.B., Colby College; A.M.T.,  
Harvard University

Carter, Celeste V. (1996)

Biology  
B.S., University of California,  
Berkeley; M.S., Harvard; Ph.D.,  
Pennsylvania State School of  
Medicine

Cashmore, Beatrix (1993)

Counselor, Adaptive Learning  
A.B., University of California, Santa  
Cruz; M.S., San Francisco State  
University

Cellilo, Gerard (1989)

Counseling  
A.A.S., Borough of Manhattan  
Community College; B.S., M.A.,  
Bradley University; Ed.D.,  
University of San Francisco

Chavez, Robert A. (1970)

Counseling, Middlefield Campus  
B.A., M.A., University of New  
Mexico

Chivington, Thomas H. (1966)

Physical Education, Tennis  
A.A., Ventura College; B.S.,  
Wyoming University; M.A.,  
Washington State University

Chung, Lilia (1974)

English as a Second Language  
A.A., Holy Ghost College; B.Ph.,  
M.A., University of Santo Tomas;  
Ph.D., Syracuse University

Clark, Nancy Howe (1977)

Director, Children's Programs  
B.A., M.A., Stanford University

Cohen, Vivian (1987)

Counseling  
B.A., M.Ed., Boston University

Cole, Jerry R. (1967)

Men's Basketball, Physical  
Education  
B.A., M.A., University of Denver;  
Ed.D., Colorado State College

Cotter, Stanley (1964)

Mathematics  
B.A., University of California,  
Berkeley; M.A., University of  
Illinois

Critchfield, Frederick (1960)

Director, Economic Development,  
Grants, Apprenticeship Programs  
B.S., Utah State University; M.A.,  
Stanford University

Cross, Truman B. (1970)

History  
B.A., Portland State College; M.A.,  
George Washington University;  
Ph.D., Indiana University

Davies, Paul (1992)

Music  
B.A., San Diego State University;  
M.A., Ph.D., University of  
California, San Diego

De Luna, Yaya (1971)

History, Sociology  
B.A., M.A., San Jose State  
University; Ph.D., University of  
Southern California

De Palma, Barton (1962)

Art, Film  
B.F.A., M.F.A., University of  
Pennsylvania

Dillon, William M. (1992)

Director, Aviation Program  
B.S., Cheney State University;  
M.S., California State University,  
Hayward; A.T.P. C.S.I.I.

Di Nucci, Linda (1991)

Reach Program  
A.A., West Valley College;  
B.A., M.A., M.S., San Jose  
State University; R.N., Western  
Pennsylvania Hospital School of  
Nursing

Dominguez, Arno (1990)

Physical Education  
B.A., San Jose State University;  
M.A., St. Mary's College

Dong, Raymond P. (1976)

Electronics  
B.S., Tri-State University; M.A.,  
Michigan State University

Dorsey, Donald (1973)

Dean, Student Affairs & Activities  
B.A., Prairie View A & M College;  
M.A., San Jose State University

Dowling, W. Lescher (1967)

Photography  
B.A., University of California, Santa  
Barbara; M.A., San Diego State  
University

Ettinger, Stanley L. (1966)

Graphic Design  
B.F.A., Pratt Institute; M.A., New  
York University

Fairchild, James R. (1966)

Football, Physical Education  
B.A., M.A., College of the Pacific

Farber, John (1981)

Electronics, Personal Computer  
Service, Computer Software  
Training  
A.A., West Valley College; B.A., San  
Jose State University

Feeter, J. William (1975)

Animal Health Technology  
B.S., D.V.M., Kansas State  
University

Feig, Konnilyn (1989)

Business, History, Political Science  
B.S., B.A., M.A., University of  
Montana; Ph.D., University of  
Washington; M.B.A.,  
Golden Gate University

Felix, Raul (1973)

Work Experience Coordinator,  
Cooperative Education  
B.A., M.A., San Jose State  
University

Fetler, James M. (1964)

English  
B.A., San Francisco State  
University; M.A., University of  
California, Berkeley

Fish, Ruth Anne (1959)

Mathematics  
B.S., M.S., University of Arizona

Fisher, Carl J. (1964)

Accounting, Business  
B.A., M.B.A., Stanford University

Flowers, April (1988)

English, English for Second  
Language Learners  
B.A., Auburn University; M.A., San  
Francisco State University

Fong, Bernadine Chuck (1970)

President  
B.A., M.A., Ph.D., Stanford  
University

Ford, John Rene (1967)

Drama, Speech  
A.A., Santa Ana College; B.A., U.C.  
Santa Barbara; M.A., San Jose State  
University

Fraknoi, Andrew (1992)

Astronomy  
B.A., Harvard University; M.A.,  
University of California, Berkeley

Gallo, Joseph D. (1963)

English  
A.A., Fullerton Junior College;  
B.A., M.A., San Jose State  
University; D.Arts., University of  
Pacific

Gatlin, Susan (1996)

Division Dean, Physical Education  
B.A., Humbolt State University;  
M.S., South Oregon State College

Gause, Mary Jane Powell (1977)

Computer Applications  
B.A., University of Washington;  
M.A., University of California,  
Berkeley



- Gause, Richard A. (1964)  
Art  
B.A., M.A., University of California, Berkeley
- George, Carol (1987)  
Counseling  
B.S., Ohio State University; M.A., Austin Peay State University
- Gonzales, Richard R. (1972)  
Counseling  
B.A., San Jose State University; M.A., California Polytechnic State University, San Luis Obispo
- Gonzalez, Ismael (1987)  
Director, EOPS-CARE  
A.A., West Valley College; B.A., California State University Hayward; M.A., University of San Francisco
- Gravenhorst, Kurt (1985)  
English  
B.S., M.A., University of Nevada, Reno; M.A., California State University, Dominguez Hills
- Gregorio, Gertrude (1980)  
Division Dean, Adaptive Learning & Disability Services  
B.A., University of the Philippines; M.A., University of San Francisco
- Grenbeaux, Jean M. (1965)  
English, Education  
B.A., San Jose State University; M.A., Stanford University
- Gutter, Malcolm D. (1962)  
Economics  
B.A., City College of New York; M.A., University of California, Berkeley
- Hack, Sharon (1989)  
Travel Careers  
B.A., Brigham Young University
- Hale, Melanie (1990)  
Director, Psychological Services & Personal Counseling  
B.A., City College of New York; M.S., Columbia University
- Handa, Judith H. (1973)  
Dean, Instruction & Student Affairs  
B.A., M.S., University of Hawaii
- Harkin, Arthur P. (1963)  
Biology  
A.A., Compton College; B.A., University of California, Berkeley; M.S., University of Utah
- Hasling, John (1966)  
Speech, Broadcasting  
B.A., M.A., Sacramento State University
- Hawkins, Mark F. (1965)  
English, Humanities  
B.A., Ph.D., University of California, Berkeley, M.A., San Francisco State University
- Hawkins, Mary K. (2000)  
Transition to Work  
B.A. University of the Pacific; M.S., San Francisco State University
- Hawley, Gene M. (1967)  
Physical Education  
A.A., Everett Junior College; B.A., M.A., San Francisco State University
- Hayes, Diane (1987)  
Health  
B.S., M.S., San Jose State University
- Heinz, Duane (1970)  
Chemistry  
A.A., Hartnell College; A.B., Sacramento State University; Ph.D., University of California, Davis
- Hendrickson, Maribeth (1974)  
Philosophy  
B.A., M.A., San Jose State University; Ph.D., Stanford University; J.D., University of California, Hastings College of the Law
- Henning, Richard L. (1967)  
Dean, Community Services, Development & Public Relations  
A.A., Taft College, B.A., M.A., San Jose State University; Ed.D., University of Southern California
- Heslet, Marylou M. (1990)  
Counseling  
B.A., M.S., California State University, Hayward; M.L.A., Stanford University
- Holler, Gordon W. (1968)  
Art  
B.A., University of Nebraska; M.A., University of California, Berkeley
- Horowitz, Kenneth L. (1977)  
Dental Programs, Health  
D.M.D., Tufts University
- Hurd, Warren (1998)  
Dean, Faculty & Staff  
B.S., Wayne State University; M.S., De Paul University; Ed.D., Northern Illinois University
- Hutchinson, Clarence G. (1966)  
Counseling  
B.A., M.S., University of Southern California
- Jaschob, Charles (1967)  
Art, Computer Graphics  
B.F.A., Pratt Institute; M.A., Teachers College, Columbia University
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Counseling  
B.A., California State University, Sacramento; M.A., San Jose State University
- Johnson, Charles (1998)  
Computer Information Systems  
B.A., M.A., California State University, Fullerton
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Business, Office Technology, Computer Information Systems  
B.B.A., Woodbury University; B.A., California State University, Los Angeles; M.A., Teachers College, Columbia University
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Library  
B.A., University of California, Davis; M.S., San Jose State University
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Librarian  
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Physical Education, Track  
B.S., M.S., University of Southern California
- Khejjou, Ali (1993)  
English for Second Language Learners  
B.A., English University Mohammed V; M.A., San Francisco State University
- Kingson, Robert C. (1965)  
English  
B.A., M.A., University of California, Los Angeles; Ph.D., University of California, Berkeley
- Kitajima, Lorraine N. (1985)  
Director, Health Services  
B.S., San Jose State University; M.S., University of California, San Francisco
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French, Spanish  
B.A., M.A., University of Southern California
- Knopf, Karl (1977)  
Kinesiology & Athletics  
B.A., San Diego State University; M.A., San Jose State University; Ed.D., Nova University
- Kohs, Gerald D. (1965)  
English  
B.A., Eastern Michigan University; M.A., University of Michigan
- Konigsberg, Charles W. (1973)  
Ornamental Horticulture  
B.S., M.A., California Polytechnic State University, San Luis Obispo
- Kornegay, Catherine (1977)  
Dental Hygiene  
B.S., San Francisco State University; M.A., San Jose State University
- Lane, Linda (1985)  
English, Reading  
B.A., M.S., California State University, Hayward
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Business, Computer Information Systems, Data Processing, Database Management  
B.S., San Jose State University; M.B.A., Santa Clara University
- Lee, Davida C. Vance (1975)  
Counseling  
B.S., M.A., Ph.D., San Jose State University
- Lindauer, Charles (1997)  
Mathematics  
B.S.E.E., City College of New York; M.S.E.E., City University of New York; Ph.D., Virginia Polytechnic Institute
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Computer Information Systems  
B.S., University of Michigan; M.S., Stanford University
- Long, Bernard F. (1965)  
Physics  
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Associate Dean, Administrative Services  
B.S., M.Ed., University of Idaho; Ed.D., Brigham Young University
- Lum, Linda (1977)  
Art  
B.A., Marycrest College; M.A., University of Iowa
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Mathematics  
B.A., M.A., University of Oregon
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Counseling, EOPS  
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Adaptive Learning, STEP Program Coordinator  
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Music  
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Art, Graphic & Interactive Design  
B.F.A., University of Wisconsin, Eau Claire; M.F.A., School of the Art Institute of Chicago
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Drama, Theater Conservatory  
B.A., M.A., San Francisco State University; Ph.D., University of California, Berkeley
- Manoogian, Norman V. (1965)  
Physical Education  
B.A., M.A., Stanford University

- Marvin, Denos P. (1965)  
Speech  
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Teachers College, Columbia  
University
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Division Dean, Language Arts  
B.A., University of the Americas,  
Mexico; M.A., University of  
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Business  
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Sociology, Psychology  
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Philosophy  
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Counseling, Honors Institute,  
Staff Development  
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California State University,  
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Sciences
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English  
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Mathematics  
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Respiratory Therapy  
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Medical Center
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Travel Careers  
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Biology  
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Biology, Western Washington  
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University
- Morris, Victor (1967)  
Music  
B.M., M.M., Manhattan School of  
Music
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Division Dean, Fine Arts  
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Chemistry  
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University
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Photography  
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English  
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Art History  
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Theatre Arts,  
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History  
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Physical Education, Intercollegiate  
Women's Golf  
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Psychology  
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School of Psychology
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Health  
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Journalism  
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- Schobert-Jones, G. Judith (1966)  
German  
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- Schrier, Nancy G. (1969)  
English  
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Mathematics, Physics  
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- Stevenson, Janis (1975)  
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- Strand, Tomas F. (1969)  
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University
- Summa, Terry (1973)  
Music  
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Librarian  
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California, Berkeley
- Svenson, Daniel K. (1995)  
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Sonoma State University
- Swenson, Bruce P. (1967)  
Dean, Instruction & Educational  
Resources  
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University of Wisconsin; Ph.D.,  
University of California, Berkeley
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University of Connecticut
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University
- Talboy, Alan R. (1967)  
Baseball, Physical Education  
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- Telfer, Richard W. (1966)  
Mathematics  
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- Thompson, Robert J. (1959)  
Business, Data Processing  
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Chico; M.A., Ed.D., Stanford  
University
- Thompson, William (1974)  
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San Diego State University; M.B.A.,  
Golden Gate University
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M.L.S., University of Hawaii
- Tinsley, William E. (1964)  
Philosophy  
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San Jose State University; M.S.,  
University of Oregon
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Psychology  
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Graduate Intern, University of  
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CTIS, Data Communication  
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Counseling  
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Santa Cruz; M.S. California State  
University, Hayward
- Urband, Richard (1974)  
Respiratory Therapy  
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University of California, Berkeley
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Health Counselor  
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School of Public Health; M.D.,  
New York Medical College
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Political Science  
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Barbara; M.A., Columbia University
- Walker, Lee R. (1959)  
Mathematics  
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Southern California
- Walker, William O. (1964)  
Creative Writing, English  
B.A., Bard College, New York;  
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- Watkins, Sandra (1998)  
Computer Science  
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- Watson, Carol (1978)  
Adaptive Learning  
M.S., Hofstra University
- Watts, June (1967)  
Acquisitions Librarian  
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Holy Names College, Spokane;  
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Santa Cruz; M.L.I.S. University of  
California, Berkeley
- Wirth, Jean (1987)  
Counseling, Articulation,  
Curriculum Officer  
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Berkeley; M.A., Ph.D., Ohio State  
University
- Wolterbeek, Kim S. (1989)  
English
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Pacific, Stockton
- Wong, Rita (1991)  
English for Second Language  
Learners  
B.A., San Francisco State  
University; M.A., University of  
Michigan
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German  
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Bookstore

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Evaluation Specialist  
Counseling & Student Services



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## About This Catalog

This catalog can be purchased at the Foothill College Main Campus and Sunnyvale Center bookstores, and accessed online at [foothill.edu](http://foothill.edu). To request this publication in alternative media such as Braille or large print, call 650.949.7017.



# Campus Information

[Parking Regulations](#)

[Access Information](#)

[Main Campus Information](#)

[Campus Map Legend](#)

[Campus Map](#)

## Parking Regulations

The Foothill-De Anza District Police Department supervises on-campus parking and traffic. The following rules and regulations apply to all students, staff and public. You can find a complete list of college parking and traffic regulations in the Admissions & Records Office (Room 8101) and District Police Department, (Room 2013).

- The speed limit in campus parking lots and access ways is 5 miles per hour. The speed limit of 20 miles per hour is posted on all roadways and is strictly enforced.
- Except in areas with 30-minute parking meters, all vehicles must display a valid parking permit to park on campus. Failure to display a permit will result in a citation.
- A parking permit is required from 7 a.m. to 10 p.m. seven days a week at the Foothill College Main Campus. This requirement is enforced.
- Overnight parking is prohibited.
- Day-use parking permits are \$3 and are valid for the date of purchase only. Purchase from permit dispensers in all student parking lots. Purchase quarterly or annual permits from the Admissions & Records Office.
- All vehicles must properly display a valid parking permit. Students are authorized to park in marked stalls in student lots only. Students may not park in stalls marked for disabled, staff, vendors, official vehicles or park in roadways, dirt areas or along parking lot curbing. People with disabilities are required to display state-issued identification on their vehicles or, in the event of temporary disabilities, obtain permits from the Disability Resource Center, Room 5401; or call 650.949.7017.
- Staff parking permits are required for all staff spaces. Staff permits are issued by the District Police Department.
- Special permits will be issued only by the District Police Department. The permit must be displayed on the dashboard or hang on the interior mirror so it can be read from the outside. Special permits are valid only when used within the areas and dates designated on the permit.

- Motor vehicles, bicycles and skateboards are not permitted on the interior portion of campus.
- All vehicles remaining for more than 20 minutes in areas posted for 20-minute maximum will be cited.
- Parking or loitering on campus after 11 p.m. and/or after special activities is prohibited.
- Alcoholic beverages are prohibited on campus.
- For more information, call the District Police Department at 650.949.7313.

## Access Information

### Parking

Campus parking lot numbers relate to campus building, classroom and office numbers. For the most convenient parking spot, park in the lot that corresponds to the classroom or office you're visiting. For example: Your class meets in Room 4101. Park in Lot 4. Your appointment is in Building 8301. Park in Lot 8.

### Accessible Elevators

Located at Krause Center for Innovation, Library, Pool Deck, Campus Center, Student Services Building, Life Sciences Building and Physical Sciences & Engineering Center.

### Accessible Parking

Located in Lots 1, 2-A, 3-A, 4, 4-B, 5, 8 and all transit stations. You must display the DMV-issued placard. To obtain a temporary disability on-campus permit, call 650.949.7017.

### Shuttle Service

To all points on campus is available for students with physical disabilities. For operating hours, call 650.949.7017.

### Deaf & Hearing-Impaired Access

E-mail [drc@fhda.edu](mailto:drc@fhda.edu). For more access information, visit the Disability Resource Center (Room 5401), access [foothill.edu/drc](http://foothill.edu/drc) or call 650.949.7017.

## Main Campus

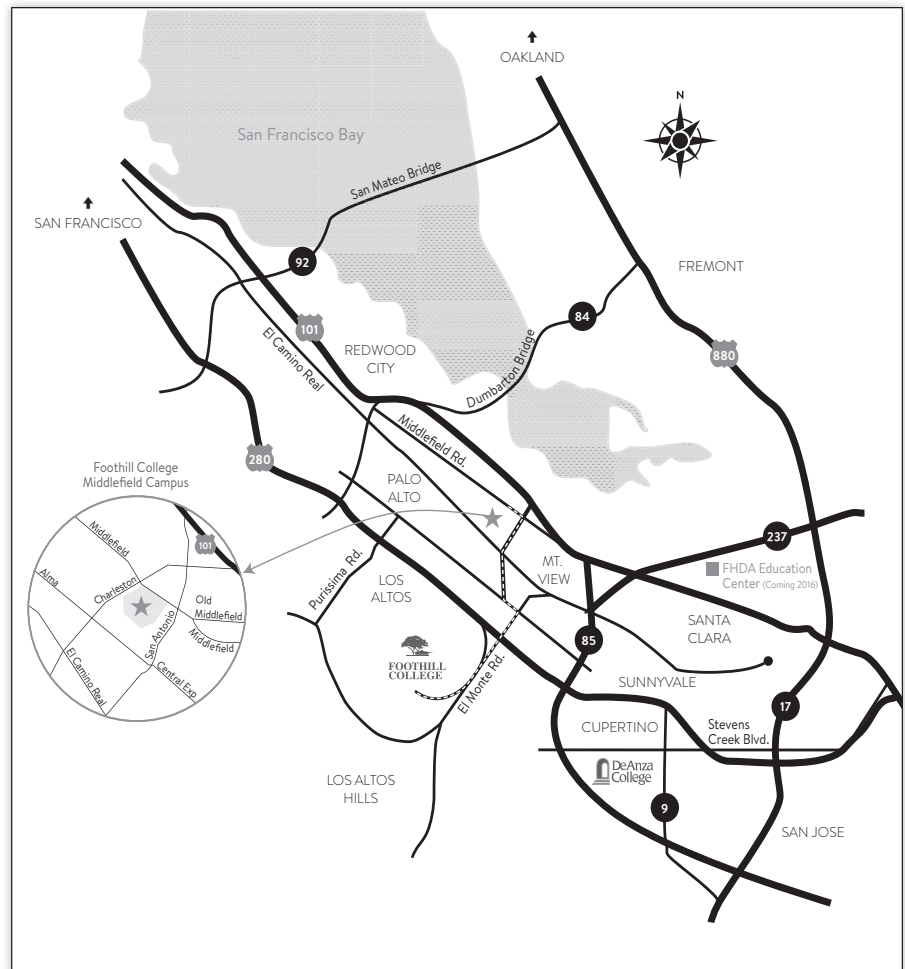
12345 El Monte Road  
Los Altos Hills, CA  
94022-4599  
650.949.7777

Foothill College is located in Los Altos Hills, 10 minutes south of Stanford University and 20 minutes north of San Jose. From Interstate 280, exit El Monte Road and travel west. Visitors must purchase a required campus parking permit for \$3. Quarterly and annual permits can be purchased in the Admissions Office. VTA bus routes #40 and #52 serve the college approximately every 30 minutes (vta.org).

## Sunnyvale Center

1070 Innovation Way  
Sunnyvale, CA 94089-1200

The Foothill College Sunnyvale Center is located between Hwy. 237 and N. Matilda Ave. in Sunnyvale. To travel from the Main Campus to the center: Drive east on El Monte Road. Take I-280 S. to Hwy. 85 N. to Hwy. 237 E. Exit N. Mathilda Ave. Continue on N. Mathilda Ave. to Innovation Way. The trip is 13 miles.





## Notes

**FOOTHILL COLLEGE**  
**SUNNYVALE CENTER**  
 1070 INNOVATION WAY, SUNNYVALE, CA 94089

- Classroom
- Restroom
- Counseling & Financial Aid
- Admissions & Records
- Administration
- Cafe
- Elevator
- Student Resource Center
- Storage

- Stairs
- Accessible Entrance
- GN Gender Neutral Restroom
- E Emergency Call Box
- Vending Machine



North Mathilda Avenue



foothill.edu | 408.745.8000 | Disability Access Information, 650.949.7017

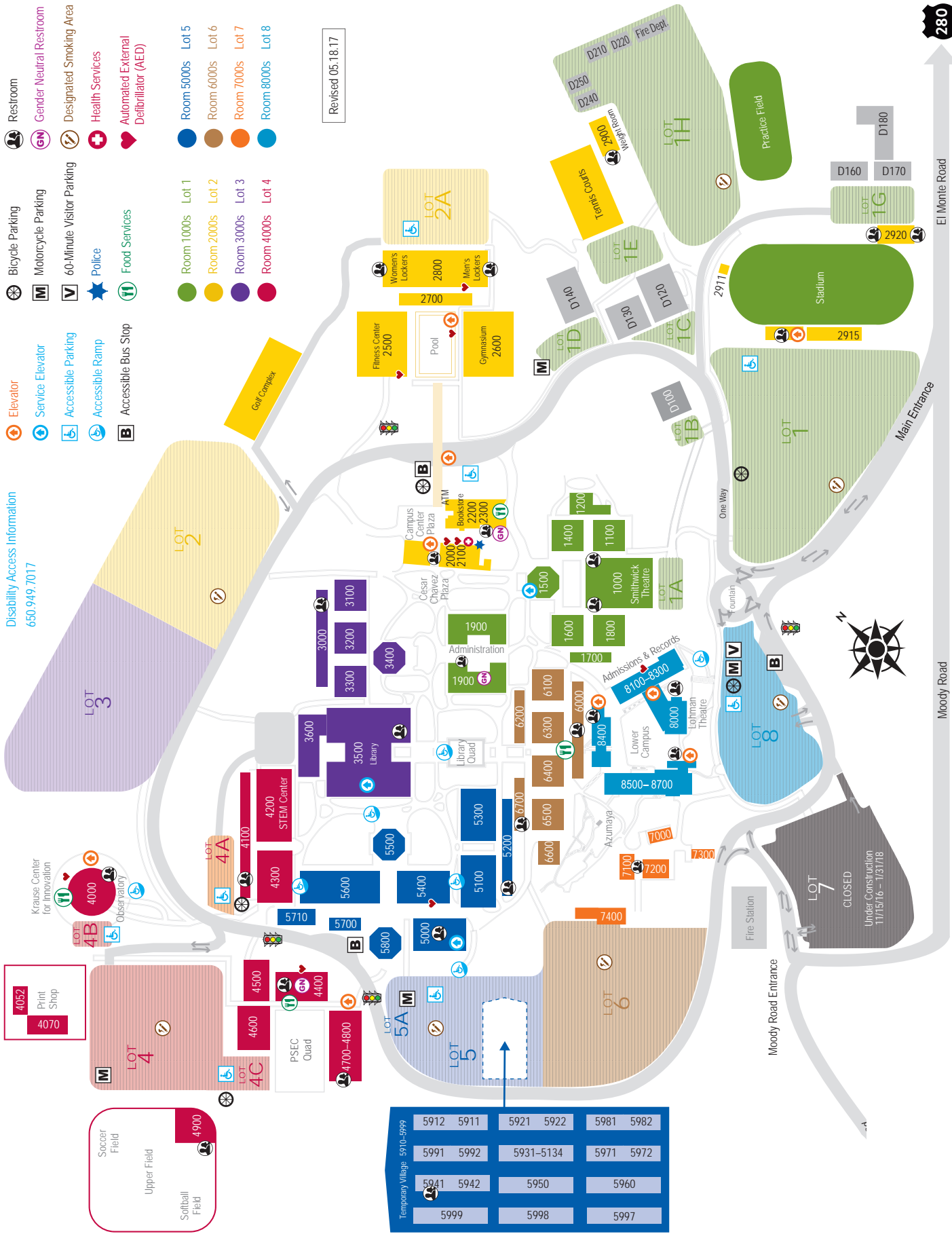


Disability Access Information  
650.949.7017

- Elevator
- Service Elevator
- Accessible Parking
- Accessible Ramp
- Accessible Bus Stop
- Bicycle Parking
- Motorcycle Parking
- 60-Minute Visitor Parking
- Police
- Food Services
- Restroom
- Gender Neutral Restroom
- Designated Smoking Area
- Health Services
- Automated External Defibrillator (AED)

- Room 1000s Lot 1
- Room 2000s Lot 2
- Room 3000s Lot 3
- Room 4000s Lot 4
- Room 5000s Lot 5
- Room 6000s Lot 6
- Room 7000s Lot 7
- Room 8000s Lot 8

Revised 05.18.17



Temporary Village 5910-5999					
5912	5911	5921	5922	5981	5982
5991	5992	5931-5134		5971	5972
5941	5942	5950	5960		
5999	5998	5997			

280

El Monte Road

Moody Road

Moody Entrance

LOT 7  
CLOSED  
Under Construction  
11/7/16 - 1/31/18

Fire Station

LOT 8

Lower Campus

Admissions & Records

1000 Smithwick Theatre

1100

1200

1400

1500

1600

1700

1800

1900

1900 Administration

2000

2100

2200 Bookstore

2300

2500 Fitness Center

2600 Gymnasium

2700

2800 Women's Lockers

2800 Men's Lockers

2900

2915

2920

2991

LOT 1H

LOT 1E

LOT 1D

LOT 1C

LOT 1B

LOT 1A

LOT 2

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LOT 4

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Los Altos Hills, CA 94022

650.949.7777  
foothill.edu



*#iamfoothill*