College Curriculum Committee Meeting Agenda
Tuesday, June 4, 2019
2:00 p.m. – 3:30 p.m.
President's Conference Room

Item	Action	Attachment(s)	Presenter(s)
1. Minutes: May 21, 2019	Action	#6/4/19-1	Armerding
2. Report Out from Division Reps	Discussion		All
3. Announcements a. New Course Proposals b. Honors Course Prerequisite c. CLEP Pilot Project d. Division Reps for 2019-20 e. Upcoming COR Deadline—June 21	Information	#6/4/19-2—5	Armerding
4. Credit for Prior Learning	Discussion		Armerding, Davison
5. Consent Calendar a. GE Application	Action	#6/4/19-6	Armerding
6. New Program Application: Nutrition and Dietetics ADT	2nd Read/ Action	#6/4/19-7	Armerding
7. Stand Alone Approval Request: C S 55A	2nd Read/ Action	#6/4/19-8	Armerding
8. Stand Alone Approval Request: C S 55B	2nd Read/ Action	#6/4/19-9	Armerding
9. Stand Alone Approval Request: C S 55C	2nd Read/ Action	#6/4/19-10	Armerding
10. Stand Alone Approval Request: C S 55D	2nd Read/ Action	#6/4/19-11	Armerding
11. Stand Alone Approval Request: NCEL 426	1st Read	#6/4/19-12	Armerding
12. Stand Alone Approval Request: NCEL 427	1st Read	#6/4/19-13	Armerding
13. Stand Alone Approval Request: NCEL 435	1st Read	#6/4/19-14	Armerding
14. Stand Alone Approval Request: NCEL 436	1st Read	#6/4/19-15	Armerding
15. Stand Alone Approval Request: NCEL 437	1st Read	#6/4/19-16	Armerding
16. Stand Alone Approval Request: NCEN 401A	1st Read	#6/4/19-17	Armerding
17. Stand Alone Approval Request: NCEN 442A	1st Read	#6/4/19-18	Armerding
18. Stand Alone Approval Request: NCEN 442B	1st Read	#6/4/19-19	Armerding
19. Student Petition for Credit by Exam	2nd Read/ Action	#6/4/19-20	Armerding
20. Good of the Order			Armerding
21. Adjournment			Armerding

Consent Calendar:

Foothill General Education (attachments #6/4/19-6a/b/c)

Area IV—Social & Behavioral Sciences: Plumbing Technology Apprenticeship Program

Attachments:

#6/4/19-1 Draft Minutes: May 21, 2019
#6/4/19-2 New Course Proposal: BIOL 70R series
#6/4/19-3 New Course Proposal: C S 85
#6/4/19-4 New Course Proposal: GID 1A
#6/4/19-5 New Course Proposal: MATH 10B
#6/4/19-7a Nutrition and Dietetics ADT Narrative
#6/4/19-7b Nutrition and Dietetics ADT TMC
#6/4/19-7c Nutrition and Dietetics ADT Additional Information
#6/4/19-8 Stand Alone Course Approval Request: C S 55A
#6/4/19-9 Stand Alone Course Approval Request: C S 55B
#6/4/19-10 Stand Alone Course Approval Request: C S 55C
#6/4/19-11 Stand Alone Course Approval Request: C S 55D
#6/4/19-12 Stand Alone Course Approval Request: NCEL 426
#6/4/19-13 Stand Alone Course Approval Request: NCEL 427
#6/4/19-14 Stand Alone Course Approval Request: NCEL 435
#6/4/19-15 Stand Alone Course Approval Request: NCEL 436
#6/4/19-16 Stand Alone Course Approval Request: NCEL 437
#6/4/19-17 Stand Alone Course Approval Request: NCEN 401A
#6/4/19-18 Stand Alone Course Approval Request: NCEN 442A
#6/4/19-19 Stand Alone Course Approval Request: NCEN 442B
#6/4/19-20a/b Petition for Credit by Examination—draft (updated)

2018-2019 Curriculum Committee Meetings:

Fall 2018 Quarter	Winter 2019 Quarter	Spring 2019 Quarter
~~10/2/18~~	~~1/22/19~~	~~4/23/19~~
~~10/16/18~~	~~2/5/19~~	~~5/7/19~~
~~10/30/18~~	~~2/19/19~~	~~5/21/19~~
~~11/13/18~~	~~3/5/19~~	6/4/19
~~11/27/18~~	~~3/19/19~~	6/18/19

Standing reminder: Items for inclusion on the CCC agenda are due no later than one week before the meeting.

2018-2019 Curriculum Deadlines:

~~*12/1/18*~~ Deadline to submit courses to CSU for CSU GE approval (Articulation Office).
~~*12/1/18*~~ Deadline to submit courses to UC/CSU for IGETC approval (Articulation Office).
~~*2/15/19*~~ Deadline to submit local GE applications for 2019-20 catalog (Faculty/Divisions).
~~*3/1/19*~~ Curriculum Sheet updates for 2019-20 catalog (Faculty/Divisions).
~~*6/1/19*~~ Deadline to submit new/revised courses to UCOP for UC transferability (Articulation Office).
6/21/19 COR/Title 5 updates for 2020-21 catalog (Faculty/Divisions).
Ongoing Submission of courses for C-ID approval and course-to-course articulation with individual colleges and universities (Articulation Office).

Distribution:
Chris Allen (Dean, APPR), Ben Armerding (Faculty Co-Chair), Rachelle Campbell (BH), Zachary Cembellin (PSME), Stephanie Chan (LA), Bernie Day (Articulation Officer), Kimberly Escamilla (LA), Isaac Escoto (AS President), Valerie Fong (Acting Dean, LA), Marnie Francisco (PSME), Evan Gilstrap (CNSL), Allison Herman (LA), Kurt Hueg (Dean, BSS), Eric Kuehnl (FA), Kristy Lisle (VP Instruction), Kent McGee (Evaluations), Ron Painter (PSME), Katy Ripp (KA), Lisa Schultheis (BH), Ben Schwartzman (SRC), Lety Serna (CNSL), Barbara Shewfelt (KA), Paul Starer (Administrator Co-Chair), Mary Thomas (LIBR), Anh Tran (SRC), Nick Tuttle (BSS), Mary Vanatta (Curriculum Coordinator), Anand Venkataraman (PSME), Bill Ziegenhorn (BSS)

Updated 5/2/19

COLLEGE CURRICULUM COMMITTEE

Committee Members - 2018-19

Meeting Date: 6/4/19

Co-Chairs (2)

✓	Benjamin Armerding	7453	Vice President, Academic Senate (tiebreaker vote only)	armerdingbenjamin@fhda.edu
✓	Paul Starer	7179	Interim Associate Vice-President of Instruction	starerpaul@fhda.edu

Voting Membership (12 total; 1 vote per division)

	Rachelle Campbell	7469	BH	campbellrachelle@fhda.edu
✓	Zachary Cembellin	7383	PSME	cembellinzachary@fhda.edu
	Stephanie Chan		LA	chanstephanie@fhda.edu
✓	Bernie Day	7225	Articulation	daybernie@fhda.edu
✓	Kimberly Escamilla	7316	LA	escamillakimberly@fhda.edu
✓	Valerie Fong	7135	Acting Dean—LA	fongvalerie@fhda.edu
✓	Marnie Francisco	7420	PSME	franciscomarnie@fhda.edu
✓	Evan Gilstrap	7675	CNSL	gilstrapevan@fhda.edu
✓	Allison Herman	7460	LA	hermanallison@fhda.edu
✓	Kurt Hueg	7394	Dean—BSS	huegkurt@fhda.edu
	Eric Kuehnl	7479	FA	kuehnleric@fhda.edu
	Ron Painter		PSME	painterron@fhda.edu
✓	Katy Ripp	7355	KA	rippkaty@fhda.edu
✓	Lisa Schultheis	7780	BH	schultheislisa@fhda.edu
✓	Leticia Serna	7059	CNSL	sernaleticia@fhda.edu
	Barbara Shewfelt	7658	KA	shewfeltbarbara@fhda.edu
✓	Mary Thomas	7522	Library	thomasmary@fhda.edu
✓	Nick Tuttle	7056	BSS	tuttlenick@fhda.edu
✓	Anand Venkataraman	7495	PSME	venkataramananand@fhda.edu
✓	Bill Ziegenhorn	7799	BSS	ziegenhornbill@fhda.edu

Non-Voting Membership (4)

			ASFC Rep.	
✓	Mary Vanatta	7439	Curr. Coordinator	vanattamary@fhda.edu
	Kent McGee	7298	Evaluations	mcgeekent@fhda.edu
			SLO Coordinator	

Visitors

Ben Schwartzman, Dolores Davison

College Curriculum Committee
Meeting Minutes
Tuesday, May 21, 2019
2:00 p.m. – 3:30 p.m.
President's Conference Room

Item	Discussion
1. Minutes: May 7, 2019	**Approved by consensus.**
2. Report Out from Division Reps	**Speaker: All** Bio Health: Deactivating VITI courses; reactivating R T 73; working on Title 5 list; planning to reactivate BIOL independent study courses. Counseling: Creating CSU GE & IGETC lists for 2019-20. SRC: Working on Title 5 list. PSME: Working on Title 5 list. Fine Arts: Eric Kuehnl will be CCC faculty co-chair for 2019-20! Kinesiology: Working on Title 5 list. Library: No updates to report. Language Arts: Working on new ESLL corequisite and new noncredit courses. BSS: Working on Title 5 list; continuing to work on new BUSI courses.
3. Announcements a. New Course Proposals b. Spring Plenary Resolutions	**Speaker: Ben Armerding** The following proposals were presented: ACTG 54; BUSI 59C, 59D, 59E, 60B, 66A, 88A; CHEM 210; SPAN 70R series. Please share with your constituents. No discussion. Armerding shared out resolutions adopted at recent plenary which may be of interest to group: 13.01—Develop Recommendations for the Implementation of a No-Cost Designation in Course Schedules; 9.06—Support New Distance Education Definitions: updates language for different types of DE courses, guidance from ASCCC forthcoming; 13.02—Support for Faculty Open Educational Resources Coordinators: suggests colleges designate a faculty OER coordinator.
4. Update to Department/Subject Name for GIST	**Speaker: Ben Armerding** BSS has approved a change to the department/subject name for GIST—from Geospatial Technology to Geospatial Technology and Data Science. Subject code will remain GIST. Vanatta working with Marketing to try to get new name in the 2019-20 catalog.
5. Program Deactivation: Mathematical Foundations Certificate of Completion	**Speaker: Ben Armerding** Second read of deactivation of Mathematical Foundations Certificate of Completion. Counseling rep expressed concern for many students who struggle with math; asked about resources since NCBS 401A & 401B deactivated—PSME rep explained recent changes to MATH courses made in response to AB 705, noted that data from this first year is very encouraging; Math dept. trying different types of support for students. SRC rep noted similar difficulties for DRC students; looking to other colleges for

	ideas, including offering course through DRC for DRC students. Noted that other colleges offering noncredit courses through depts. other than Math (e.g., Noncredit dept.)—Hueg noted many colleges are trying out different things which may or may not end up passing muster in the eyes of the state. BSS rep asked if Math dept. still offers imbedded tutoring—yes, in MATH 10, 48A w/ corequisite. Hueg asked if MATH 105 still being offered—yes, mostly online, many high school students enroll. PSME rep noted that most students take college-level MATH course following MATH 105, which fits within AB 705 mandate. Motion to approve **M/S** (Francisco, Ziegenhorn). **Approved.**
6. New Program Application: Nutrition and Dietetics ADT	**Speaker: Ben Armerding** First read of new Nutrition and Dietetics ADT. Feedback Form has been sent to governance groups but no feedback has yet been received. Day noted that ADT has been in the works for several years; quite a few Foothill students transfer as Nutrition and Dietetics majors. Second read and possible action will occur at next meeting.
7. Stand Alone Approval Request: C S 55A	**Speaker: Ben Armerding** First read of Stand Alone Approval Request for C S 55A. Will be temporarily Stand Alone—included in new AWS Cloud certificate of achievement. Counseling rep asked for details regarding partnership with Amazon—PSME rep explained that Amazon offers a commercial service for users to rent server space on the Cloud to run their websites; Amazon is in need of more employees with skills specific to running these servers. C S dept. anticipates courses/cert. will be popular. Second read and possible action will occur at next meeting.
8. Stand Alone Approval Request: C S 55B	**Speaker: Ben Armerding** First read of Stand Alone Approval Request for C S 55B. Will be temporarily Stand Alone—included in new AWS Cloud certificate of achievement. *[Note: see item 7 for comments.]* Second read and possible action will occur at next meeting.
9. Stand Alone Approval Request: C S 55C	**Speaker: Ben Armerding** First read of Stand Alone Approval Request for C S 55C. Will be temporarily Stand Alone—included in new AWS Cloud certificate of achievement. *[Note: see item 7 for comments.]* Second read and possible action will occur at next meeting.
10. Stand Alone Approval Request: C S 55D	**Speaker: Ben Armerding** First read of Stand Alone Approval Request for C S 55D. Will be temporarily Stand Alone—included in new AWS Cloud certificate of achievement. *[Note: see item 7 for comments.]* Second read and possible action will occur at next meeting.
11. Student Petition for Credit by Exam	**Speaker: Ben Armerding** First read of petition form used by students to request Credit by Exam (CBE) for a course. Now that we have a process for faculty to offer a course as available for CBE, we need a form for students to use to petition. Form used for the draft was used in the past by a dept., so CCC Team felt it would be good to serve as a template. Note that form included “I do/do not approve” selections next do signature lines for instructor and dean, which have been struck-through on draft.

	Language Arts rep suggested making clear that all three signature lines are for signatures. Counseling rep commented on need for clarity regarding process for the student: Whose responsibility to turn form in to Admissions & Records (A&R)?; If it's the student, how does A&R verify instructor approval? Commented that if course approved as available for CBE, why should student need to provide justification? Day questioned need for dean signature—Armerding noted not required by our local process, but group can discuss its inclusion on form. Day noted language prohibiting student from using CBE for a course for which they've received credit at another school; asked how this is verifiable. Starer noted that in the past A&R used form to enter final grade for the student ("Instructor's Use Only" section of form); division submitted forms to A&R for processing. Noted that justification provided by student was simply informational. Day noted incorrect language on form: min. of 24 resident units should be 18 units. Counseling rep noted students cannot use CBE for major courses—needs added to the form. Day suggested adding reminder to student that transcript will clearly note when CBE used for course. Counseling rep suggested adding suggestion of meeting with counselor to top of page 2. Bio Health rep suggested students pick up form from counselor, to ensure they meet with one. PSME rep asked for clarification regarding max. of 20 units allowed for CBE, is there a time limitation on that—group unsure. Kinesiology rep asked for clarification regarding grades earned via CBE—grade goes on transcript and counts as an attempt; student can reattempt course during subsequent quarter but not by using CBE again. BSS rep asked how CBE will be tracked if student fails—it will be annotated on the transcript. Discussion regarding language on form disallowing student from using CBE if they previously failed the course (not via CBE), and if this is allowable under Title 5. Starer noted that in his experience there isn't a lot of confusion for students regarding CBE, but did see confusion regarding how to handle CBE as related to major courses; faculty were good at advising students regarding CBE. Discussion regarding whether or not to allow student to continue on in the course (during the same quarter) if CBE attempted but receives a failing grade; most think student should wait and re-enroll in future quarter (but not all in agreement). Day asked if student who fails CBE exam would be allowed to remain as an audit—local policy allows student to audit only if they have previously passed the course. Counseling rep suggested maintaining consistency with other forms used by students (e.g., use "CWID" instead of "Student ID Number"). Second read and possible action will occur at next meeting.
12. Kinesiology Request to Add Advisory to ATHL Courses	**Speaker: Ben Armerding** Kinesiology has approved new language to include in the Advisory on CORs for "in season" ATHL courses, to limit enrollment due to team selection. CORs will be updated effective fall 2019 quarter. The request is to allow the CORs to be updated by Vanatta without requiring each COR complete the full C3MS process. Kinesiology rep explained that this language allows for team selection and cuts to be made. Motion to approve **M/S** (Day, Schultheis). **Approved.**
13. Templates for New Program Narratives	**Speaker: Ben Armerding** Template documents have been updated based on the discussion

	at the last CCC meeting: in Item 5, added suggestion to contact Institutional Research for enrollment data (with link to IR website); above Additional Documentation list, added note regarding "significant lead time" and suggestion to work with the AVPI. No further suggestions; Vanatta will upload templates to the CCC website and create/upload versions for local AA/AS degrees.
14. Honors Course Prerequisite	**Speaker: Ben Armerding** Armerding spoke with Honors Institute coordinators; decided to delay topic to next meeting to allow more time for divisions to provide feedback to them. Reps encouraged to speak with faculty regarding possibility of removing "Honors Institute participant" prerequisite from honors courses; bring feedback for upcoming discussion. Counseling rep expressed concern regarding rush to remove the prereq; noted there is still an application for students to submit for honors courses. Concerned regarding effects on articulation for courses if prereq is removed. BSS rep shared feedback from two faculty expressing frustration with prereq—they stated it discourages students from enrolling, related to the time it takes to apply as honors student and be coded in Banner so that they clear the prereq. Language Arts rep asked if there's a way to make the application automatic, if issue is truly related to a slow-moving process—Day noted that application may be submitted electronically.
15. Credit for Prior Learning	**Speaker: Ben Armerding** Dolores Davison will be joining CCC for discussion at next meeting. State moving quickly to expand Credit for Prior Learning (CPL) and will begin mandating colleges offer certain options. CCCCO and ASCCC collaborating to create forthcoming policy. Today's discussion to gather thoughts to bring to discussion with Davison. BSS rep expressed concern with trend of viewing college as an obstacle for some students; goal seems to be for students to be able to earn cert./degree by taking as few courses as possible. Armerding noted that language in current legislation mostly related to veterans with education in a certain field via their military training, but noted that concern should be shared with Davison. Counseling rep expressed opinion that CPL a great opportunity for those who gain skills via work experience and not by taking specific courses; for example, computer science skills. BSS rep clarified that concern is regarding the intent of the trend and agreed it does make sense for certain majors; concerned for how CPL could affect transfer courses. Armerding noted he believes intent is to address certain types of courses and not in general—will need to address with Davison. Language Arts rep asked how prior learning would be evaluated—some examples: coursework at non-college institutions (e.g., military), capstone projects. Starer noted need to create process to assess prior learning situations, similar to recent process to map Apprenticeship coursework to GE. Noted community colleges in competition with institutions like for-profit colleges that target veterans and other groups with prior learning; this does not mean that we should follow their lead but may explain some impetus for the trend. Day echoed BSS rep's concerns and noted that Foothill is ahead of the curve with our AP, CLEP, CBE policies. Does not think the state's mandate will be for colleges to open up full curriculum to CPL. Noted that CSU system having same conversation and establishing policies; unclear how UC is

	addressing. Noted that CCCCO setting up an office related to the topic but has yet to publish any guidelines. Armerding noted additional categories of IB (International Baccalaureate credit) and prior career/technical experience. Counseling rep noted we already have a local policy for IB. Additionally, related to international education, we can award credit for local GE, as well as for some Allied Health programs, but we cannot certify any international coursework for CSU GE or IGETC for transfer. Clarified that international education and IB are two separate things. Day noted complexities when assessing international coursework and transcripts. Noted that ASCCC website has rostrum article written by Davison related to CPL, which could clear up some concerns from the group.
16. Good of the Order	
17. Adjournment	**3:28 PM**

Attendees: Ben Armerding (Faculty Co-Chair), Bernie Day (Articulation Officer), Kimberly Escamilla (LA), Marnie Francisco (PSME), Evan Gilstrap (CNSL), Allison Herman (LA), Kurt Hueg (Dean, BSS), Eric Kuehnl (FA), Ron Painter (PSME), Katy Ripp (KA), Lisa Schultheis (BH), Ben Schwartzman (SRC), Lety Serna (CNSL), Paul Starer (Administrator Co-Chair), Mary Thomas (LIBR), Nick Tuttle (BSS), Mary Vanatta (Curriculum Coordinator), Anand Venkataraman (PSME), Bill Ziegenhorn (BSS)

Minutes Recorded by: M. Vanatta

Ensure you're using the current version of this form by downloading a fresh copy from the CCC webpage!

Foothill College
College Curriculum Committee
New Course Proposal

*This form should be completed by the faculty author as preparation to writing a new course. Your division CC rep can assist you in completing it appropriately, and will forward it to the Office of Instruction for inclusion as an announcement at the next available CCC meeting. The purpose of this form is **interdisciplinary communication**. The responsibility to rigorously review and approve new courses remains with the divisional curriculum committees.*

Faculty Author: Lisa Schultheis

Proposed Number: BIOL 70R series **Proposed Units:** 1-4
Proposed Hours: 3-12 hours laboratory
Proposed Transferability: CSU
Proposed Title: Independent Study in Biology

Proposed Catalog Description & Requisites:
Provides an opportunity for the student to expand their studies in Biology 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.

Proposed Discipline: Biological Sciences
(For guidance, refer to the Minimum Quals handbook, available on the CCC webpage.)
Note: If any proposed discipline falls within the purview of another division, please verify approval from that division. Division Rep: _____ *Date:* _____

To which Degree(s) or Certificate(s) would this course potentially be added?
None.

Are there any other departments that may be impacted from the addition of this course? Please identify those departments and the effect:
None known.

Comments & Other Relevant Information for Discussion:
We've modeled this after independent study courses currently offered in Physics and Anthropology. More students are requesting opportunities to pursue independent study, and we would like to make that option available for them.

Instruction Office:
Date presented at CCC:
Number assigned:

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College Curriculum Committee
New Course Proposal

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Faculty Author: Eric Reed

Proposed Number: C S 85 **Proposed Units:** 4.5
Proposed Hours: 4 hours lecture, 2 hours laboratory
Proposed Transferability: CSU
Proposed Title: Data Visualization

Proposed Catalog Description & Requisites:
Introduction to the effective processing and communication of data. Topics include identifying the key techniques and theory used in data visualization, create and designing static and interactive visualizations using data, and communicating insight through data visualization to an intended audience. Students will use a data visualization package such as R, Tableau, or MatPlotLib in Python.

Proposed Discipline: Computer Science
(For guidance, refer to the Minimum Quals handbook, available on the CCC webpage.)
Note: If any proposed discipline falls within the purview of another division, please verify approval from that division. Division Rep: _____ *Date:* _____

To which Degree(s) or Certificate(s) would this course potentially be added?
Data Analytics Certificate

Are there any other departments that may be impacted from the addition of this course? Please identify those departments and the effect:
None

Comments & Other Relevant Information for Discussion:

Instruction Office:
Date presented at CCC:
Number assigned:

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College Curriculum Committee
New Course Proposal

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Faculty Author: Carolyn Brown

Proposed Number: GID 1A **Proposed Units:** 4
Proposed Hours: 3 hours lecture, 3 hours laboratory
Proposed Transferability: UC/CSU (usually found under "human centered design")
Proposed Title: Design Thinking

Proposed Catalog Description & Requisites:
Design Thinking provides a solution-based, iterative approach to solving problems. It is a way of thinking and working as well as a collection of hands-on methods. Design Thinking revolves around a deep interest in developing an understanding of the people for whom we're designing products and services. It helps us observe and develop empathy with the users. Design Thinking also includes ongoing experimentation: questioning, sketching, prototyping, testing, and trying out concepts and ideas.

Proposed Discipline: Graphic Arts, Industrial Design
(For guidance, refer to the Minimum Quals handbook, available on the CCC webpage.)
Note: If any proposed discipline falls within the purview of another division, please verify approval from that division. Division Rep: _____ *Date:* _____

To which Degree(s) or Certificate(s) would this course potentially be added?
GID - AA degree
GID - Certificate of Achievement
GID - Web Careers Certificate
GID - Game Design Skills Certificate

Are there any other departments that may be impacted from the addition of this course? Please identify those departments and the effect:
None

Comments & Other Relevant Information for Discussion:

Instruction Office:
Date presented at CCC:
Number assigned:

Ensure you're using the current version of this form by downloading a fresh copy from the CCC webpage!

Foothill College
College Curriculum Committee
New Course Proposal

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Faculty Author: Debbie Lee

Proposed Number: MATH 10B
Proposed Units: 5 units
Proposed Hours: 5 lecture hours/week
Proposed Transferability: CSU, UC
Proposed Title: Statistics for Data Analytics

Proposed Catalog Description & Requisites:
This course introduces statistical methods for analyzing data from experiments, surveys and using industry analytics software such as Excel, SQL or Tableau. Students will be calculating and developing Poisson, geometric, hypergeometric, uniform, norm, gamma, exponential and beta distributions in software, in addition to developing simple and multiple linear regression models using software. Students will be identifying the roles of discrete and conditional probability in data analysis. Students will also present quantitative insights on data using industry best practices.

Prerequisite: MATH 10 and C S 31A.

Proposed Discipline: Mathematics
(For guidance, refer to the Minimum Quals handbook, available on the CCC webpage.)
Note: If any proposed discipline falls within the purview of another division, please verify approval from that division. Division Rep: _____ *Date:* _____

To which Degree(s) or Certificate(s) would this course potentially be added?
Certificate of Achievement in Data Analytics

Are there any other departments that may be impacted from the addition of this course? Please identify those departments and the effect:
Computer Science – the course uses a software package such as Excel, SQL and Tableau.

Comments & Other Relevant Information for Discussion:
This course is being created to be part of a group of 4 courses – one from business, two from computer science, and one from math to encompass the requirements for the certificate of achievement.

Instruction Office:
Date presented at CCC:
Number assigned:

General Education Review Request
AREA IV – SOCIAL & BEHAVIORAL SCIENCES

Course Number & Title: Plumbing Technology Apprenticeship Program

Breadth Criteria:

At Foothill College, the primary objective of the general education requirements is to provide students with the depth and breadth of knowledge and understanding required to be independent, thinking persons who are able to interact successfully with others as educated and productive members of our diverse society. Design and implementation of the general education curriculum ensures that students have exposure to all major disciplines, understand relationships among the various disciplines, and appreciate and evaluate the collective knowledge and experiences that form our cultural and physical heritage. General education courses provide content that is broad in scope and at an introductory depth, and all require critical thinking.
A general education enables students to clarify and present their personal views as well as respect, evaluate, and be informed by the views of others. This academic program is designed to facilitate a process that enables students to reach their fullest potential as individuals, national and global citizens, and lifelong learners for the 21st century.

In order to be successful, students are expected to have achieved minimum proficiency in math (MATH 105) and English (ENGL 1A, 1AH or ESL 26) before enrolling in a GE course.
A completed pattern of general education courses provides students with opportunities to acquire, practice, apply, and become proficient in each of the core competencies listed below.

B1. Communication (analytical reading, writing, speaking, and listening skills including evaluation, synthesis, and research).
B2. Computation (application of mathematical concepts, and/or using principles of data collection and analysis to solve problems).
B3. Creative, critical, and analytical thinking (reasoning, questioning, problem solving, and consideration of consequence).
B4. Community and global consciousness and responsibility (consideration of one's role in society at the local, regional, national, and global level in the context of cultural constructs and historical and contemporary events and issues).
B5. Information competency (ability to identify an information need, to find, evaluate and use information to meet that need in a legal and ethical way) and digital literacy (to teach and assess basic computer concepts and skills so that people can use computer technology in everyday life to develop new social and economic opportunities for themselves, their families, and their communities).

Depth Criteria for Area IV-Social & Behavioral Sciences:

The social sciences embrace a large number of interrelated subjects that examine the relationship of human beings to society.

Courses meeting the General Education Requirement in Social and Behavior Sciences ***must*** include ***all of the following*** student learning outcomes:

S1. Explain the interactions of people as members of societies, cultures and social subgroups;
S2. Exercise critical thinking and analytical oral and/or written skills including consideration of events and ideas from multiple perspectives;
S3. Demonstrate knowledge and application of the scientific method in conducting research and in other methods of inquiry relative to the discipline.

In addition, courses meeting this requirement ***must*** include ***at least three*** of the following student learning outcomes:

S4. Demonstrate appreciation of and sensitivity towards diverse cultures -- their social, behavioral and organizational structure;
S5. Explain world development and global relationships;
S6. Recognize the rights, duties, responsibilities, and opportunities of community members;
S7. Analyze the relationship of business and economic activities to the functioning of society as a whole;
S8. Assess the distribution of power and influence;
S9. Analyze current events and global issues in the context of historic, ethical and social patterns;
S10. Comprehend and engage in social, economic and political issues at the local, national and global level;
S11. Display knowledge of human motivations, behaviors and relationships;
S12. Understand the evolutionary origins of humanity and how this relates to present day human interactions;
S13. Describe how individual interaction with the natural world and external societies shapes and influences human behavior;
S14. Explain the association between psychological well-being, mental processes, emotions & societal functioning.

General Education Review Request
AREA IV – SOCIAL & BEHAVIORAL SCIENCES

Course Number & Title: Plumbing Technology Apprenticeship Program

Please map each appropriate component from the **Course Outline of Record** to the appropriate depth and breadth criteria. You can use any part of your COR including course outcomes, expanded content, methods of instruction/evaluation, and/or lab content.

Depth Map: Must include the following:

S1. Explain the interactions of people as members of societies, cultures and social subgroups;

Matching course component(s):
Year 1, Sem 1 = 1.3, 1.4, 1.7, 1.8, Special Project

S2. Exercise critical thinking and analytical oral and/or written skills including consideration of events and ideas from multiple perspectives;

Matching course component(s):
Year 1, Sem 2 = 9.10, 1.11, 9.30 Year 2, Sem 1 = 12.1, 12.14 Year 3, Sem 1 = 17.4 Year 5, Sem 2 = Special Project

S3. Demonstrate knowledge and application of the scientific method in conducting research and in other methods of inquiry relative to the discipline.

Matching course component(s):
Year 1, Sem 2 = 10.2, 10.4, 10.12, 10.13, 10.14

Depth Map: Additionally, must include at least three of the following:

S4. Demonstrate appreciation of and sensitivity towards diverse cultures -- their social, behavioral and organizational structure;

Matching course component(s):
Year 5, Sem 2 = 25.1, 25.2, 25.3, 25.4, 25.5

S5. Explain world development and global relationships;

Matching course component(s):

S6. Recognize the rights, duties, responsibilities, and opportunities of community members;

Matching course component(s):
Year 1, Sem = 1.1, 1.3, 1.4, 1.9

S7. Analyze the relationship of business and economic activities to the functioning of society as a whole;

Matching course objective(s):
Year 4, Sem 1 = 20.1, 20.2, 20.3, 20.5

S8. Assess the distribution of power and influence;

Matching course component(s):

S9. Analyze current events and global issues in the context of historic, ethical and social patterns;

Matching course component(s):

S10. Comprehend and engage in social, economic and political issues at the local, national and global level;

Matching course component(s):

General Education Review Request
AREA IV – SOCIAL & BEHAVIORAL SCIENCES

S11. Display knowledge of human motivations, behaviors and relationships;

Matching course component(s):

S12. Understand the evolutionary origins of humanity and how this relates to present day human interactions;

Matching course component(s):

S13. Describe how individual interaction with the natural world and external societies shapes and influences human behavior;

Matching course component(s):

S14. Explain the association between psychological well-being, mental processes, emotions & societal functioning.

Matching course component(s):

Breadth Mapping: please indicate all that apply (if applicable)

B1. Communication (analytical reading, writing, speaking, and listening skills including evaluation, synthesis, and research)

Matching course component(s):
Year 1, Sem 1 = 3.5, 4.1, 4.10
Year 1, Sem 2 = 7.1, 7.4, 7.8
Year 2, Sem 1 = 10.1, 10.2

B2. Computation (application of mathematical concepts, and/or using principles of data collection and analysis to solve problems).

Matching course component(s):
Year 1, Sem 2 = 3.6
Year 3, Sem 2 = 19.1, 19.2, 19.3, 19.4, 19.5, 19.6

B3. Clearly and precisely express their ideas in a logical and organized manner using the discipline-appropriate language

Matching course component(s):
Year 1, Sem 1 = 3.1
Year 1, Sem 2 = 9.2, 9.3, 9.9
Year 2, Sem 1 = 10.12, 10.17, 10.18, 10.21

B4. Community and global consciousness and responsibility (consideration of one's role in society at the local, regional, national, and global level in the context of cultural constructs and historical and contemporary events and issues).

Matching course component(s):
Year 1, Sem 1 = 2.1, 2.2, 2.3, 2.4

B5. Information competency (ability to identify an information need, to find, evaluate and use information to meet that need in a legal and ethical way) and digital literacy (to teach and assess basic computer concepts and skills so that people can use computer technology in everyday life to develop new social and economic opportunities for themselves, their families, and their communities).

Matching course component(s):
Year 4, Sem 2 = 22.82, 22.83

General Education Review Request
AREA IV – SOCIAL & BEHAVIORAL SCIENCES

Requesting Faculty: Peter Chursin, Lisa Drake, Patricia Gibbs Date: March 5, 2019

Division Curriculum Rep: Peter Chursin Date: May 16, 2019

FOR USE BY GE SUBCOMMITTEE:

Review Committee Members: N/A

Recommended for Approval: _____ Not Recommended for Approval: _____ Date: _____

In the box below, please provide rationale regarding the subcommittee's recommendation:

Note: application did not go to subcommittee

FOR USE BY CURRICULUM OFFICE:

Approved: _____ Denied: _____ CCC Co-Chair Signature: _____ Date: _____

Below please find the key to interpreting the codes provided on the GE applications for the Pipes apprenticeship. Please send any questions you may have to: starerpaul@fhda.edu

101 - Year and Semester (first year, first semester in the case of "101." In the case of "102," this means first year, second semester, and so on....).

.1 - Module number (".1" is the first module. ".2" is the second module and so on....)

Example: P101.1 = Plumbing Curriculum, first year, first semester, module 1

Commercial Plumbing Apprenticeship Program

Syllabus – Year 1, Semester 1 – P 101
Course Title:

Module 1: Union Heritage (6 hours)
Module 2: Construction Safety (24 hours)
Module 3: Use and Care of tools (12 hours)
Module 4: Pipe and Tube Installations (42 hours)
Module 5: Soldering and Brazing (24 hours)

108 hours (Lecture/Lab)

Class Information	**Instructor Information**
Day(s) – TBD	Name – TBD
Time – TBD	Phone –TBD
Room – TBD	Email – TBD
Day(s) – TBD	Name – TBD
Time – TBD	PH: (408) 453-6330
Room – TBD	Email – TBD

Resources

1. United Association, "Your Heritage and Future in the Pipe Trades", Chapters 1-3.
2. SmartMark CD
3. International Pipe Trades Joint Training Committee, "Job Safety and Health" for United Association Journeymen & Apprentices, 1999.
4. RWQCP, "Good Plumbing Practices Protect San Francisco Bay", Summit Training Source – Instructional Series", May 2003.
5. J.J. Keller, "Forklift Safety for Construction", Video.
6. J.J. Keller, "Forklift Safety for Construction", Instructor's Guide.
7. J.J. Keller, "Forklift Safety for Construction", Preparation Guide.
8. 29 CFR Part 1910.178(1) "Powered Industrial Truck Operator Training", Final Rule
9. Horizon High Lift, "Self-Propelled Aerial Lift – Operator Safety Training", (1998), California.
10. Horizon High Reach, California, "Boom Supported Aerial Lift – Operator Safety Training" (1998),
11. United Association, "UA Use and Care of Tools for United Association Journeymen & Apprentices," 2000.
12. American Technical Publishers, Inc, "Plumbing Design & Installation," 3rd Edition, L.V. Ripka, 2006.
13. United Association, "Pipe, Fittings, Valves, Supports and Fasteners for United Association for Journeyman and Apprentices," 2000.
14. Swagelok—TM Swagelok Company, "Hand Tube Bender Manual"© 1999, 2003 Swagelok Company Printed in U.S.A., GLLMa www.swagelok.com/downloads/webcatalogs/EN/MS-13-43.PDF
15. United Association, "Water Supply," 2000.

Resources (continued)

16. United Association- Book**, "**Soldering and Brazing", 2002.
17. Smith Equipment 2601 Lockheed Avenue Watertown, SD 57201 605-882-3200, **"**Oxyfuel Safety", 25 min. 30 sec- Video.
18. Kennecott Utah Copper Public Affairs Department P.O. Box 6001 Magna, Utah 84004, "Kennecott's Bingham Canyon Mine", 14 min. 00 sec. Video.
19. National Association of Plumbing-Heating Cooling Contractors, P.O. Box 6808, Falls Church, VA 22046-1148, 703-237-8100, "Soldering and Brazing Copper", 18 min. 00 sec.
20. J.W. Harris Co, Inc., 4501 Quality Place, Mason, OH 45040-1971, 513-237-8100, "J.W. Harris Practical Braze Training", 18 min. 35 sec. – Video.
21. Smith Equipment, 2601 Lockheed Avenue, Watertown, SD 57201, 605-882-3200, "Quickbraze Torch Systems", 6 min. 00 sec. – Video.

Course Performance & Learning Objectives – Module 1 - Union Heritage

1. Identify partners in an apprenticeship.
2. Describe how to get off to the right start.
3. Identify the collective voice.
4. Identify role of employer as a partner.
5. Describe the effectiveness on the job.
6. Define the most important partner-YOU.
7. Describe the role and responsibilities of contractors.
8. Describe qualities that promote effectiveness on the job.
9. Identify characteristics and goals of outstanding journeymen.

Course Performance & Learning Objectives – Module 2 - Construction Safety

1. Identify the purpose and responsibilities of OSHA.
2. Describe workplace hazards.
3. Identify safety issues relating to hoisting.
4. Describe the importance of fall protection.
5. Identify Personal Protective Equipment (PPE).
6. Describe the importance of electrical safety.
7. Describe the importance of tool safety.
8. Describe the importance of stairway and ladder safety.
9. Describe proper methods for lifting and carrying objects.
10. Identify safety issues related to excavation.
11. Describe the characteristics of confined spaces.
12. Describe atmospheric hazards.

Syllabus – Year 1, Semester 1 – P 101
Course Title:

Course Performance & Learning Objectives – Module 2 - Construction Safety, (continued)

13. Identify the responsibilities of parties involved with confined spaces.
14. Describe the importance of fire safety.
15. Describe policies and procedures related to environmental management systems.
16. Define regulations for the Resource Conservation Recovery Act.
17. Describe policies and procedures for handling hazardous waste.
18. Define procedures for dealing with storm water.
19. Define policies and procedures for dealing with asbestos and its abatement.
20. Describe policies and procedures for lead safety.
21. Define methods currently being taken to protect San Francisco Bay.
22. Safely operate a rough terrain vehicle (forklift) to prevent accidents.
23. Discuss self-propelled and boom supported aerial lift safety.

Course Performance & Learning Objectives – Module 3 - Use and Care of Tools

1. Describe safe use of tools and equipment.
2. Identify types of and common use of the following tools:
    a. Screw drivers, pliers and nut drivers.
    b. Wrenches.
    c. Vises and clamps.
    d. Hammers and saws.
    e. Files.
    f. Punches and chisels.
    g. Pipe wrenches, vises and miscellaneous tools.
3. Convert between English and Metric measurements.
4. Use common layout and measuring tools.
5. Use and read common marking tools.
6. Convert construction measurements from fractions to decimal measurements.
7. Properly use:
    a. Pipe cutting tools.
    b. Pipe reaming tools.
    c. Drilling tools.
8. Pipe boring tools.
9. Recognize and use:
    a. Digging and lifting tools and equipment.
    b. Finishing tools and equipment.
    c. Testing tools and equipment.

Syllabus – Year 1, Semester 1 – P 101
Course Title:

Course Performance & Learning Objectives – Module 4 - Pipe and Tube Installations

1. Describe common terms associated with steel pipe.
2. Identify the various types of steel pipe.
3. Identify the various types of fittings for steel pipe.
4. Perform joining methods used for steel pipe.
5. Prepare steel pipe for threading.
6. Use the flanged method of joining steel pipe.
7. Use the grooved coupling method of joining steel pipe.
8. Identify plastic pipe nomenclature.
9. Define plastic pipe materials.
10. Describe plastic pipe features.
11. Identify and properly use plastic pipe fittings.
12. Assemble plastic pipe using multiple joining methods.
13. Identify cast iron pipe nomenclature.
14. Describe cast iron pipe features.
15. Identify the types and uses of fittings.
16. Prepare cast iron joints for joining.
17. Properly cut cast iron pipe.
18. Discuss the components and functions of hangers.
19. Identify fire-stop materials.
20. Describe methods of fire-stop installation.
21. Discuss tube bending procedures.
22. Describe pressure testing.
23. Describe hydrostatic testing.
24. Create water supply mock-up.

Course Performance & Learning Objectives – Module 5 - Soldering and Brazing

1. Describe safe work practices including:
    a. Handling high pressure gas cylinders.
    b. Using torches in soldering and brazing.
    c. Identifying methods of fire prevention.
    d. Using personal protective equipment (PPE).
2. Define the terms generally used in conjunction with the methods used for soldering and brazing copper tube.
3. Identify the common types of fittings used with copper tubing.
4. Describe the manufacture and materials of copper pipe.
5. Describe the manufacture and materials of copper tubing.
6. Describe the types of solders used for joining copper tube.
7. Describe the type of brazing filler metals used for joining copper tube.
8. Describe the types of fluxes used for soldering and brazing copper tube.
9. Prepare and assemble copper joints.
10. Identify the various uses of heating equipment.
11. Perform the soldering process.

Syllabus – Year 1, Semester 1 – P 101
Course Title:

Course Performance & Learning Objectives – Module 5 - Soldering and Brazing, (continued)

12. Prepare and assemble copper joints.
13. Use heating equipment to make a soldered joint.
14. Perform a soldering joint test.
15. Make a brazed joint.
16. Perform a brazed joint test.

Course Policies

1. Both your attendance and participation in class discussions are appreciated, expected and required. Attendance will be taken daily. (For specific guidelines, see the Apprentice Handbook, pg. 23)
2. The class process will include: a) short PowerPoint lectures b) class & group discussions c) writing exercises d) short quizzes e) reading assignments f) videos g) end-of-session and end-of-module assessment.
3. Grading – Please refer to Apprentice Handbook, pg. 20.
4. Instructor's Policies:

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FELLOW APPRENTICES

Name	Telephone Number	Email Address

Commercial Plumbing Apprenticeship Program

Syllabus – Year 1, Semester 2 – P 102
Course Title:

Module 6: Related Math (12 hours)
Module 7: Related Science (27 hours)
Module 8: Fuel Gas Installations (30 hours)
Module 9: Drainage (39 hours)

108 hours (Lecture/Lab)

Class Information	**Instructor Information**
Day(s) – TBD	Name – TBD
Time – TBD	Phone –TBD
Room – TBD	Email – TBD
Day(s) – TBD	Name – TBD
Time – TBD	PH: (408) 453-6330
Room – TBD	Email – TBD

Resources

1. United Association, "Related Mathematics," 2002.
2. Videos from "The UA Related Science Course" CD.
3. International Pipe Trades Joint Training Committee, Inc., "Related Science", 2004.
4. United Association 2000 UPC Plumbing Code, "Gas Installations Manual", 2001
5. Phillips Driscopipe, "Heat Fusion Qualification Guide 6500", 1997.
6. Performance Pipe, "Heat Fusion Procedures and Qualification Guide", 2004.
7. Performance Pipe, "Heat Fusion (Video)", 2004.
8. International Pipe Trades Joint Training Committee, Inc, "Drainage Assignments", Sewage Disposal; 1999.
9. Chevron Chemical Company, "Qualification Procedures for Making Heat Fusion Joints", 1997.
10. American Technical Publishers, "Plumbing Design and Installation", 2006.
11. International Pipe Trades Joint Training Committee, Inc, "Drainage Workbook", 1999.
12. American Technical Publishers, "Plumbing Design and Installation Workbook", Third Edition, Plumbing Traps, 2006.
13. International Association of Plumbing and Mechanical Officials, "Uniform Plumbing Code Study Guide", 2000 Edition.
14. International Pipe Trades Joint Training Committee, Inc, "Drainage", 2001.
15. International Association of Plumbing and Mechanical Officials, "Uniform Plumbing Code", 2000 Edition, 1999.

Syllabus – Year 1, Semester 2 – P 102
Course Title:

Course Performance & Learning Objectives – Module 6 - Related Math

1. Review purpose and functions of fractions.
2. Add fractions.
3. Subtract fractions.
4. Practice adding and subtracting fractions.
5. Multiply fractions.
6. Divide fractions.
7. Practice multiplying and dividing fractions.
8. Perform math operations with decimals.
9. Perform math operations with percentages.
10. Practice working with decimals and percentages.
11. Add and subtract compound units.
12. Convert decimals dimensions to feet and inches.
13. Review triangle basics.
14. Apply Pythagorean Theorem.
15. Use 3-4-5 triangles.
16. Apply triangles to piping applications.
17. Calculate pipe fitting allowances in pipe measurements
18. Define grade as applied to piping problems.
19. Apply grade formulas to piping problems.

Course Performance & Learning Objectives – Module 7 - Related Science

1. Describe properties, peculiarities, and characteristics of water.
2. Define states of matter and units of measurement.
3. Interpret the Periodic Table.
4. Describe the expansion of water.
5. Define temperature changes in substances (specific, sensible and latent heat).
6. Describe vaporization and evaporation.
7. Define characteristics and properties of steam.
8. Describe principles of hydraulics and pneumatics.
9. Define work.
10. Define basic classifications of simple machines.
11. Define prime movers.
12. Describe characteristics of common metals.
13. Differentiate between metals, alloys and synthetics.
14. Describe methods of joining synthetic materials.
15. Describe methods of controlling expansion and contraction issues.
16. Describe properties and methods to control expansion of metals.
17. Measure high temperatures.

Syllabus – Year 1, Semester 2 – P 102
Course Title:

Course Performance & Learning Objectives – Module 7 - Related Science, (continued)

18. Describe properties of solids which depend on cohesive force.
19. Describe hazards and type of corrosion.
20. Anticipate, diagnose and deal with corrosion problems including:
    a. Galvanic cell problems.
    b. Underground piping problems.
    c. Corrosion resistant situations.
    d. Cathodic protection.
    e. Corrosion inhibitors.
    f. Coatings.

Course Performance & Learning Objectives – Module 8 - Fuel Gas Installations

1. Identify the characteristics of fuel gas.
2. Define combustion of fuel gases.
3. Describe types of air needed for combustion.
4. Identify basic styles of burners.
5. Define and identify terms in gas piping installations.
6. Identify approved gas piping materials.
7. Identify approved fittings and appurtenances.
8. Describe approved joining methods.
9. Describe approved installation methods.
10. Describe underground PE piping methods.
11. Identify testing methods and requirements.
12. Describe process required for sizing fuel gas piping.
13. Calculate fuel gas pipe sizes.
14. Construct fuel gas piping system.
15. Discuss appliance installation and venting.
16. Explain the evolution of polyethylene piping.
17. Understand and apply related codes.
18. Recognize various fittings and specialty tools.
19. Join polyethylene pipe.

Course Performance & Learning Objectives – Module 9 - Drainage

1. Describe public health benefits and parameters of sewage disposal.
2. List principles of sewage treatment.
3. List requirements for private sewage disposal systems.
4. Discuss on-site sewage disposal.
5. Describe use of sand filters.
6. Examine alternatives for septic tanks.
7. Explain use of commercial package disposal units.

Course Performance & Learning Objectives – Module 9 – Drainage (continued)

8. Discuss wastewater treatment plants.
9. Use appropriate terminology for sewer and drain piping.
10. Explain function of sewers and drains.
11. Explain basic system principles.
12. Install sewers.
13. Review sewage treatment processes.
14. Install sewers.
15. Identify components of building drainage systems.
16. Explain hydraulic operation of building drainage systems.
17. Describe different types of building drainage systems.
18. Describe types of major appurtenances used in building drainage systems.
19. Identify components and installation requirements for roof drains.
20. Identify components and installation requirements for planter drains.
21. Identify components and installation requirements for ornamental fountain drains.
22. Identify components and installation requirements for floor drains.
23. Identify components and installation requirements for cleanouts in building drainage systems.
24. Identify components and installation requirements for cleanouts in drainage systems.
25. Describe components of gray water systems.
26. Describe use of plumbing traps.
27. Describe use of P-traps.
28. Discuss prohibited traps.
29. Discuss trap seals.
30. Explain causes of trap seal loss.
31. Install different types of traps.
32. Explain principles of drainage system venting.
33. Describe various venting methods.
34. Discuss alternate venting methods.
35. Describe other types of venting methods.
36. Describe effects of hydraulic gradient.
37. Define length restrictions.
38. List installation requirements.
39. Demonstrate proper vent sizing.
40. Demonstrate proficiency in sizing of sanitary drainage and vent piping systems in different types of structures.
41. Sketch sanitary drainage and vent piping systems.
42. Design sanitary drainage and vent piping systems.

Syllabus – Year 1, Semester 2 – P 102
Course Title: Applied and Related Theory

Course Policies

1. Both your attendance and participation in class discussions are appreciated, expected and required. Attendance will be taken daily. (For specific guidelines, see the Apprentice Handbook, pg. 23)
2. The class process will include: a) short PowerPoint lectures b) class & group discussions c) writing exercises d) short quizzes e) reading assignments f) videos g) end-of-session and end-of-module assessment.
3. Grading – Please refer to Apprentice Handbook, pg. 20.
4. Instructor's Policies:

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FELLOW APPRENTICES

Name	Telephone Number	Email Address

Commercial Plumbing Apprenticeship Program

Syllabus – Year 2, Semester 1 – P 201
Course Title:

Module 10: Storm Drains; Interceptors (18 hours)
Module 11: Water Supply (27 hours)
Module 12: Applied Drawing (63 hours)

108 hours (Lecture/Lab)

Class Information	**Instructor Information**
Day(s) – TBD	Name – TBD
Time – TBD	Phone –TBD
Room – TBD	Email – TBD
Day(s) – TBD	Name – TBD
Time – TBD	PH: (408) 453-6330
Room – TBD	Email – TBD

Resources

1. International Pipe Trades Joint Training Committee, Inc, "Drainage", Sewers and Drains, 2001.
2. City of San Jose California website, www.sanjoseca.gov, "San Jose Post Construction Urban Runoff Management Policy", and "Post Construction Hydro-Modification Management Policy".
3. International Association of Plumbing and Mechanical Officials, "Uniform Plumbing Code", 2000 Edition, 1999.
4. Joint Plumbing Apprentice and Journeyman Training, Inc, "A Guide to Service Work", Section L-3, "Troubleshooting Plumbing Systems", 1994.
5. International Association of Plumbing and Mechanical Officials, "Traps and Interceptors", "Mandatory Referenced Standards", 1999.
6. United Association, "Water Supply", 2000.
7. United Association "Related Science", 2000.
8. University of Southern California, "Cross Connection Control Manual".
9. American Technical Publishers, Inc, "Plumbing Design & Installation", 2nd Edition, L.V. Ripka, 2002.
10. International Pipe Trades Joint Training Committee, Inc. "Introduction to Basic Drawing Tools, Measuring Tools, and Lettering Skills", Drawing Interpretation and Plan Reading for United Association Journeyworkers and Apprentices, 2006.
11. International Pipe Trades Joint Training Committee, Inc., "Drawing Interpretation and Plan Reading for United Association Journeyworkers and Apprentices", 2006.

Resources (continued)

12. Michael A. Joyce**,** "Blueprint Reading and Drafting for Plumbers"**.**
13. IAPMO, "Uniform Plumbing Code Study Guide", 2000 Edition.

Course Performance & Learning Objectives – Module 10 - Storm Drains; Interceptors

1. Describe storm water drainage.
2. Describe requirements specific to San Jose.
3. Discuss installation of underground piping.
4. Discuss installation of rainwater piping.
5. Define different types of storm water piping joints.
6. Demonstrate procedures used to make joints.
7. Discuss miscellaneous installation procedures.
8. Describe different types of drains.
9. Discuss roof drainage.
10. Describe use of cleanouts.
11. Demonstrate knowledge of roof drains and cleanouts.
12. List procedures for the removal of blockages.
13. Describe use of conductors, leaders and connections.
14. Test drainage systems.
15. Discuss use of interceptors.
16. Describe use of grease traps and interceptors.
17. List different ways grease interceptors can operate.
18. List ways to remove grease from interceptor.
19. Describe use of other kinds of interceptors and separators.
20. Describe use of modular type oil/water separators.
21. List how to troubleshoot problems with storm water systems.
22. Identify common water distribution system problems.
23. Identify methods to correct common water distribution system problems.
24. Continue installation of water distribution system.

Course Performance & Learning Objectives – Module 11 - Water Supply

1. Describe characteristics of water.
2. Identify sources of water.
3. Define water contaminants.
4. Describe methods used for water purification.
5. Identify water treatment equipment.
6. Define types of water main.
7. Identify sections of the water main.
8. Describe water main piping.
9. Describe water main joining methods.
10. Describe protection devices for water main piping joints.

Syllabus – Year 2, Semester 1 – P 201
Course Title:

Course Performance & Learning Objectives – Module 11 - Water Supply (continued)

11. Describe water service piping systems.
12. Demonstrate the installation of water meter fittings.
13. Demonstrate the installation water service valves.
14. Describe water distribution systems.
15. Define water distribution system requirements.
16. Define building water distribution system design requirements.
17. Define building water distribution system layout methods.
18. Calculate building water distribution pipe sizing.
19. Describe the differences between potable and non-potable piping systems.
20. Identify control devices and describe methods to protect against cross contamination.
21. Identify buildings where cross contamination control devices are required.
22. Identify UPC Code requirements in reference to cross connection control.
23. Define characteristics and properties of hot water.
24. Identify common types of water heaters.
25. Identify hot water safety devices.
26. Continue installation of water distribution system mock up.
27. Demonstrate pressure testing.
28. Demonstrate hydrostatic testing.
29. Finish water supply mock up.
30. Identify five factors that determine size of water piping.
31. Size water supply piping.
32. Size water supply piping in larger installations.
33. Size water supply piping for a four-unit, multi-family dwelling.
34. Size water supply piping for a public building.

Course Performance & Learning Objectives – Module 12 - Applied Drawing

1. Identify basic drafting tools used by journey workers for making sketches.
2. Comply with proper drafting protocol for lines and lettering.
3. Identify importance of location when creating a three-view drawing.
4. Demonstrate the correct method for arranging plan and elevation views.
5. Describe graphic symbols for pipe fittings and valves.
6. Identify various piping symbols.
7. Interpret technical drawings for proper installation of piping systems.
8. Describe riser diagrams.
9. Interpret isometric drawings.
10. Define rules for making isometric drawings.
11. Describe building plans.
12. Describe architectural specifications.
13. Discuss codes from various aspects of building.

14. Apply code information to determine proper code applications from prints from Drawing Interpretation and Plan Reading Building Plans.

Syllabus – Year 2, Semester 1 – P 201
Course Title:

Course Performance & Learning Objectives – Module 12 - Applied Drawing (continued)

15. Identify and describe various plumbing symbols.
16. Discuss features of shop drawings.
17. Describe process of creating a shop drawing.
18. Discuss adding detail to shop drawings
19. Review code sections for UPC Chapter 6, Water Supply and Distribution.
20. Draw water sizing diagram.
21. Interpret ADA requirements for fixture installation.
22. Create ADA compliant drawing for a water closet installation.
23. Create storm drain system.
24. Create interceptor for a commercial application.

Course Policies

1. Both your attendance and participation in class discussions are appreciated, expected and required. Attendance will be taken daily. (For specific guidelines, see the Apprentice Handbook, pg. 23)
2. The class process will include: a) short PowerPoint lectures b) class & group discussions c) writing exercises d) short quizzes e) reading assignments f) videos g) end-of-session and end-of-module assessment.
3. Grading – Please refer to Apprentice Handbook, pg. 20.
4. Instructor's Policies:

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FELLOW APPRENTICES

Name	Telephone Number	Email Address

Commercial Plumbing Apprenticeship Program

Syllabus – Year 2, Semester 2 – P 202
Course Title:

Module 13: Knots and Rigging (15 hours)
Module 14: Builder's Level-Transit (27 hours)
Module 15: Related Electricity (12 hours)
Module 16: Industrial Safety (54 hours)

108 hours (Lecture/Lab)

Class Information	**Instructor Information**
Day(s) – TBD	Name – TBD
Time – TBD	Phone –TBD
Room – TBD	Email – TBD
Day(s) – TBD	Name – TBD
Time – TBD	PH: (408) 453-6330
Room – TBD	Email – TBD

Resources

1. International Pipe Trades Joint Training Committee, Inc., "Rigging", 2004.
2. United Association Journeyworkers & Apprentices, International Pipe Trades Joint Training Committee, Inc, "Related Mathematics", 2002.
3. United Association Journey workers & Apprentices, "Basic Electricity", 2001.
4. McGraw Hill, Hackman, Christian, Ellsworth Hackman, Matthew Hackman, *Hazardous Waste Operations & Emergency Response Manual and Desk Reference*", 2002.
5. Hackman, Christian, Ellsworth Hackman, Matthew Hackman, "Fall Protection", Handout Supplemental.
6. CA/OSHA Consultation Service, Department of Industrial Relations, Easy Ergonomics: "A Practical Approach for Improving the Workplace", 1999 (on pdf on CD).
7. CAL/OSHA (on pdf on CD) Supplemental: Hackman, Christian, Ellsworth Hackman, Matthew Hackman, "Ergonomic Survival Guide for Carpenters & Framers".
8. CAL/OSHA, Supplemental: Hackman, Christian, Ellsworth Hackman, Matthew Hackman, "Respiratory Protection in the Workplace", (on pdf on CD).
9. CAL/OSHA, "Guide to the California Hazard Communication Regulation", (on pdf on CD) Supplemental: Hackman, Christian, Ellsworth Hackman, Matthew Hackman.
10. CAL/OSHA, "Lockout/Blockout", CD, Hackman, Christian, Ellsworth Hackman, Matthew Hackman.
11. CAL/OSHA, "Is it Safe to Enter A Confined Space", (on pdf on CD) Supplemental: Hackman, Christian, Ellsworth Hackman, Matthew Hackman.

Syllabus – Year 2, Semester 2 – P 202
Course Title:

Course Performance & Learning Objectives – Module 13 - Knots and Rigging

1. Identify safety protocol relative to barricade and notification of people in the area.
2. Perform calculations using mathematical formulas to determine the weights of structural shapes, equipment and construction materials.
3. Identify safe work practices when fastening fiber rope to heavy objects.
4. Demonstrate ability to identify and tie types of knots and hitches used for rigging operations.
5. Describe the selection and use of wire rope.
6. Demonstrate knowledge in the selection and use of slings.
7. Demonstrate the proper use of hoisting and jacking equipment.
8. Identify proper rigging hardware and sling configurations.
9. Describe special procedures and safe work practices required during rigging operations using helicopters.
10. Demonstrate types of cranes, operating hazards and capacity factors.
11. Identify industry recognized signals used for hoisting materials and equipment.
12. Demonstrate crane operation for conducting a rigging operation.

Course Performance & Learning Objectives – Module 14 - Builder's Level- Transit

1. Identify process for gaining approval to excavate.
2. Describe elevation concepts.
3. Discuss combination transits and levels.
4. Discuss leveling procedures.
5. Discuss elevation readings.
6. Discuss layout of a line.
7. Identify the process of laying out a line.
8. Describe establishing depth.
9. Discuss invert elevations.
10. Identify stations.
11. Discuss elevation of a ditch.
12. Describe profile drawing.
13. Describe the laser level.

Course Performance & Learning Objectives – Module 15 – Related Electricity

1. Describe electrical safety.
2. Define electricity.
3. Define methods of producing electricity.
4. Explain relationship between magnetism and electricity.
5. Describe rules and laws of electric circuits.
6. Define and calculate Ohm's Law.
7. Describe electrical power and energy.
8. Define simple circuits.
9. Define series circuits.
10. Define parallel circuits.

Syllabus – Year 2, Semester 2 – P 202
Course Title:

Course Performance & Learning Objectives – Module 15 – Related Electricity, continued

11. Define purpose and operation of transformers.
12. Explain operation and common vocabulary of motors.
13. Use electric meters and instruments.

Course Performance & Learning Objectives – Module 16 - Industrial Safety

1. Identify regulators, legislation and HAZWOPER working environment.
2. Describe roles and responsibilities of Federal Regulators.
3. Define HAZWOPER regulations and standards.
4. Differentiate between various agencies definition of Hazardous Waste.
5. Describe characteristics and effects on humans of six categories of toxic hazards.
6. Describe systemic poisons and biohazard toxic hazards.
7. Describe fire hazards.
8. Describe explosive and propellant hazards.
9. Describe corrosive hazards.
10. Describe chemical reactivity hazards.
11. Describe radioactivity hazards.
12. Describe characteristics and effects on humans of six categories of toxic hazards.
13. Describe how toxic materials affect one's health.
14. Describe types of common personal protective equipment and their safe use.
15. Describe types of common fall protection systems and demonstrate their safe use.
16. Describe the importance of using ergonomics to improve the workplace.
17. Describe types of respirators.
18. Identify methods to assess exposure to respiratory hazards.
19. Properly use and maintain various types of respirators
20. Describe the three major systems of signage for hazardous material containers.
21. Become familiar with and use the Emergency Response Guidebook (ERG).
22. Describe program elements and requirements for hazard communication regulation.
23. Describe specific workplace hazards.
24. Describe conditions that require locking out and blocking out of matchinery.
25. Explain the decontamination process.
26. Describe various rescue operations, rescue training, and equipment.
27. Define scientific and regulatory confined space terms.
28. Describe scientific and regulatory confined space terms.
29. List the dangers or potential dangers within or nearby a confined space.
30. Describe the dangers or potential dangers within or nearby a confined space.
31. List control measures for the elimination and controls of hazards.

Syllabus – Year 2, Semester 2 – P 202
Course Title:

Course Policies

1. Both your attendance and participation in class discussions are appreciated, expected and required. Attendance will be taken daily. (For specific guidelines, see the Apprentice Handbook, pg. 23)
2. The class process will include: a) short PowerPoint lectures b) class & group discussions c) writing exercises d) short quizzes e) reading assignments f) videos g) end-of-session and end-of-module assessment.
3. Grading – Please refer to Apprentice Handbook, pg. 20.
4. Instructor's Policies:

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FELLOW APPRENTICES

Name	Telephone Number	Email Address

Commercial Plumbing Apprenticeship Program

Syllabus – Year 3, Semester 1 – P 301
Course Title:

Module 17: Plumbing Fixtures (54 hours)
Module 18: Plumbing Codes (54 hours)

108 hours (Lecture/Lab)

Class Information	**Instructor Information**
Day(s) – TBD	Name – TBD
Time – TBD	Phone –TBD
Room – TBD	Email – TBD
Day(s) – TBD	Name – TBD
Time – TBD	PH: (408) 453-6330
Room – TBD	Email – TBD

Resources

1. International Pipe Trades Joint Training Committee, Inc. "Plumbing Fixtures and Appliances", 2001.
2. International Pipe Trades Joint Training Committee, Inc. "Assignments for Plumbing Fixtures and Appliances", 2001.
3. International Pipe Trades Joint Training Committee, Inc, "Assignments for Plumbing Fixtures and Appliances", 2005.
4. Joint Plumbing Apprentice and Journeyman Training, Inc, "A Guide to Service Work", 1994.
5. ATP Publication, "Plumbing Design and Installation", 2nd edition, 2002.
6. American Technical Publishers, Inc., "Plumbing Design and Installation", 2002.
7. IAPMO. "Uniform Plumbing Code Illustrated Training Manual", International Association of Plumbing and Mechanical Officials.
8. IAPMO, "Uniform Plumbing Code", 2000 Edition, 1999, Chapter 1.
9. IAPMO, "Uniform Plumbing Code Study Guide", 2000 Edition.
10. www.nfpa.org; www.oshpd ; and California Department of Justice website, "Seismic Restraint Manual, SMACNA, 2nd Edition", Feb, 1998.

Syllabus – Year 3, Semester 1 – P 301
Course Title:

Course Performance & Learning Objectives – Module 17 - Plumbing Fixtures

1. Define and classify plumbing fixtures.
2. Describe operation of water closets.
3. Describe flushing action of various types of water closets.
4. Identify names and design features for various types of water closets.
5. Describe design characteristics of various types of water closets.
6. Describe design characteristics and installation procedures for bidets and urinals.
7. Install a wall-hung siphon jet urinal. Describe design characteristics of lavatories.
8. Describe design styles and characteristics of bathtubs and commercial showers.
9. Identify characteristics of service sinks and floor drains.
10. Describe design styles and characteristics of drinking fountains and water coolers.
11. Describe general safety, sanitary and Americans with Disabilities Act principles.
12. Identify requirements for connecting to potable water supply.
13. Describe types and operation of plumbing traps
14. Install a lavatory trap.
15. Install a bath/shower trap.
16. Identify uses of special tools and equipment for setting fixtures.
17. Select and install anchors and fasteners.
18. Install plumbing fixtures requiring wood backing.
19. Demonstrate procedures for installing slab-top lavatory.
20. Identify parts of and function of closet carriers.
21. Describe function of water closet carrier fittings.
22. Calculate measurements for installing water closet.
23. Install flush valve.
24. Sequence and layout plumbing fixtures.
25. Install a control stop and waste valve.
26. Describe fixture supply stops.
27. Describe installation procedures for fixture supply stops.
28. Identify types of traps for waste connections to fixtures.
29. Describe procedures for installing a water closet.
30. Repair a ball cock on a water closet.
31. Install a floor-mounted water closet.
32. Install a wall-mounted lavatory.
33. Describe purposes and types of fixture controls.
34. Describe operation and components of float valves.
35. Describe operation and components of flush valves.
36. Describe operation of vacuum assist water closet flushing cycle.
37. Describe operation of diaphragm direct flush valves.
38. Describe operation of piston type direct flush valves.
39. Describe types and operation of flushing controls for urinals.
40. Describe operation of 120V AC line voltage circuit timers.

Syllabus – Year 3, Semester 1 – P 301
Course Title:

Course Performance & Learning Objectives – Module 17 - Plumbing Fixtures (continued)

41. Describe battery powered automatic flushing devices.
42. Identify types and applications of bedpan cleaners.
43. Describe types and operation of bibb faucets.
44. Disassemble and reassemble a push-button type single lavatory faucet.
45. Describe operation of thermostatic mixing valve water control devices.
46. Describe operation of piston type pressure balancing valves.
47. Describe operation of stoppers and pop-up waste drains.
48. Describe waste cleaning devices and backflow preventers.
49. Install dual control lavatory faucet.
50. Describe operation of water heaters.
51. List components of gas water heaters.
52. Describe operation of gas water heaters.
53. Describe operation of electric water heaters.
54. Install gas water heater.
55. Demonstrate electric water heater installation procedures.
56. List common complaints about hot water heaters.
57. Describe how pressure affects water heater operations.
58. Describe procedures to check continuity between lower E.C.O. terminal and body of valve.
59. List thermocouple troubleshooting procedures.
60. Demonstrate closed circuit testing.
61. Describe how manifold pressures should be measured.
62. List the test procedures for electric water heater components.
63. Test operation of thermocouple on gas hot water heater.
64. Test operation of upper and lower thermostats in electric hot water heater.
65. Replace thermostat on electric hot water heater.
66. Replace screw-in element on electric hot water heater.
67. Fix malfunctions on pressure-flush valve toilets.
68. Demonstrate knowledge of tempering valves.
69. Demonstrate the replacement of stem units.
70. Describe the service requirements of horizontal pumps.
71. Define pump troubleshooting procedures.
72. Discuss circulating pumps.
73. Install circulating pumps.
74. Replace a horizontal pump.
75. Replace the impeller on a pump.
76. Troubleshoot malfunctioning pumps.

Syllabus – Year 3, Semester 1 – P 301
Course Title:

Course Performance & Learning Objectives – Module 18 - Plumbing Codes

1. Describe the importance of testing and inspecting plumbing systems.
2. Identify the various types of plumbing system tests.
3. Coordinate the testing and inspection of plumbing systems.
4. Identify national, state and local standards and codes.
5. Demonstrate knowledge of code sections for UPC Chapter 1, Administration.
6. Demonstrate ability in researching answers to code questions.
7. Define terms in UPC, Chapter 2.
8. Demonstrate knowledge of general regulations as presented in Chapter 3.
9. Demonstrate knowledge of sections for UPC Chapter 3, General Regulations
10. Demonstrate knowledge of codes related to Chapter 4, Plumbing Fixtures and Fixture Fittings in UPC.
11. Demonstrate knowledge of codes related to Plumbing Fixtures and Fixture Fittings as presented in Chapter 4 of UPC.
12. Demonstrate knowledge of code sections for UPC Chapter 4, Plumbing Fixtures and Fixture Fittings including accessibility and ADA requirements.
13. Demonstrate knowledge of codes related to Water Heaters as presented in Chapter 5 of the UPC.
14. Identify and know codes for Water Heaters as presented in the UPC Chapter 5.
15. Demonstrate knowledge of codes related to Water Heaters as presented in Chapter 5 of UPC.
16. Identify and know code sections for UPC Chapter 6, Water Supply and Distribution.
17. Identify and know code sections for UPC Chapter 6, Water Supply and Distribution.
18. Demonstrate knowledge of codes related to Water Supply and Distribution as presented in Chapter 6 of UPC.
19. Describe code sections 701-712 for UPC Chapter 7, Sanitary Drainage Part 1.
20. Describe code sections 713 for UPC Chapter 7, Sanitary Drainage Part 2.
21. Describe code sections 714-723 for UPC Chapter 7, Sanitary Drainage Part 2.
22. Demonstrate knowledge of calculating drainage pipe sizing.
23. Demonstrate knowledge of code sections for UPC Chapter 8, Indirect Wastes.
24. Demonstrate knowledge of code sections for UPC Chapter 9, Vents.
25. Describe code sections for UPC Chapter 10, Traps and Interceptors.
26. Identify sections for UPC Chapter 11, Storm Drainage.
27. Identify and know codes related to Fuel Piping as presented in Chapter 12 of UPC.
28. Demonstrate methods and procedures for sizing fuel gas piping.
29. Identify code sections for UPC Chapter 13, Health Care Facilities.
30. Review questions for UPC Chapter 13, Health Care Facilities.
31. Identify organizations and agencies that have regulations and requirements that relate to plumbing installations.
32. Describe code sections for UPC Chapter 14, Referenced Standards.
33. Review questions for UPC Chapter 14, Referenced Standards.
34. Identify sections for UPC Chapter 15, Firestop Protection.
35. Review questions for UPC Chapter 15, Firestop Protection.

Syllabus – Year 3, Semester 1 – P 301
Course Title:

Course Policies

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4. Instructor's Policies:

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FELLOW APPRENTICES

Name	Telephone Number	Email Address

Commercial Plumbing Apprenticeship Program

Syllabus – Year 3, Semester 2 – P 302
Course Title:

Module 19: Advanced Trade Math (108 hours)

108 hours (Lecture/Lab)

Class Information	**Instructor Information**
Day(s) – TBD	Name – TBD
Time – TBD	Phone –TBD
Room – TBD	Email – TBD
Day(s) – TBD	Name – TBD
Time – TBD	PH: (408) 453-6330
Room – TBD	Email – TBD

Resources

1. Thompson-Delmar Learning, "*Mathematics for Plumbers and Pipefitters*", 6th ed., Smith, Lee, J. Russell Guest, Bartholomew D'Arcangelo, and Benedict D'Arcangelo, 2004.

Course Performance & Learning Objectives – Module 19 - Advanced Trade Math

1. Explain basic rules of mathematics (Unit 1).
2. Use formulas (Unit 2).
3. Solve using formulas/equations (Unit 3).
4. Calculate square root (Unit 4).
5. Measure angles (Unit 5).
6. Convert length measurements (Unit 6).
7. Define standard pipe weights and calculate clearances (Unit 7).
8. Determine allowance for threaded fittings (Unit 8).
9. Define uses of copper tubing and calculate wall thickness (Unit 9).
10. Determine allowances for copper fittings (Unit 10).
11. Define styles, weights, and chemical composition of plastic pipe (Unit 11).
12. Determine allowances for plastic fittings (Unit 12).
13. Define materials and considerations for welded steel pipe (Unit 13).
14. Determine allowances for welded fittings (Unit 14).
15. Calculate equal spacing (Unit 15).
16. Use angles in plumbing (Unit 16).
17. Determine offsets, diagonal, rise and run (Unit 17).
18. Solve for 45° Constants (Unit 18).
19. Calculate pipe diagonals and derive pipe lengths (Unit 19).
20. Calculate three-pipe diagrams with a 45° offset (Unit 20).
21. Use a 45° angle to make a right angle (Unit 21).

Syllabus – Year 3, Semester 2 – P 302
Course Title:

Course Performance & Learning Objectives – Module 19 - Advanced Trade Math (continued)

22. Use a 45° offset with a wye fitting (Unit 22).
23. Use a wye and tee-wye assembly (Unit 23).
24. Find the offset using the length of the diagonal (Unit 24).
25. Solve for other angles (Unit 25).
26. Describe methods and calculations of pipe bending (Unit 26).
27. Allow hubbed and non-hub cast iron pipe (Unit 27).
28. Solve for e-e length and lead amounts of cast iron pipe (Unit 28).
29. Calculate bend offsets (Unit 29).
30. Combine assemblies with cast iron wyes and tee-wyes (Unit 30).
31. Layout single loop back venting (Unit 31).
32. Calculate grade, percent grade, and drop (Unit 32).
33. Calculate elevation and grade (Unit 33).
34. Calculate elevation in a plan view (Unit 34).
35. Calculate two patterns of jumper offsets (Unit 35).
36. Calculate center-to-center and end-to-end lengths for 45° offsets in parallel (Unit 36).
37. Calculate 90° turns with parallel offsets (Unit 37).
38. Calculate rolling offsets (Unit 38).
39. Calculate combination offsets (Unit 39).
40. Create pipe length layouts (Unit 40).
41. Calculate end-to-end measurements using cast iron flanged fittings (Unit 41).
42. Calculate the setback of any miter cut (Unit 42).
43. Design shower pans (Unit 43).
44. Design tank liners (Unit 44).
45. Design a roof flange (Unit 45).
46. Design an elliptical roof opening (Unit 46).
47. Calculate water weights and volumes (Unit 47).
48. Calculate volume of rectangular solids (Unit 48).
49. Calculate volume of cylindrical tanks (Unit 49).
50. Calculate volumes of spheres and half-spheres (Unit 50).
51. Calculate volumes of partly filled tanks (Unit 51).
52. Calculate partial volumes and weights of compound shapes (Unit 52).
53. Calculate water pressure, head and force (Unit 53).
54. Determine ratio of pipe capacities (Unit 54).
55. Use “Unit of Flow” method for pipe sizing (Unit 55).
56. Calculate heat loss for radiator sizes (Unit 56).
57. Calculate radiation sizing for total heat loss of a room (Unit 57).
58. Estimate size of piping (Unit 58).
59. Size ventilation for commercial buildings (Unit 59).
60. Calculate heat loss for an entire house (Unit 60).
61. Define words used in leveling (Unit 61).
62. Keep field notes using the conventions used in site leveling (Unit 62).

Syllabus – Year 3, Semester 2 – P 302
Course Title:

Course Performance & Learning Objectives – Module 19 - Advanced Trade Math (continued)

Course Policies

1. Both your attendance and participation in class discussions are appreciated, expected and required. Attendance will be taken daily. (For specific guidelines, see the Apprentice Handbook, pg. 23)
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3. Grading – Please refer to Apprentice Handbook, pg. 20.
4. Instructor's Policies:

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FELLOW APPRENTICES

Name	Telephone Number	Email Address

Commercial Plumbing Apprenticeship Program

Syllabus – Year 4, Semester 1 – P 401
Course Title:

Module 20: Domestic and Industrial Water Installations (54 hours)
Module 21: Cutting and Welding (54 hours)

108 hours (Lecture/Lab)

Class Information	**Instructor Information**
Day(s) – TBD	Name – TBD
Time – TBD	Phone –TBD
Room – TBD	Email – TBD
Day(s) – TBD	Name – TBD
Time – TBD	PH: (408) 453-6330
Room – TBD	Email – TBD

Resources

1. American Water Works Association, "Water Transmission and Distribution", Principles and Practices of Water Supply Operations, Third Edition, 2003.
2. International Pipe Trades Joint Training Committee, Inc., "Water Supply" for United Association Journeymen and Apprentices, 2000.
3. American Water Works Association, "Water Transmission and Distribution", Third Edition, (2003).
4. United Association, "Pipe, Fittings, Valves, Supports and Fasteners".
5. High Purity Piping Training Program: Module 3, "High Purity Water".
6. "Uniform Plumbing Code": 2000 Edition.
7. University of Southern California – Foundation for Cross-Connection Control and Hydraulic Research, "Manual of Cross-Connection Control", Ninth Edition, 1993.
8. Thompson Delmar Publishing, "Welding Safety", Chapter 1. Welding Principles and Applications, 5th Ed. 2004, Larry Jeffus.
9. http://www.hse.gov.uk/pubns/indg229.pdf, HSE, "Using work equipment safely", Retrieved on March 9, 2007.
10. http://siri.uvm.edu/ppt/yourbacklifting/sldoo1.htm, SIRI, "Your Back Lifting Safety", Retrieved on March 9, 2007.
11. Thompson Delmar Publishing, Jeffus L. (2004), "Welding Principles and Applications", 5th Ed.
12. Victor Equipment Company. (2003), "Oxy-fuel Welding, Cutting & Heating Guide", Form No. 56-0003. St. Louis MO.
13. United Association, International Pipe Trades Joint Committee. (2001), "Oxy-fuel Cutting and Shielded Metal Arc Welding". Reprinted 2004, Washington DC.

Syllabus – Year 4, Semester 1 – P 401
Course Title:

Course Performance & Learning Objectives – Module 20 - Domestic and Industrial Water Installations

1. Describe the operation of municipal water distribution systems.
2. Describe factors required to operate and maintain water distribution systems.
3. Describe the process of water testing.
4. Describe the water treatment process.
5. Describe various aspects of water distribution.
6. Describe the components and operation of high purity water systems (HPW).
7. Identify purification technologies and materials required for HPW system operation.
8. Describe factors required for an effective building water supply
9. Describe backflow connection and cross-connection control.
10. Discuss backflow and backsiphonage prevention assemblies.
11. Follow recommended procedures to assure accurate results of backflow prevention assembly tests completed in the field.

Course Performance & Learning Objectives – Module 21 - Cutting and Welding

1. Discuss the proper techniques for lifting and caring for your back.
2. Identify the various types and proper use of lifting equipment.
3. Illustrate the physical and mechanical properties of pipe.
4. Discuss the aspects of welding, cutting and general shop safety.
5. Discuss the theoretical principles associated with cutting, heating and bending steel.
6. Identify the integral components of the oxy-fuel system and their function.
7. Select appropriate tips and establish the gas pressures for various oxy-fuel operations.
8. Demonstrate the proper assembly of oxy-fuel equipment.
9. Review the proper start up and shut down procedure for using the oxy-fuel torch.
10. Demonstrate the proper techniques associated with the start up, operation and shut down of the torch to cut, heat and bend steel.
11. Supervise the apprentice in their practice of setting up, operating and shutting down the oxy-fuel torch system.
12. Supervise the apprentices in their practice of setting up, operating and shutting down the oxy-fuel torch system.
13. Provide individual guidance for the apprentices as they complete torch cutting activities.
14. Assess the apprentice's skills and recommend repeat of activities as necessary.
15. Illustrate methods of laying out pipe for manual cutting with the torch.
16. Demonstrate the proper techniques associated with cutting steel pipe with the torch.
17. Assess apprentice skills and recommend repeat of torch activities as necessary.
18. Make minor external repairs to equipment and accessories.
19. Illustrate the various methods of beveling plate and pipe.
20. Demonstrate the use of the mechanical beveling machines.

Syllabus – Year 4, Semester 1 – P 401
Course Title:

Course Performance & Learning Objectives – Module 21 - Cutting and Welding (continued)

21. Demonstrate the required techniques for using the oxy-fuel torch to manually bevel steel plate.
22. Supervise each apprentice in their practice of beveling plate with the oxy-fuel torch and mechanical beveling machine.
23. Apply skills and knowledge learned to beveling steel pipe.
24. Assess the apprentice's skills and recommend repeat of activities as necessary.
25. Demonstrate beveling pipe with the oxy-fuel torch beveling machine.
26. Supervise the apprentice in their practice of beveling pipe with the oxy-fuel torch machine.
27. Practice cutting, beveling operations.
28. Introduce the apprentice to plasma arc cutting principles.
29. Introduce the apprentice to the principles of the plasma arc cutting torch.
30. Demonstrate cutting aluminum and stainless steel plate and pipe with the plasma torch.
31. Supervise apprentice's practice of plasma arc cutting aluminum and stainless plate and pipe.
32. Provide an open lab for students to practice, complete lab assignments and prepare for written and practical examinations.
33. Supervise and provide individual instruction of student practice activities.
34. Assess the apprentice's skills and knowledge.
35. Review the basic safety precautions and personal protective equipment required for shielded metal arc welding (SMAW).
36. Illustrate the theoretical principles of shielded metal arc welding.
37. Identify the integral components and assemble the SMAW equipment.
38. Demonstrate striking the arc and producing weld beads on flat plate.
39. Discuss electrodes and the fundamental operating characteristics of SMAW.
40. Review striking the arc and producing flat weld beads on steel plate.
41. Supervise the apprentice in striking the arc and producing flat beads.
42. Demonstrate producing horizontal fillet welds in lap joints.
43. Supervise the apprentice in producing horizontal fillets in lap joints.
44. Demonstrate producing welds in square butt joints in the flat position (1G).
45. Supervise the apprentice's practice by providing individualized instruction of welding in the horizontal lap and flat square butt joints.
46. Discuss and provide examples of weld defects and discontinuities.
47. Discuss the aspects of bead sequencing and bead layers.
48. Demonstrate bead sequencing by producing multi-pass layers of stringer and weave beads in lap and T-joints in the vertical (3F) position.
49. Supervise the apprentice's practice of welding fillets in vertical lap and T joints.
50. Demonstrate welding butt joints in the vertical (3G) position.
51. Demonstrate welding fillets in the overhead (4F) position.
52. Supervise apprentice practice of welding joints in the horizontal (2G), vertical (3G) and overhead (4F) positions.
53. Introduce the apprentice to destructive weld testing techniques.

Syllabus – Year 4, Semester 1 – P 401
Course Title:

Course Performance & Learning Objectives – Module 21 - Cutting and Welding (continued)

54. Demonstrate welding in the overhead position (4G) on steel plate butt joints.
55. Supervise the apprentice's practice of overhead plate welding butt joints.
56. Introduce the apprentice to all position welding and the fit up and tacking of pipe.
57. Demonstrate welding pipe butt joints in the horizontal fixed (5G) position.
58. Conduct destructive testing of groove welded butt joints.
59. Supervise apprentice welding pipe in the horizontal fixed (5G) position.
60. Discuss the principles associated with shielded metal arc welding stainless steel.
61. Determine requirements and lay out parts for the fabrication of brackets and supports.
62. Layout and fabricate according to a drawing.
63. Evaluate fabrications using destructive and non-destructive testing to insure accuracy and weld quality.

Course Policies

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3. Grading – Please refer to Apprentice Handbook, pg. 20.
4. Instructor's Policies:

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FELLOW APPRENTICES

Name	Telephone Number	Email Address

Commercial Plumbing Apprenticeship Program

Syllabus – Year 4, Semester 2 – P 402
Course Title:

Module 22: Advanced Drawing and Blueprint Reading (108 hours)

108 hours (Lecture/Lab)

Class Information	**Instructor Information**
Day(s) – TBD	Name – TBD
Time – TBD	Phone –TBD
Room – TBD	Email – TBD
Day(s) – TBD	Name – TBD
Time – TBD	PH: (408) 453-6330
Room – TBD	Email – TBD

Resources

1. American Technical Publishers, Inc., "Printreading for Residential and Light Commercial Construction Part 2", Fourth Edition, 2005.
2. American Technical Publishers, Inc., "Plumbing – Design and Installation", Second Edition, L.V. Ripka.
3. International Pipe Trades Joint Training Committee, Inc., "Advanced Plan Reading and Related Drawing for United Association Journeymen and Apprentices", 1999.

Course Performance & Learning Objectives – Module 22 - Advanced Drawing and Blueprint Reading

1. Describe basic print reading concepts.
2. Identify common types of drawings.
3. Discuss different types and styles of lines.
4. Describe size description for prints.
5. Describe shape descriptions of prints.
6. Describe written descriptions for prints.
7. Identify print conventions.
8. Identify standard symbols for plumbing that would be used on a construction print.
9. Identify standard electrical symbols for that would be used on a construction print.
10. Describe HVAC symbols that would appear on a construction print.
11. Identify standard architectural symbols that would be used on a construction print.
12. Identify standard plot plan symbols that would be used on a construction print.
13. Identify standard line types that would be used on a construction print.
14. Describe symbols used on prints for wood construction materials.

Syllabus – Year 4, Semester 2 – P 402
Course Title:

Course Performance & Learning Objectives – Module 22 - Advanced Drawing and Blueprint Reading (continued)

15. Identify common types and structural properties of wood.
16. List and describe common types and applications of concrete.
17. Describe common types of masonry construction materials.
18. Explain the function of common types of metal construction materials.
19. List common types of insulation used in building construction.
20. Identify common types of glass products used in building construction.
21. Describe the uses of gypsum products in construction.
22. List common materials used in roofing.
23. Describe common components of electrical systems.
24. List and describe common components used in mechanical systems.
25. Identify fundamental principles of platform framing.
26. Describe common methods of frame construction in addition to platform framing.
27. Identify fundamental principles in monolithic concrete construction.
28. List and describe common types of unit masonry construction.
29. Identify fundamental principles of metal framing.
30. Describe regional considerations for light frame construction.
31. Identify key elements used as a reference when reading plans for the multifamily dwelling.
32. List elements of the multifamily dwelling included in the Site Plan.
33. Identify information contained on the Foundation Plan for the multifamily dwelling.
34. List elements of the multifamily dwelling included on the Penthouse Floor Plan.
35. Describe components of the multifamily dwelling roof design found on the roof plan and details.
36. Describe key components of the multifamily dwelling design found on exterior elevations.
37. Describe types of building information contained on the Section Thru Decks.
38. List information for the multifamily dwelling contained on detail sections and elevations.
39. Describe elements of the multifamily dwelling included on wall and window details.
40. Identify elements included on stairway details for the multifamily dwelling.
41. Describe features that the elevations show for bathrooms and powder rooms of the multifamily dwelling.
42. Describe key components of the design of the commercial building.
43. Identify concrete work specifications for the commercial building.
44. List elements of the rough structure for the commercial building.
45. List and describe building codes that apply to stairways.
46. Identify where information for windows and doors may be found.
47. Describe the operation of the commercial building heating system.
48. Describe key components of the Branch Bank design.
49. List elements of the Branch Bank included on the Site Plan.
50. List elements of the Branch Bank included on the floor plan.
51. Identify information contained in elevations for the Branch Bank.
52. List information found on the foundation plan of the Branch Bank.

Syllabus – Year 4, Semester 2 – P 402
Course Title:

Course Performance & Learning Objectives – Module 22 - Advanced Drawing and Blueprint Reading (continued)

53. Describe components of the Branch Bank steel structure, roof, and lintels.
54. List elements of the Branch Bank included on the sections.
55. Identify information contained on the detail drawings for the Branch Bank.
56. List information for the Branch Bank included on the schedules.
57. Identify information found on the Geometric Plan.
58. List types of information included on the Grading Plan.
59. Describe the contents of the Utility Plan and related project details.
60. Identify common items included on a set of site details.
61. Describe information contained on the Photometric Plan.
62. Identify information found on the Foundation Plan.
63. Describe items found on section drawings.
64. List common information included in structural plans and related details and notes.
65. Identify general information and symbol references found on floor plans.
66. Describe information contained on elevations and schedules related to specific rooms.
67. Describe the purpose of specifications and explain how they are organized according to the CSI MasterFormat ™.
68. List items contained in Division 1 – General Conditions of MasterFormat specifications.
69. Describe common elements found in Division 2 – Site Construction of MasterFormat specifications.
70. List items commonly contained in Division 3 – Concrete and Division 4 – Masonry of MasterFormat specifications.
71. Identify common types of information included in Division 5 – Metals of MasterFormat specifications.
72. Describe common elements found in Division 6 – Wood and Plastics of MasterFormat specifications.
73. Identify information commonly included in Division 7 – Thermal and Moisture Protection of MasterFormat specifications.
74. Identify common types of information contained in Division 8 – Doors and Windows of MasterFormat specifications.
75. Describe common elements found in Division 9 – Finishes of MasterFormat specifications.
76. List types of building features and systems contained in Division 10 – specialties of MasterFormat specifications.
77. Describe common elements found in Division 15 – Mechanical of MasterFormat specifications.
78. Describe common elements found in Division 16 – Electrical of MasterFormat specifications.
79. List common types of exterior finish materials included in takeoff.
80. List common types of interior finish materials included in a takeoff.

Syllabus – Year 4, Semester 2 – P 402
Course Title:

Course Performance & Learning Objectives – Module 22 - Advanced Drawing and Blueprint Reading (continued)

81. Describe items contained in takeoffs for mechanical and electrical systems.
82. Describe basic theory and concepts of Computer Aided Design (CAD).
83. Visually portray CAD applications and its uses in the pipe trades.
84. Identify layout tools.
85. Research layout tools and equipment.
86. Demonstrate ability to use layout tools.
87. Create shop drawings for the commercial building prints.
88. Identify equipment on shop drawing.
89. Describe factors that determine the size of water supply piping.
90. Sizing water supply piping.
91. Describe advanced plan reading and sketching.
92. Discuss sleeve drawing and deck layout.
93. Identify drawing coordination and piping systems design.
94. Describe advanced plan reading and sketching.

Course Policies

1) Both your attendance and participation in class discussions are appreciated, expected and required. Attendance will be taken daily. (For specific guidelines, see the Apprentice Handbook, pg. 23)
2) The class process will include: a) short PowerPoint lectures b) class & group discussions c) writing exercises d) short quizzes e) reading assignments f) videos g) end-of-session and end-of-module assessment.
3) Grading – Please refer to Apprentice Handbook, pg. 20.
4) Instructor's Policies:

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FELLOW APPRENTICES

Name	Telephone Number	Email Address

Commercial Plumbing Apprenticeship Program

Syllabus – Year 5, Semester 1 – P 501
Course Title:

Module 23: Process Piping Installations (54 hours)
Module 24: Medical Gas Installations (54 hours)

108 hours (Lecture/Lab)

Class Information	**Instructor Information**
Day(s) – TBD	Name – TBD
Time – TBD	Phone –TBD
Room – TBD	Email – TBD
Day(s) – TBD	Name – TBD
Time – TBD	PH: (408) 453-6330
Room – TBD	Email – TBD

Resources

1. International Pipe Trades Joint Training Committee, Inc., "High Purity Piping Training Program".
2. Ruth Carranza Production, "Silicon Run", I and II Videos.
3. United Association Medical Gas Certified Instructors, "Certified Medical Gas Systems Installers and Brazer Qualification"- Training Course, 2005.
4. National Fire Protection Association (NFPA), "NFPA 99C Gas and Vacuum Systems", 2005 Edition.
5. Brazing Workmanship Certification.

Course Performance & Learning Objectives – Module 23 - Process Piping Installations

1. Identify risks of working with hazardous materials commonly used in high purity piping installations.
2. Describe information, procedures, regulations, and requirements for safely working with hazardous materials in high purity piping installations.
3. Identify risks of working with common process gases found in high purity piping installations.
4. Describe procedures for safely working with and monitoring process gases.
5. Describe basic principles and requirements of high purity water (HPW) production.
6. Describe theory of operation and processes of typical water purification technologies.
7 Define basic principles of contamination control to ensure process and product purity.

Syllabus – Year 5, Semester 1 – P 501
Course Title:

Course Performance & Learning Objectives – Module 23 - Process Piping Installations (continued)

8. Describe physical and chemical properties of common metal alloys used in high purity piping systems.
9. Describe plastics used in high purity piping systems.
10. Describe proper handling, installation and use of plastic piping in high purity water applications.
11. Describe the importance of maintaining high purity standards for process gases and UPW used in the manufacture of semiconductor devices.
12. Describe the pharmaceutical and biotech manufacturing (bio-pharmaceutical) industry utilities and clean steam parameters.
13. Describe the pharmaceutical and biotech manufacturing (bio-pharmaceutical) industry water treatment.
14. Describe the process of microbiological control during pretreatment and final treatment.
15. Describe water system passivation processes.
16. Describe instrumentation, control and monitoring used within pharmaceutical water systems.
17. Describe validation procedures in a pharmaceutical process.
18. Discuss regulations and standards related to the bio-pharmaceutical industry.
19. Administer the final examination.

Course Performance & Learning Objectives – Module 24 - Medical Gas Installations

1. Present class overview.
2. Describe gas and vacuum systems.
3. Define Level 1 medical air supply systems.
4. Describe medical-surgical vacuum systems.
5. Describe instrument air supply systems and Level 1 valves.
6. Define station outlets and inlets.
7. Describe manufactured assemblies.
8. Identify pressure and vacuum indicators.
9. Describe Level 1 warning systems.
10. Describe Level 1 distribution.
11. Describe performance criteria and testing.
12. Describe Level 1 support gases.
13. Define Level 2 requirements.
14. Define Level 3 requirements.
15. Review material from sessions 1-10.
16. Give practice exam covering all worksheet material.
17. Administer third party exam.
18. Describe brazing medical gas piping.
19. Identify requirements for brazing qualification test.

Syllabus – Year 5, Semester 1 – P 501
Course Title:

Course Performance & Learning Objectives – Module 24 - Medical Gas Installations (continued)

20. Provide the apprentice with opportunity to gain hands-on-experience by practicing brazing.
21. Administer brazing qualification exam.

Course Policies

1. Both your attendance and participation in class discussions are appreciated, expected and required. Attendance will be taken daily. (For specific guidelines, see the Apprentice Handbook, pg. 23)
2. The class process will include: a) short PowerPoint lectures b) class & group discussions c) writing exercises d) short quizzes e) reading assignments f) videos g) end-of-session and end-of-module assessment.
3. Grading – Please refer to Apprentice Handbook, pg. 20.
4. Instructor's Policies:

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FELLOW APPRENTICES

Name	Telephone Number	Email Address

Commercial Plumbing Apprenticeship Program

Syllabus – Year 5, Semester 2 – P 501
Course Title:

Module 25: Customer Service and Administrative Skills (6 hours)
Module 26: Pumps and Valves (24 hours)
Module 27: Tube Bending (12 hours)
Module 28: Code Review (12 hours)
Module 29: Special Topics (54 hours)

108 hours (Lecture/Lab)

Class Information	**Instructor Information**
Day(s) – TBD	Name – TBD
Time – TBD	Phone –TBD
Room – TBD	Email – TBD
Day(s) – TBD	Name – TBD
Time – TBD	PH: (408) 453-6330
Room – TBD	Email – TBD

Resources

1. Joint Plumbing Apprentice & Journeyman Training, Inc. "A Guide to Service Work", 1994.
2. International Pipe Trades Joint Training Committee, Inc., "Pipe, fittings, valves, supports and fasteners for United Association Journeyworkers & Apprentices". Washington, D.C., Author, 2005
3. American Water Works Association, "Water Transmission and Distribution", Third Ed. Denver, CO, 2003.
4. International Pipe Trades Joint Training Committee, Inc., "Water Supply for United Association Journeyworkers & Apprentices", Washington, D.C., 2004.
5. International Pipe Trades Joint Training Committee, Inc., "Pumps for United Association Journeymen & Apprentices", Washington, D.C., 2000.
6. F.J. Callahan, Swagelok Tube Fitters Manual, Swagelok Company, Solon, Ohio USA, 1998.
7. Swagelok—TM Swagelok Company © 1999, 2003 Swagelok Company Printed in U.S.A., "Hand Tube Bender Manual", GLLMa, www.swagelok.com/downloads/webcatalogs/EN/MS-13-43.PDF.
8. IAPMO, Uniform Plumbing Code Illustrated Training Manual.
9. IAPMO, Uniform Plumbing Code 2006 Edition, 2005.
10. IAPMO, Uniform Plumbing Code Study Guide, 2006 Edition.
11. American Technical Publishers, Inc., Plumbing Design and Installation, 2nd Edition, 2002.
12. International Pipe Trades Joint Training Committee, Inc., Plumbing Fixtures and Appliances, 2001.

Syllabus – Year 5, Semester 2 – P 501
Course Title:

Course Performance & Learning Objectives – Module 25 - Customer Service and Administrative Skills

1. Describe characteristics of good public and customer relations.
2. Identify communication skills as they relate to providing good customer service.
3. Discuss how professionalism and ethics are demonstrated on the job.
4. Identify office procedures associated with jobsite work.
5. Identify documentation completed as part of each job.
6. Identify ways to comply with job specifications.
7. Discuss basic computer and technology knowledge.

Course Performance & Learning Objectives – Module 26 - Pumps and Valves

1. Describe pump applications and operating theory.
2. Define terminology used to assess levels of pump and system operation.
3. Describe the operation of various pump designs including:
    a. Identifying the two basic classifications of pumps.
    b. Describing the basic operation of reciprocating type pumps.
    c. Describing the basic operation of rotary type pumps.
    d. Explaining the basic operation of centrifugal pumps.
    e. Describing the design and operation of various centrifugal pump impellers.
4. Apply general rules for proper pump installation.
5. Install and maintain booster pumps.
6. Install and maintain submersible pumps.
7. Install and maintain ejector pumps.
8. Install and maintain circulating pumps.
9. Install and maintain vacuum pumps
10. Describe the design, operation and maintenance of a compressed air system.
11. Understand the function and ratings of valves.
12. Select general purpose valve designs appropriate for basic operating functions.
13. Describe the characteristics of typical general purpose valves.
14. Identify the common variable features available when ordering valves.
15. Describe the factors that are critical to valve installation.
16. Replace selected valve in a plumbing system.
17. Install system controls in a plumbing system.

Syllabus – Year 5, Semester 2 – P 501
Course Title:

Course Performance & Learning Objectives – Module 27 - Tube Bending

1. Discuss general tube bending concepts.
2. Discuss tube bending procedures.
3. The apprentice will get hands-on experience with tube bending.

Course Performance & Learning Objectives – Module 28 - Code Review

1. Review the purpose, procedures and various types of plumbing system tests.
2. Describe national, state and local standards and model codes.
3. Review general information of UPC.
4. Review basic fittings and hangers and supports common to plumbing systems.
5. Review and understand code sections for UPC, Plumbing Fixtures and Fixture Fittings, Chapter 4.
6. Identify ADA requirements for Plumbing Fixtures and fittings regarding accessibility.
7. Review and understand code sections for UPC, Water Heaters, Chapter 5.
8. Review and understand code sections for UPC, Water Supply and Distribution, Chapter 6.
9. Review and understand code sections for UPC, Sanitary Drainage, Chapter 7.
10. Review and understand code sections for UPC, Indirect Wastes, Chapter 8.
11. Review and understand code sections for UPC, Vents, Chapter 9.
12. Review and understand code sections for UPC, Traps and Interceptors, Chapter 10.
13. Review and understand code sections for UPC, Storm Drainage, Chapter 11.
14. Review and understand code sections for UPC, Fuel Piping, Chapter 12.
15. Review and understand code sections for UPC Chapter 13, Health Care Facilities.
16. Demonstrate knowledge of UPC codes by completing Module 28 Final Exam.

Course Performance & Learning Objectives – Special Topics

Apprentices will select two electives from a list of special topics.

Syllabus – Year 5, Semester 2 – P 501
Course Title:

Course Policies

1. Both your attendance and participation in class discussions are appreciated, expected and required. Attendance will be taken daily. (For specific guidelines, see the Apprentice Handbook, pg. 23)
2. The class process will include: a) short PowerPoint lectures b) class & group discussions c) writing exercises d) short quizzes e) reading assignments f) videos g) end-of-session and end-of-module assessment.
3. Grading – Please refer to Apprentice Handbook, pg. 20.
4. Instructor's Policies:

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FELLOW APPRENTICES

Name	Telephone Number	Email Address

Foothill College
Program Application
Associate in Science in Nutrition and Dietetics for Transfer Degree

Item 1. Statement of Program Goals and Objectives

The Associate in Science in Nutrition and Dietetics for Transfer Degree meets the requirements set forth by Education Code section 66746 to prepare students to transfer to the California State University (CSU). Students who complete the Associate in Science in Nutrition and Dietetics for Transfer Degree will be ensured preferential and seamless transfer status to CSUs for Nutrition and Dietetics majors and majors in related disciplines. This program prepares students with foundational knowledge in the science of human nutrition as well as with the skills and knowledge to be successful in upper division coursework at CSUs. Students are advised, however, to meet with a counselor to assess the course requirements for specific CSUs.

Program Learning Outcomes
Upon completion of the Associate in Science in Nutrition and Dietetics for Transfer Degree, students will be able to:

- Utilize knowledge from the physical and biological sciences as a basis for understanding the role of food and nutrients in health and disease processes.
- Use their knowledge from the physical and biological sciences to critically evaluate nutrition information.
- Discuss how nutrition intersects with race and ethnicity, and socioeconomic factors to impact human health.
- Consider the impacts of dietary choices on the environment.

Item 2. Catalog Description

Students who complete the Associate in Science in Nutrition and Dietetics for Transfer Degree will be ensured preferential and seamless transfer status to CSUs for Nutrition and Dietetics majors and majors in related disciplines. This program prepares students with strong foundational knowledge in the science of human nutrition as well as with the skills and knowledge to be successful in upper division coursework at CSUs. Students are advised, however, to meet with a counselor to assess the course requirements for specific CSUs. Students may also review ASSIST to determine whether their desired university destination requires additional coursework (e.g. organic chemistry).

In addition, the student must complete the following:

1. Completion of 90 quarter units that are eligible for transfer to the California State University, including both of the following:
    a. The Inter-segmental General Education Transfer Curriculum (IGETC) or the California State University (CSU) General Education-Breadth Requirements.
    b. A minimum of 27 quarter units in a major or area of emphasis.
2. Obtainment of a minimum grade point average of 2.0.
3. Minimum grade of "C" (or "P") for each course in the major.

Transfer Model Curriculum (TMC) Template for Nutrition and Dietetics
CCC Major or Area of Emphasis: Nutrition and Dietetics
TOP Code: 130600
CSU Major(s): Nutrition and Dietetics
Total Units: 25 *(all units are minimum semester units)*

Template # 2013
Original: 02/01/15

In the four columns to the right under the **College Program Requirements**, enter the college's course identifier, title and the number of units comparable to the course indicated for the TMC. If the course may be double-counted with either CSU-GE or IGETC, enter the GE Area to which the course is articulated. To review the GE Areas and associated unit requirements, please go to Chancellor's Office Academic Affairs page, RESOURCE section located at:

http://extranet.cccco.edu/Divisions/AcademicAffairs/CurriculumandInstructionUnit/TransferModelCurriculum.aspx

or the ASSIST website:

http://web1.assist.org/web-assist/help/help-csu_ge.html.

The units indicated in the template are the **minimum** semester units required for the prescribed course or list. All courses must be CSU transferable. ***All courses with an identified C-ID Descriptor must be submitted to C-ID prior to submission of the Associate Degree for Transfer (ADT) proposal to the Chancellor's Office.***

Where no **C-ID Descriptor** is indicated, discipline faculty should compare their existing course to the example course(s) provided in the TMC at:

http://www.c-id.net/degreereview.html

Attach the appropriate ASSIST documentation as follows:

- *Articulation Agreement by Major* (***AAM***) demonstrating lower division preparation in the major at a CSU;
- *CSU Baccalaureate Level Course List by Department* (***BCT***) for the transfer courses; and/or,
- *CSU GE Certification Course List by Area* (***GECC***).

The acronyms ***AAM, BCT,*** and ***GECC*** will appear in **C-ID Descriptor** column directly next to the course to indicate which report will need to be attached to the proposal to support the course's inclusion in the transfer degree. To access ASSIST, please go to http://www.assist.org.

Associate in Science in Nutrition and Dietetics for Transfer Degree College Name: Foothill College						
TRANSFER MODEL CURRICULUM (TMC)		**COLLEGE PROGRAM REQUIREMENTS**				
Course Title (units)	**C-ID Descriptor**	**Course ID**	**Course Title**	**Units**	**GE Area**	
					CSU	**IGETC**
REQUIRED CORE: (15-21 units)						
Introduction to Nutrition Science (3)	NUTR 110	BIOL 45	Introduction to Human Nutrition	4	B2	5
Introductory Psychology (3)	PSY 110	PSYC 1 or PSYC 1H	General Psychology Honors General Psychology	5 5	D D	4 4
General Chemistry with Lab for Science Majors 1, (5) **OR** General Chemistry for Science Majors Sequence A (10)	CHEM 110 **OR** CHEM 120S	CHEM 1A or CHEM 1AH and CHEM 1B or CHEM 1BH	General Chemistry Honors General Chemistry General Chemistry Honors General Chemistry	5 5 5 5	B1 B1 B1 B1	5 5 5 5

		and CHEM 1C	 General Chemistry & Quantitative Analysis	 5	 B1	 5
Microbiology with Lab (4–5)	***AAM***	BIOL 41	Microbiology	6	B2	5
LIST A: Select one to two (3-13 units) (***** See Notes section)						
General Chemistry for Science Majors Sequence A (5) (If not already used above)	CHEM 120S					
Organic Chemistry with Lab for Science Majors I, (4)	CHEM 150					
Human Anatomy with Lab (4) **OR** Human Physiology with Lab (4) **OR** Human Anatomy and Physiology with Lab (8)*****	BIOL 110B BIOL 120B BIOL 115S	BIOL 40A and BIOL 40B and BIOL 40C	Human Anatomy & Physiology I Human Anatomy & Physiology II Human Anatomy & Physiology III	5 5 5	B2 B2 B2	5 5 5
Introduction to Statistics (3) **OR** Introduction to Statistics in Sociology (3)	MATH 110 **OR** SOCI 125	MATH 10 or MATH 17 or PSYC 7 or SOC 7	Elementary Statistics Integrated Statistics II Statistics for the Behavioral Sciences Statistics for the Behavioral Sciences	5 5 5 5	B4 B4 B4 B4	2 2 2 2
LIST B: Select one (3-4 units)						
Principles of Food with Lab (3)	NUTR 120					
Any course articulated as lower division preparation in the Nutrition and Dietetics major at a CSU.	***AAM***	BIOL 1A BIOL 10 BIOL14 ECON 1A ECON 1B MATH 1A MATH 1AH MATH 12 POLI 1 PSYC 14	Principles of Cell Biology General Biology: Basic Principles Human Biology Principles of Macroeconomics Principles of Microeconomics Calculus Honors Calculus I Calculus for Business & Economics Political Science: Introduction to American Government & Politics Child & Adolescent Development	6 5 5 5 5 5 5 5 5 4	B2, B3 B2, B3 B1 D D B4 B4 B4 D D	5B, 5C 5B, 5C 5A 4 4 2 2 2 4 4

		PSYC 40	Human Development	5	D	4
		SOC 1	Introduction to Sociology	5	D	4
		SOC 1H	Honors Introduction to Sociology	5	D	4
Total Units for the Major:	**25**	**Total Units for the Major:**		39-51		
		Total Units that may be double-counted (*The transfer GE Area limits must not be exceeded)*			20-25	20-25
		General Education (CSU-GE or IGETC) Units			**39**	**37**
		Elective (CSU Transferable) Units			1-18	10-27
		Total Degree Units (maximum)			**60**	

NOTES:

1. *Students cannot be awarded credit for BIOL 110B or BIOL 120B and BIOL 115S. BIOL 115S is a sequence descriptor that effectively consists of both BIOL 110B and BIOL 120B.
2. * List A:
   a. Select one course if CHEM-120S is used in Required Core.
   b. Select two courses if CHEM-110 is used in Required Core.

Foothill College
Program Application - additional information
Associate in Science in Nutrition and Dietetics for Transfer Degree

http://www.nutritioned.org/registered-dietitian.html

Registered Dietitian Salary - Average Income

As of May 2012, the Bureau of Labor Statistics (BLS) of the U.S. Department of Labor states that the mean annual salary for Registered Dietitians nationally was $56,170. At that time, approximately 58,240 persons were employed as dietitians and/or nutritionists across the country. The highest paying state in which dietitians and nutritionists worked at that time was Maryland, where RDs earned an annual mean salary of $82,650. The top paying industry in which dietitians and nutritionists worked was the animal food manufacturing industry, where the annual mean salary of a RD was $88,100.

Registered Dietitian Job Outlook and Demand

Employment projections from the BLS indicate that the job outlook for Registered Dietitians nationwide is quite good. Between the years 2010 and 2020, employment opportunities for Registered Dietitians are expected to increase at a faster than average rate of 20 to 28 percent. There are an estimated 35,400 job openings predicted for dietitians and nutritionists during that decade.

Ensure you're using the current version of this form by downloading a fresh copy from the CCC webpage!

FOOTHILL COLLEGE
Stand-Alone Course Approval Request

If a Foothill credit course is **NOT** part of a State approved associate's degree, certificate of achievement or the Foothill College GE Pattern, it is considered by the State to be a "Stand Alone Course." Per Title 5, local curriculum committees must review and approve proposed stand-alone courses to ensure that they are consistent with credit course standards (§55002), the community college mission and there is sufficient need and resources for the course. To be compliant with State regulations, there must be a completed, approved Stand Alone Form on file in the Office of Instruction.

Per our local process, the same process of review and approval is used for noncredit Stand Alone courses.

Stand Alone Course Approval Requests should be completed and forwarded to your Division Curriculum Committee to begin the approval process.

Course #: C S 55A

Course Title: INTRODUCTION TO CLOUD COMPUTING IN AMAZON WEB SERVICES

Credit Status:

X Credit course
_____ Noncredit course

Catalog Description:

This course introduces cloud computing which shifts information systems from on premises computing infrastructure to highly scalable internet architectures using the Amazon AWS platform. The course provides a basic understanding of cloud computing technologies and provides students with the abilities to configure, deploy and manage cloud facilities including simple and complex compute instances, web servers and web services. The course also demonstrates/makes available the AWS Educate platform for educational, industry career path guidance and career opportunities.

Are you requesting Stand Alone approval for the course on a <u>temporary</u> or <u>permanent</u> basis?

_____ The course will be **permanently** Stand Alone; there are no plans to add it to a State approved degree or certificate, nor to the Foothill GE pattern

X The course will be Stand Alone **temporarily**, and it will be incorporated into a new degree or certificate that is not yet State approved. In this case, identify the degree/certificate to which the course will be added:

AWS Cloud certificate of achievement

- What is the specific timeline for program application/approval? (e.g., is your program application locally approved, or is it still in development and if so, what is your anticipated submission date?)

  We expect this certificate to be offered sometime in the 19-20 academic year

NOTE: *If you have not submitted your program application to the State by the end of the current academic year, you must reapply for permanent Stand Alone approval.*

The Curriculum Committee must evaluate this application based on the following criteria:

Criteria A. Appropriateness to Mission

The Foothill College Mission states: 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.

Please indicate how your course supports the Foothill College Mission (select all that apply):

_____ Transfer
X Workforce/CTE
_____ Basic Skills

Criteria B. Need

A course may only be granted Stand Alone Approval if there is demonstrable need for the course in the college service area. Please provide evidence of the need or demand for your course, such as ASSIST documentation for transfer courses or Labor Market Information for workforce/CTE courses (if LMI is unavailable, advisory board minutes or employer surveys may be submitted). For basic skills courses, assessment-related data or information may be provided.

Evidence may be attached to this form or provided in the box below.

Course will eventually be a requirement for the certificate of achievement in cloud computing.

Criteria C. Curriculum Standards (please initial as appropriate)

ZC The outline of record for this course has been approved the Division Curriculum Committee and meets the requirements of Title 5

Faculty Requestor: Anand Venkataraman **Date:** 1/31/19

Division Curriculum Representative: Zach Cembellin **Date:** 1/31/19

Date of Approval by Division Curriculum Committee: 1/31/19

College Curriculum Co-Chairperson: _____ **Date:** _____

Submissions Course Outline Editor

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Physical Sciences, Mathematics & Engineering

C S 55A INTRODUCTION TO CLOUD COMPUTING IN AMAZON WEB SERVICES

Edit Course Outline

C S 55A **INTRODUCTION TO CLOUD COMPUTING IN AMAZON WEB SERVICES** **Fall 2019**

4 hours lecture, 2 hours laboratory. **4.5 Units**

Total Contact Hours: 72 **(Total of All Lecture and Lab hours X 12)**

Total Student Learning Hours: 168 **(Total of All Lecture, Lab and Out of Class hours X 12)**

Lecture Hours: 4 **Lab Hours:** 2 **Weekly Out of Class Hours:** 8

Note: If Lab hours are specified, the **item 10. Lab Content** field must be completed.

Repeatability -

Statement: Not Repeatable.

Status -

Course Status: Active **Grading:** Letter Grade with P/NP option

Degree Status: Applicable **Credit Status:** Credit

Degree or Certificate Requirement: Stand Alone Course

Foothill GE Status: Non-GE

Articulation Office Information -

C.I.D. Notation:

Transferability: CSU **Validation:** 1/23/2019

Division Dean Information -

Seat Count: 40 **Load Factor:** .121 **FOAP Code:** 114000125111070600

Instruction Office Information -

FSA Code:

Distance Learning: no

Stand Alone Designation: no

Program Title:

Program TOPs Code:

Program Unique Code:

Content Review Date:

Former ID:

Need/Justification -

This course will be a required core course for the upcoming AWS Cloud certificate of achievement.

1. Description -

This course introduces cloud computing which shifts information systems from on premises computing infrastructure to highly scalable internet architectures using the Amazon AWS platform. The course provides a basic understanding of cloud computing technologies and provides students with the abilities to configure, deploy and manage cloud facilities including simple and complex compute instances, web servers and web services. The course also demonstrates/makes available the AWS Educate platform for educational, industry career path guidance and career opportunities.

Prerequisite: None

Co-requisite: None

Advisory: C S 50A.

2. Course Objectives -

The student will be able to:

A. Understand and describe the cloud computing model, history, vendor perspectives and industry offerings
B. Describe how to obtain and actually obtain an Amazon (AWS) account and an Amazon Educate account
C. Understand the current cloud commercial and technical environments
D. Explain the current AWS cloud services, including computing, global infrastructure and data center deployments
E. Understand and navigate the AWS Management Console to manage AWS services and understand the basics of the Identity and Access Management (IAM) interfaces
F. Describe the basics of AWS services costs, costs management, billing and budgeting basic tools
G. Create a basic web server on the AWS platform, enable domain services and upload website content
H. Demonstrate how to implement an example web service (AWS Polly), access it and understand pricing
I. Understand AWS Elastic Compute Services, including instance types, machine images and pricing
J. Explain the purpose and use of the AWS Elastic Cloud (EC 2)
K. Demonstrate how to utilize AWS educational and career offerings

3. Special Facilities and/or Equipment -

A. Access to a computer with a web browser compatible with the Foothill learning management system.
B. A learning management system with an assignment posting component (through which all lab assignments are to be submitted) and a forum component (where students can discuss course material and receive help from the instructor). This applies to all sections, including on campus (i.e., face-to-face) offerings.
C. The college will provide a fully functional and maintained course management system through which the instructor and students can interact.
D. Students must have email accounts and ongoing access to computers with internet capabilities.

4. Course Content (Body of knowledge) -

A. Cloud computing fundamentals
    1. History
    2. Business drivers
    3. Basic concepts and terminology
    4. Goals/benefits
    5. Risks and challenges
    6. Vendor perspectives
    7. Infrastructure as a service (IaaS)
    8. Platform as a service (PaaS)
    9. Software as a service (SaaS)
B. AWS access
    1. AWS account acquisition
    2. AWS Educate account acquisition
C. Cloud adoption
    1. Current state of the cloud
    2. Business benefits and challenges of cloud services
    3. Cloud services offerings in the marketplace
    4. Case studies of AWS customers
D. Cloud services from AWS
    1. Computing with AWS

2. The AWS platform
3. AWS global infrastructure
4. Data center concepts

E. Managing the AWS platform
1. Understanding the AWS management console
2. AWS Identity and Access Management (IAM)
a. Understanding the IAM
b. IAM user management

F. AWS budgets and alarms
1. Free tier offering
2. Establishment of budgets
3. Creation of billing alarms
4. Billing estimation and monthly calculator

G. Hosting a static website in AWS
1. Creating buckets for website objects
2. Configure root domain bucket
3. Enable logging of website
4. Uploading of website content
5. Enabling bucket redirections
6. Testing/debugging of website

H. Introduction to web services
1. AWS Polly service introduction
2. Using AWS Polly
3. AWS Polly pricing
4. AWS Polly technology demonstration

I. Amazon AWS Elastic Compute Cloud (EC2) Services
1. Elastic web-scale computing
2. Administration
3. Integration with AWS services
a. Amazon Simple Storage Service (S3)
b. Amazon Relational Database Service (RDS)
4. EC2 instance types
5. EC2 machine images
6. EC2 pricing
7. Creation of a WordPress site using EC2

J. AWS Educate Platform introduction
1. Features
2. Career pathways
3. Learning plan
4. Career opportunities

5. Repeatability - Moved to header area.

6. Methods of Evaluation -

A. Tests and quizzes
B. Written laboratory assignments which include detailed instructions, sample runs and documentation
C. Final examination

7. Representative Text(s) -

Ryan, M., and F. Lucifredi. AWS System Administration. O'Reilly Publishers, 2018. ISBN-13: 978-1449342579.
Sarkar, Aurobindo, and Amit Shah. Learning AWS: Design, Build, and Deploy Responsive Applications using AWS Cloud Components, 2nd ed. Packt Publishing, 2018. ISBN-13: 978-1787281066.

8. Disciplines -

Computer Science

9. Method of Instruction -

A. Lectures which include motivation for the architecture of the specific topics being discussed.
B. In-person or online labs (for all sections, including those meeting face-to-face/on campus), consisting of:
1. An assignment webpage located on a college-hosted course management system or other department-approved internet environment. Here, the students will review the specification of each assignment and submit their completed lab work.

2. A discussion webpage located on a college-hosted course management system or other department-approved internet environment. Here, students can request assistance from the instructor and interact publicly with other class members.

C. Detailed review of laboratory assignments which includes model solutions and specific comments on the student submissions.
D. In person or online discussion which engages students and instructor in an ongoing dialog pertaining to all aspects of designing, implementing and analyzing programs.
E. When course is taught fully online:
    1. Instructor-authored lecture materials, handouts, syllabus, assignments, tests, and other relevant course material will be delivered through a college-hosted course management system or other department-approved internet environment.
    2. Additional instructional guidelines for this course are listed in the attached addendum of C S department online practices.

10. Lab Content -

A. Investigate the AWS and AWS Educate website and create accounts for the class
B. Current applications of the cloud
    1. From the listing of Amazon Customer Case Studies (aws.amazon.com/solutions/case-studies/all/) select one customer from each of the five different categories (Big Data, Enterprise, Government/Non-Profit, Startups, Web/Mobile Apps)
        a. Describe how they are making use of the AWS platform
        b. Identify their Cloud Maturity Level as defined here: www.rightscale.com/
        c. Explain your reasoning behind why you picked the maturity level you did
        d. As described by the customer, what were some of the benefits they received by moving to cloud? What were some of the risks they faced?
C. Create and configure an AWS Identity and Access Management (IAM) user account
D. Create an AWS budget
E. Create a simple website in AWS
F. Use Amazon Polly service to create text to speech for your website
G. Use Amazon EC2 Services to create an EC2 WordPress instance

11. Honors Description - No longer used. Integrated into main description section.

12. Types and/or Examples of Required Reading, Writing and Outside of Class Assignments -

A. Reading:
    1. Textbook assigned reading averaging 30 pages per week.
    2. Reading the supplied handouts and modules averaging 10 pages per week.
    3. Reading online resources as directed by instructor though links pertinent to programming.
    4. Reading library and reference material directed by instructor through course handouts.
B. Writing:
    1. Writing technical prose documentation that supports and describes the programs that are submitted for grades.

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FOOTHILL COLLEGE
Stand-Alone Course Approval Request

If a Foothill credit course is **NOT** part of a State approved associate's degree, certificate of achievement or the Foothill College GE Pattern, it is considered by the State to be a "Stand Alone Course." Per Title 5, local curriculum committees must review and approve proposed stand-alone courses to ensure that they are consistent with credit course standards (§55002), the community college mission and there is sufficient need and resources for the course. To be compliant with State regulations, there must be a completed, approved Stand Alone Form on file in the Office of Instruction.

Per our local process, the same process of review and approval is used for noncredit Stand Alone courses.

Stand Alone Course Approval Requests should be completed and forwarded to your Division Curriculum Committee to begin the approval process.

Course #: C S 55B

Course Title: DATABASE ESSENTIALS IN AMAZON WEB SERVICES

Credit Status:

X Credit course
_____ Noncredit course

Catalog Description:

This course addresses cloud database management which supports a number of different approaches for storing data. In the course, students define, operate and scale both SQL and noSQL data storage solutions. This course considers factors that should be balanced during the design of a storage solution. Principles are applied by performing exercises using Amazon RDS and SQL to create and fill tables, retrieve and manipulate data. Object-based APIs are used to serialize objects to Amazon DynamoDB for noSQL solutions. Topics include automated backups, transaction logs, restoration and retention.

Are you requesting Stand Alone approval for the course on a temporary or permanent basis?

_____ The course will be **permanently** Stand Alone; there are no plans to add it to a State approved degree or certificate, nor to the Foothill GE pattern

X The course will be Stand Alone **temporarily**, and it will be incorporated into a new degree or certificate that is not yet State approved. In this case, identify the degree/certificate to which the course will be added:

AWS Cloud certificate of achievement

- What is the specific timeline for program application/approval? (e.g., is your program application locally approved, or is it still in development and if so, what is your anticipated submission date?)

  We expect this certificate to be offered sometime in the 19-20 academic year

NOTE: *If you have not submitted your program application to the State by the end of the current academic year, you must reapply for permanent Stand Alone approval.*

The Curriculum Committee must evaluate this application based on the following criteria:

Criteria A. Appropriateness to Mission

The Foothill College Mission states: 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.

Please indicate how your course supports the Foothill College Mission (select all that apply):

_____ Transfer
X Workforce/CTE
_____ Basic Skills

Criteria B. Need

A course may only be granted Stand Alone Approval if there is demonstrable need for the course in the college service area. Please provide evidence of the need or demand for your course, such as ASSIST documentation for transfer courses or Labor Market Information for workforce/CTE courses (if LMI is unavailable, advisory board minutes or employer surveys may be submitted). For basic skills courses, assessment-related data or information may be provided.

Evidence may be attached to this form or provided in the box below.

Course will eventually be a requirement for the certificate of achievement in cloud computing.

Criteria C. Curriculum Standards (please initial as appropriate)

ZC The outline of record for this course has been approved the Division Curriculum Committee and meets the requirements of Title 5

Faculty Requestor: Anand Venkataraman **Date:** 1/31/19

Division Curriculum Representative: Zach Cembellin **Date:** 1/31/19

Date of Approval by Division Curriculum Committee: 1/31/19

College Curriculum Co-Chairperson: _____ **Date:** _____

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Physical Sciences, Mathematics & Engineering

C S 55B DATABASE ESSENTIALS IN AMAZON WEB SERVICES

Edit Course Outline

C S 55B **DATABASE ESSENTIALS IN AMAZON WEB SERVICES** **Fall 2019**

4 hours lecture, 2 hours laboratory. **4.5 Units**

Total Contact Hours: 72 **(Total of All Lecture and Lab hours X 12)**

Total Student Learning Hours: 168 **(Total of All Lecture, Lab and Out of Class hours X 12)**

Lecture Hours: 4 **Lab Hours:** 2 **Weekly Out of Class Hours:** 8

Note: If Lab hours are specified, the **item 10. Lab Content** field must be completed.

Repeatability -

Statement: Not Repeatable.

Status -

Course Status: Active **Grading:** Letter Grade with P/NP option

Degree Status: Applicable **Credit Status:** Credit

Degree or Certificate Requirement: Stand Alone Course

Foothill GE Status: Non-GE

Articulation Office Information -

C.I.D. Notation:

Transferability: CSU **Validation:** 1/23/2019

Division Dean Information -

Seat Count: 40 **Load Factor:** .121 **FOAP Code:** 114000125111070600

Instruction Office Information -

FSA Code:

Distance Learning: no

Stand Alone Designation: no

Program Title:

Program TOPs Code:

Program Unique Code:

Content Review Date:

Former ID:

Need/Justification -

This course will be a required core course for the upcoming AWS Cloud certificate of achievement.

1. Description -

This course addresses cloud database management which supports a number of different approaches for storing data. In the course, students define, operate and scale both SQL and noSQL data storage solutions. This course considers factors that should be balanced during the design of a storage solution. Principles are applied by performing exercises using Amazon RDS and SQL to create and fill tables, retrieve and manipulate data. Object-based APIs are used to serialize objects to Amazon DynamoDB for noSQL solutions. Topics include automated backups, transaction logs, restoration and retention.

Prerequisite: None

Co-requisite: None

Advisory: C S 55A.

2. Course Objectives -

The student will be able to:

A. Apply for an Amazon (AWS) account and Amazon Educate account
B. Understand and describe the basics of database technology, including their need, transactions, indexing, keys and components
C. Demonstrate how to create and interface to an Amazon cloud based Relational Database System (RDS)
D. Understand how to store and access relational data from the cloud RDS through application and programmatic methods
E. Explain the need for and principles of non-relational, unstructured database technology via Amazon DynamoDB
F. Demonstrate how to store and access non-relational data using the DynamoDB through application and programmatic methods
G. Understand and describe how to migrate exiting RDBMS instances into the Amazon RDS system using the AWS Database Migration service
H. Demonstrate the basics of monitoring, managing, backing up and restoring RDS instances using Amazon tools
I. Understand the basics of backing up, restoring and securing using encryption with Amazon DynamoDB instances

3. Special Facilities and/or Equipment -

A. Access to a computer laboratory with web browsers.
B. Website or course management system with an assignment posting component (through which all lab assignments are to be submitted) and a forum component (where students can discuss course material and receive help from the instructor). This applies to all sections, including on campus (i.e., face-to-face) offerings.
C. When taught via Foothill Global Access on the internet, the college will provide a fully functional and maintained course management system through which the instructor and students can interact.
D. When taught via Foothill Global Access on the internet, students must have currently existing email accounts and ongoing access to computers with internet capabilities.

4. Course Content (Body of knowledge) -

A. AWS access
    1. AWS account acquisition
    2. AWS Educate account acquisition
B. Database technology
    1. Commercial database examples
    2. Requirements for database technology versus flat file storage
    3. Transaction processing, including atomicity, consistency, isolation and durability
    4. Indexing principles
    5. Modern Relational Database Systems (RDBMS) components
C. AWS Database Services
    1. Amazon RDS instance creation
D. Storage and access of RDS through remote applications
    1. Remote management of RDS via the HeidiSQL tool
    2. Remote access to RDS through MySQL Workbench tool
    3. RDBMS tables, data, metadata and data types
    4. Basic SQL commands
        a. CREATE TABLE
        b. INSERT INTO

c. DROP TABLE
d. TRUNCATE TABLE
e. Primary Key
5. Creating tables using HeidiSQL and MySQL Workbench
6. Adding data to tables using HeidiSQL and MySQL Workbench
7. Querying data in tables using HeidiSQL and MySQL Workbench
8. Foreign key basics
9. Using HeidiSQL and MySQL Workbench to establish foreign keys
10. Programmatic access to RDS via JavaScript

E. Unstructured databases
1. Introduction and need
a. Concepts of volume, velocity, variety and veracity
b. Introduction to Big Data and example of Amazon Rekognition image analysis service
c. Introduction to Amazon DynamoDB NoSQL database service
1. Tables and table creation
2. Items
3. Primary Key
4. Secondary Index

F. Amazon DynamoDB usage
1. Creating and launching an Amazon DynamoDB table
2. Managing and securing the Amazon DynamoDB instance
3. Basics of JavaScript Object Notation (JSON)
4. Connecting to Amazon DynamoDB via JavaScript

G. Database migration concepts
1. Understanding and using the Amazon Database Migration Service (AWS DMS)
2. Migrating data from source DB to target DB
a. Pricing model
b. Source DB DBMS types

H. Monitoring and managing RDS instances
1. Monitoring fundamentals
a. Performance metrics, including CPU, memory, disk space and input/output operations (IOPS), throughput and connections
b. Monitoring via RDS console
c. Monitoring via Trusted Advisor dashboard
d. Monitoring via Amazon CloudWatch
2. Backup and restore concepts
a. Strategies
b. RDS backup
c. Snapshot creation and restore

I. Managing Amazon DynamoDB instances
1. Backup and restore concepts
2. Creation and restore
3. Encryption

5. Repeatability - Moved to header area.

6. Methods of Evaluation -

A. Tests and quizzes
B. Written laboratory assignments, which include detailed instructions, sample runs and documentation
C. Final examination

7. Representative Text(s) -

Ryan, M., and F. Lucifredi. AWS System Administration. O'Reilly Publishers, 2018. ISBN-13: 978-1449342579.
Sarkar, Aurobindo, and Amit Shah. Learning AWS: Design, Build, and Deploy Responsive Applications using AWS Cloud Components, 2nd ed. Packt Publishing, 2018. ISBN-13: 978-1787281066.

8. Disciplines -

Computer Science

9. Method of Instruction -

A. Lectures which include motivation for the architecture of the specific topics being discussed.
B. In-person or online labs (for all sections, including those meeting face-to-face/on campus), consisting of:

1. An assignment webpage located on a college-hosted course management system or other department-approved internet environment. Here, the students will review the specification of each assignment and submit their completed lab work.
2. A discussion webpage located on a college-hosted course management system or other department-approved internet environment. Here, students can request assistance from the instructor and interact publicly with other class members.

C. Detailed review of laboratory assignments which includes model solutions and specific comments on the student submissions.
D. In person or online discussion which engages students and instructor in an ongoing dialog pertaining to all aspects of designing, implementing and analyzing programs.
E. When course is taught fully online:
    1. Instructor-authored lecture materials, handouts, syllabus, assignments, tests, and other relevant course material will be delivered through a college-hosted course management system or other department-approved internet environment.
    2. Additional instructional guidelines for this course are listed in the attached addendum of C S department online practices.

10. Lab Content -

A. Install node, npm and the MySQLWorkbench
B. Create a standard AWS Relational Database and verify that is is functioning correctly
C. Launch a Relational Database in the cloud
D. Storing relational data in the cloud
    1. Install and verify the dataset of recent bank closures required by the FDIC, the Federal Deposit Insurance Corporation (dataset will be provided)
    2. Install and verify the dataset of about 1000 cameras with 13 properties, including weight, length and price (dataset will be provided)
E. Install and connect to a Amazon DynamoDB noSQL database
F. Perform a variety of experiments with the Amazon DynamoDB
G. Advanced RDS using Advanced DynamoDB facilities

11. Honors Description - No longer used. Integrated into main description section.

12. Types and/or Examples of Required Reading, Writing and Outside of Class Assignments -

A. Reading:
    1. Textbook assigned reading averaging 30 pages per week.
    2. Reading the supplied handouts and modules averaging 10 pages per week.
    3. Reading online resources as directed by instructor though links pertinent to programming.
    4. Reading library and reference material directed by instructor through course handouts.
B. Writing:
    1. Writing technical prose documentation that supports and describes the programs that are submitted for grades.

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FOOTHILL COLLEGE
Stand-Alone Course Approval Request

If a Foothill credit course is **NOT** part of a State approved associate's degree, certificate of achievement or the Foothill College GE Pattern, it is considered by the State to be a "Stand Alone Course." Per Title 5, local curriculum committees must review and approve proposed stand-alone courses to ensure that they are consistent with credit course standards (§55002), the community college mission and there is sufficient need and resources for the course. To be compliant with State regulations, there must be a completed, approved Stand Alone Form on file in the Office of Instruction.

Per our local process, the same process of review and approval is used for noncredit Stand Alone courses.

Stand Alone Course Approval Requests should be completed and forwarded to your Division Curriculum Committee to begin the approval process.

Course #: C S 55C

Course Title: COMPUTE ENGINES IN AMAZON WEB SERVICES

Credit Status:

X Credit course
____ Noncredit course

Catalog Description:

In this course, students explore how cloud computing systems are built using a common set of core technologies, algorithms, and design principles centered around distributed systems. Students will use the Amazon Web Services (AWS) Management Console to provision, load-balance and scale their applications using the Elastic Compute Cloud (EC2) and the AWS Elastic Beanstalk. The course discusses, from a developer perspective, the most important reasons for using AWS and examines the underlying design principles of scalable cloud applications.

Are you requesting Stand Alone approval for the course on a <u>temporary</u> or <u>permanent</u> basis?

____ The course will be **permanently** Stand Alone; there are no plans to add it to a State approved degree or certificate, nor to the Foothill GE pattern

X The course will be Stand Alone **temporarily**, and it will be incorporated into a new degree or certificate that is not yet State approved. In this case, identify the degree/certificate to which the course will be added:

AWS Cloud certificate of achievement

- What is the specific timeline for program application/approval? (e.g., is your program application locally approved, or is it still in development and if so, what is your anticipated submission date?)

  We expect this certificate to be offered sometime in the 19-20 academic year

NOTE: *If you have not submitted your program application to the State by the end of the current academic year, you must reapply for permanent Stand Alone approval.*

The Curriculum Committee must evaluate this application based on the following criteria:

Criteria A. Appropriateness to Mission

The Foothill College Mission states: 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.

Please indicate how your course supports the Foothill College Mission (select all that apply):

_____ Transfer
X Workforce/CTE
_____ Basic Skills

Criteria B. Need

A course may only be granted Stand Alone Approval if there is demonstrable need for the course in the college service area. Please provide evidence of the need or demand for your course, such as ASSIST documentation for transfer courses or Labor Market Information for workforce/CTE courses (if LMI is unavailable, advisory board minutes or employer surveys may be submitted). For basic skills courses, assessment-related data or information may be provided.

Evidence may be attached to this form or provided in the box below.

Course will eventually be a requirement for the certificate of achievement in cloud computing.

Criteria C. Curriculum Standards (please initial as appropriate)

ZC The outline of record for this course has been approved the Division Curriculum Committee and meets the requirements of Title 5

Faculty Requestor: Anand Venkataraman **Date:** 1/31/19

Division Curriculum Representative: Zach Cembellin **Date:** 1/31/19

Date of Approval by Division Curriculum Committee: 1/31/19

College Curriculum Co-Chairperson: _____ **Date:** _____

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Physical Sciences, Mathematics & Engineering

C S 55C COMPUTE ENGINES IN AMAZON WEB SERVICES

Edit Course Outline

C S 55C **COMPUTE ENGINES IN AMAZON WEB SERVICES** **Fall 2019**

4 hours lecture, 2 hours laboratory. **4.5 Units**

Total Contact Hours: 72 **(Total of All Lecture and Lab hours X 12)**

Total Student Learning Hours: 168 **(Total of All Lecture, Lab and Out of Class hours X 12)**

Lecture Hours: 4 **Lab Hours:** 2 **Weekly Out of Class Hours:** 8

Note: If Lab hours are specified, the **item 10. Lab Content** field must be completed.

Repeatability -

Statement: Not Repeatable.

Status -

Course Status: Active **Grading:** Letter Grade with P/NP option

Degree Status: Applicable **Credit Status:** Credit

Degree or Certificate Requirement: Stand Alone Course

Foothill GE Status: Non-GE

Articulation Office Information -

C.I.D. Notation:

Transferability: CSU **Validation:** 1/23/2019

Division Dean Information -

Seat Count: 40 **Load Factor:** .121 **FOAP Code:** 114000125111070600

Instruction Office Information -

FSA Code:

Distance Learning: no

Stand Alone Designation: no

Program Title:

Program TOPs Code:

Program Unique Code:

Content Review Date:

Former ID:

Need/Justification -

This course will be a required core course for the upcoming AWS Cloud certificate of achievement.

1. Description -

In this course, students explore how cloud computing systems are built using a common set of core technologies, algorithms, and design principles centered around distributed systems. Students will use the Amazon Web Services (AWS) Management Console to provision, load-balance and scale their applications using the Elastic Compute Cloud (EC2) and the AWS Elastic Beanstalk. The course discusses, from a developer perspective, the most important reasons for using AWS and examines the underlying design principles of scalable cloud applications.

Prerequisite: None

Co-requisite: None

Advisory: C S 55A.

2. Course Objectives -

The student will be able to:

A. Obtain and manage an Amazon (AWS) account and an Amazon Educate account
B. Describe basic cloud computing concepts and AWS services
C. Apply basic AWS storage services
D. Understand basics of AWS EC2 compute instances
E. Explain and apply principles of AWS Docker Containers via Elastic Container Service (ECS)
F. Demonstrate the principles of Serverless Architectures and Microservices using AWS Lambda Services
G. Explain principles of applications as environments via AWS Elastic Beanstalk
H. Understand and manage scaling of web servers using AWS Elastic Load Balancer
I. Demonstrate principles of provisioning and managing infrastructure using AWS Cloud Formation

3. Special Facilities and/or Equipment -

A. Access to a computer laboratory with web browsers.
B. Website or course management system with an assignment posting component (through which all lab assignments are to be submitted) and a forum component (where students can discuss course material and receive help from the instructor). This applies to all sections, including on campus (i.e., face-to-face) offerings.
C. When taught via Foothill Global Access on the internet, the college will provide a fully functional and maintained course management system through which the instructor and students can interact.
D. When taught via Foothill Global Access on the internet, students must have currently existing email accounts and ongoing access to computers with internet capabilities.

4. Course Content (Body of knowledge) -

A. AWS access
    1. AWS account acquisition
    2. AWS command line interface
    3. AWS Educate account acquisition
B. AWS cloud computing concepts
    1. Business drivers
    2. Cloud computing models
    3. Security and compliance
    4. AWS cloud platform overview
C. AWS storage services
    1. AWS Simple Storage Service (S3) object storage
        a. Creation and management of S3 Buckets via CLI
    2. AWS Glacier archive storage
    3. AWS Elastic File System (EFS) network file storage
        a. Creation of EFS instances via AWS console
    4. AWS Elastic Block Store (EBS)
    5. AWS Snowball data transport service
    6. AWS CloudFront content distribution service
D. AWS EC2 instances
    1. Amazon Machine Instance (AMI) instance types
        a. Machine sizing
        b. System image types
    2. Secure login via key pairs
    3. Storage volumes
    4. Availability zones
    5. IP addressing

6. Virtual network
7. Pricing considerations
8. Security groups

E. AWS Docker Containers
1. Concepts
2. Container benefits
3. ECS Container Service
4. Creation and deployment of Docker images with ECS

F. Serverless Architectures and Microservices
1. Concepts and benefits (Functions as a Service)
2. AWS Lambda programming
3. Serverless best practices
4. Sample programming with Lambda functions employing DynamoDB

G. Application environments using AWS Elastic Beanstalk
1. Create an example Node.js web app using Elastic Beanstalk
2. Manage the application

H. Scaling of web servers using AWS Elastic Load Balancing
1. Creation of scaled and load balanced web application via the web interface
2. Creation of scaled and load balanced web application via the CLI

I. Basics of AWS Cloud Formation
1. Provisioning of infrastructure via JSON templates

5. Repeatability - Moved to header area.

6. Methods of Evaluation -

A. Tests and quizzes
B. Written laboratory assignments, which include detailed instructions, sample runs and documentation
C. Final examination

7. Representative Text(s) -

Ryan, M., and F. Lucifredi. AWS System Administration. O'Reilly Publishers, 2018. ISBN-13: 978-1449342579.
Sarkar, Aurobindo, and Amit Shah. Learning AWS: Design, Build, and Deploy Responsive Applications using AWS Cloud Components, 2nd ed. Packt Publishing, 2018. ISBN-13: 978-1787281066.

8. Disciplines -

Computer Science

9. Method of Instruction -

A. Lectures which include motivation for the architecture of the specific topics being discussed.
B. In-person or online labs (for all sections, including those meeting face-to-face/on campus), consisting of:
1. An assignment webpage located on a college-hosted course management system or other department-approved internet environment. Here, the students will review the specification of each assignment and submit their completed lab work.
2. A discussion webpage located on a college-hosted course management system or other department-approved internet environment. Here, students can request assistance from the instructor and interact publicly with other class members.

C. Detailed review of laboratory assignments which includes model solutions and specific comments on the student submissions.
D. In person or online discussion which engages students and instructor in an ongoing dialog pertaining to all aspects of designing, implementing and analyzing programs.
E. When course is taught fully online:
1. Instructor-authored lecture materials, handouts, syllabus, assignments, tests, and other relevant course material will be delivered through a college-hosted course management system or other department-approved internet environment.
2. Additional instructional guidelines for this course are listed in the attached addendum of C S department online practices.

10. Lab Content -

A. Create AWS IAM Accounts (Root, Student, Professor)
B. Create and manage an AWS S3 Bucket via CLI

C. Create Elastic File System (EFS) via the AWS Console
D. Setup Linux LAMP EC2 Server with the required security settings
E. Setup Linux Server EC2 Instance for use as a template for the other servers in the course
F. Create and configure a Docker Image and deploy with ECS (Module 4)
G. Create a Lambda "Hello World API Gateway Trigger"
H. Create a Lambda function to provide a DynamoDB Read Engine
I. Use Elastic Beanstalk to create, view and deploy a simple Node.js web app
J. Configure and deploy a Classic Elastic Load Balancer and Auto Scaling web servers via the web interface
K. Classic Elastic Load Balancer and Auto Scaling web servers via the CLI and then setup a Scaled and Load-Balanced Application via Command Line Interface

11. Honors Description - No longer used. Integrated into main description section.

12. Types and/or Examples of Required Reading, Writing and Outside of Class Assignments -

A. Reading:
    1. Textbook assigned reading averaging 30 pages per week.
    2. Reading the supplied handouts and modules averaging 10 pages per week.
    3. Reading online resources as directed by instructor though links pertinent to programming.
    4. Reading library and reference material directed by instructor through course handouts.
B. Writing:
    1. Writing technical prose documentation that supports and describes the programs that are submitted for grades.

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FOOTHILL COLLEGE
Stand-Alone Course Approval Request

If a Foothill credit course is **NOT** part of a State approved associate's degree, certificate of achievement or the Foothill College GE Pattern, it is considered by the State to be a "Stand Alone Course." Per Title 5, local curriculum committees must review and approve proposed stand-alone courses to ensure that they are consistent with credit course standards (§55002), the community college mission and there is sufficient need and resources for the course. To be compliant with State regulations, there must be a completed, approved Stand Alone Form on file in the Office of Instruction.

Per our local process, the same process of review and approval is used for noncredit Stand Alone courses.

Stand Alone Course Approval Requests should be completed and forwarded to your Division Curriculum Committee to begin the approval process.

Course #: C S 55D

Course Title: SECURITY IN AMAZON WEB SERVICES

Credit Status:

X Credit course
_____ Noncredit course

Catalog Description:

This course focuses on protecting the confidentiality, integrity and availability of computing systems and data. Students learn how Amazon Web Service (AWS) uses redundant and layered controls, continuous validation and testing, and a substantial amount of automation to ensure the underlying infrastructure is continuously monitored and protected. Students examine the AWS Shared Responsibility Model and access the AWS Management Console to learn more about security tools and features provided by the AWS platform.

Are you requesting Stand Alone approval for the course on a <u>temporary</u> or <u>permanent</u> basis?

_____ The course will be **permanently** Stand Alone; there are no plans to add it to a State approved degree or certificate, nor to the Foothill GE pattern

X The course will be Stand Alone **temporarily**, and it will be incorporated into a new degree or certificate that is not yet State approved. In this case, identify the degree/certificate to which the course will be added:

AWS Cloud certificate of achievement

- What is the specific timeline for program application/approval? (e.g., is your program application locally approved, or is it still in development and if so, what is your anticipated submission date?)

  We expect this certificate to be offered sometime in the 19-20 academic year

NOTE: *If you have not submitted your program application to the State by the end of the current academic year, you must reapply for permanent Stand Alone approval.*

The Curriculum Committee must evaluate this application based on the following criteria:

Criteria A. Appropriateness to Mission

The Foothill College Mission states: 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.

Please indicate how your course supports the Foothill College Mission (select all that apply):

_____ Transfer
X Workforce/CTE
_____ Basic Skills

Criteria B. Need

A course may only be granted Stand Alone Approval if there is demonstrable need for the course in the college service area. Please provide evidence of the need or demand for your course, such as ASSIST documentation for transfer courses or Labor Market Information for workforce/CTE courses (if LMI is unavailable, advisory board minutes or employer surveys may be submitted). For basic skills courses, assessment-related data or information may be provided.

Evidence may be attached to this form or provided in the box below.

Course will eventually be a requirement for the certificate of achievement in cloud computing.

Criteria C. Curriculum Standards (please initial as appropriate)

ZC The outline of record for this course has been approved the Division Curriculum Committee and meets the requirements of Title 5

Faculty Requestor: Anand Venkataraman **Date:** 1/31/19

Division Curriculum Representative: Zach Cembellin **Date:** 1/31/19

Date of Approval by Division Curriculum Committee: 1/31/19

College Curriculum Co-Chairperson: _____ **Date:** _____

Submissions Course Outline Editor

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Physical Sciences, Mathematics & Engineering

C S 55D SECURITY IN AMAZON WEB SERVICES

Edit Course Outline

C S 55D **SECURITY IN AMAZON WEB SERVICES** **Fall 2019**

4 hours lecture, 2 hours laboratory. **4.5 Units**

Total Contact Hours: 72 **(Total of All Lecture and Lab hours X 12)**

Total Student Learning Hours: 168 **(Total of All Lecture, Lab and Out of Class hours X 12)**

Lecture Hours: 4 **Lab Hours:** 2 **Weekly Out of Class Hours:** 8

Note: If Lab hours are specified, the **item 10. Lab Content** field must be completed.

Repeatability -

Statement: Not Repeatable.

Status -

Course Status: Active **Grading:** Letter Grade with P/NP option

Degree Status: Applicable **Credit Status:** Credit

Degree or Certificate Requirement: Stand Alone Course

Foothill GE Status: Non-GE

Articulation Office Information -

C.I.D. Notation:

Transferability: CSU **Validation:** 1/23/2019

Division Dean Information -

Seat Count: 40 **Load Factor:** .121 **FOAP Code:** 114000125111070600

Instruction Office Information -

FSA Code:

Distance Learning: no

Stand Alone Designation: no

Program Title:

Program TOPs Code:

Program Unique Code:

Content Review Date:

Former ID:

Need/Justification -

This course will be a required core course for the upcoming AWS Cloud certificate of achievement.

1. Description -

This course focuses on protecting the confidentiality, integrity and availability of computing systems and data. Students learn how Amazon Web Service (AWS) uses redundant and layered controls, continuous validation and testing, and a substantial amount of automation to ensure the underlying infrastructure is continuously monitored and protected. Students examine the AWS Shared Responsibility Model and access the AWS Management Console to learn more about security tools and features provided by the AWS platform.

Prerequisite: None

Co-requisite: None

Advisory: C S 55A.

2. Course Objectives -

The student will be able to:

A. Apply for an Amazon (AWS) account and Amazon Educate account
B. Demonstrate the basics of the AWS Security and Compliance Principles
C. Understand and describe the Shared Responsibility model and AWS configuration
D. Configure the AWS Identity Access Management (IAM) system
E. Use the AWS CloudTrail and CloudWatch services
F. Understand Inspector and Trusted Advisor services
G. Configure AWS Virtual Private Cloud (VPC) and Route 53 (DNS) services
H. Understand principles of AWS CloudFront (content distribution), WAF (web access firewall) and Shield services (DDoS protection)
I. Demonstrate the Key Management Service and use best practices

3. Special Facilities and/or Equipment -

A. Access to a computer laboratory with web browsers.
B. Website or course management system with an assignment posting component (through which all lab assignments are to be submitted) and a forum component (where students can discuss course material and receive help from the instructor). This applies to all sections, including on campus (i.e., face-to-face) offerings.
C. When taught via Foothill Global Access on the internet, the college will provide a fully functional and maintained course management system through which the instructor and students can interact.
D. When taught via Foothill Global Access on the internet, students must have currently existing email accounts and ongoing access to computers with internet capabilities.

4. Course Content (Body of knowledge) -

A. AWS access
    1. AWS account acquisition
    2. AWS command line interface
    3. AWS Educate account acquisition
B. Introduction to AWS Security and Compliance Principles
    1. Shared responsibility model
    2. AWS security responsibilities
    3. Customer security responsibilities
    4. AWS Compliance Program standards and practices
    5. Physical and environmental security
    6. Business continuity management
    7. Network security
    8. AWS account security features
C. Shared Responsibility Model and AWS configuration
    1. AWS Secure Global Infrastructure
    2. Using the AWS Identity and Access Management service (IAM)
    3. Review AWS regions, availability zones and endpoints
    4. Security basics for:
        a. Infrastructure services (EC2 compute, EBS block store, VPC virtual private cloud)
        b. Container services
        c. Abstracted services (S3 data, database, queuing)
    5. AWS configuration principles
        a. AWS configuration review
        b. Resource administration
        c. Auditing and compliance

        d. Change management and troubleshooting
        e. Security analysis
D. Identity Access Management (IAM)
    1. IAM features
    2. IAM principles
        a. Principal
        b. Request
        c. Authentication
        d. Authorization
        e. Actions
        f. Resources
    3. IAM users
    4. Permissions and policies
    5. Practical IAM usages
        a. Assigning users
        b. IAM administration of users and groups
        c. IAM command line interface
        d. IAM multi-factor authentication
E. AWS CloudTrail and CloudWatch fundamentals
    1. CloudTrail concepts (governance, compliance, operational/risk auditing)
        a. CloudTrail fundamentals
        b. Workflow
        c. Regions
        d. Log files
    2. CloudWatch concepts
        a. Monitoring
        b. Access methods
        c. Related AWS services
        d. Principles of operation
        e. More concepts
            1. Namespaces
            2. Metrics
            3. Dimensions
            4. Statistics
            5. Percentiles
            6. Alarms
    3. Setup and usage
F. Inspector and Trusted Advisor
    1. Inspector concepts and fundamentals
        a. Analysis of behavior of AWS resources security issues
        b. Basic features
        c. Pricing
        d. Access methods
        e. Terminology and concepts
        f. Service limits
        g. Regions and platforms
        h. Setup
        i. Assessment targets and instance tags
        j. Inspector agent
            1. Walk through with Ubuntu Server
            2. Agent privileges
            3. Agent security
            4. Agent updates
            5. Access control
    2. Trusted Advisor best practices checks
        a. Cost optimization
        b. Fault tolerance
        c. Service limits
        d. Security
        e. Performance
G. Virtual Private Cloud (VPC) and Route 53 (DNS)
    1. VPC fundamentals
        a. Virtual private clouds and subnets
        b. Default and non-default VPCs
        c. Internet access
        d. Tunneling access
        e. AWS PrivateLink
        f. VPC with other Amazon Services
        g. Access methods
        h. Launching VPC

1. VPC creation
2. Security group creation
3. Launching Instances into the VPC

i. Scenarios and examples of VPCs

2. Route 53 fundamentals
    a. Domain registration
    b. DNS service
    c. Health checking
    d. Routing and resource sets

H. CloudFront, WAF and Shield Services
1. CloudFront
    a. Principles of operation
    b. Setup
    c. Use cases
    d. Locations and IP addressing
    e. Access control lists
2. WAF and Shield Services
    a. DDOS review and attack types
    b. AWS DDoS response team
    c. Use cases

I. Key Management and best practices
1. Customer master keys
2. Data keys
3. Envelope encryption
4. Encryption context
5. Key policies
6. Grants
7. Grant tokens
8. Auditing CMK usage
9. Key Management Infrastructure
10. Key usage
    a. Key creation
    b. Viewing keys
11. Best practices overview

5. Repeatability - Moved to header area.

6. Methods of Evaluation -

A. Tests and quizzes
B. Written laboratory assignments, which include detailed instructions, sample runs and documentation
C. Final examination

7. Representative Text(s) -

Anthony, Albert. Mastering AWS Security: Create and Maintain a Secure Cloud Ecosystem. Packt Publishing, 2017. ISBN-13: 9781788293723.

8. Disciplines -

Computer Science

9. Method of Instruction -

A. Lectures which include motivation for the architecture of the specific topics being discussed.
B. In-person or online labs (for all sections, including those meeting face-to-face/on campus), consisting of:
    1. An assignment webpage located on a college-hosted course management system or other department-approved internet environment. Here, the students will review the specification of each assignment and submit their completed lab work.
    2. A discussion webpage located on a college-hosted course management system or other department-approved internet environment. Here, students can request assistance from the instructor and interact publicly with other class members.
C. Detailed review of laboratory assignments which includes model solutions and specific comments on the student submissions.
D. In person or online discussion which engages students and instructor in an ongoing dialog pertaining to all aspects of designing, implementing and analyzing programs.
E. When course is taught fully online:

1. Instructor-authored lecture materials, handouts, syllabus, assignments, tests, and other relevant course material will be delivered through a college-hosted course management system or other department-approved internet environment.
2. Additional instructional guidelines for this course are listed in the attached addendum of C S department online practices.

10. Lab Content -

A. Create necessary AWS accounts
B. Configure AWS Config to monitor all AWS resources in your region
C. Establish an IAM group for managing your sites
D. Enable CloudTrail by creating a trail and configuring it to record all API call from all AWS regions
E. Establish a CloudWatch Billing Alarm, setup an alarm to trip when your billing reaches $100.00 and have the alarm signaled by an SMS message
F. Establish a CloudWatch Event Rule to monitor EC2 instance state changes resulting in termination of the instance
G. Launch an Amazon Linux instance and install and configure Linux Inspector
H. Configure Trusted Advisor to monitor security events
I. Configure a Virtual Private Cloud (VPC) instance with public and private subnets and launch an EC2 instance in each subnet
J. Setting up an instance of the AWS Web Application Firewall (WAF) protection against common attacks
    1. Protect against:
        a. Cross-site scripting attacks
        b. SQL injection attacks
        c. Attacks from known bad IP addresses
    2. Associate your WAF ACL to your CloudFront Distribution
K. Setup the pre-configured WAF ACL, rules and conditions for Lambda provided by AWS

11. Honors Description - No longer used. Integrated into main description section.

12. Types and/or Examples of Required Reading, Writing and Outside of Class Assignments -

A. Reading:
    1. Textbook assigned reading averaging 30 pages per week.
    2. Reading the supplied handouts and modules averaging 10 pages per week.
    3. Reading online resources as directed by instructor though links pertinent to programming.
    4. Reading library and reference material directed by instructor through course handouts.
B. Writing:
    1. Writing technical prose documentation that supports and describes the assignment that are submitted for grades.

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FOOTHILL COLLEGE
Stand-Alone Course Approval Request

If a Foothill credit course is **NOT** part of a State approved associate's degree, certificate of achievement or the Foothill College GE Pattern, it is considered by the State to be a "Stand Alone Course." Per Title 5, local curriculum committees must review and approve proposed stand-alone courses to ensure that they are consistent with credit course standards (§55002), the community college mission and there is sufficient need and resources for the course. To be compliant with State regulations, there must be a completed, approved Stand Alone Form on file in the Office of Instruction.

Per our local process, the same process of review and approval is used for noncredit Stand Alone courses.

Stand Alone Course Approval Requests should be completed and forwarded to your Division Curriculum Committee to begin the approval process.

Course #: NCEL 426

Course Title: HIGH-INTERMEDIATE GRAMMAR

Credit Status:

_____ Credit course
X Noncredit course

Catalog Description:

A non-credit high-intermediate English course focusing on verb tenses, gerunds, infinitives, modal verbs in present, past, real present and future conditionals.

Are you requesting Stand Alone approval for the course on a temporary or permanent basis?

_____ The course will be **permanently** Stand Alone; there are no plans to add it to a State approved degree or certificate, nor to the Foothill GE pattern

X The course will be Stand Alone **temporarily**, and it will be incorporated into a new degree or certificate that is not yet State approved. In this case, identify the degree/certificate to which the course will be added:

English as a Second Language-Intermediate certificate of completion (noncredit)

- What is the specific timeline for program application/approval? (e.g., is your program application locally approved, or is it still in development and if so, what is your anticipated submission date?)

  Plan to submit in late June, 2019

NOTE: *If you have not submitted your program application to the State by the end of the current academic year, you must reapply for permanent Stand Alone approval.*

The Curriculum Committee must evaluate this application based on the following criteria:

Criteria A. Appropriateness to Mission

The Foothill College Mission states: 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.

Please indicate how your course supports the Foothill College Mission (select all that apply):

_____ Transfer
_____ Workforce/CTE
X Basic Skills

Criteria B. Need

A course may only be granted Stand Alone Approval if there is demonstrable need for the course in the college service area. Please provide evidence of the need or demand for your course, such as ASSIST documentation for transfer courses or Labor Market Information for workforce/CTE courses (if LMI is unavailable, advisory board minutes or employer surveys may be submitted). For basic skills courses, assessment-related data or information may be provided.

Evidence may be attached to this form or provided in the box below.

Student need:
Learning a language is not a linear path though the paths the students must take are often structured in such a way. Instead, students must be able to revisit these skills, as language learning is typically a recursive process. To this end, NCEL 426 gives NCEL students the chance to take a class that may be financially out of reach otherwise. Offering this mirrored course may also help transfer rates by acting as a bridge for students who have the skills to succeed in a credit class but lack the confidence or familiarity with community colleges to make the leap. For students pursuing career paths, offering students the option to take the course non-credit makes the course more equitable as it reduces the cost for students who only want to improve their English skills not earn college credit. This course could also be taken by credit students as a low-stakes support or review course which may be more valuable than ever now in light of the changes made due to AB705 legislation.

Need in our service area:
Our service area is one of the most diverse regions in the world and has a large need for ESL classes and specifically lower level ESL courses, as "Immigrants comprise more than 45 percent of Silicon Valley's total labor force. While the majority of the immigrant workforce in San Mateo and Santa Clara Counties are fluent in English, about 21 percent are English language learners. About 47 percent of adult English language learners have household incomes that are below 250 percent of the federal poverty level, compared to 28 percent of the overall adult population" – National Immigration Forum on Building the Skills of the Immigrant Workforce in Silicon Valley (2017). There are many adult learners in the area who need to improve their English level to improve their standard of living and the "Non-credit ESL classes offered by some community colleges are a critical bridge between beginning/intermediate ESL and the higher level needed for college courses" - Silicon Valley Allies Research Brief (2015). NCEL 426 would benefit many of the residents in our service area who do not need college credit but do need low-cost and low-stakes ESL classes to improve standard of living.

Criteria C. Curriculum Standards (please initial as appropriate)

_____ The outline of record for this course has been approved the Division Curriculum Committee and meets the requirements of Title 5

Faculty Requestor: Amy Sarver **Date:** 4/18/19

Division Curriculum Representative: Stephanie Chan **Date:** 4/19/19

Date of Approval by Division Curriculum Committee: 4/19/19

College Curriculum Co-Chairperson: _____ **Date:**

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Language Arts

NCEL 426 HIGH-INTERMEDIATE GRAMMAR

Edit Course Outline

NCEL 426 **HIGH-INTERMEDIATE GRAMMAR** **Fall 2019**

5 hours lecture. **0 Units**

Total Contact Hours: 60 **(Total of All Lecture and Lab hours X 12)**

Total Student Learning Hours: 60 **(Total of All Lecture, Lab and Out of Class hours X 12)**

Lecture Hours: 5 **Lab Hours:** **Weekly Out of Class Hours:**

Note: If Lab hours are specified, the **item 10. Lab Content** field must be completed.

Repeatability -

Statement: Unlimited Repeatability.

Criteria: Students can repeat the course to build their basic language skills.

Status -

Course Status: Active **Grading:** Pass No Pass

Degree Status: Non-Applicable **Credit Status:** Non-Credit

Degree or Certificate Requirement: Stand Alone Course

Foothill GE Status: Non-GE

Articulation Office Information -

C.I.D. Notation:

Transferability: **Validation:** 4/29/19

Division Dean Information -

Seat Count: 25 **Load Factor:** .076 **FOAP Code:** 114000152013493085

Cross Listed as:

Related ID: ESLL 226

Instruction Office Information -

FSA Code:

Distance Learning: no

Stand Alone Designation: no

Program Title:

Program TOPs Code:

Program Unique Code:

Content Review Date:

Former ID:

Need/Justification -

This course prepares students for credit coursework in preparation for the composition course requirement for the AA/AS degree and/or transfer to UC/CSU. Additionally, will be included in an enhanced noncredit certificate, currently in development.

1. Description -

A noncredit high-intermediate English course focusing on verb tenses, gerunds, infinitives, modal verbs in present, past, real present and future conditionals.

Prerequisite: None

Co-requisite: None

Advisory: Designed for students whose native language is not English; concurrent enrollment in ESLL 227 or NCEL 427 recommended; completion of noncredit ESL sequence or previous ESL coursework at Adult School is recommended.

2. Course Objectives -

The student will be able to:

A. Correctly identify and use the following structures: verb tenses, gerunds, infinitives, modal verbs in present, past, real present and future conditionals
B. Write original sentences, dialogues, and short paragraphs using the above-mentioned structures
C. Recognize and edit for common sentence-level errors with the above-mentioned structures

3. Special Facilities and/or Equipment -

None.

4. Course Content (Body of knowledge) -

A. Correctly identify and use the following structures:
    1. Verb tenses in active voice
        a. Simple present and present progressive
        b. Simple past and past progressive
            1. Separate and in combination with each other
        c. Future and future progressive
            1. Future time clauses
        d. Present perfect and present perfect progressive
        e. Past perfect and past perfect progressive
    2. Introduction to passive voice
        a. Simple present tense
        b. Simple past tense
    3. Gerunds and infinitives
        a. Gerunds as subjects
        b. Gerunds following certain verbs
        c. Gerunds following prepositions
        d. Gerunds in contrast to infinitives following stop, forget, remember
        e. Infinitives following certain verbs
        f. Infinitives requiring an object
        g. Infinitives without to: make, let, help, have
    4. Modal and modal-like verbs (review of common modal verbs)
        a. Ability
        b. Advice
        c. Necessity and non-necessity
        d. Prohibition
        e. Future possibility
        f. Assumptions (degrees of certainty)
    5. Modal verbs in the past
        a. Advisability and regret
        b. Speculations and conclusions
    6. Real present conditionals
        a. Use of if, when, whenever

7. Real future conditionals
    a. Use of if, when, unless
    b. Use of future time clauses

B. Write original sentences, dialogues, and short paragraphs using the above-mentioned structures with correct capitalization, punctuation, and sentence boundaries
    1. Write original sentences based on exercises from the book
    2. Write original dialogues which give a context to the structures
    3. Write original paragraphs based on models from the book or teacher-generated models

C. Recognize and edit for common sentence-level errors with the above-mentioned structures
    1. Tense
        a. Incomplete verb form
        b. Incorrect verb form
        c. Inconsistency of tense
            1. Time markers not followed
        d. Incorrect tense
    2. Question formation
        a. Wh and yes/no questions
            1. With be verb (inversion)
            2. With do support for other verbs
                a. No do when asking about the subject
    3. Gerunds and infinitives
        a. Gerund or infinitive following wrong verb
        b. Object missing before infinitive when required
    4. Modals
        a. Modal verb form
        b. Second verb always base form

5. Repeatability - Moved to header area.

6. Methods of Evaluation -

1. Quizzes and tests to assess the targeted structures
    a. Fill-in-the-blank
    b. Question formation
    c. Providing answers to questions
    d. Sentence combining
    e. Original sentences in response to a task
    f. Error correction
2. Final exam covering all of the body of knowledge
3. Original paragraphs
    a. Based on models from the textbook
    b. Based on the shared viewing of a picture, film, skit

7. Representative Text(s) -

Instructors must choose a textbook from the list below. If, however, a faculty member would prefer to use a textbook not on the list, he or she must contact a full-time faculty member who regularly teaches the course to explain how the adoption would serve to achieve the learning outcomes specified in the course outline of record. We encourage the faculty to share new adoptions with colleagues, solicit feedback, and suggest additions to the list of recommended textbooks.

Azar, Betty. Understanding and Using English Grammar. 5th ed. White Plains, NY: Pearson Longman, 2016.
Azar, Betty. Understanding and Using English Grammar. Vol. A, 5th ed. White Plains, NY: Pearson Longman, 2016. (This is first half of the book listed above.)
Fuchs, Marjorie and Margaret Bonner. Focus on Grammar. 4th ed. White Plains, NY: Pearson Longman, 2012.

8. Disciplines -

English as a Second Language (ESL) or English as a Second Language (ESL): Noncredit

9. Method of Instruction -

Lecture, discussion, demonstration.

10. Lab Content -

Not applicable.

11. Honors Description - No longer used. Integrated into main description section.

12. Types and/or Examples of Required Reading, Writing and Outside of Class Assignments -

A. Reading assignments
    1. Textbook explanation of grammar points
    2. Textbook- and teacher-generated texts demonstrating the targeted structures
B. Writing assignments
    1. Textbook exercises ranging from mechanical to communicative
    2. Original sentences using the targeted grammatical structures
        a. Based on models from the textbook
        b. Based on photos, pictures, descriptions
    3. Original paragraphs
        a. Based on models from the textbook
        b. Based on the shared viewing of a picture, film, skit

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FOOTHILL COLLEGE
Stand-Alone Course Approval Request

If a Foothill credit course is **NOT** part of a State approved associate's degree, certificate of achievement or the Foothill College GE Pattern, it is considered by the State to be a "Stand Alone Course." Per Title 5, local curriculum committees must review and approve proposed stand-alone courses to ensure that they are consistent with credit course standards (§55002), the community college mission and there is sufficient need and resources for the course. To be compliant with State regulations, there must be a completed, approved Stand Alone Form on file in the Office of Instruction.

Per our local process, the same process of review and approval is used for noncredit Stand Alone courses.

Stand Alone Course Approval Requests should be completed and forwarded to your Division Curriculum Committee to begin the approval process.

Course #: NCEL 427

Course Title: HIGH-INTERMEDIATE READING SKILLS

Credit Status:

_____ Credit course
X Noncredit course

Catalog Description:

An upper intermediate-level noncredit 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.

Are you requesting Stand Alone approval for the course on a <u>temporary</u> or <u>permanent</u> basis?

_____ The course will be **permanently** Stand Alone; there are no plans to add it to a State approved degree or certificate, nor to the Foothill GE pattern

X The course will be Stand Alone **temporarily**, and it will be incorporated into a new degree or certificate that is not yet State approved. In this case, identify the degree/certificate to which the course will be added:

English as a Second Language-Intermediate certificate of completion (noncredit)

- What is the specific timeline for program application/approval? (e.g., is your program application locally approved, or is it still in development and if so, what is your anticipated submission date?)

  Plan to submit in late June, 2019

NOTE: *If you have not submitted your program application to the State by the end of the current academic year, you must reapply for permanent Stand Alone approval.*

The Curriculum Committee must evaluate this application based on the following criteria:

Criteria A. Appropriateness to Mission

The Foothill College Mission states: 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.

Please indicate how your course supports the Foothill College Mission (select all that apply):

_____ Transfer

_____ Workforce/CTE
X Basic Skills

Criteria B. Need

A course may only be granted Stand Alone Approval if there is demonstrable need for the course in the college service area. Please provide evidence of the need or demand for your course, such as ASSIST documentation for transfer courses or Labor Market Information for workforce/CTE courses (if LMI is unavailable, advisory board minutes or employer surveys may be submitted). For basic skills courses, assessment-related data or information may be provided.

Evidence may be attached to this form or provided in the box below.

Student need:
Learning a language is not a linear path though the paths the students must take are often structured in such a way. Instead, students must be able to revisit these skills, as language learning is typically a recursive process. To this end, NCEL 427 gives NCEL students the chance to take a class that may be financially out of reach otherwise. Offering this mirrored course may also help transfer rates by acting as a bridge for students who have the skills to succeed in a credit class but lack the confidence or familiarity with community colleges to make the leap. For students pursuing career paths, offering students the option to take the course non-credit makes the course more equitable as it reduces the cost for students who only want to improve their English skills not earn college credit. This course could also be taken by credit students as a low-stakes support or review course which may be more valuable than ever now in light of the changes made due to AB705 legislation.

Need in our service area:
Our service area is one of the most diverse regions in the world and has a large need for ESL classes and specifically lower level ESL courses, as "Immigrants comprise more than 45 percent of Silicon Valley's total labor force. While the majority of the immigrant workforce in San Mateo and Santa Clara Counties are fluent in English, about 21 percent are English language learners. About 47 percent of adult English language learners have household incomes that are below 250 percent of the federal poverty level, compared to 28 percent of the overall adult population" – National Immigration Forum on Building the Skills of the Immigrant Workforce in Silicon Valley (2017). There are many adult learners in the area who need to improve their English level to improve their standard of living and the "Non-credit ESL classes offered by some community colleges are a critical bridge between beginning/intermediate ESL and the higher level needed for college courses" - Silicon Valley Allies Research Brief (2015). NCEL 427 would benefit many of the residents in our service area who do not need college credit but do need low-cost and low-stakes ESL classes to improve standard of living.

Criteria C. Curriculum Standards (please initial as appropriate)

_____ The outline of record for this course has been approved the Division Curriculum Committee and meets the requirements of Title 5

Faculty Requestor: Amy Sarver **Date:** 4/18/19

Division Curriculum Representative: Stephanie Chan **Date:** 4/19/19

Date of Approval by Division Curriculum Committee: 4/19/19

College Curriculum Co-Chairperson: _____ **Date:**

Submissions Course Outline Editor

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Language Arts

NCEL 427 HIGH-INTERMEDIATE READING SKILLS

Edit Course Outline

NCEL 427 **HIGH-INTERMEDIATE READING SKILLS** **Fall 2019**

5 hours lecture. **0 Units**

Total Contact Hours: 60 **(Total of All Lecture and Lab hours X 12)**

Total Student Learning Hours: 60 **(Total of All Lecture, Lab and Out of Class hours X 12)**

Lecture Hours: 5 **Lab Hours:** **Weekly Out of Class Hours:**

Note: If Lab hours are specified, the **item 10. Lab Content** field must be completed.

Repeatability -

Statement: Unlimited Repeatability.

Criteria: Students can repeat the course to build their basic language skills.

Status -

Course Status: Active **Grading:** Pass No Pass

Degree Status: Non-Applicable **Credit Status:** Non-Credit

Degree or Certificate Requirement: Stand Alone Course

Foothill GE Status: Non-GE

Articulation Office Information -

C.I.D. Notation:

Transferability: **Validation:** 4/29/19

Division Dean Information -

Seat Count: 25 **Load Factor:** .076 **FOAP Code:** 114000152013493085

Cross Listed as:

Related ID: ESLL 227

Instruction Office Information -

FSA Code:

Distance Learning: no

Stand Alone Designation: no

Program Title:

Program TOPs Code:

Program Unique Code:

Content Review Date:

Former ID:

Need/Justification -

This course prepares students for credit coursework in preparation for the composition course requirement for the AA/AS degree and/or transfer to UC/CSU. Additionally, will be included in an enhanced noncredit certificate, currently in development.

1. Description -

An upper intermediate-level noncredit 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.

Prerequisite: None

Co-requisite: None

Advisory: Designed for students whose native language is not English; concurrent enrollment in ESLL 226 or NCEL 426 recommended; completion of noncredit ESL sequence or previous ESL coursework at Adult School is recommended.

2. Course Objectives -

The student will be able to:

A. Apply reading skills appropriate for comprehending structure and meaning
B. Apply active pre- and during-reading strategies to reinforce reading skills
C. Compose single- and multi-sentence writings in response to readings discussed in class
D. Demonstrate both active and passive vocabulary development

3. Special Facilities and/or Equipment -

None.

4. Course Content (Body of knowledge) -

A. Apply reading skills appropriate for comprehending structure and meaning
    1. Locate main ideas
        a. Thesis statements
        b. Topic sentences
    2. Determine organizational patterns
        a. Cause/effect
        b. Compare/contrast
        c. Narration
        d. Description
        e. Process (How to)
    3. Identify types of evidence
        a. Anecdote
        b. Personal experience/observation
        c. Facts/statistics
        d. Expert testimony/opinion
    4. Identify types of introductions
        a. Background information
            1. Definitions
            2. Common beliefs
            3. Questions to engage readers
        b. Anecdote
        c. Description of problem/issue
    5. Identify types of conclusions
        a. Summary of main ideas/restatement of thesis
        b. Recommendation
        c. Prediction
    6. Distinguish fact from opinion
    7. Make inferences
B. Apply active pre- and during-reading strategies to reinforce reading skills
    1. To locate main ideas:
        a. Examine titles

b. Skim sub-headings
c. Examine photos and other visuals
d. Identify terms that signal generalities/opinions in thesis statements and topic sentences

2. To determine organizational patterns:
    a. Analyze thesis statements and topic sentences for linguistic cues that signal patterns
    b. Identify words and phrases that serve as transitions between and among ideas
3. To identify types of evidence:
    a. Look for vocabulary that signals chronology in narratives (anecdotes)
    b. Look for vocabulary that signals steps in process (how to) writings
    c. Look for use of pronouns that suggest first person experience or third person observation
    d. Skim for numeric items and citations that suggest statistical evidence
4. To identify types of introductions:
    a. Search for descriptive and defining information that provides background
    b. Look for vocabulary that signal chronology in narratives (anecdotes)
    c. Look for vocabulary that signal steps in process (how to) writings
    d. Identify descriptive detail that explains a problem
5. To identify types of conclusions:
    a. Identify restated items that summarize the main ideas of a piece
    b. Look for linguistic signals that suggest recommendation
    c. Look for linguistic signals indicating prediction
6. To distinguish fact from opinion:
    a. Identify terms that signal recognized facts or real states of being
    b. Search for linguistic items that suggest a writer's beliefs and attitude, for example:
        1. Modal verbs
        2. Descriptive adjectives that show personal preferences
7. To make inferences:
    a. Access prior knowledge (schema) to interpret information
    b. Gather details to formulate generalities (induction)

C. Compose single- and multi-sentence writings in response to readings discussed in class
    1. Make connections to personal experiences
    2. Express personal opinions on main topics from readings
D. Demonstrate both active and passive vocabulary development
    1. Active: write original sentences using newly learned vocabulary accurately
        a. Grammatically
        b. Denotatively
    2. Passive: demonstrate ability to correctly identify meanings of new words in context
        a. Use context clues to determine meanings of unfamiliar word
    3. Use an English-English dictionary to support vocabulary development
        a. Identify parts of speech
        b. Choose the appropriate definition of a word based on the context from readings

5. Repeatability - Moved to header area.

6. Methods of Evaluation -

A. Class performance
B. Completion of required outside readings
    1. charts, diagrams and graphs
    2. short newspaper and magazine articles
    3. excepts from textbooks
    4. short fictional works
C. Exercises
D. Quizzes
E. Exams that demonstrate students' ability to apply the newly acquired reading skills to new reading selections comparable to those studied in class

7. Representative Text(s) -

Instructors must choose a textbook from the list below. If, however, a faculty member would prefer to use a textbook not on the list, he or she must contact a full-time faculty member who regularly teaches the course to explain how the adoption would serve to achieve the learning outcomes specified in the course outline of record.

Baker-Gonzalez, Joan, and Eileen K. Blau. World of Reading: A Thematic Approach to Reading Comprehension 2. 2nd ed. White Plains, NY: Pearson Longman, 2009.
Barton, Laurie, and Carolyn Dupaquier Sardinas. NorthStar: Reading and Writing Level 3. 4th ed. White Plains, NY: Pearson Education ESL, 2014.
Gramer, Margo, and Colin Ward. Q: Skills for Success Reading and Writing 3. 2nd ed. New York, NY: Oxford University Press, 2015.

Recommended:
Longman Dictionary of American English. 5th ed. Essex: Pearson Education ESL, 2014.

Although one or more text is older than the suggested "5 years or newer" standard, it remains a seminal text in this area of study.

8. Disciplines -

English as a Second Language (ESL) or English as a Second Language (ESL): Noncredit

9. Method of Instruction -

Lecture, discussion, demonstration.

10. Lab Content -

Not applicable.

11. Honors Description - No longer used. Integrated into main description section.

12. Types and/or Examples of Required Reading, Writing and Outside of Class Assignments -

A. Readings from the text and outside readings
B. Writing of journal entries, sentence and multi-sentence responses to readings

Ensure you're using the current version of this form by downloading a fresh copy from the CCC webpage!

FOOTHILL COLLEGE
Stand-Alone Course Approval Request

If a Foothill credit course is **NOT** part of a State approved associate's degree, certificate of achievement or the Foothill College GE Pattern, it is considered by the State to be a "Stand Alone Course." Per Title 5, local curriculum committees must review and approve proposed stand-alone courses to ensure that they are consistent with credit course standards (§55002), the community college mission and there is sufficient need and resources for the course. To be compliant with State regulations, there must be a completed, approved Stand Alone Form on file in the Office of Instruction.

Per our local process, the same process of review and approval is used for noncredit Stand Alone courses.

Stand Alone Course Approval Requests should be completed and forwarded to your Division Curriculum Committee to begin the approval process.

Course #: NCEL 435

Course Title: LISTENING/SPEAKING FOR ACADEMIC PURPOSES

Credit Status:

_____ Credit course
X Noncredit course

Catalog Description:

A noncredit listening/speaking course focusing on preparing students for listening to authentic lectures and participating in classroom discussions and presentations.

Are you requesting Stand Alone approval for the course on a temporary or permanent basis?

_____ The course will be **permanently** Stand Alone; there are no plans to add it to a State approved degree or certificate, nor to the Foothill GE pattern

X The course will be Stand Alone **temporarily**, and it will be incorporated into a new degree or certificate that is not yet State approved. In this case, identify the degree/certificate to which the course will be added:

English as a Second Language-Advanced certificate of completion (noncredit)
English as a Second Language-Oral Proficiency certificate of completion (noncredit)

- What is the specific timeline for program application/approval? (e.g., is your program application locally approved, or is it still in development and if so, what is your anticipated submission date?)

  Plan to submit in late June, 2019

NOTE: *If you have not submitted your program application to the State by the end of the current academic year, you must reapply for permanent Stand Alone approval.*

The Curriculum Committee must evaluate this application based on the following criteria:

Criteria A. Appropriateness to Mission

The Foothill College Mission states: 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.

Please indicate how your course supports the Foothill College Mission (select all that apply):

_____ Transfer
_____ Workforce/CTE

X Basic Skills

Criteria B. Need

A course may only be granted Stand Alone Approval if there is demonstrable need for the course in the college service area. Please provide evidence of the need or demand for your course, such as ASSIST documentation for transfer courses or Labor Market Information for workforce/CTE courses (if LMI is unavailable, advisory board minutes or employer surveys may be submitted). For basic skills courses, assessment-related data or information may be provided.

Evidence may be attached to this form or provided in the box below.

Student need:
Learning a language is not a linear path though the paths the students must take are often structured in such a way. Instead, students must be able to revisit these skills as language learning is typically a recursive process. To this end, NCEL 435 gives NCEL students the chance to take a class that may be financially out of reach otherwise. Offering this mirrored course may also help transfer rates by acting as a bridge for students who have the skills to succeed in a credit class but lack the confidence or familiarity with community colleges to make the leap. For students pursuing career paths, offering students the option to take the course non-credit makes the course more equitable as it reduces the cost for students who only want to improve their English skills not earn college credit. This course could also be taken by credit students as a low-stakes support or review course which may be more valuable than ever now in light of the changes made due to AB705 legislation.

Need in our service area:
Our service area is one of the most diverse regions in the world and has a large need for ESL classes and specifically lower level ESL courses, as "Immigrants comprise more than 45 percent of Silicon Valley's total labor force. While the majority of the immigrant workforce in San Mateo and Santa Clara Counties are fluent in English, about 21 percent are English language learners. About 47 percent of adult English language learners have household incomes that are below 250 percent of the federal poverty level, compared to 28 percent of the overall adult population" – National Immigration Forum on Building the Skills of the Immigrant Workforce in Silicon Valley (2017). There are many adult learners in the area who need to improve their English level to improve their standard of living and the "Non-credit ESL classes offered by some community colleges are a critical bridge between beginning/intermediate ESL and the higher level needed for college courses" - Silicon Valley Allies Research Brief (2015). NCEL 435 would benefit many of the residents in our service area who do not need college credit but do need low-cost and low-stakes ESL classes to improve standard of living.

Criteria C. Curriculum Standards (please initial as appropriate)

_____ The outline of record for this course has been approved the Division Curriculum Committee and meets the requirements of Title 5

Faculty Requestor: Amy Sarver **Date:** 4/18/19

Division Curriculum Representative: Stephanie Chan **Date:** 4/19/19

Date of Approval by Division Curriculum Committee: 4/19/19

College Curriculum Co-Chairperson: _____ **Date:**

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Language Arts

NCEL 435 LISTENING/SPEAKING FOR ACADEMIC PURPOSES

Edit Course Outline

NCEL 435 **LISTENING/SPEAKING FOR ACADEMIC PURPOSES** **Fall 2019**

5 hours lecture. **0 Units**

Total Contact Hours: 60 **(Total of All Lecture and Lab hours X 12)**

Total Student Learning Hours: 60 **(Total of All Lecture, Lab and Out of Class hours X 12)**

Lecture Hours: 5 **Lab Hours:** **Weekly Out of Class Hours:**

Note: If Lab hours are specified, the **item 10. Lab Content** field must be completed.

Repeatability -

Statement: Unlimited Repeatability.

Criteria: Students can repeat the course to build their basic language skills.

Status -

Course Status: Active **Grading:** Pass No Pass

Degree Status: Non-Applicable **Credit Status:** Non-Credit

Degree or Certificate Requirement: Stand Alone Course

Foothill GE Status: Non-GE

Articulation Office Information -

C.I.D. Notation:

Transferability: **Validation:** 4/29/19

Division Dean Information -

Seat Count: 25 **Load Factor:** .076 **FOAP Code:** 114000152013493087

Cross Listed as:

Related ID: ESLL 235

Instruction Office Information -

FSA Code:

Distance Learning: no

Stand Alone Designation: no

Program Title:

Program TOPs Code:

Program Unique Code:

Content Review Date:

Former ID:

Need/Justification -

This course prepares students for credit coursework in preparation for the composition course requirement for the AA/AS degree and/or transfer to UC/CSU. Additionally, will be included in an enhanced noncredit certificate, currently in development.

1. Description -

A noncredit listening/speaking course focusing on preparing students for listening to authentic lectures and participating in classroom discussions and presentations.

Prerequisite: None

Co-requisite: None

Advisory: Successful completion of ESLL 226 and 227, or NCEL 426 and 427 strongly recommended; placement test is suggested; intended for students whose native language is not English.

2. Course Objectives -

The student will be able to:

A. Listen for different purposes
B. Respond to listening tasks in different ways
C. Recognize the basic features of spoken English in academic discourse
D. Make connections between speech and writing
E. Participate in conversations in class and in groups
F. Participate in class and group activities
G. Participate in multicultural group activities
H. Speak with relative intelligibility in an academic context
I. Give oral presentations on academic and personal subjects
J. Develop an effective understanding of how thought groups and focus words facilitate the understanding of spoken English
K. Demonstrate the use of thought groups with emphasis on focus words to facilitate better understand of spoken communication

3. Special Facilities and/or Equipment -

None.

4. Course Content (Body of knowledge) -

A. Listening for different purposes
    1. learning about the spoken features of English
    2. getting information
    3. participating in conversations
    4. learning new concepts
    5. integrating information from multiple sources
    6. distinguishing among types of discourse
        a. directions
        b. announcements
        c. narratives
        d. conversations
        e. simulated and authentic lectures
    7. appropriate strategies for listening tasks include:
        a. tolerating ambiguity
        b. adjusting to a variety of speakers
        c. guessing meaning from context
        d. making predictions
        e. forming hypotheses
        f. listening for main idea
        g. listening for specific details
        h. differentiating between fact and opinion
        i. identifying lecture language that indicates main ideas, supporting ideas, transitions, and repetition
B. Responding to listening tasks in different ways

1. taking lecture notes
    a. using abbreviations
    b. noting content words and eliminating function words
2. reconstructing notes into narrative form
3. taking dictation
4. writing critical responses
5. writing summaries of lectures
6. giving oral summaries using paraphrasing
    a. using meaningful body and facial language to communicate in oral summaries

C. Recognizing the basic features of spoken English in academic discourse
1. listening for number of syllables
2. listening for stressed syllables
3. listening for grammatical signals at the ends of words, e.g., /s/, /d/
4. listening for word blending in discourse
5. listening for stress on content words
6. listening for rhythm in discourse

D. Making connections between speech and writing
1. learning sound/spelling correspondences
2. recognizing stylistic difference between speech and writing in academic vocabulary and discourse

E. Participating in conversations in class and in groups
1. responding appropriately in conversations
2. initiating conversations
3. sustaining conversations
4. turn taking
5. conducting interviews

F. Participating in class and group activities
1. asking questions in class
2. asking for clarification
3. negotiating class activities
4. asking for repetition
5. asking for specific information
6. comparing and contrasting
7. presenting and defending opinions
8. explaining
9. analyzing
10. defining terms and concepts
11. showing comprehension
12. being active in class according to U.S. class cultural expectations
13. working in groups according to U.S. academic cultural expectations
14. discussing lectures and readings
15. leading, participating in and reporting on discussions

G. Participating in multicultural group activities
1. learning to accommodate and negotiate differences in how students participate in American classrooms
2. giving eye contact and body language to show interest and attention

H. Speaking with relative intelligibility in an academic context
1. using appropriate number of syllables in words
2. pronouncing final syllables of words, especially syllables that show grammatical endings, e.g., plurality, possession, tense
3. placing stress on the appropriate syllable of words
4. placing sentence stress appropriately in common phrases to focus, emphasize, contrast
5. using intonation appropriately, e.g., to introduce or conclude a topic, to distinguish between main points and descriptive details
6. speaking in appropriate phrases and not single one-word-at-a-time sentences

I. Giving oral presentations on academic and personal subjects
1. applying the rules of pronunciation and stress in controlled and communicative practice with peers
    a. using appropriate stress on content words in spoken English to create the anticipated rhythm in spoken discourse
    b. using appropriate body language, facial expressions, and eye-contact

J. Developing an effective understanding of how thought groups and focus words facilitate the understanding of spoken English
1. identifying thought groups and their focus words for effective communication
2. recognizing how the same group of words when put into different thought groups can change meaning
3. recognizing how a shift on a focus word in a thought group can change the intent of the speaker

K. Demonstrating the use of thought groups with emphasis on focus words to facilitate better understanding of spoken communication
1. applying learned rules for thought groups in controlled and communicative oral practice
2. shifting the focus to different words in the same thought groups and demonstrate how this changes meaning
3. incorporating thought groups with focus words into formal and informal class presentations

5. Repeatability - Moved to header area.

6. Methods of Evaluation -

A. Textbook- and/or teacher-generated listening quizzes
B. Homework
    1. Listening to/watching a lecture
    2. Summarizing the lecture
    3. Being able to answer questions about the lecture
C. Oral presentations
    1. Short presentations on personal or academic topics
D. Group work
    1. Turn-taking
    2. Initiating questions
    3. Non-verbal signals and eye-contact

7. Representative Text(s) -

Instructors must choose a textbook from the list below. If, however, a faculty member would prefer to use a textbook not on the list, he or she must contact a full-time faculty member who regularly teaches the course to explain how the adoption would serve to achieve the learning outcomes specified in the course outline of record. We encourage the faculty to share new adoptions with colleagues, solicit feedback, and suggest additions to the list of recommended textbooks.

Frazier, Laurie, and Shalle Leeming. Lecture Ready 3, 2nd ed. Oxford, 2013.
AND
Gilbert, Judy. Clear Speech. NY: Cambridge University Press, 2013.
OR
Grant, Linda. Well Said: Pronunciation for Clear Communication, 4th ed. Boston: Heinle & Heinle, 2016.

8. Disciplines -

English as a Second Language (ESL) or English as a Second Language (ESL): Noncredit

9. Method of Instruction -

Lecture, class and group discussion, oral presentations.

10. Lab Content -

Not applicable.

11. Honors Description - No longer used. Integrated into main description section.

12. Types and/or Examples of Required Reading, Writing and Outside of Class Assignments -

A. Readings in the texts
B. Writing to support listening and speaking activities
C. One-on-one survey taken on campus outside of the classroom
D. Listening to lectures on campus in chosen discipline
E. Listening to assigned videos (TED Talks, The World from PRI, etc.)
F. Recording possible personal stories on The World from PRI

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FOOTHILL COLLEGE
Stand-Alone Course Approval Request

If a Foothill credit course is **NOT** part of a State approved associate's degree, certificate of achievement or the Foothill College GE Pattern, it is considered by the State to be a "Stand Alone Course." Per Title 5, local curriculum committees must review and approve proposed stand-alone courses to ensure that they are consistent with credit course standards (§55002), the community college mission and there is sufficient need and resources for the course. To be compliant with State regulations, there must be a completed, approved Stand Alone Form on file in the Office of Instruction.

Per our local process, the same process of review and approval is used for noncredit Stand Alone courses.

Stand Alone Course Approval Requests should be completed and forwarded to your Division Curriculum Committee to begin the approval process.

Course #: NCEL 436

Course Title: ADVANCED GRAMMAR

Credit Status:

_____ Credit course
X Noncredit course

Catalog Description:

Continuation of NCEL 426. An advanced noncredit English grammar course focusing on clause and phrase structures.

Are you requesting Stand Alone approval for the course on a <u>temporary</u> or <u>permanent</u> basis?

_____ The course will be **permanently** Stand Alone; there are no plans to add it to a State approved degree or certificate, nor to the Foothill GE pattern

X The course will be Stand Alone **temporarily**, and it will be incorporated into a new degree or certificate that is not yet State approved. In this case, identify the degree/certificate to which the course will be added:

English as a Second Language-Advanced certificate of completion (noncredit)

- What is the specific timeline for program application/approval? (e.g., is your program application locally approved, or is it still in development and if so, what is your anticipated submission date?)

  Plan to submit in late June, 2019

NOTE: *If you have not submitted your program application to the State by the end of the current academic year, you must reapply for permanent Stand Alone approval.*

The Curriculum Committee must evaluate this application based on the following criteria:

Criteria A. Appropriateness to Mission

The Foothill College Mission states: 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.

Please indicate how your course supports the Foothill College Mission (select all that apply):

_____ Transfer
_____ Workforce/CTE
X Basic Skills

Criteria B. Need

A course may only be granted Stand Alone Approval if there is demonstrable need for the course in the college service area. Please provide evidence of the need or demand for your course, such as ASSIST documentation for transfer courses or Labor Market Information for workforce/CTE courses (if LMI is unavailable, advisory board minutes or employer surveys may be submitted). For basic skills courses, assessment-related data or information may be provided.

Evidence may be attached to this form or provided in the box below.

Student need:
Learning a language is not a linear path though the paths the students must take are often structured in such a way. Instead, students must be able to revisit these skills, as language learning is typically a recursive process. To this end, NCEL 436 gives NCEL students the chance to take a class that may be financially out of reach otherwise. Offering this mirrored course may also help transfer rates by acting as a bridge for students who have the skills to succeed in a credit class but lack the confidence or familiarity with community colleges to make the leap. For students pursuing career paths, offering students the option to take the course non-credit makes the course more equitable as it reduces the cost for students who only want to improve their English skills not earn college credit. This course could also be taken by credit students as a low-stakes support or review course which may be more valuable than ever now in light of the changes made due to AB705 legislation.

Need in our service area:
Our service area is one of the most diverse regions in the world and has a large need for ESL classes and specifically lower level ESL courses, as "Immigrants comprise more than 45 percent of Silicon Valley's total labor force. While the majority of the immigrant workforce in San Mateo and Santa Clara Counties are fluent in English, about 21 percent are English language learners. About 47 percent of adult English language learners have household incomes that are below 250 percent of the federal poverty level, compared to 28 percent of the overall adult population" – National Immigration Forum on Building the Skills of the Immigrant Workforce in Silicon Valley (2017). There are many adult learners in the area who need to improve their English level to improve their standard of living and the "Non-credit ESL classes offered by some community colleges are a critical bridge between beginning/intermediate ESL and the higher level needed for college courses" - Silicon Valley Allies Research Brief (2015). NCEL 436 would benefit many of the residents in our service area who do not need college credit but do need low-cost and low-stakes ESL classes to improve standard of living.

Criteria C. Curriculum Standards (please initial as appropriate)

_____ The outline of record for this course has been approved the Division Curriculum Committee and meets the requirements of Title 5

Faculty Requestor: Amy Sarver **Date:** 4/18/19

Division Curriculum Representative: Stephanie Chan **Date:** 4/19/19

Date of Approval by Division Curriculum Committee: 4/19/19

College Curriculum Co-Chairperson: _____ **Date:**

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Language Arts

NCEL 436 ADVANCED GRAMMAR

Edit Course Outline

NCEL 436 **ADVANCED GRAMMAR** **Fall 2019**

5 hours lecture. **0 Units**

Total Contact Hours: 60 **(Total of All Lecture and Lab hours X 12)**

Total Student Learning Hours: 60 **(Total of All Lecture, Lab and Out of Class hours X 12)**

Lecture Hours: 5 **Lab Hours:** **Weekly Out of Class Hours:**

Note: If Lab hours are specified, the **item 10. Lab Content** field must be completed.

Repeatability -

Statement: Unlimited Repeatability.

Criteria: Students can repeat the course to build their basic language skills.

Status -

Course Status: Active **Grading:** Pass No Pass

Degree Status: Non-Applicable **Credit Status:** Non-Credit

Degree or Certificate Requirement: Stand Alone Course

Foothill GE Status: Non-GE

Articulation Office Information -

C.I.D. Notation:

Transferability: **Validation:** 4/29/19

Division Dean Information -

Seat Count: 25 **Load Factor:** .076 **FOAP Code:** 114000152013493087

Cross Listed as:

Related ID: ESLL 236

Instruction Office Information -

FSA Code:

Distance Learning: no

Stand Alone Designation: no

Program Title:

Program TOPs Code:

Program Unique Code:

Content Review Date:

Former ID:

Need/Justification -

This course prepares students for credit coursework in preparation for the composition course requirement for the AA/AS degree and/or transfer to UC/CSU. Additionally, will be included in an enhanced noncredit certificate, currently in development.

1. Description -

Continuation of NCEL 426. An advanced noncredit English grammar course focusing on clause and phrase structures.

Prerequisite: None

Co-requisite: None

Advisory: Designed for students whose native language is not English; concurrent enrollment in ESLL 237 or NCEL 437 recommended; completion of noncredit ESL sequence or previous ESL coursework at Adult School is recommended; placement test is suggested.

2. Course Objectives -

The student will be able to:

A. Identify and correctly use a variety of clauses and phrases in order to describe concrete and abstract ideas.
B. Identify and correctly use all tenses and aspects.
C. Write original sentences and paragraphs using the targeted structures in a variety of contexts.
D. Recognize and edit for common sentence-level errors in regard to clauses and phrases and for broader paragraph-level errors.

3. Special Facilities and/or Equipment -

None.

4. Course Content (Body of knowledge) -

A. Identify and correctly use a variety of clauses and phrases in order to describe concrete and abstract ideas
    1. Adjective clauses
        a. Relative pronoun as subject
        b. Relative pronoun as object
        c. Relative pronoun as object of the preposition
        d. Using whose, where, when
        e. Use of commas: Essential vs. non-essential
    2. Adjective phrases
        a. Deleting relative pronoun and be verb in adjective clauses
        b. Deleting relative pronoun and adding -ing to base form of verb in adjective clauses
    3. Adverb clauses
        a. Purpose and reason
        b. Time
        c. Contrast
        d. Conditionals
            1. Real: present and future
            2. Unreal: present and past
        e. Result
            1. So... that, such... that
    4. Adverb phrases
        a. Time
        b. Reason
    5. Noun clauses
        a. After verbs and adjectives
        b. Embedded question/statement in a statement
        c. Embedded question in a question
        d. Quoted speech
            1. Punctuation
        e. Reported speech
            1. Sequence of tenses
            2. Report an imperative
            3. Report a question

B. Identify and correctly use all tenses and aspects
    1. A brief review of tenses and aspects
    2. Passive voice
        a. With a variety of tenses
        b. Participles used as adjectives (-ed, -ing)

C. Write original sentences and paragraphs using the targeted structures with correct punctuation in a variety of contexts
    1. Sentences
        a. Sentences using correct tense and aspect
        b. Sentences containing more than one independent clause
            1. Using FANBOYS (for, and, nor, but, or, yet, so) to connect sentences
        c. Sentence connectors that connect two independent clauses
            1. In addition, furthermore, moreover
            2. However, nevertheless
            3. Therefore, as a result, for this reason
        d. Sentences containing independent with dependent clauses
            1. Adjective clauses
            2. Adverb clauses
            3. Noun clauses
        e. Sentences containing independent clauses with phrases
            1. Adjective phrases
            2. Adverb phrases
    2. Paragraphs
        a. Descriptions of a person or place using adjective clauses and phrases
        b. Narratives about personal, historical, or cultural events using adverb clauses and phrases, conditionals, and quoted and reported speech
        c. Writer responses

D. Edit for errors in tense, sentences, clauses, and phrases
    1. Sentence and clause fragments
    2. Run-on sentences
    3. Comma splices
    4. Verb complementation
    5. Double subjects or no subject
    6. Parallelism

5. Repeatability - Moved to header area.

6. Methods of Evaluation -

A. Textbook- and teacher-generated exercises (from mechanical to communicative)
    1. Recognition of grammatical structures
    2. Fill-in-the-blank
    3. Sentencing combining
    4. Question/answer formation
    5. Reducing clauses to phrases
    6. Transformation from quoted to reported speech
    7. Paragraph writing using targeted grammatical structures
    8. Error correction

B. Textbook and teacher generated tests
    1. Fill-in-the-blank
    2. Sentencing combining
    3. Question/answer formation
    4. Reducing clauses to phrases
    5. Transformation from quoted to reported speech
    6. Paragraph writing using targeted grammatical structures
    7. Error analysis

C. Comprehensive final exam covering all of the course content

7. Representative Text(s) -

Instructors must choose a textbook from the list below. If, however, a faculty member would prefer to use a textbook not on the list, he or she must contact a full-time faculty member who regularly teaches the course to explain how the adoption would serve to achieve the learning outcomes specified in the course outline of record. We encourage the faculty to share new adoptions with colleagues, solicit feedback, and suggest additions to the list of recommended textbooks.

Azar, Betty. Understanding and Using English Grammar. 5th ed. White Plains, NY: Pearson Education, Inc., 2016.
Azar, Betty. Understanding and Using English Grammar Vol. B. 5th ed. White Plains, NY: Pearson Education, Inc.,

2016. (This is the second half of the above mentioned book.)
Elbaum, Sandra. Grammar in Context 3. 6th ed. Boston: Cengage, 2016.
Maurer, Jay. Focus on Grammar 5. 5th ed. White Plains, NY: Pearson Longman, 2017.

8. Disciplines -

English as a Second Language (ESL) OR English as a Second Language (ESL): Noncredit

9. Method of Instruction -

Lecture, discussion.

10. Lab Content -

Not applicable.

11. Honors Description - No longer used. Integrated into main description section.

12. Types and/or Examples of Required Reading, Writing and Outside of Class Assignments -

A. Reading assignments
   1. Textbook explanations of targeted grammatical structures
   2. Textbook- and/or teacher-generated texts that demonstrate the use of target structures
   3. Student-found newspaper articles that contain the targeted structure

B. Writing assignments
   1. Textbook exercises that move from mechanical to communicative exercises
   2. Original sentences using the targeted grammatical structures
   3. Original paragraphs using the targeted grammatical structures

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FOOTHILL COLLEGE
Stand-Alone Course Approval Request

If a Foothill credit course is **NOT** part of a State approved associate's degree, certificate of achievement or the Foothill College GE Pattern, it is considered by the State to be a "Stand Alone Course." Per Title 5, local curriculum committees must review and approve proposed stand-alone courses to ensure that they are consistent with credit course standards (§55002), the community college mission and there is sufficient need and resources for the course. To be compliant with State regulations, there must be a completed, approved Stand Alone Form on file in the Office of Instruction.

Per our local process, the same process of review and approval is used for noncredit Stand Alone courses.

Stand Alone Course Approval Requests should be completed and forwarded to your Division Curriculum Committee to begin the approval process.

Course #: NCEL 437

Course Title: BASIC COMPOSITION SKILLS

Credit Status:

_____ Credit course
X Noncredit course

Catalog Description:

A basic noncredit 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.

Are you requesting Stand Alone approval for the course on a <u>temporary</u> or <u>permanent</u> basis?

_____ The course will be **permanently** Stand Alone; there are no plans to add it to a State approved degree or certificate, nor to the Foothill GE pattern

X The course will be Stand Alone **temporarily**, and it will be incorporated into a new degree or certificate that is not yet State approved. In this case, identify the degree/certificate to which the course will be added:

English as a Second Language-Advanced certificate of completion (noncredit)

- What is the specific timeline for program application/approval? (e.g., is your program application locally approved, or is it still in development and if so, what is your anticipated submission date?)

  Plan to submit in late June, 2019

NOTE: *If you have not submitted your program application to the State by the end of the current academic year, you must reapply for permanent Stand Alone approval.*

The Curriculum Committee must evaluate this application based on the following criteria:

Criteria A. Appropriateness to Mission

The Foothill College Mission states: 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.

Please indicate how your course supports the Foothill College Mission (select all that apply):

_____ Transfer
_____ Workforce/CTE
X Basic Skills

Criteria B. Need

A course may only be granted Stand Alone Approval if there is demonstrable need for the course in the college service area. Please provide evidence of the need or demand for your course, such as ASSIST documentation for transfer courses or Labor Market Information for workforce/CTE courses (if LMI is unavailable, advisory board minutes or employer surveys may be submitted). For basic skills courses, assessment-related data or information may be provided.

Evidence may be attached to this form or provided in the box below.

Student need:
Learning a language is not a linear path though the paths the students must take are often structured in such a way. Instead, students must be able to revisit these skills as language learning is typically a recursive process. To this end, NCEL 437 gives NCEL students the chance to take a class that may be financially out of reach otherwise. Offering this mirrored course may also help transfer rates by acting as a bridge for students who have the skills to succeed in a credit class but lack the confidence or familiarity with community colleges to make the leap. For students pursuing career paths, offering students the option to take the course non-credit makes the course more equitable as it reduces the cost for students who only want to improve their English skills not earn college credit. This course could also be taken by credit students as a low-stakes support or review course which may be more valuable than ever now in light of the changes made due to AB705 legislation.

Need in our service area:
Our service area is one of the most diverse regions in the world and has a large need for ESL classes and specifically lower level ESL courses, as "Immigrants comprise more than 45 percent of Silicon Valley's total labor force. While the majority of the immigrant workforce in San Mateo and Santa Clara Counties are fluent in English, about 21 percent are English language learners. About 47 percent of adult English language learners have household incomes that are below 250 percent of the federal poverty level, compared to 28 percent of the overall adult population" – National Immigration Forum on Building the Skills of the Immigrant Workforce in Silicon Valley (2017). There are many adult learners in the area who need to improve their English level to improve their standard of living and the "Non-credit ESL classes offered by some community colleges are a critical bridge between beginning/intermediate ESL and the higher level needed for college courses" - Silicon Valley Allies Research Brief (2015). NCEL 437 would benefit many of the residents in our service area who do not need college credit but do need low-cost and low-stakes ESL classes to improve standard of living.

Criteria C. Curriculum Standards (please initial as appropriate)

_____ The outline of record for this course has been approved the Division Curriculum Committee and meets the requirements of Title 5

Faculty Requestor: Amy Sarver **Date:** 4/18/19

Division Curriculum Representative: Stephanie Chan **Date:** 4/19/19

Date of Approval by Division Curriculum Committee: 4/19/19

College Curriculum Co-Chairperson: _____ **Date:**

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Language Arts

NCEL 437 BASIC COMPOSITION SKILLS

Edit Course Outline

NCEL 437 **BASIC COMPOSITION SKILLS** **Fall 2019**

5 hours lecture. **0 Units**

Total Contact Hours: 60 **(Total of All Lecture and Lab hours X 12)**

Total Student Learning Hours: 60 **(Total of All Lecture, Lab and Out of Class hours X 12)**

Lecture Hours: 5 **Lab Hours:** **Weekly Out of Class Hours:**

Note: If Lab hours are specified, the **item 10. Lab Content** field must be completed.

Repeatability -

Statement: Unlimited Repeatability.

Criteria: Students can repeat the course to build their basic language skills.

Status -

Course Status: Active **Grading:** Pass No Pass

Degree Status: Non-Applicable **Credit Status:** Non-Credit

Degree or Certificate Requirement: Stand Alone Course

Foothill GE Status: Non-GE

Articulation Office Information -

C.I.D. Notation:

Transferability: **Validation:** 4/29/19

Division Dean Information -

Seat Count: 25 **Load Factor:** .076 **FOAP Code:** 114000152013493084

Cross Listed as:

Related ID: ESLL 237

Instruction Office Information -

FSA Code:

Distance Learning: no

Stand Alone Designation: no

Program Title:

Program TOPs Code:

Program Unique Code:

Content Review Date:

Former ID:

Need/Justification -

This course prepares students for credit coursework in preparation for the composition course requirement for the AA/AS degree and/or transfer to UC/CSU. Additionally, will be included in an enhanced noncredit certificate, currently in development.

1. Description -

A basic noncredit 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.

Prerequisite: None

Co-requisite: None

Advisory: Designed for students whose native language is not English; concurrent enrollment in ESLL 236 or NCEL 436 recommended; completion of noncredit ESL sequence or previous ESL coursework at Adult School is recommended; placement test is suggested.

2. Course Objectives -

The student will be able to:

A. Analyze the rhetorical features of authentic reading selections.
B. Respond to readings by making connections to personal schema.
C. Write multi-paragraph compositions with a clear purpose and audience using focused, organized, and appropriately developed paragraphs.
D. Use a variety of grammatically correct sentence structures appropriate to meaningful expression within the context of essay development.
E. Revise and edit writing assignments.
F. Write and edit a complete essay in class.

3. Special Facilities and/or Equipment -

None.

4. Course Content (Body of knowledge) -

A. Analyze the rhetorical features of authentic reading selections
    1. Identify main ideas, both explicit and implied
    2. Identify audience and purpose
    3. Determine organizational patterns
    4. Analyze the rhetorical functions of introductions and conclusions
    5. Identify types and effectiveness of supporting detail
    6. Recognize cohesive devices
    7. Distinguish between fact and opinion
B. Respond to reading selections in writing or orally
    1. Make connections to personal experiences and observations
    2. Discuss social, personal, and historical importance of authors' ideas
C. Write focused multi-paragraph compositions
    1. Generate ideas for writing
        a. Brainstorming
        b. Freewriting
        c. Journal response
    2. Determine a main idea, purpose, and audience for each composition
    3. Express a controlling idea for each paragraph in a topic sentence
    4. Use supporting details as appropriate
        a. Examples
        b. Anecdotes
        c. Comparisons
        d. Descriptions
        e. Cause/effect
    5. Analyze/explain the meaning of supporting detail
        a. Show cause/effect

b. Make predictions
c. Describe compare/contrast relationships

6. Organize ideas using specific strategies
    a. Blocking
    b. Outlining
    c. Clustering
7. Show relationships between and among ideas using a variety of coherence structures
    a. Lexical repetition
    b. Transition words and phrases
    c. Pronoun reference
    d. Subordinators
    e. Conjunctions

D. Use a variety of grammatically correct sentence structures as appropriate to meaningful expression within the context of essay development
1. Simple, compound and complex sentences
2. Adverb clauses
3. Adjective clauses
4. Correct verb tense and form
5. Properly punctuated sentence boundaries

E. Revise and edit writing assignments
1. Make substantial changes in content (e.g., delete, add, or rearrange ideas) based on feedback from instructor, peers, and TLC tutors
2. Edit for correctness
    a. Sentence structure/word order
    b. Subject-verb agreement
    c. Verb tense
    d. Pronoun reference
    e. Word form
    f. Word choice
    g. Punctuation of dialogue
    h. Fragments
    i. Run-on sentences

F. Write a complete essay in class in 80 minutes. When the in-class essay is given as the final exam, the allotted time will be 120 minutes

5. Repeatability - Moved to header area.

6. Methods of Evaluation -

A. Written responses to assigned reading selections
B. Journal assignments
C. At least three revised essay assignments of approximately 500 words demonstrating academic essay structure. Essays must not be completely descriptive in nature but must also contain an analytical component. No quoting of outside materials is expected
1. The first essay should explain the significance of a personal experience or the reasoning behind a personal opinion. Personal narrative or description may be used, but only to support controlling ideas. (Sample topics: "My Favorite Strategies for Learning English" or "Why I chose Foothill College")
2. The second essay should be on a more general topic. In addition to developing examples based on general observations, student writers may still use some personal examples for support. (Sample topics: "Characteristics of a Good Teacher" or The Biggest Problems in My Hometown")
3. The third essay deals with a contrast, e.g., comparing a certain cultural aspect of the student's home country to one in the U.S., or discussing a change in cultural values. (Sample topic: "Traditional Family Values")

D. At least two in-class compositions without advance notice of the prompt
E. Exercises and quizzes

7. Representative Text(s) -

Instructors must choose a textbook from the list below. If, however, a faculty member would prefer to use a textbook not on the list, he or she must contact a full-time faculty member who regularly teaches the course to explain how the adoption would serve to achieve the learning outcomes specified in the course outline of record.

Boardman, Cynthia A., and Jia Frydenberg. Writing to Communicate 2: Paragraphs and Essays, 3rd ed. White Plains, NY: Pearson Education, Inc., 2008.
Mlynarczyk, Rebecca, and Steven Haber. In Our Own Words: A Guide with Readings for Student Writers, 3rd ed. New York: Cambridge University Press, 2005.
Smoke, Trudy. A Writer's Workbook. NY: Cambridge University Press, 2005.

Although these texts are older than the suggested "5 years or newer" standard, they remain seminal texts in this area of study.

8. Disciplines -

English as a Second Language (ESL) or English as a Second Language (ESL): Noncredit

9. Method of Instruction -

Lecture, discussion.

10. Lab Content -

Not applicable.

11. Honors Description - No longer used. Integrated into main description section.

12. Types and/or Examples of Required Reading, Writing and Outside of Class Assignments -

A. Readings from the text and other sources.
B. Three revised writing assignments and two in-class essays of approximately 500 words each.

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FOOTHILL COLLEGE
Stand-Alone Course Approval Request

If a Foothill credit course is **NOT** part of a State approved associate's degree, certificate of achievement or the Foothill College GE Pattern, it is considered by the State to be a "Stand Alone Course." Per Title 5, local curriculum committees must review and approve proposed stand-alone courses to ensure that they are consistent with credit course standards (§55002), the community college mission and there is sufficient need and resources for the course. To be compliant with State regulations, there must be a completed, approved Stand Alone Form on file in the Office of Instruction.

Per our local process, the same process of review and approval is used for noncredit Stand Alone courses.

Stand Alone Course Approval Requests should be completed and forwarded to your Division Curriculum Committee to begin the approval process.

Course #: NCEN 401A

Course Title: Bridge to Transfer English

Credit Status:

_____ Credit course
X Noncredit course

Catalog Description:

This course incorporates and contextualizes basic skills reading and writing strategies aligned with transfer level coursework. When taken as a corequisuite to ENGL 1A, students receive additional basic skills support for success in ENGL 1A by practicing and reinforcing critical reading, thinking, and writing skills to engage further in the processes of expository and argumentative writing.

Are you requesting Stand Alone approval for the course on a <u>temporary</u> or <u>permanent</u> basis?

_____ The course will be **permanently** Stand Alone; there are no plans to add it to a State approved degree or certificate, nor to the Foothill GE pattern
X The course will be Stand Alone **temporarily**, and it will be incorporated into a new degree or certificate that is not yet State approved. In this case, identify the degree/certificate to which the course will be added:

Certificate of Competency in Bridge to College Level English

- What is the specific timeline for program application/approval? (e.g., is your program application locally approved, or is it still in development and if so, what is your anticipated submission date?)

  The program is still in development and will be ready for submission Spring 2019.

NOTE: *If you have not submitted your program application to the State by the end of the current academic year, you must reapply for permanent Stand Alone approval.*

The Curriculum Committee must evaluate this application based on the following criteria:

Criteria A. Appropriateness to Mission

The Foothill College Mission states: 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.

Please indicate how your course supports the Foothill College Mission (select all that apply):

_____ Transfer

_____ Workforce/CTE
X Basic Skills

Criteria B. Need

A course may only be granted Stand Alone Approval if there is demonstrable need for the course in the college service area. Please provide evidence of the need or demand for your course, such as ASSIST documentation for transfer courses or Labor Market Information for workforce/CTE courses (if LMI is unavailable, advisory board minutes or employer surveys may be submitted). For basic skills courses, assessment-related data or information may be provided.

Evidence may be attached to this form or provided in the box below.

In compliance with legislation AB 705, this course provides students, who would otherwise be placed in basic skills, pre-transfer level courses, support and guided instruction to meet the learning objectives in ENGL 1A or other transfer level reading and writing intensive courses. These students will practice fundamental critical reading strategies and composition techniques to reinforce the objectives of ENGL 1A or other transfer level courses. This corequisite model aligns with recommendations from the state chancellor's office as well as the California Acceleration Project, and is supported by data showing that transfer level basic skills corequisites improve student throughput data to an average of 80%, which is significantly higher than our current pre-transfer basic skills series and higher than transfer-level success rates for this student population without the co-requisite.

Criteria C. Curriculum Standards (please initial as appropriate)

X The outline of record for this course has been approved the Division Curriculum Committee and meets the requirements of Title 5

Faculty Requestor: Benjamin Armerding **Date:** 3/19/19

Division Curriculum Representative: Stephanie Chan **Date:** 3/21/19

Date of Approval by Division Curriculum Committee: 3/25/19

College Curriculum Co-Chairperson: _____ **Date:** _____

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Language Arts

NCEN 401A BRIDGE TO TRANSFER ENGLISH

Edit Course Outline

NCEN 401A BRIDGE TO TRANSFER ENGLISH **Fall 2019**

2 hours lecture. **0 Units**

Total Contact Hours: 24 **(Total of All Lecture and Lab hours X 12)**

Total Student Learning Hours: 24 **(Total of All Lecture, Lab and Out of Class hours X 12)**

Lecture Hours: 2 **Lab Hours:** 0 **Weekly Out of Class Hours:** 0

Note: If Lab hours are specified, the **item 10. Lab Content** field must be completed.

Repeatability -

Statement: Unlimited Repeatability.

Criteria: Provides direct instruction and individualized skill-building activities in reading, writing, critical thinking and scaffolding high-stakes assignments. Students repeating this course will identify new goals and continue to build mastery in their skills. The course will also adapt to the needs of the students depending on the time of year offered. The instructor can cater the assignments to help students work toward their educational pursuits. Because students receive no college credit or grades, and there is no course fee, there are no concerns with repeatability.

Status -

Course Status: Active **Grading:** No Credit

Degree Status: Non-Applicable **Credit Status:** Non-Credit

Degree or Certificate Requirement: Stand Alone Course

Foothill GE Status: Non-GE

Articulation Office Information -

C.I.D. Notation:

Transferability: **Validation:** 1/30/2019

Division Dean Information -

Seat Count: 30 **Load Factor:** .030 **FOAP Code:** 114000123093150100

Instruction Office Information -

FSA Code:

Distance Learning: no

Stand Alone Designation: no

Program

Title:

Program TOPs Code:

Program Unique Code:

Content Review Date:

Former ID:

Need/Justification -

In compliance with legislation AB 705, this course provides students, who would otherwise be placed in pre-transfer level courses, additional basic skills support and guided instruction to meet the reading and writing learning objectives in transfer level courses, such as ENGL 1A. These students will practice fundamental critical reading strategies and composition techniques to reinforce the objectives of transfer level courses. Particularly, when used as a corequisite for ENGL 1A, this course aligns with recommendations from the state Chancellor's Office as well as the California Acceleration Project, and is supported by data showing that transfer level basic skills corequisites improve student throughput data to an average of 80%, which is significantly higher than our current pre-transfer basic skills series and higher than transfer-level success rates for this student population without the corequisite.

1. Description -

This course incorporates and contextualizes basic skills reading and writing strategies aligned with transfer level coursework. When taken as a corequisuite to ENGL 1A, students receive additional basic skills support for success in ENGL 1A by practicing and reinforcing critical reading, thinking, and writing skills to engage further in the processes of expository and argumentative writing.

Prerequisite: None

Co-requisite: None

Advisory: When enrolled in ENGL 1A, concurrent enrollment in NCEN 401A is required for students who do not meet the prerequisite requirement for ENGL 1A.

2. Course Objectives -

The student will be able to:

A. Practice integrated reading and writing strategies to support the writing process as applied to transfer level reading requirements.
B. Demonstrate meta-cognitive awareness of the integration between reading and writing processes to support work in transfer level writing courses.

3. Special Facilities and/or Equipment -

None.

4. Course Content (Body of knowledge) -

A. Practice reading and writing strategies to support the writing process as relevant to student needs in transfer level courses and/or ENGL 1A:
    1. Reading strategies for comprehension and critical reading, such as:
        a. Activating schema: previewing, predicting, prior knowledge
        b. Think aloud
        c. Talking to the text (e.g., double entry journals, annotation)
        d. Sectioning and reverse outlining
        e. Vocabulary in context
        f. Summary for comprehension
        g. Questioning
        h. Graphic organizers
        i. Text-based discourse, including class discussion strategies
        j. Create and foster personal connections to the texts
        k. Establish a community of readers who are able to discuss texts with ease and critical attention (e.g., think/pair/share, response cards, idea gallery, "Cocktail Party")
    2. Writing strategies for all stages of writing process, such as:
        a. Understanding and responding to a prompt

b. Brainstorming: free-write, concept mapping, listing
c. Outlining
d. Thesis statements: closed versus open
e. Evaluation of evidence
f. Drafting
g. Understanding and incorporating feedback
h. Revision: essay level, paragraph level, sentence level
i. Sentence combining, such as coordination, subordination, correlatives, modifiers (noun phrases, adjective clauses, verbal phrases)
j. Proofreading to identify and eliminate errors, such as comma splices, fragments, spelling (e.g., homophones)

B. Demonstrate meta-cognitive awareness of the integration between reading and writing processes to support work in transfer level writing courses and/or ENGL 1A:
1. Reflect on the student's own learning to identify and overcome difficulties during the reading and writing process
2. Develop meta-cognitive awareness of the range of reading and writing strategies and when to employ them
3. Apply writing rubrics to evaluate the effectiveness of writing artifacts at essay, paragraph, and sentence levels

5. Repeatability - Moved to header area.

6. Methods of Evaluation -

A. Midterm and final self-assessment

7. Representative Text(s) -

When this course is used as a corequisuite for ENGL 1A, the course should primarily focus on texts assigned in the ENGL 1A corequisite; however, the following texts may be considered for additional assignment:

Behrens and Rosen. Writing and Reading Across the Curriculum. New York: Longman, 2015.
Graff and Berkenstein. They Say/I Say: The Moves that Matter in Academic Writing with Readings. New York: Norton, 2017.

8. Disciplines -

English

9. Method of Instruction -

Lecture presentations and class discussion (whole class and small group) on the processes and products of reading and writing.

10. Lab Content -

Not applicable.

11. Honors Description - No longer used. Integrated into main description section.

12. Types and/or Examples of Required Reading, Writing and Outside of Class Assignments -

A. Reading of books and/or articles on the process and purpose of reading and writing in an academic setting
B. Reading and evaluation of student work (self and that of peers)
C. Written reflections and self-evaluations

Ensure you're using the current version of this form by downloading a fresh copy from the CCC webpage!

FOOTHILL COLLEGE
Stand-Alone Course Approval Request

If a Foothill credit course is **NOT** part of a State approved associate's degree, certificate of achievement or the Foothill College GE Pattern, it is considered by the State to be a "Stand Alone Course." Per Title 5, local curriculum committees must review and approve proposed stand-alone courses to ensure that they are consistent with credit course standards (§55002), the community college mission and there is sufficient need and resources for the course. To be compliant with State regulations, there must be a completed, approved Stand Alone Form on file in the Office of Instruction.

Per our local process, the same process of review and approval is used for noncredit Stand Alone courses.

Stand Alone Course Approval Requests should be completed and forwarded to your Division Curriculum Committee to begin the approval process.

Course #: NCEN 442A

Course Title: CRITICAL THINKING: STUDENT-MANAGED PORTFOLIO DEVELOPMENT

Credit Status:

_____ Credit course
X Noncredit course

Catalog Description:

A survey of basic theory, design, and implementation strategies for the student-managed formative portfolio. Students write at least 750 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; the student's location within discourse communities, including the campus community; and the behaviors necessary for college success across disciplines.

Are you requesting Stand Alone approval for the course on a <u>temporary</u> or <u>permanent</u> basis?

_____ The course will be **permanently** Stand Alone; there are no plans to add it to a State approved degree or certificate, nor to the Foothill GE pattern

X The course will be Stand Alone **temporarily**, and it will be incorporated into a new degree or certificate that is not yet State approved. In this case, identify the degree/certificate to which the course will be added:

Certificate of Competency in Bridge to College Level English

- What is the specific timeline for program application/approval? (e.g., is your program application locally approved, or is it still in development and if so, what is your anticipated submission date?)

  The program is still in development and will be ready for submission Spring 2019.

NOTE: *If you have not submitted your program application to the State by the end of the current academic year, you must reapply for permanent Stand Alone approval.*

The Curriculum Committee must evaluate this application based on the following criteria:

Criteria A. Appropriateness to Mission

The Foothill College Mission states: 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.

Please indicate how your course supports the Foothill College Mission (select all that apply):

_____ Transfer
_____ Workforce/CTE
X Basic Skills

Criteria B. Need

A course may only be granted Stand Alone Approval if there is demonstrable need for the course in the college service area. Please provide evidence of the need or demand for your course, such as ASSIST documentation for transfer courses or Labor Market Information for workforce/CTE courses (if LMI is unavailable, advisory board minutes or employer surveys may be submitted). For basic skills courses, assessment-related data or information may be provided.

Evidence may be attached to this form or provided in the box below.

In compliance with legislation AB 705, this course provides students, who would otherwise be placed in basic skills, pre-transfer level courses, support and guided instruction to meet the learning objectives in ENGL 1A or other transfer level reading and writing intensive courses. These students will practice fundamental critical reading strategies and composition techniques to reinforce the objectives of ENGL 1A, ENGL 1S/T or other transfer level courses. This corequisite model aligns with recommendations from the state chancellor's office as well as the California Acceleration Project, and is supported by data showing that transfer level basic skills corequisites improve student throughput data to an average of 80%, which is significantly higher than our current pre-transfer basic skills series and higher than transfer-level success rates for this student population without the co-requisite.

Criteria C. Curriculum Standards (please initial as appropriate)

X The outline of record for this course has been approved the Division Curriculum Committee and meets the requirements of Title 5

Faculty Requestor: Brian Lewis **Date:** 3/19/19

Division Curriculum Representative: Stephanie Chan **Date:** 3/21/19

Date of Approval by Division Curriculum Committee: 3/25/19

College Curriculum Co-Chairperson: _____ **Date:** _____

Language Arts

NCEN 442A CRITICAL THINKING: STUDENT-MANAGED PORTFOLIO DEVELOPMENT

Edit Course Outline

NCEN 442A CRITICAL THINKING: STUDENT-MANAGED PORTFOLIO DEVELOPMENT **Fall 2019**

2 hours lecture. **0 Units**

Total Contact Hours: 24 **(Total of All Lecture and Lab hours X 12)**

Total Student Learning Hours: 24 **(Total of All Lecture, Lab and Out of Class hours X 12)**

Lecture Hours: 2 **Lab Hours:** 0 **Weekly Out of Class Hours:** 0

Note: If Lab hours are specified, the **item 10. Lab Content** field must be completed.

Repeatability -

Statement: Unlimited Repeatability.

Criteria: This course offers students a variety of context based learning tools and increased awareness of the learning process/product, which enhances learning if repeated any number of times. 1) Repeatability enhances the student's learning process; the course promotes seeing different possible learning process solutions in different learning contexts. While creating and capturing the learning process for an opinion essay, for instance, with a student recording a variety of steps and stages before writing in one course, students may learn one thing about their learning process, while if taken again in another course, the student will see how other steps or approaches to developing thinking might influence learning and the end product. The course not only makes the context based learning visible through a portfolio, but also provides a platform to evaluate how these steps and stages, as experienced in different contexts and times, might be beneficial to the producing of an essay or other academic product. 2) Repeatability enhances the learning product or writing; in addition, the student, if the course if repeated, will evaluate their essays or end products with more acuity as well, building on how they understand what makes "excellent" writing, as it relates to essay level, paragraph level, or sentence level considerations. Students will improve their ability to evaluate the end products of the learning process, internalizing the criteria of good writing so as to make their assessments of their own written work clearer.

Status -

Course Status: Active **Grading:** Pass No Pass

Degree Status: Non-Applicable **Credit Status:** Non-Credit

Degree or Certificate Requirement: Stand Alone Course

Foothill GE Status: Non-GE

Articulation Office Information -

C.I.D. Notation:

Transferability: **Validation:** 2/25/19

Division Dean Information -

Seat Count: 25 **Load Factor:** .030 **FOAP Code:** 114000123093150100

Instruction Office Information -

FSA Code:

Distance Learning: no

Stand Alone Designation: no

Program Title:

Program TOPs Code:

Program Unique Code:

Content Review Date:

Former ID:

Need/Justification -

In compliance with legislation AB 705, this course provides students, who would otherwise be placed in basic skills, pre-transfer level courses, additional support and guided instruction to meet the reading and writing learning objectives in transfer level courses, such as ENGL 1S/T. These students will practice fundamental metacognitive strategies and portfolio development activities to enable them to meet the objectives of transfer level courses. Particularly when used as a corequisite for ENGL 1S/T, this course aligns with recommendations from the state Chancellor's Office as well as the California Acceleration Project, and is supported by data showing that transfer level basic skills corequisites improve student throughput data to an average of 80%, which is significantly higher than our current pre-transfer basic skills series and higher than transfer-level success rates for this student population without the corequisite.

This course can be offered independently or concurrently as a corequisite; additionally, the course will be included on the forthcoming Certificate of Competency in Bridge to College Level English.

1. Description -

A survey of basic theory, design, and implementation strategies for the student-managed formative portfolio. Students write at least 750 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; the student's location within discourse communities, including the campus community; and the behaviors necessary for college success across disciplines.

Prerequisite: None

Corequisite: When taught in conjunction with ENGL 1S, the course must be taken concurrently; when offered independently, no corequisite is required.

Advisory: While no corequisite is required and this course may be offered independently, it is highly encouraged to take course while enrolled in any college level English course or a reading/writing intensive course across the disciplines.

Note: the corequisite/Advisory language is still under discussion at the dept/division level and will be finalized for the 2nd read

2. Course Objectives -

The student will be able to:

A. Apply basic theory to the design and implementation for student-managed formative (process) portfolios
B. Demonstrate meta-cognitive awareness of the integration between reading and writing processes
C. Demonstrate meta-cognitive awareness of the student's location within academic discourse communities and the behaviors necessary for college success at the transfer level

3. Special Facilities and/or Equipment -

A. Access to the internet
B. Smart classroom
C. Lab cart or computer classroom when possible (highly recommended)

4. Course Content (Body of knowledge) -

A. Apply basic theory to the design and implementation for student-managed formative (process) portfolios
    1. Recognize the distinguishing features of formative portfolios
    2. Identify and develop the characteristics of effective formative portfolio design tied to purpose
B. Demonstrate meta-cognitive awareness of the integration between reading and writing processes
    1. Managing a formative portfolio of reading and writing strategies, learning processes
        a. Formative content highlights strengths and weaknesses (process)
            1. Record the steps and strategies of reading process (pre-, during, after)
            2. Record the steps and strategies of the writing process
            3. Write a culminating reflection of reading/writing processes and learning processes toward the success of a finished product
C. Demonstrate meta-cognitive awareness of the student's location within academic discourse communities and the behaviors necessary for college success
    1. Evaluate the purpose and effectiveness of reading/writing steps and strategies
    2. Apply writing rubrics to evaluate the effectiveness of writing artifacts at essay, paragraph, and sentence levels
    3. Create, manage and maintain an exemplar formative portfolio including artifacts of reading and writing processes
        a. Identify the qualitative differences among artifacts (process)
        b. Effective choices of representative artifacts (process)
        c. Effective organization of representative artifacts and design of the overall portfolio
            1. Selecting, ranking, and arranging information and artifacts
                a. Strategies
                b. Experiences
                c. Outcomes - finished products
                d. Formal self-evaluation of processes and products: Summarize coursework evaluations; determine and prioritize growth areas; develop goals to facilitate growth

5. Repeatability - Moved to header area.

6. Methods of Evaluation -

A. Informal reflections on portfolio management
B. Midterm self-assessment
C. Finished formative portfolio, various media (evaluated by committee, if necessary)
D. Formal analysis of the formative portfolio
    1. What portfolio demonstrates of learning outcomes (reading/writing, course-level, and institutional level)

7. Representative Text(s) -

Reynolds, Nedra, and Rich Rice. Portfolio Keeping. 3rd ed. Boston: Bedford/St. Martin's, 2014.

Short articles, such as:
Dubinsky, Jim. "Creating new views on learning: ePortfolios." Business Communication Quarterly (Dec. 2003): 96+. Academic OneFile. Web: 23 May 2016.
Young, Jeffrey. "Creating Online Portfolios Can Help Students See 'Big Picture,' Colleges Say." Chronicle of Higher Education (21 Feb. 2002).

8. Disciplines -

English

9. Method of Instruction -

A. Lecture presentations and class discussion (whole class and small group) on the processes and products of reading and writing
B. Guided evaluation of the distinguishing features of formative portfolios
C. Instructor-guided development of portfolios
D. Presentations of portfolios followed by in-class discussion

10. Lab Content -

Not applicable.

11. Honors Description - No longer used. Integrated into main description section.

12. Types and/or Examples of Required Reading, Writing and Outside of Class Assignments -

A. Reading of books and/or articles on the process, purpose, and distinguishing characteristics of student-managed portfolios
B. Reading and evaluation of student work (self and that of peers)
C. Written reflections and self-evaluations
D. Selection and compilation of portfolio artifacts

Ensure you're using the current version of this form by downloading a fresh copy from the CCC webpage!

FOOTHILL COLLEGE
Stand-Alone Course Approval Request

If a Foothill credit course is **NOT** part of a State approved associate's degree, certificate of achievement or the Foothill College GE Pattern, it is considered by the State to be a "Stand Alone Course." Per Title 5, local curriculum committees must review and approve proposed stand-alone courses to ensure that they are consistent with credit course standards (§55002), the community college mission and there is sufficient need and resources for the course. To be compliant with State regulations, there must be a completed, approved Stand Alone Form on file in the Office of Instruction.

Per our local process, the same process of review and approval is used for noncredit Stand Alone courses.

Stand Alone Course Approval Requests should be completed and forwarded to your Division Curriculum Committee to begin the approval process.

Course #: NCEN 442B

Course Title: CRITICAL THINKING: PORTFOLIO MANAGEMENT & PUBLICATION

Credit Status:

_____ Credit course
X Noncredit course

Catalog Description:

Application of basic theory, design, and implementation strategies for the student-managed summative portfolio. Students write a total of at least 750 words, with emphasis on the reflective and evaluative processes necessary to enable them to meet the objectives of transfer level courses. 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.

Are you requesting Stand Alone approval for the course on a <u>temporary</u> or <u>permanent</u> basis?

_____ The course will be **permanently** Stand Alone; there are no plans to add it to a State approved degree or certificate, nor to the Foothill GE pattern

X The course will be Stand Alone **temporarily**, and it will be incorporated into a new degree or certificate that is not yet State approved. In this case, identify the degree/certificate to which the course will be added:

Certificate of Competency in Bridge to College Level English

- What is the specific timeline for program application/approval? (e.g., is your program application locally approved, or is it still in development and if so, what is your anticipated submission date?)

  The program is still in development and will be ready for submission Spring 2019.

NOTE: *If you have not submitted your program application to the State by the end of the current academic year, you must reapply for permanent Stand Alone approval.*

The Curriculum Committee must evaluate this application based on the following criteria:

Criteria A. Appropriateness to Mission

The Foothill College Mission states: 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.

Please indicate how your course supports the Foothill College Mission (select all that apply):

_____ Transfer
_____ Workforce/CTE
X Basic Skills

Criteria B. Need

A course may only be granted Stand Alone Approval if there is demonstrable need for the course in the college service area. Please provide evidence of the need or demand for your course, such as ASSIST documentation for transfer courses or Labor Market Information for workforce/CTE courses (if LMI is unavailable, advisory board minutes or employer surveys may be submitted). For basic skills courses, assessment-related data or information may be provided.

Evidence may be attached to this form or provided in the box below.

In compliance with legislation AB 705, this course provides students, who would otherwise be placed in basic skills, pre-transfer level courses, support and guided instruction to meet the learning objectives in ENGL 1A or other transfer level reading and writing intensive courses. These students will practice fundamental critical reading strategies and composition techniques to reinforce the objectives of ENGL 1A, ENGL 1S/T or other transfer level courses. This corequisite model aligns with recommendations from the state chancellor's office as well as the California Acceleration Project, and is supported by data showing that transfer level basic skills corequisites improve student throughput data to an average of 80%, which is significantly higher than our current pre-transfer basic skills series and higher than transfer-level success rates for this student population without the co-requisite.

Criteria C. Curriculum Standards (please initial as appropriate)

X The outline of record for this course has been approved the Division Curriculum Committee and meets the requirements of Title 5

Faculty Requestor: Brian Lewis **Date:** 3/19/19

Division Curriculum Representative: Stephanie Chan **Date:** 3/21/19

Date of Approval by Division Curriculum Committee: 3/25/19

College Curriculum Co-Chairperson: _____ **Date:** _____

Language Arts

NCEN 442B CRITICAL THINKING: PORTFOLIO MANAGEMENT & PUBLICATION

Edit Course Outline

NCEN 442B CRITICAL THINKING: PORTFOLIO MANAGEMENT & PUBLICATION **Fall 2019**

2 hours lecture. **0 Units**

Total Contact Hours: 24 **(Total of All Lecture and Lab hours X 12)**

Total Student Learning Hours: 24 **(Total of All Lecture, Lab and Out of Class hours X 12)**

Lecture Hours: 2 **Lab Hours:** 0 **Weekly Out of Class Hours:** 0

Note: If Lab hours are specified, the **item 10. Lab Content** field must be completed.

Repeatability -

Statement: Unlimited Repeatability.

Criteria: This course offers students a variety of context based learning tools and increased awareness of the learning process/product, which enhances learning if repeated any number of times. 1) Repeatability enhances the student's learning process; the course promotes seeing different possible learning process solutions in different learning contexts. While creating and capturing the learning process for an opinion essay, for instance, with a student recording a variety of steps and stages before writing in one course, students may learn one thing about their learning process, while if taken again in another course, the student will see how other steps or approaches to developing thinking might influence learning and the end product. The course not only makes the context based learning visible through a portfolio, but also provides a platform to evaluate how these steps and stages, as experienced in different contexts and times, might be beneficial to the producing of an essay or other academic product. 2) Repeatability enhances the learning product or writing; in addition, the student, if the course if repeated, will evaluate their essays or end products with more acuity as well, building on how they understand what makes "excellent" writing, as it relates to essay level, paragraph level, or sentence level considerations. Students will improve their ability to evaluate the end products of the learning process, internalizing the criteria of good writing so as to make their assessments of their own written work clearer.

Status -

Course Status: Active **Grading:** Pass No Pass

Degree Status: Non-Applicable **Credit Status:** Non-Credit

Degree or Certificate Requirement: Stand Alone Course

Foothill GE Status: Non-GE

Articulation Office Information -

C.I.D. Notation:

Transferability: **Validation:** 2/25/19

Division Dean Information -

Seat Count: 25 **Load Factor:** .030 **FOAP Code:** 114000123093150100

Instruction Office Information -

FSA Code:

Distance Learning: no

Stand Alone Designation: no

Program Title:

Program TOPs Code:

Program Unique Code:

Content Review Date:

Former ID:

Need/Justification -

In compliance with legislation AB 705, this course provides students, who would otherwise be placed in pre-transfer level courses, additional support and guided instruction to meet the reading and writing learning objectives in transfer level courses, such as ENGL 1S/T. These students will practice fundamental metacognitive strategies and portfolio development activities to reinforce the objectives of transfer level courses. Particularly when used as a corequisite for ENGL 1ST, this course aligns with recommendations from the state Chancellor's Office as well as the California Acceleration Project, and is supported by data showing that transfer level basic skills corequisites improve student throughput data to an average of 80%, which is significantly higher than our current pre-transfer basic skills series and higher than transfer-level success rates for this student population without the corequisite.

This course can be offered independently or concurrently as a corequisite; additionally, the course will be included on the forthcoming Certificate of Competency in Bridge to College Level English.

1. Description -

Application of basic theory, design, and implementation strategies for the student-managed summative portfolio. Students write a total of at least 750 words, with emphasis on the reflective and evaluative processes necessary to enable them to meet the objectives of transfer level courses. 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.

Prerequisite: None

Corequisite: When taught in conjunction with ENGL 1T, the course must be taken concurrently; when offered independently, no corequisite is required.

Advisory: While no corequisite is required and this course may be offered independently, it is highly encouraged to take course while enrolled in any college level English course or a reading/writing intensive course across the disciplines.

Note: the corequisite/Advisory language is still under discussion at the dept/division level and will be finalized for the 2nd read

2. Course Objectives -

The student will be able to:

A. Apply basic theory to the design and implementation for student-managed summative (product) portfolios
B. Demonstrate meta-cognitive awareness of the integration between reading and writing processes
C. Demonstrate meta-cognitive awareness of the student's location within discourse communities across disciplines
D. Demonstrate meta-cognitive awareness of the behaviors necessary for college success across disciplines

3. Special Facilities and/or Equipment -

A. Access to the internet
B. Smart classroom
C. Lab cart or computer classroom when possible (highly recommended)

4. Course Content (Body of knowledge) -

A. Apply basic theory to the design and implementation for student-managed summative (product) portfolios
    1. Recognize the distinguishing features of summative (product) portfolios
    2. Identify and develop the characteristics of effective summative portfolio design tied to purpose
B. Demonstrate meta-cognitive awareness of the integration between reading and writing processes
    1. Collect and maintain reading and writing process artifacts
    2. Continued reflection of reading/writing processes and learning processes
C. Demonstrate meta-cognitive awareness of the student's location within discourse communities across disciplines
    1. Create an exemplar summative portfolio including coursework (essays), experiences, and achievements across the curriculum
        a. Identify the qualitative differences among artifacts (product)
        b. Effective choices of representative works from ENGL 1S/T and other courses
        c. Effective organization of representative works and design of the overall portfolio
            1. Selecting, ranking, arranging, and managing information and artifacts
                a. Coursework
                b. Experiences
                c. Achievements
            2. Apply portfolio rubrics to evaluate the purpose and effectiveness of the summative portfolio
                a. Reading and writing learning outcomes (essay, paragraph, and sentence levels)
                b. Institutional SLOs
                c. Individual learning outcomes (goals achieved)
                d. The genre of portfolios (content, organization, and design)
D. Demonstrate meta-cognitive awareness of the behaviors necessary for college success across disciplines
    1. Develop academic goals based on a review of his/her portfolio
        a. Summarize coursework evaluations, including ENGL 1S/T and other courses
        b. Determine growth areas
        c. Prioritize growth areas needed
        d. Develop goals to facilitate growth

5. Repeatability - Moved to header area.

6. Methods of Evaluation -

A. Midterm self-assessment
B. Published summative portfolio (various media)
C. Formal analysis and evaluation of the portfolio
    1. The quality of the portfolio (genre)
    2. What portfolio demonstrates of learning outcomes (reading/writing, course-level, and institutional level)
D. Formal presentation of the portfolio and analysis/evaluation

7. Representative Text(s) -

Reynolds, Nedra and Rich Rice. Portfolio Keeping. 3rd ed. Boston: Bedford/St. Martin's, 2014.

Short articles, such as:
Dubinsky, Jim. "Creating new views on learning: ePortfolios." Business Communication Quarterly. (Dec. 2003): 96+. Academic OneFile. Web: 23 May 2016.
Young, Jeffrey. "Creating Online Portfolios Can Help Students See 'Big Picture,' Colleges Say." Chronicle of Higher Education. (21 Feb. 2002).

8. Disciplines -

English

9. Method of Instruction -

A. Lecture presentations and class discussion (whole class and small group) on the processes and products of reading and writing
B. Guided evaluation of the distinguishing features of formative portfolios

C. Instructor-guided development of portfolios
D. Presentations of portfolios followed by in-class discussion

10. Lab Content -

Not applicable.

11. Honors Description - No longer used. Integrated into main description section.

12. Types and/or Examples of Required Reading, Writing and Outside of Class Assignments -

A. Reading of books and/or articles on the process, purpose, and distinguishing characteristics of student-managed portfolios
B. Reading and evaluation of student work (self and that of peers)
C. Written reflections and self-evaluations
D. Selection and compilation of portfolio artifacts
E. Design and publication of the summative portfolio

FOOTHILL COLLEGE
Petition for Credit by Examination

Date:

Name: CWID:

Email: Phone Number:

Credit by Examination is being requested for the following course:

Dept. and Course Number *(e.g., SPAN 1)*:

Course Title *(e.g., Elementary Spanish I)*:

Number of Units:

Instructor Name:

Please describe your previous qualifying training or experience for which you have not received credit (the department may ask for proof or documentation):

I have read and agree to the conditions and regulations on page 2 of this document:

_____

Student Signature

_____

Instructor Signature

Division Use Only
Date of Exam:
Grade:
Examiner Name (printed):
Examiner Signature:

Conditions and Regulations for Earning Credit by Examination

- Before submitting this petition, please meet with a Foothill counselor to discuss the implications of taking a course for Credit by Examination
- The grade received using Credit by Examination is final. The student may not drop the class after seeing the exam or retake the final exam with the rest of the class during finals week
- For any grade received by using Credit by Examination, the student transcript will clearly note that Credit by Examination was used
- Petitions for Credit by Examination will not be accepted after the second week of instruction during a regular quarter, or after the first week of summer session, or after the second meeting of a two-week course
- Credit by Examination will not be granted for any course for which the student has received a grade from any institution of higher education
- Units of credit received through Credit by Examination may not apply toward the minimum of 18 resident units required at Foothill College for an Associate Degree
- A maximum of 20 units of credit may be earned by Credit by Examination
- Credit by Examination may not be used for major courses
- Special limitations apply to courses in a sequence:
    - If a student has completed a course within a sequence (using Credit by Examination or through regular enrollment), Credit by Examination may not be used to receive credit for a preceding course within that same sequence; e.g., a student who has successfully completed MATH 1B may not use Credit by Examination for MATH 1A
    - Students may challenge only one course within a sequence
- Acceptance of units of credit received through Credit by Examination by a transfer institution depends on the policies of that institution
- The student must remain enrolled in the class being petitioned and may not enroll in another class scheduled at the same time

Foothill College

Petition for Credit by Examination

Date _____

Name _____
Last First Middle

Student ID Number_____

I request permission to take the examination for credit in the following course, in which I am currently enrolled:

Dept. and Course Number Units Instructor

The previous qualifying training or experience for which I have not received credit is as follows: (The department may ask for proof or documentation of training or experience.)

_____

_____

_____

I have read and agree to the conditions and regulations on the reverse side.

_____
Student Signature

_____ ~~I do/do not approve.~~
Instructor of the Course

_____ ~~I do/do not approve.~~
Division Dean

Instructor's Use Only

Course No. _____

Date of Exam _____

Grade _____

Examiner's Signature _____

Regulations for Earning Credit by Examination

1. No course may be challenged after the second week of instruction during a regular quarter, or after the first week of summer session, or after the second meeting of a two-week course.

2. Credit by examination will not be granted in courses for which the student has received a grade from any institution of higher education.

3. Units of credit received through this procedure may not apply toward the minimum of 24 resident units required at Foothill College for an Associate Degree.

4. A maximum of 20 units of credit may be earned by examination.

5. Special limitations apply to challenging a course in sequence.

   a. Students challenging a course successfully cannot subsequently challenge a course that normally precedes the course challenged or completed previously; e.g., a student who has successfully challenged or passed Math 1B cannot challenge Math 1A.
   b. Students may challenge only one course in a sequence.

6. Acceptance of challenged credit by transfer institution depends upon the policies of that institution.

7. The student must remain enrolled in the class to be challenged and may not enroll in another class scheduled at the same time.

8. The grade on the challenge exam is final. The student may not drop the class after seeing the exam or retake the final with the rest of the class during finals week.

9. Petitions for credit by examination may be obtained from the student's counselor or Division office.