

College Curriculum Committee Meeting Agenda

Tuesday, April 30, 2024

2:00 p.m. – 3:00 p.m.

Administrative Conference Room 1901; virtual option via Zoom

Item	Time*	Action	Attachment(s)	Presenter(s)
1. Minutes: April 16, 2024	2:00	Action	#4/30/24-1	Kaupp
2. Report Out and Check-in	2:02	Discussion		All
3. Public Comment on Items Not on Agenda (CCC cannot discuss or take action)	2:12	Information		
4. Announcements a. New Course Proposals b. Curriculum Institute Conference (July 10-13 in Pasadena— more info here)	2:17	Information	#4/30/24-2–23	CCC Team
5. New Certificate Application: Spanish-Advanced	2:27	2nd Read/ Action	#4/30/24-24	Kaupp
6. GE Application: Area VI: Steamfitting and Pipefitting Technology Apprenticeship Program	2:30	2nd Read/ Action	#4/30/24-25	Kaupp
7. GE Application: Area III: Air Conditioning and Refrigeration Technology Apprenticeship Program (Pathway #1)	2:33	1st Read	#4/30/24-26	Kaupp
8. GE Application: Area III: Steamfitting and Pipefitting Technology Apprenticeship Program		1st Read	#4/30/24-27	Kaupp
9. GE Application: Area IV: Steamfitting and Pipefitting Technology Apprenticeship Program		1st Read	#4/30/24-28	Kaupp
10. Program Maps—Updates for 2024-25	2:40	Information		Hueg
11. Updating Foothill GE	2:47	Discussion		Kaupp
12. Updating Guided Pathways CAPs	2:52	Information	#4/30/24-29	Hueg/Kaupp
13. Good of the Order	2:57			Kaupp
14. Adjournment	3:00			Kaupp

*Times listed are approximate

Attachments:

- #4/30/24-1 Draft Minutes: April 16, 2024
- #4/30/24-2–23 New Course Proposals: [ACTG 57](#), [ART 4AH](#), [ENGL 16H](#), [LINC 86C](#), [LINC 87A](#), [THTR 421A](#), [THTR 421B](#), [THTR 421C](#), [THTR 425](#), [THTR 425B](#), [THTR 425C](#), [THTR 427](#), [THTR 431](#), [THTR 440A](#), [THTR 440B](#), [THTR 442](#), [THTR 445A](#), [THTR 445B](#), [THTR 445C](#), [THTR 445D](#), [THTR 445E](#), [THTR 445F](#)
- #4/30/24-24 New Certificate Application: [Spanish-Advanced](#)
- #4/30/24-25 Foothill General Education Application for Area VI—United States Cultures & Communities: Steamfitting and Pipefitting Technology Apprenticeship Program
- #4/30/24-26 Foothill General Education Application for Area III—Natural Sciences: Air Conditioning and Refrigeration Technology Apprenticeship Program (Pathway #1 - Pipe Trades Training Center students)

- #4/30/24-27 Foothill General Education Application for Area III—Natural Sciences: Steamfitting and Pipefitting Technology Apprenticeship Program
- #4/30/24-28 Foothill General Education Application for Area IV—Social & Behavioral Sciences: Steamfitting and Pipefitting Technology Apprenticeship Program
- #4/30/24-29 Resolution to Approve the Foothill College Meta Major Groupings and Names—updated

2023-2024 Curriculum Committee Meetings:

<u>Fall 2023 Quarter</u>	<u>Winter 2024 Quarter</u>	<u>Spring 2024 Quarter</u>
10/3/23	1/16/24	4/16/24
10/17/23	1/30/24	4/30/24
10/31/23	2/13/24	5/14/24
11/14/23	2/27/24	5/28/24
11/28/23	3/12/24	6/11/24

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

2023-2024 Curriculum Deadlines:

- ~~12/1/23~~ Deadline to submit courses to CSU for CSU GE approval (Articulation Office).
- ~~12/1/23~~ Deadline to submit courses to UC/CSU for IGETC approval (Articulation Office).
- 4/19/24 Deadline to submit curriculum sheet updates for 2024-25 catalog (Faculty/Divisions).
- 6/1/24 Deadline to submit new/revised courses to UCOP for UC transferability (Articulation Office).
- 6/21/24 Deadline to submit course updates and local GE applications for 2025-26 catalog (Faculty/Divisions).
- Ongoing Submission of courses for C-ID approval and course-to-course articulation with individual colleges and universities (Articulation Office).

Distribution:

Micaela Agyare (LRC), Chris Allen (Dean, APPR), Ben Armerding (LA), Jeff Bissell (KA), Sam Bliss (De Anza AVP Instruction), Cynthia Brannvall (FAC), Rachelle Campbell (HSH), Zach Cembellin (Dean, STEM), Anthony Cervantes (Dean, Enrollment Services), Sam Connell (BSS), Stephanie Crosby (Dean, SRC), Cathy Draper (HSH), Angie Dupree (BSS), Kelly Edwards (KA), Jordan Fong (FAC), Valerie Fong (Dean, LA), Evan Gilstrap (Articulation Officer), Stacy Gleixner (VP Instruction), Kurt Hueg (Administrator Co-Chair), Maritza Jackson Sandoval (CNSL), Ben Kaupp (Faculty Co-Chair), Andy Lee (CNSL), Don Mac Neil (KA), Brian Murphy (APPR), Tim Myres (APPR), Teresa Ong (AVP Workforce), Sarah Parikh (STEM), Eric Reed (LRC), Richard Saroyan (SRC), Amy Sarver (LA), Paul Starer (APPR), Shae St. Onge-Cole (HSH), Kyle Taylor (STEM), Mary Vanatta (Curriculum Coordinator), Voltaire Villanueva (AS President), Catherina Wong (De Anza CCC Faculty Co-Chair), Erik Woodbury (De Anza AS President)

COLLEGE CURRICULUM COMMITTEE

Committee Members – 2023-24

Meeting Date: 4/30/24Co-Chairs (2)

<u>✓*</u>	Ben Kaupp	408-874-6380	Vice President, Academic Senate (tiebreaker vote only)	kauppben@fhda.edu
<u>✓*</u>	Kurt Hueg	7179	Associate Vice President of Instruction	huegkurt@fhda.edu

Voting Membership (1 vote per division)

<u>✓*</u>	Micaela Agyare	7086	LRC	agyaremicaela@fhda.edu
_____	Ben Armerding	7453	LA	armerdingbenjamin@fhda.edu
<u>✓</u>	Jeff Bissell	7663	KA	bisselljeff@fhda.edu
<u>✓*</u>	Cynthia Brannvall	7477	FAC	brannvallcynthia@fhda.edu
<u>✓*</u>	Zach Cembellin	7383	Dean—STEM	cembellinzachary@fhda.edu
<u>✓*</u>	Sam Connell	7197	BSS	connellsamuel@fhda.edu
<u>✓*</u>	Cathy Draper	7249	HSH	drapercatherine@fhda.edu
<u>✓*</u>	Angie Dupree		BSS	dupreeangelica@fhda.edu
<u>✓</u>	Kelly Edwards	7327	KA	edwardskelly@fhda.edu
<u>✓*</u>	Jordan Fong	7272	FAC	fongjordan@fhda.edu
_____	Valerie Fong	7135	Dean—LA	fongvalerie@fhda.edu
<u>✓*</u>	Evan Gilstrap	7675	Articulation	gilstrapevan@fhda.edu
<u>✓*</u>	Maritza Jackson Sandoval	7409	CNSL	jacksonsandovalmaritza@fhda.edu
<u>✓*</u>	Andy Lee	7783	CNSL	leeandrew@fhda.edu
_____	Brian Murphy		APPR	brian@pttc.edu
<u>✓*</u>	Tim Myres		APPR	timm@smw104jatc.org
<u>✓*</u>	Sarah Parikh	7748	STEM	parikhsarah@fhda.edu
_____	Eric Reed	7091	LRC	reederic@fhda.edu
<u>✓</u>	Richard Saroyan	7232	SRC	saroyanrichard@fhda.edu
<u>✓*</u>	Amy Sarver	7459	LA	sarveramy@fhda.edu
_____	Shae St. Onge-Cole	7818	HSH	stonge-coleshaelyn@fhda.edu
<u>✓*</u>	Kyle Taylor	7126	STEM	taylorkyle@fhda.edu

Non-Voting Membership (4)

_____			ASFC Rep.	
<u>✓*</u>	Mary Vanatta	7439	Curr. Coordinator	vanattamary@fhda.edu
_____			Evaluations	
_____			SLO Coordinator	

Visitors

Paul Starer

* Indicates in-person attendance

**College Curriculum Committee
Meeting Minutes**

Tuesday, April 16, 2024

2:00 p.m. – 3:30 p.m.

Administrative Conference Room 1901; virtual option via Zoom

Item	Discussion
1. Minutes: March 12, 2024	Approved by consensus.
2. Report Out and Check-in	<p>Speaker: All Apprenticeship: Myres shared continuing to work on Foothill GE apps.</p> <p>BSS: Dupree mentioned new Business cert. on today's agenda. Connell shared Sociology faculty caught student using ChatGPT to participate in course, possibly related to Financial Aid fraud.</p> <p>Counseling: No updates to report.</p> <p>Fine Arts & Comm: Fong mentioned new noncredit course proposals on today's agenda; working on curriculum sheets.</p> <p>HSH: Draper mentioned new Public Health ADT in development; working on curriculum sheets.</p> <p>Language Arts: Sarver mentioned new Spanish cert. on today's agenda.</p> <p>LRC: Agyare shared working on Title 5 updates and reviewing CORs with an equity lens.</p> <p>Kinesiology & Athletics: No updates to report.</p> <p>STEM: Taylor shared working on Title 5 updates and curriculum sheets; Math dept. working on curriculum related to AB 1705.</p> <p>SRC: Saroyan mentioned new division dean, Stephanie Crosby, just started—very excited!</p> <p>Gilstrap first thanked reps for their help on big project to update ADTs. Shared FYI about ASCCC discipline-specific listservs, and highly encouraged folks sign up. Mentioned ASCCC's Transfer Alignment Project (TAP) to align Transfer Model Curriculum (TMC) with UC Transfer Pathways (UCTP); 13 majors identified, and discipline input groups (DIG) will be held at which faculty can collaborate w/ colleagues and create new TMC. Provided update re: AB 1111 (Common Course Numbering); CCCCCO selected six courses to have Common Course Numbering eff. fall 2025. Gilstrap has reached out to appropriate faculty; descriptors aren't yet available but should be by mid-August. We will need to expedite curriculum process to ensure courses meet fall 2025 target. Input groups being held in June, in case folks are interested. Brannvall asked if Common Course Numbering is something everyone needs to be aware of—Gilstrap responded, yes, this first group of courses is a "soft launch" but eventually all courses will be transitioned to Common Course Numbering. Gilstrap provided further info re: course descriptors and the work which will need to be done.</p>

	<p>Vanatta reminded the reps of upcoming deadline for curriculum sheets (this Friday); emailed reps this morning with up-to-date status of sheets for their division.</p> <p>Kaupp shared he presented CCC’s report on local GE changes at recent Academic Senate meeting; received comments about potential impact to courses in Kinesiology & Athletics division.</p>
<p>3. Public Comment on Items Not on Agenda</p>	<p>No comments.</p>
<p>4. Announcements a. New Course Proposals</p> <p>b. Foothill GE List for 2024-25</p> <p>c. Updating AP Chart and Creating IB/CLEP Policy</p> <p>d. ASCCC Spring Plenary Resolutions</p>	<p>Speakers: CCC Team The following proposals were presented: ACTG 1AH, 55, 56; ART 402A, 402B, 402C, 402D, 402E, 402F, 402J, 403, 444, 445A, 445B, 445C, 445F, 446B; ENGR 76A; JRYM 401; MATH 47, 247; NCBS 447; PHOT 408, 410, 411; THTR 407, 420B, 420C, 422, 424, 438A, 438D, 443C, 443E, 447A, 448G, 449A, 463A. Reps provided additional info about courses being proposed for their division. Cembellin noted new MATH course being created in response to AB 1705 and possibility we may need to stop offering MATH 48 series (Precalculus). Brannvall mentioned still trying to determine how to best handle assessments for mirrored noncredit courses (e.g., whether to make optional).</p> <p>Bissell asked about purpose for creation of mirrored noncredit courses for older adults—Fong responded, to increase enrollment and access for community members; Brannvall added, division encouraged by college administration to create courses to help increase enrollment, noting older adult population uncaptured. Bissell mentioned discussion of topic w/ colleague, wondering if Kinesiology & Athletics may create this type of courses; Gilstrap and Vanatta recalled comment by Kurt Hueg that state won’t allow Physical Education courses be offered as noncredit for older adults. Kaupp will follow up and get concrete info.</p> <p>Vanatta shared Foothill General Education requirements for 2024-25. Newly approved GE courses have been added, and deactivated courses have been removed. Noted Apprenticeship GE apps on today’s agenda; if additional apps approved by end of year, list will be updated.</p> <p>Gilstrap shared the AP chart needs to be updated, to resolve some disconnects between what the chart states and what we actually award. Will reach out to faculty in each affected discipline to resolve. Also, need to create policy for awarding IB/CLEP credit; CCCCO memo attachment provides info re: what we can award for GE credit. Again, Gilstrap will reach out to depts. Jackson Sandoval mentioned recent conversation with student and asked how long updating process may take—Gilstrap unsure, but hopes to be done by end of spring quarter; noted Evaluations will likely award the correct units to students even before updates completed to the chart.</p> <p>Resolutions packet was attached as info item. Plenary is April 18-20. Kaupp noted newer packet has been published on ASCCC’s website since agenda distributed. Encouraged the group to read through the resolutions and ask questions.</p>
<p>5. Course Deactivation Exemption Requests</p>	<p>Speaker: Ben Kaupp Three late requests, related to courses not taught in four years process from winter quarter: HORT 60G, MDIA 52, PHOT 57B.</p> <p>No discussion occurred regarding any specific requests.</p> <p>Motion to approve M/S (Fong, Gilstrap). Approved.</p>

<p>6. GE Application: Area III: Sheet Metal Apprenticeship Program</p>	<p>Speaker: Ben Kaupp Second read of GE application, which would approve Foothill GE Area III for students who complete the full major requirements for Sheet Metal, not one individual course. No comments.</p> <p>Motion to approve M/S (Brannvall, Draper). Approved.</p>
<p>7. New Certificate Proposal: Pre-STEM</p>	<p>Speaker: Ben Kaupp Proposal for new Pre-STEM Certificate of Achievement. Parikh noted cert. will be included in Semiconductor Apprenticeship pathway, which students will enter from different walks of life and education levels. Cert. intends to fill the gap between the math students need to enter pathway and the math needed to start on the AS degree. Parikh believes there's potential for cert. to be used by students in other STEM programs. Also envisioning potential for cohort model, for students taking courses at the same time. Kaupp believes cert. could be useful for his student population. Discussion occurred re: MATH 47 new course proposal and MATH 48 series, and how those changes may be related to this cert.; Cembellin noted still having discussions re: how to move forward.</p> <p>Motion to approve M/S (Parikh, Draper). Approved.</p>
<p>8. New Certificate Proposal: Business and Marketing</p>	<p>Speaker: Ben Kaupp Proposal for new Business and Marketing Certificate of Achievement. Dupree noted there's a need for fundamental skills in this topic in the workforce, which is in very high demand. This will be a low-cost option for students, to provide recognition for their training.</p> <p>Motion to approve M/S (Parikh, Draper). Approved.</p>
<p>9. New Certificate Application: Spanish-Advanced</p>	<p>Speaker: Ben Kaupp First read of new Spanish-Advanced Certificate of Achievement. No comments.</p> <p>Second read and possible action will occur at next meeting.</p>
<p>10. GE Application: Area VI: Steamfitting and Pipefitting Technology Apprenticeship Program</p>	<p>Speaker: Ben Kaupp First read of GE application, which would approve Foothill GE Area VI for students who complete the full major requirements for Steamfitting and Pipefitting Technology, not one individual course. No comments.</p> <p>Second read and possible action will occur at next meeting.</p>
<p>11. Program Maps—Updates for 2024-25</p>	<p>Speaker: Kurt Hueg Topic delayed to future meeting, due to Hueg's absence.</p>
<p>12. Updating Foothill GE</p>	<p>Speaker: Ben Kaupp De Anza's CCC currently bringing forward their own recommendations for updating local GE; following that, Kaupp will meet w/ his counterpart at De Anza to discuss alignment. Goal is for both colleges to bring forward aligned recommendations to their constituent groups. Kaupp believes it's likely we will recommend removing Lifelong Learning, as well as removing lab requirement for Natural Sciences. Also noted likely to recommend moving courses from current Area V over to new Area 2 (Math & Quantitative Reasoning). Gilstrap added that for new Areas 2 & 6 (Ethnic Studies) we will need to draft standards for courses. Current Area V likely includes standards we can use for new Area 2; for Area 6, we can look to current transfer GE competencies to use as a basis, if we want to. Agreed w/ Kaupp that it will be beneficial to students to align w/ De Anza, because many students take courses at both colleges, and also noted Common Course Numbering will force a lot of alignment. Kaupp also noted Chancellor Lambert's desire for alignment between both colleges.</p>

	<p>Kaupp acknowledged concerns from divisions with courses in Lifelong Learning and noted that while preparing to present to Academic Senate he learned Foothill awarded approx. 300 non-transfer associate degrees, with most of those being in Engineering (which doesn't have an ADT). Hope is that any potential impact to enrollment in Lifelong Learning courses can be minimized via marketing and encouraging students to take those courses. Noted that many faculty seem ambivalent about potential changes, and stressed importance of making sure that any division constituents who want to express their opinion are doing so (or have done so). Bissell thanked Kaupp and noted that throughout the years there always seem to be impacts to Kinesiology & Athletics division's courses (e.g., repeatability changes, not allowing creation of mirrored noncredit). Noted it can feel like division is separate from the rest of campus, not just geographically. Expressed support for keeping Lifelong Learning in local GE pattern.</p> <p>Parikh responded to Kaupp's comment about ambivalence, noting strong feelings from faculty and students in STEM division re: Lifelong Learning. Bissell mentioned frequent messaging on campus about mindfulness and pointed out that Physical Education courses provide students with a break from more stressful coursework. Brannvall commented on alignment w/ De Anza and recalled previous advice from Gilstrap to wait for CalGETC to become active before making changes—Gilstrap responded to provide clarification. Lee mentioned that Lifelong Learning/Understanding not included in CalGETC.</p>
<p>13. COR Process Updates</p>	<p>Speaker: Ben Kaupp Kaupp shared with the group that there is concern from some folks re: lack of awareness about new course and degree/certificate development. Would like to get the group's thoughts about having new course and degree/cert. proposals entered into a searchable database to allow access for people who don't have CourseLeaf account. Stressed that this would not add any work on the part of faculty or divisions. Connell pointed out that PDFs (already used for CCC attachments) are searchable. Parikh asked how this would be much different than what we're already doing (sharing proposals w/ CCC agendas and documenting in meeting minutes). Kaupp just interested in seeing how the group feels, and stressed that this will not ever put a pause/stop to our curriculum development process.</p>
<p>14. Good of the Order</p>	
<p>15. Adjournment</p>	<p>3:29 PM</p>

Attendees: Micaela Agyare* (LRC), Chris Allen* (Dean, APPR), Ben Armerding (LA), Jeff Bissell (KA), Cynthia Brannvall* (FAC), Zach Cembellin* (Dean, STEM), Sam Connell* (BSS), Cathy Draper* (HSH), Angie Dupree* (BSS), Kelly Edwards (KA), Jordan Fong* (FAC), Evan Gilstrap* (Articulation Officer), Maritza Jackson Sandoval* (CNSL), Ben Kaupp* (Faculty Co-Chair), Andy Lee* (CNSL), Tim Myres* (APPR), Sarah Parikh* (STEM), Eric Reed (LRC), Richard Saroyan (SRC), Amy Sarver* (LA), Kyle Taylor* (STEM), Mary Vanatta* (Curriculum Coordinator)
 * Indicates in-person attendance

Minutes Recorded by: M. Vanatta

Course Change Request

New Course Proposal

Date Submitted: 04/23/24 12:45 pm

Viewing: **ACTG F057. : TAX COMPLIANCE & PLANNING**

Last edit: 04/24/24 3:03 pm

Changes proposed by: Sara Seyedin (10517752)

In Workflow

- 1SS Curriculum Rep
- Curriculum Coordinator
- Activation

Course Proposal Form

Faculty Author Sara Seyedin

Effective Term Summer 2025

Subject Accounting (ACTG) Course Number F057.

Department Accounting (ACTG)

Division Business and Social Sciences (1SS)

Units 5

Hours 5 hours lecture

Course Title TAX COMPLIANCE & PLANNING

Short Title

Proposed Transferability CSU Only

Proposed Description and Requisites: This course introduces the tax planning consideration for gross income, inclusions, and exclusions. Topics include acquisition, use, and disposition of assets, evaluation of tax accounting methods for different business entities, Federal taxation of entities, C corporations, S corporations, partnership, and trusts.

Proposed Discipline Accounting

To which Degree(s) or Certificate(s) would this course potentially be added?
AA degree in Accounting

Are there any other departments that may be impacted from the addition of this course?
No

Comments & Other Relevant Information for Discussion:

This course is created to respond to changes that took place in the components of the AICAP exam.

Reviewer
Comments

Approval Path

- 04/23/24 1:12 pm
Angelica Dupree
(dupreeangelica):
Approved for 1SS
Curriculum Rep

Course Change Request

New Course Proposal

Date Submitted: 03/26/24 10:39 am

Viewing: **ART F04AH : HONORS FUNDAMENTALS IN DRAWING**

Last edit: 04/24/24 8:29 am

Changes proposed by: Hilary Gomes (10926523)

In Workflow

- 1FA Curriculum Rep
- Curriculum Coordinator
- Activation

Approval Path

- 04/23/24 2:27 pm
Jordan Fong (fongjordan):
Approved for 1FA Curriculum Rep

Course Proposal Form

Faculty Author Hilary Gomes

Effective Term Summer 2025

Subject Art (ART) Course Number F04AH

Department Art (ART)

Division Fine Arts and Communication (1FA)

Units 4

Hours 3 hours lecture, 3 hours lab

Course Title HONORS FUNDAMENTALS IN DRAWING

Short Title

Proposed UC/CSU

Transferability

Proposed Description and Requisites: In this beginning-level drawing course, students will analyze form and incorporate value, the concepts of light and shadow patterns, perspective, proportion, and composition in the practice of drawing. In-depth theory and practice of charcoal drawing. Honors work emphasizes a deeper study of great works of historical and contemporary drawings of value, line, form, space, and composition.

Proposed Discipline Art

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

This honors class will be added to the core requirements of the AA-T Studio Art for Transfer Degree, the AA-T Art History for Transfer Degree, the Art AA and Certificate of Achievement. The course will also be added as a restricted support course on the GID AA and Certificate of Achievement. The honors class will be an alternative to the ART 4A Fundamentals in Drawing class.

Are there any other departments that may be impacted from the addition of this course?

No

Comments & Other Relevant Information for Discussion:

ART 4A is a GE course for the humanities at Foothill College. We would like this course ART 4AH to also receive GE for Foothill College.

Reviewer
Comments

Course Change Request

New Course Proposal

Date Submitted: 04/21/24 8:27 am

Viewing: **ENGL F016H : HONORS INTRODUCTION TO LITERATURE**

Last edit: 04/25/24 11:28 am

Changes proposed by: Ben Armerding (20109525)

In Workflow

1. **1LA Curriculum Rep**
2. **Curriculum Coordinator**
3. Activation

Course Proposal Form

Faculty Author	Natalia Menendez		
Effective Term	Summer 2025		
Subject	English (ENGL)	Course Number	F016H
Department	English (ENGL)		
Division	Language Arts (1LA)		
Units	4		
Hours	4 Lecture hours		
Course Title	HONORS INTRODUCTION TO LITERATURE		
Short Title			

Proposed Transferability UC/CSU

Proposed Description and Requisites: Introduction to literary study through texts from a wide range of genres, including poetry, drama, fiction, and creative nonfiction. Focus on analytical reading and literary analysis, including effective use of critical theory and secondary source research. Intended for students desiring further development of literary analytical skills and literary appreciation. Specific to this honors class: Engagement in rigorous critical analyses and in-depth exploration of historical and cultural contexts and critical theory, leading to sophisticated and complex arguments about literary texts.

Proposed Discipline English

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

Are there any other departments that may be impacted from the addition of this course?

No

Comments & Other Relevant Information for Discussion:
None

Reviewer Comments **Amy Sarver (sarveramy) (05/31/23 2:16 pm)**: Rollback: Course description needs editing.

Amy Sarver (sarveramy) (04/15/24 1:58 pm): Rollback: By request

Approval Path

1. 05/31/23 2:16 pm
Amy Sarver (sarveramy):
Rollback to Initiator
2. 04/15/24 1:58 pm
Amy Sarver (sarveramy):
Rollback to Initiator
3. 04/25/24 10:57 am
Ben Armerding (armerdingbenjami)
Approved for 1LA Curriculum Rep

Course Change Request

New Course Proposal

Date Submitted: 04/17/24 8:37 am

Viewing: **LINC F086C : DIGITAL STORYTELLING IN EDUCATION**

Last edit: 04/23/24 12:34 pm

Changes proposed by: Cassandra Pereira (10209946)

In Workflow

1. 1SS Curriculum Rep
2. Curriculum Coordinator
3. Activation

Approval Path

1. 04/23/24 8:39 am
Angelica Dupree
(dupreeangelica):
Approved for 1SS
Curriculum Rep

Course Proposal Form

Faculty Author Cassandra Pereira

Effective Term Summer 2025

Subject Learning in New Media Classrooms Course Number F086C
(LINC)

Department Learning in New Media Classrooms
(LINC)

Division Business and Social Sciences (1SS)

Units 3

Hours 3 Hours Lecture

Course Title DIGITAL STORYTELLING IN EDUCATION

Short Title

Proposed
Transferability None

Proposed
Description and
Requisites: Designed for educators and administrators, this course empowers participants to harness the power of digital storytelling to enhance educational outcomes and institutional branding. Focusing on the strategic use of multimedia tools, the course guides participants through the creation of compelling digital narratives that effectively communicate the values, achievements, and aspirations of educational institutions to a broad audience, including students, parents, and community stakeholders. Participants will explore techniques in personal and institutional branding, multimedia content creation, and effective communication strategies tailored for educational settings. Emphasis is placed on crafting stories that resonate with diverse audiences, using storytelling for professional networking, and enhancing stakeholder engagement. Through hands-on projects, including a capstone project focused on real-world applications, educators will learn to leverage digital storytelling as a dynamic tool for professional and educational advancement.

Proposed
Discipline Instructional Design/Technology

To which Degree(s) or Certificate(s) would this course potentially be added?
C.A. in Emerging Educational Technology Leadership
C.A. in Educational Immersive Media

Are there any other departments that may be impacted from the addition of this course?

No

Comments & Other Relevant Information for Discussion:

This will be a core course for the revised Emerging Education Technology Leadership certificate program, which we intend to begin offering in Summer 2025. It will also be an elective for the C.A. in Educational Immersive Media.

Reviewer
Comments

Course Change Request

New Course Proposal

Date Submitted: 04/17/24 8:37 am

Viewing: **LINC F087A : EDUCATION TECHNOLOGY LEADERSHIP**

Last edit: 04/23/24 12:36 pm

Changes proposed by: Cassandra Pereira (10209946)

In Workflow

- 1SS Curriculum Rep
- Curriculum Coordinator
- Activation

Approval Path

- 04/23/24 8:39 am
Angelica Dupree (dupreeangelica):
Approved for 1SS Curriculum Rep

Course Proposal Form

Faculty Author	Cassandra Pereira		
Effective Term	Summer 2025		
Subject	Learning in New Media Classrooms (LINC)	Course Number	F087A
Department	Learning in New Media Classrooms (LINC)		
Division	Business and Social Sciences (1SS)		
Units	3		
Hours	3 hours lecture		
Course Title	EDUCATION TECHNOLOGY LEADERSHIP		
Short Title			

Proposed Transferability: None

Proposed Description and Requisites: Designed for aspiring and current education leaders, this course focuses on the integration of leadership skills and technology to drive innovation within educational settings. It covers essential aspects of educational technology leadership including personal branding, professional networking, effective presentation and workshop facilitation, and innovative technology integration. Special emphasis is placed on leadership and team development, with a comprehensive exploration of conflict management strategies and team dynamics in educational technology projects. Students will learn to foster an inclusive environment, promoting collaboration and respect for diverse viewpoints. Through practical exercises and a capstone leadership project, participants will be prepared to lead and support educational technology initiatives effectively, positioning themselves and their organizations at the forefront of educational innovation.

Proposed Discipline: Instructional Design/Technology

To which Degree(s) or Certificate(s) would this course potentially be added?
C.A. in Emerging Education Technology Leadership

Are there any other departments that may be impacted from the addition of this course?

No

Comments & Other Relevant Information for Discussion:

This will be a core course for the revised Emerging Education Technology Leadership certificate program, which we intend to begin offering in Summer 2025.

Reviewer Comments

Course Change Request

New Course Proposal

Date Submitted: 03/19/24 9:06 pm

Viewing: **THTR F421A : SCENERY & PROPERTY CONSTRUCTION
NONCREDIT**

Last edit: 04/18/24 11:28 am

Changes proposed by: Leigh Henderson (20539301)

In Workflow

- 1FA Curriculum Rep
- Curriculum Coordinator
- Activation

Approval Path

- 03/19/24 2:41 pm
Jordan Fong (fongjordan):
Rollback to Initiator
- 04/09/24 3:17 pm
Jordan Fong (fongjordan):
Approved for 1FA Curriculum Rep

Course Proposal Form

Faculty Author	Leigh Henderson		
Effective Term	Summer 2025		
Subject	Theatre Arts (THTR)	Course Number	F421A
Department	Theatre Arts (THTR)		
Division	Fine Arts and Communication (1FA)		
Units	0		
Hours	2 hours lecture, 6 hours lab		
Course Title	SCENERY & PROPERTY CONSTRUCTION NONCREDIT		
Short Title			

Proposed Transferability: None

Proposed Description and Requisites: The theory and practice of creating and using scenery and properties for dramatic presentations. Students will learn basic vocabulary, processes, tools and materials used in the production of scenery and properties for the stage. Practical application and safe use of basic woodworking tools used for creating scenery and properties for Theatre Arts productions. Noncredit course.

Proposed Discipline: Theater Arts or Stagecraft

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? No

Comments & Other Relevant Information for Discussion: Non-credit mirrored version of THTR 21A.

Reviewer Comments: **Jordan Fong (fongjordan) (03/19/24 2:41 pm):** Rollback: Hi, Leigh! Based on feedback from our FAC Div CC meeting, please add noncredit in title, add weekly hours not total hours, and add mirrors "x" class.

Course Change Request

New Course Proposal

Date Submitted: 03/19/24 9:06 pm

Viewing: **THTR F421B : INTERMEDIATE SCENERY & PROPERTY CONSTRUCTION NONCREDIT**

Last edit: 04/18/24 11:30 am

Changes proposed by: Leigh Henderson (20539301)

In Workflow

- 1FA Curriculum Rep
- Curriculum Coordinator
- Activation

Approval Path

- 03/19/24 2:41 pm
Jordan Fong (fongjordan):
Rollback to Initiator
- 04/09/24 3:18 pm
Jordan Fong (fongjordan):
Approved for 1FA Curriculum Rep

Course Proposal Form

Faculty Author	Leigh Henderson		
Effective Term	Summer 2025		
Subject	Theatre Arts (THTR)	Course Number	F421B
Department	Theatre Arts (THTR)		
Division	Fine Arts and Communication (1FA)		
Units	0		
Hours	2 hours lecture, 6 hours lab		
Course Title	INTERMEDIATE SCENERY & PROPERTY CONSTRUCTION NONCREDIT		
Short Title			

Proposed Transferability: None

Proposed Description and Requisites: Continuation of THTR 421A. The theory and practice of creating and using scenery and properties for dramatic presentations. Students will learn vocabulary, processes, tools and materials specific to areas of the production of scenery and properties for the stage. Practical application and safe use of advanced woodworking tools used for creating scenery and properties for Theatre Arts productions. Introduction of designing and working safely with alternative materials, basic electrical and lighting functions and sound reinforcement. Practical application of 3-D design software and digital fabrication machines. Noncredit course.

Prerequisite: Successful completion of THTR 21A, THTR 421A or equivalent.

Proposed Discipline: Theater Arts or Stagecraft

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? No

Comments & Other Relevant Information for Discussion: Noncredit mirrored version of THTR 21B.

Reviewer Comments: **Jordan Fong (fongjordan) (03/19/24 2:41 pm):** Rollback: Hi, Leigh! Based on feedback from our FAC Div CC meeting, please add noncredit in title, add weekly hours not total hours, and add mirrors "x" class.

Course Change Request

New Course Proposal

Date Submitted: 03/19/24 9:05 pm

Viewing: **THTR F421C : ADVANCED SCENERY & PROPERTIES CONSTRUCTION NONCREDIT**

Last edit: 04/18/24 11:33 am

Changes proposed by: Leigh Henderson (20539301)

In Workflow

- 1FA Curriculum Rep
- Curriculum Coordinator
- Activation

Approval Path

- 03/19/24 2:41 pm
Jordan Fong (fongjordan):
Rollback to Initiator
- 04/09/24 3:18 pm
Jordan Fong (fongjordan):
Approved for 1FA Curriculum Rep

Course Proposal Form

Faculty Author	Leigh Henderson		
Effective Term	Summer 2025		
Subject	Theatre Arts (THTR)	Course Number	F421C
Department	Theatre Arts (THTR)		
Division	Fine Arts and Communication (1FA)		
Units	0		
Hours	2 hours lecture, 6 hours lab		
Course Title	ADVANCED SCENERY & PROPERTIES CONSTRUCTION NONCREDIT		
Short Title			

Proposed Transferability: None

Proposed Description and Requisites: Continuation of THTR 421B. Theory of and practice creating and using scenery and properties for department dramatic presentations. Safe use of tools, materials, and construction techniques used in the construction of scenery and properties for the stage. Introduction to the use of metal in the production of scenery and properties for the stage. Safe rigging concepts, tools and practices for the stage. Leadership experience in a collaborative theatre environment. Practical application of 3-D design software and digital fabrication machines. Noncredit course.

Prerequisite: Successful completion of THTR 21B, THTR 421B or equivalent.

Proposed Discipline: Stagecraft or Theater Arts

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? No

Comments & Other Relevant Information for Discussion: Noncredit mirrored version of THTR 21C.

Reviewer Comments: **Jordan Fong (fongjordan) (03/19/24 2:41 pm):** Rollback: Hi, Leigh! Based on feedback from our FAC Div CC meeting, please add noncredit in title, add weekly hours not total hours, and add mirrors "x" class.

Course Change Request

New Course Proposal

Date Submitted: 03/19/24 9:04 pm

Viewing: **THTR F425. : INTRODUCTION TO FASHION & COSTUME CONSTRUCTION NONCREDIT**

Last edit: 04/18/24 11:36 am

Changes proposed by: Leigh Henderson (20539301)

In Workflow

- 1FA Curriculum Rep
- Curriculum Coordinator
- Activation

Approval Path

- 03/19/24 2:41 pm
Jordan Fong (fongjordan):
Rollback to Initiator
- 04/09/24 3:19 pm
Jordan Fong (fongjordan):
Approved for 1FA Curriculum Rep

Course Proposal Form

Faculty Author	Leigh Henderson		
Effective Term	Summer 2025		
Subject	Theatre Arts (THTR)	Course Number	F425.
Department	Theatre Arts (THTR)		
Division	Fine Arts and Communication (1FA)		
Units	0		
Hours	3 hours lecture, 3 hours lab		
Course Title	INTRODUCTION TO FASHION & COSTUME CONSTRUCTION NONCREDIT		
Short Title			

Proposed Transferability: None

Proposed Description and Requisites: An introduction to sewing techniques, pattern cutting, costume room equipment and the design and fabrication of clothing and costumes for the theatre and stage. Noncredit course.

Proposed Discipline: Stagecraft or Theater Arts

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? No

Comments & Other Relevant Information for Discussion: Mirrored noncredit version of THTR 25.

Reviewer Comments: **Jordan Fong (fongjordan) (03/19/24 2:41 pm):** Rollback: Hi, Leigh! Based on feedback from our FAC Div CC meeting, please add noncredit in title, add weekly hours not total hours, and add mirrors "x" class.

Course Change Request

New Course Proposal

Date Submitted: 03/19/24 9:03 pm

Viewing: **THTR F425B : FASHION & COSTUME CONSTRUCTION II
NONCREDIT**

Last edit: 04/18/24 11:38 am

Changes proposed by: Leigh Henderson (20539301)

In Workflow

1. **1FA Curriculum Rep**
2. **Curriculum Coordinator**
3. Activation

Approval Path

1. 03/19/24 2:41 pm
Jordan Fong (fongjordan): Rollback to Initiator
2. 04/09/24 3:19 pm
Jordan Fong (fongjordan): Approved for 1FA Curriculum Rep

Course Proposal Form

Faculty Author	Leigh Henderson		
Effective Term	Summer 2025		
Subject	Theatre Arts (THTR)	Course Number	F425B
Department	Theatre Arts (THTR)		
Division	Fine Arts and Communication (1FA)		
Units	0		
Hours	3 hours lecture, 3 hours lab		
Course Title	FASHION & COSTUME CONSTRUCTION II NONCREDIT		
Short Title			

Proposed Transferability: None

Proposed Description and Requisites: Continuation of THTR 425 with an exploration into more complex sewing techniques and machinery use. Further practice in the fabrication of clothing and costumes for the theatre, including pattern adjustment and measuring, basic pattern making, sewing knits, advanced fitting and alteration techniques and specialty machine usage. Noncredit course.

Prerequisites: Successful completion of THTR 425, THTR 25 or equivalent.

Proposed Discipline: Stagecraft or Theater Arts

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? No

Comments & Other Relevant Information for Discussion: Mirrored noncredit version of THTR 25B.

Reviewer Comments: **Jordan Fong (fongjordan) (03/19/24 2:41 pm):** Rollback: Hi, Leigh! Based on feedback from our FAC Div CC meeting, please add noncredit in title, add weekly hours not total hours, and add mirrors "x" class.

Course Change Request

New Course Proposal

Date Submitted: 03/19/24 9:02 pm

Viewing: **THTR F425C : FASHION & COSTUME CONSTRUCTION III
NONCREDIT**

Last edit: 04/18/24 11:40 am

Changes proposed by: Leigh Henderson (20539301)

In Workflow

- 1FA Curriculum Rep
- Curriculum Coordinator
- Activation

Approval Path

- 03/19/24 2:41 pm
Jordan Fong (fongjordan): Rollback to Initiator
- 04/09/24 3:20 pm
Jordan Fong (fongjordan): Approved for 1FA Curriculum Rep

Course Proposal Form

Faculty Author	Leigh Henderson		
Effective Term	Summer 2025		
Subject	Theatre Arts (THTR)	Course Number	F425C
Department	Theatre Arts (THTR)		
Division	Fine Arts and Communication (1FA)		
Units	0		
Hours	3 hours lecture, 3 hours lab		
Course Title	FASHION & COSTUME CONSTRUCTION III NONCREDIT		
Short Title			

Proposed Transferability: None

Proposed Description and Requisites: Continuation of THTR 425B with a practical focus on creating costumes from designs for a theatrical production. Further use and practice with complex sewing projects and patterning skills to include drafting and fitting a body block, then creating a pattern from it, basic draping techniques and advanced materials usage with specialty materials for complex theatrical headgear, wigs, and costumes. Noncredit course.

Prerequisite: Successful completion of THTR 425B, THTR 25B or equivalent.

Proposed Discipline: Stagecraft or Theater Arts

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? No

Comments & Other Relevant Information for Discussion: Mirrored noncredit version of THTR 25C.

Reviewer Comments: **Jordan Fong (fongjordan) (03/19/24 2:41 pm):** Rollback: Hi, Leigh! Based on feedback from our FAC Div CC meeting, please add noncredit in title, add weekly hours not total hours, and add mirrors "x" class.

Course Change Request

New Course Proposal

Date Submitted: 03/19/24 9:00 pm

Viewing: **THTR F427. : LIGHTING DESIGN & TECHNOLOGY**

NONCREDIT

Last edit: 04/18/24 11:48 am

Changes proposed by: Leigh Henderson (20539301)

In Workflow

- 1FA Curriculum Rep
- Curriculum Coordinator
- Activation

Approval Path

- 03/19/24 2:42 pm
Jordan Fong (fongjordan):
Rollback to Initiator
- 04/09/24 3:20 pm
Jordan Fong (fongjordan):
Approved for 1FA Curriculum Rep

Course Proposal Form

Faculty Author	Leigh Henderson		
Effective Term	Summer 2025		
Subject	Theatre Arts (THTR)	Course Number	F427.
Department	Theatre Arts (THTR)		
Division	Fine Arts and Communication (1FA)		
Units	0		
Hours	3 hours lecture, 3 hours lab		
Course Title	LIGHTING DESIGN & TECHNOLOGY NONCREDIT		
Short Title			

Proposed Transferability: None

Proposed Description and Requisites: A survey of lighting design for the theatre, film, and television. An introduction to the basic elements of electrical wiring, lighting instruments, lighting control devices, and lighting special effects. Basic lighting design principles of color, intensity, direction, and movement. Use of computer to design simple stage lighting plans. Noncredit course.

Proposed Discipline: Stagecraft or Theater Arts

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? No

Comments & Other Relevant Information for Discussion: Mirrored noncredit version of THTR 27.

Reviewer Comments: **Jordan Fong (fongjordan) (03/19/24 2:42 pm):** Rollback: Hi, Leigh! Based on feedback from our FAC Div CC meeting, please add noncredit in title, add weekly hours not total hours, and add mirrors "x" class.

Course Change Request

New Course Proposal

Date Submitted: 03/19/24 8:59 pm

Viewing: **THTR F431. : MANAGEMENT FOR THE THEATRE & STAGE NONCREDIT**

Last edit: 04/18/24 11:50 am

Changes proposed by: Leigh Henderson (20539301)

In Workflow

- 1FA Curriculum Rep
- Curriculum Coordinator
- Activation

Approval Path

- 03/19/24 2:42 pm
Jordan Fong (fongjordan): Rollback to Initiator
- 04/09/24 3:21 pm
Jordan Fong (fongjordan): Approved for 1FA Curriculum Rep

Course Proposal Form

Faculty Author	Leigh Henderson		
Effective Term	Summer 2025		
Subject	Theatre Arts (THTR)	Course Number	F431.
Department	Theatre Arts (THTR)		
Division	Fine Arts and Communication (1FA)		
Units	0		
Hours	4 hours lecture		
Course Title	MANAGEMENT FOR THE THEATRE & STAGE NONCREDIT		
Short Title			

Proposed Transferability: None

Proposed Description and Requisites: An introduction to the process and techniques of theatre management. Presentations and models of the business and management side of a theatre production, focusing specifically on the roles of the general manager, production manager, and stage manager. Noncredit course.

Proposed Discipline: Theater Arts or Stagecraft

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? No

Comments & Other Relevant Information for Discussion: Mirrored noncredit version of THTR 31.

Reviewer Comments: **Jordan Fong (fongjordan) (03/19/24 2:42 pm):** Rollback: Hi, Leigh! Based on feedback from our FAC Div CC meeting, please add noncredit in title, add weekly hours not total hours, and add mirrors "x" class.

Course Change Request

New Course Proposal

Date Submitted: 03/19/24 8:58 pm

Viewing: **THTR F440A : BASIC THEATRICAL MAKEUP NONCREDIT**

Last edit: 04/18/24 11:52 am

Changes proposed by: Leigh Henderson (20539301)

In Workflow

- 1FA Curriculum Rep
- Curriculum Coordinator
- Activation

Course Proposal Form

Faculty Author	Leigh Henderson		
Effective Term	Summer 2025		
Subject	Theatre Arts (THTR)	Course Number	F440A
Department	Theatre Arts (THTR)		
Division	Fine Arts and Communication (1FA)		
Units	0		
Hours	3 hours lecture, 3 hours lab		
Course Title	BASIC THEATRICAL MAKEUP NONCREDIT		
Short Title			

Approval Path

- 03/19/24 2:42 pm
Jordan Fong (fongjordan):
Rollback to Initiator
- 04/09/24 3:22 pm
Jordan Fong (fongjordan):
Approved for 1FA Curriculum Rep

Proposed Transferability: None

Proposed Description and Requisites: A practical introduction to the techniques of applying theatrical makeup for the stage. Noncredit course.

Proposed Discipline: Theater Arts

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? No

Comments & Other Relevant Information for Discussion: Mirrored noncredit version of THTR 40A.

Reviewer Comments: **Jordan Fong (fongjordan) (03/19/24 2:42 pm):** Rollback: Hi, Leigh! Based on feedback from our FAC Div CC meeting, please add noncredit in title, add weekly hours not total hours, and add mirrors "x" class.

Course Change Request

New Course Proposal

Date Submitted: 03/19/24 8:57 pm

Viewing: **THTR F440B : THEATRICAL MAKEUP FOR PRODUCTION
NONCREDIT**

Last edit: 04/18/24 11:54 am

Changes proposed by: Leigh Henderson (20539301)

In Workflow

- 1FA Curriculum Rep
- Curriculum Coordinator
- Activation

Approval Path

- 03/19/24 2:42 pm
Jordan Fong (fongjordan):
Rollback to Initiator
- 04/09/24 3:22 pm
Jordan Fong (fongjordan):
Approved for 1FA Curriculum Rep

Course Proposal Form

Faculty Author	Leigh Henderson		
Effective Term	Summer 2025		
Subject	Theatre Arts (THTR)	Course Number	F440B
Department	Theatre Arts (THTR)		
Division	Fine Arts and Communication (1FA)		
Units	0		
Hours	3 hours lecture, 3 hours lab		
Course Title	THEATRICAL MAKEUP FOR PRODUCTION NONCREDIT		
Short Title			

Proposed Transferability: None

Proposed Description and Requisites: Continuation of work in THTR 440A with emphasis in more advanced techniques and practical application experience for the stage. Noncredit course.

Prerequisite: Successful completion of THTR 40A, THTR 440A, or equivalent.

Proposed Discipline: Theater Arts

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?

No

Comments & Other Relevant Information for Discussion: Mirrored non-credit version of THTR 40B.

Reviewer Comments: **Jordan Fong (fongjordan) (03/19/24 2:42 pm):** Rollback: Hi, Leigh! Based on feedback from our FAC Div CC meeting, please add noncredit in title, add weekly hours not total hours, and add mirrors "x" class.

Course Change Request

New Course Proposal

Date Submitted: 03/19/24 8:56 pm

Viewing: **THTR F442. : INTRODUCTION TO THEATRE DESIGN
NONCREDIT**

Last edit: 04/18/24 12:49 pm

Changes proposed by: Leigh Henderson (20539301)

In Workflow

1. 1FA Curriculum Rep
2. Curriculum Coordinator
3. Activation

Approval Path

1. 03/19/24 2:42 pm
Jordan Fong (fongjordan): Rollback to Initiator
2. 04/09/24 3:23 pm
Jordan Fong (fongjordan): Approved for 1FA Curriculum Rep

Course Proposal Form

Faculty Author	Leigh Henderson		
Effective Term	Summer 2025		
Subject	Theatre Arts (THTR)	Course Number	F442.
Department	Theatre Arts (THTR)		
Division	Fine Arts and Communication (1FA)		
Units	0		
Hours	3 hours lecture, 3 hours lab		
Course Title	INTRODUCTION TO THEATRE DESIGN NONCREDIT		
Short Title			

Proposed Transferability: None

Proposed Description and Requisites: A survey of the theory and practice of theatrical design using traditional and digital tools. Introduces basic concepts applicable to scenery, lighting, sound, costumes, makeup and properties. Coursework includes research and analysis, sketching and drafting, rendering and model making and the use of computer graphics software and equipment to create three-dimensional designs for the performing arts, film, and television. Introduction of equipment and construction techniques through demonstration and laboratory experience. Noncredit course.

Proposed Discipline: Theater Arts or Stagecraft

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? No

Comments & Other Relevant Information for Discussion: Mirrored noncredit version of THTR 42.

Reviewer Comments: **Jordan Fong (fongjordan) (03/19/24 2:42 pm):** Rollback: Hi, Leigh! Based on feedback from our FAC Div CC meeting, please add noncredit in title, add weekly hours not total hours, and add mirrors "x" class.

Course Change Request

New Course Proposal

Date Submitted: 03/19/24 8:55 pm

Viewing: **THTR F445A : TECHNICAL THEATRE IN PRODUCTION I
NONCREDIT**

Last edit: 04/18/24 12:52 pm

Changes proposed by: Leigh Henderson (20539301)

In Workflow

- 1FA Curriculum Rep
- Curriculum Coordinator
- Activation

Approval Path

- 03/19/24 2:42 pm
Jordan Fong (fongjordan):
Rollback to Initiator
- 04/09/24 3:24 pm
Jordan Fong (fongjordan):
Approved for 1FA Curriculum Rep

Course Proposal Form

Faculty Author	Leigh Henderson		
Effective Term	Summer 2025		
Subject	Theatre Arts (THTR)	Course Number	F445A
Department	Theatre Arts (THTR)		
Division	Fine Arts and Communication (1FA)		
Units	0		
Hours	1 hour lecture, 9 hours lab		
Course Title	TECHNICAL THEATRE IN PRODUCTION I NONCREDIT		
Short Title			

Proposed Transferability: None

Proposed Description and Requisites: Students will gain practical experience in the application of production responsibilities in any of the following: stage management, house management, construction, scenery, properties, costume, lighting, sound, and running crews. Noncredit course.

Proposed Discipline: Stagecraft or Theater Arts

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? No

Comments & Other Relevant Information for Discussion: Mirrored non-credit version of THTR 45A.

Reviewer Comments: **Jordan Fong (fongjordan) (03/19/24 2:42 pm):** Rollback: Hi, Leigh! Based on feedback from our FAC Div CC meeting, please add noncredit in title, add weekly hours not total hours, and add mirrors "x" class.

Course Change Request

New Course Proposal

Date Submitted: 03/19/24 8:55 pm

Viewing: **THTR F445B : TECHNICAL THEATRE IN PRODUCTION II
NONCREDIT**

Last edit: 04/18/24 12:54 pm

Changes proposed by: Leigh Henderson (20539301)

In Workflow

- 1FA Curriculum Rep
- Curriculum Coordinator
- Activation

Approval Path

- 03/19/24 2:42 pm
Jordan Fong (fongjordan):
Rollback to Initiator
- 04/09/24 3:24 pm
Jordan Fong (fongjordan):
Approved for 1FA Curriculum Rep

Course Proposal Form

Faculty Author	Leigh Henderson		
Effective Term	Summer 2025		
Subject	Theatre Arts (THTR)	Course Number	F445B
Department	Theatre Arts (THTR)		
Division	Fine Arts and Communication (1FA)		
Units	0		
Hours	1 hour lecture, 9 hours lab		
Course Title	TECHNICAL THEATRE IN PRODUCTION II NONCREDIT		
Short Title			

Proposed Transferability: None

Proposed Description and Requisites: Students will gain a practical experience in the application of production responsibilities in any of the following theatre technical areas: construction, scenery, properties, costume, lighting, sound, special effects and running crews, based on the students' level of experience and the demands of the current department productions. Students will assume greater responsibility for the planning and scheduling of work in their assigned area. Noncredit course.

Prerequisite: THTR 445A or THTR 45A.

Proposed Discipline: Stagecraft or Theater Arts

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? No

Comments & Other Relevant Information for Discussion: Mirrored noncredit version of THTR 45B.

Reviewer Comments: **Jordan Fong (fongjordan) (03/19/24 2:42 pm):** Rollback: Hi, Leigh! Based on feedback from our FAC Div CC meeting, please add noncredit in title, add weekly hours not total hours, and add mirrors "x" class.

Course Change Request

New Course Proposal

Date Submitted: 03/19/24 8:54 pm

Viewing: **THTR F445C : TECHNICAL THEATRE IN PRODUCTION III
NONCREDIT**

Last edit: 04/18/24 12:56 pm

Changes proposed by: Leigh Henderson (20539301)

In Workflow

1. **1FA Curriculum Rep**
2. **Curriculum Coordinator**
3. Activation

Approval Path

1. 03/19/24 2:42 pm
Jordan Fong (fongjordan):
Rollback to Initiator
2. 04/09/24 3:24 pm
Jordan Fong (fongjordan):
Approved for 1FA Curriculum Rep

Course Proposal Form

Faculty Author	Leigh Henderson		
Effective Term	Summer 2025		
Subject	Theatre Arts (THTR)	Course Number	F445C
Department	Theatre Arts (THTR)		
Division	Fine Arts and Communication (1FA)		
Units	0		
Hours	1 hour lecture, 9 hours lab		
Course Title	TECHNICAL THEATRE IN PRODUCTION III NONCREDIT		
Short Title			

Proposed Transferability: None

Proposed Description and Requisites: Continuation of THTR 445B. Students will gain additional practical experience in the application of production responsibilities in any of the following: construction, scenery, properties, costume, lighting, sound, and running crews. Students will assume greater responsibility for the design and implementation of technical elements for a theatrical production as department heads or group leaders. Noncredit course.

Prerequisite: THTR 445B or THTR 45B.

Proposed Discipline: Stagecraft or Theater Arts

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? No

Comments & Other Relevant Information for Discussion: Mirrored noncredit version of THTR 45C.

Reviewer Comments: **Jordan Fong (fongjordan) (03/19/24 2:42 pm):** Rollback: Hi, Leigh! Based on feedback from our FAC Div CC meeting, please add noncredit in title, add weekly hours not total hours, and add mirrors "x" class.

Course Change Request

New Course Proposal

Date Submitted: 03/19/24 8:53 pm

Viewing: **THTR F445D : TECHNICAL THEATRE IN PRODUCTION IV
NONCREDIT**

Last edit: 04/18/24 1:11 pm

Changes proposed by: Leigh Henderson (20539301)

In Workflow

- 1FA Curriculum Rep
- Curriculum Coordinator
- Activation

Approval Path

- 03/19/24 2:42 pm
Jordan Fong (fongjordan):
Rollback to Initiator
- 04/09/24 3:24 pm
Jordan Fong (fongjordan):
Approved for 1FA Curriculum Rep

Course Proposal Form

Faculty Author	Leigh Henderson		
Effective Term	Summer 2025		
Subject	Theatre Arts (THTR)	Course Number	F445D
Department	Theatre Arts (THTR)		
Division	Fine Arts and Communication (1FA)		
Units	0		
Hours	1 hour lecture, 9 hours lab		
Course Title	TECHNICAL THEATRE IN PRODUCTION IV NONCREDIT		
Short Title			

Proposed Transferability: None

Proposed Description and Requisites: Students will gain practical experience with backstage functions of theatre crews. Students will work with faculty and professional mentors to develop a full theatrical production. Noncredit course.

Proposed Discipline: Stagecraft or Theater Arts

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? No

Comments & Other Relevant Information for Discussion: Mirrored noncredit version of THTR 45D.

Reviewer Comments: **Jordan Fong (fongjordan) (03/19/24 2:42 pm):** Rollback: Hi, Leigh! Based on feedback from our FAC Div CC meeting, please add noncredit in title, add weekly hours not total hours, and add mirrors "x" class.

Course Change Request

New Course Proposal

Date Submitted: 03/19/24 8:52 pm

Viewing: **THTR F445E : TECHNICAL THEATRE MANAGEMENT IN PRODUCTION NONCREDIT**

Last edit: 04/18/24 1:13 pm

Changes proposed by: Leigh Henderson (20539301)

In Workflow

- 1FA Curriculum Rep
- Curriculum Coordinator
- Activation

Approval Path

- 03/19/24 2:42 pm
Jordan Fong (fongjordan):
Rollback to Initiator
- 04/09/24 3:24 pm
Jordan Fong (fongjordan):
Approved for 1FA Curriculum Rep

Course Proposal Form

Faculty Author	Leigh Henderson		
Effective Term	Summer 2025		
Subject	Theatre Arts (THTR)	Course Number	F445E
Department	Theatre Arts (THTR)		
Division	Fine Arts and Communication (1FA)		
Units	0		
Hours	2 hours lecture, 12 hours lab		
Course Title	TECHNICAL THEATRE MANAGEMENT IN PRODUCTION NONCREDIT		
Short Title			

Proposed Transferability: None

Proposed Description and Requisites: Students will gain practical experience in the application of production management responsibilities in any of the following: stage management, house management, production management, or technical department management. Noncredit course.

Proposed Discipline: Stagecraft or Theater Arts

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? No

Comments & Other Relevant Information for Discussion: Mirrored noncredit version of THTR 45E.

Reviewer Comments: **Jordan Fong (fongjordan) (03/19/24 2:42 pm):** Rollback: Hi, Leigh! Based on feedback from our FAC Div CC meeting, please add noncredit in title, add weekly hours not total hours, and add mirrors "x" class.

Course Change Request

New Course Proposal

Date Submitted: 03/19/24 8:51 pm

Viewing: **THTR F445F : TECHNICAL THEATRE MANAGEMENT IN PRODUCTION II NONCREDIT**

Last edit: 04/18/24 1:16 pm

Changes proposed by: Leigh Henderson (20539301)

In Workflow

- 1FA Curriculum Rep
- Curriculum Coordinator
- Activation

Approval Path

- 03/19/24 2:42 pm
Jordan Fong (fongjordan):
Rollback to Initiator
- 04/09/24 3:24 pm
Jordan Fong (fongjordan):
Approved for 1FA Curriculum Rep

Course Proposal Form

Faculty Author	Leigh Henderson		
Effective Term	Summer 2025		
Subject	Theatre Arts (THTR)	Course Number	F445F
Department	Theatre Arts (THTR)		
Division	Fine Arts and Communication (1FA)		
Units	0		
Hours	2 hours lecture, 12 hours lab		
Course Title	TECHNICAL THEATRE MANAGEMENT IN PRODUCTION II NONCREDIT		
Short Title			

Proposed Transferability: None

Proposed Description and Requisites: Students will gain practical experience in the application of theatre management responsibilities in any of the following: stage management, house management, production management, or technical department management. Students will be expected to assume responsibility for assembling and organizing the work of several groups or departments in the successful creation of a large theatrical production. Noncredit course.

Prerequisite: THTR 445E or THTR 45E.

Proposed Discipline: Stagecraft or Theater Arts

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? No

Comments & Other Relevant Information for Discussion: Mirrored noncredit version of THTR 45F.

Reviewer Comments: **Jordan Fong (fongjordan) (03/19/24 2:42 pm):** Rollback: Hi, Leigh! Based on feedback from our FAC Div CC meeting, please add noncredit in title, add weekly hours not total hours, and add mirrors "x" class.

Spanish-Advanced, Certificate of Achievement

Basic Information

Faculty Author(s)

Users
Julio Rivera-Montanez Patricia Crespo-Martin

Department

Spanish

Division

Language Arts

Title of Degree/Certificate

Spanish-Advanced

Type of Award

Certificate of Achievement

Workforce/CTE Program:

No

Effective Catalog Edition:

2023-2024

Certificate of Achievement Local Narrative

Program Goals and Objectives

The Certificate of Achievement in Spanish-Advanced will provide students with a working tool that will make them more attractive to prospective employers. Possession of this certificate can also guarantee employment advancement, salary increments, and more attractive job qualifications.

Program Learning Outcomes

- Students will be able to conduct a conversation in Spanish with a minimum of grammatical errors in the present, past, and future, and with minimal pronunciation errors.
- Students will be able to express verbal and written opinions about a wide variety of topics using the subjunctive, both past and present, and the conditional tense.
- Students will be able to demonstrate a solid understanding of the subtleties and idiosyncrasies of Spanish-speaking cultures by analyzing and comparing them.

Catalog Description

The Certificate of Achievement in Spanish-Advanced is designed to enhance the student's knowledge of Spanish. It provides a broader view of the Spanish-speaking world and a deeper knowledge of practical structures. It will open employment opportunities for local students because of the large number of Bay Area companies looking for bilingual students. For students planning to continue their undergraduate or graduate education in business, education, or law, this certificate will complement their studies. From a cultural standpoint, Spanish study is valuable in California, with its rich diversity of cultural traditions represented by many Spanish-speaking immigrants from all over the Hispanic World.

Program Requirements

Core Course Units: 15

Code	Course List Title	Units
<u>SPAN F004.</u>	INTERMEDIATE SPANISH I	5
<u>SPAN F005.</u>	INTERMEDIATE SPANISH II	5
<u>SPAN F006.</u>	INTERMEDIATE SPANISH III	5

Total Units: 15

Proposed Sequence

Term	Units
Year 1, Fall	5
Year 1, Winter	5
Year 1, Spring	5

Master Planning

This certificate empowers students to achieve their goals as members of the workforce, and will give them a competitive advantage, because Spanish is the most commonly used second language used in California. If students wish to continue their education, this certificate is stackable towards a degree. Finally, students will gain cultural competence to become better global citizens.

Enrollment and Completer Projections

We anticipate that for the first few years the numbers will remain flat, since most students in Spanish opt for a degree in Spanish; however, this certificate will appeal to students who are not interested in a degree but a certificate to appear in their resume and, eventually, as this certificate becomes known, the numbers will go up.

Historical Enrollment Data

Course #	Course Title	Y1 - Annual Sections	Y1 - Annual Enrollment	Y2 - Annual Sections	Y2 - Annual Enrollment
SPAN 4	Intermediate Spanish I	4	89	3	58
SPAN 5	Intermediate Spanish II	2	21	3	36
SPAN 6	Intermediate Spanish III	2	8	3	14

Place of Program in Curriculum/Similar Programs

Foothill College already offers a Spanish AA degree and AA-T degree. This certificate is stackable toward those degrees.

Similar Programs at Other Colleges in Service Area

This certificate is similar to other language certificates offered by De Anza College, such as Spanish and Mandarin.

Additional Information Required for State Submission:

TOP Code: 1105.00 - Spanish

CIP Code: 16.0905 - Spanish Languages and Literatures

Will any new resources be required (e.g., facilities, equipment, personnel)? No

Gainful Employment: Yes

Distance Education: 100%

Articulation Agreement by Major

Effective during the 2022-2023 Academic Year

To: San Jose State University
2022-2023 General Catalog, Semester

From: Foothill College
2022-2023 General Catalog, Quarter

Spanish, B.A.

STAR ACT (SB 1440)

The World Languages & Literatures department accepts the [AA-T in Spanish, Global Studies, or Social Justice Studies](#) for transfer into this major. We recommend transfer students complete the following courses, which are required for this major at SJSU, as part of their AA-T. Students should take courses which clear the American Institutions requirement and second course in English composition as part of their CSU GE or IGETC requirements for the AA-T degree (doing so will increase greater choice in the 60 units of SJSU course work to be taken after transfer).

IMPORTANT TRANSFER INFORMATION

Admission to San José State is competitive in all majors. SJSU continues to have more qualified applicants than available new student spaces. Because of this, SJSU is an impacted campus with impacted programs. For the most current information regarding admission impactation at SJSU please visit our website [Admissions Impaction](#).

Prior to transferring to San José State University all transfers must earn at least 60 transferable semester units (90 quarter), including the CSU four basic skill courses required for CSU admission eligibility (except majors which have an approved CSU GE A3 waiver). Within those 60 semester/90 quarter units, students are strongly encouraged to complete the following:

- 1. Lower Division Major Course Requirements (especially for STEM Majors):** Complete as many of the lower division courses required for the major as possible. Many of these courses may be double counted as part of the CSU GE-Breadth 39 semester unit requirements. The lower division major courses for this major are shown below.
- 2. General Education (GE) Requirements:** Complete all the CSU GE Breadth requirements at the community college (39 semester units/58 quarter units). The approved courses for each area can be found at [ASSIST.org](#) under the link "CSU GE-Breadth Certification Courses" for your college. Many of these courses may be double counted to meet the major requirements shown below, so choose your courses wisely. Some SJSU majors which meet GE requirements within the majors are noted on the [Exceptions for University Graduation Requirements](#) page in our catalog. Please see your college counselor/advisor to review your general education in order to receive FULL OR PARTIAL CERTIFICATION PRIOR TO TRANSFER to San José State University.
- 3. Second Course in English Composition highly recommended:** All students are strongly encouraged to complete a second English composition course as part of their lower division GE prior to transferring to SJSU (either to meet CSU GE Area A3 or C2). Complete this course with a grade of "C-" or better for the greatest success in passing the 100W course at SJSU.
The Writing Skills Test (WST) has been temporarily suspended. The "traditional" WST was an in-person, timed essay exam and has been suspended since March 2020. As a replacement, students now complete an online exercise to fulfill their WST requirement, called the [WST-DSP \(Directed Self-Placement\)](#).
- 4. American Institutions Requirement (US 1, US 2, and US 3 must be completed):** This requirement is normally two courses and can be taken as part of your CSU GE-Breadth 39 semester unit requirements (GE Area D and sometimes Area C). The approved courses can be found at [ASSIST.org](#) under the link "CSU US History, Constitution, and American Ideals Courses" for your college.
- 5. Graduation Requirement - Physical Education (PE):** All undergraduate students who matriculate at SJSU are required to complete two units of physical education from Kinesiology/Dance activity courses, unless the major program has an approved PE waiver. Majors which have approved PE waivers are noted on the ["Exceptions for University Graduation Requirements"](#) page in our catalog.

FOREIGN LANGUAGE REQUIREMENT:

Spanish Majors must also take one year of a second world language, ancient or modern, or the equivalent. Have your counselor check with the SJSU Department of World Languages and Literatures for approval of second language.

SECOND COURSE IN ENGLISH COMPOSITION:

ENGL 1B - Argument and Analysis (3.00)



ENGL 1B - Composition, Critical Reading & Thinking Through Literature (5.00)

--- Or ---

ENGL 1BH - Honors Composition, Critical Reading, & Thinking Through Literature (5.00)

--- Or ---

ENGL 2 - Critical Thinking and Writing (3.00)



ENGL 1B - Composition, Critical Reading & Thinking Through Literature (5.00)

--- Or ---

ENGL 1BH - Honors Composition, Critical Reading, & Thinking Through Literature (5.00)

--- Or ---

ENGL 1C - ARGUMENTATIVE WRITING & CRITICAL THINKING (5.00)

--- Or ---

ENGL 1CH - HONORS ARGUMENTATIVE WRITING & CRITICAL THINKING (5.00)

--- Or ---

PHIL 1 - Critical Thinking & Writing (5.00)

PREPARATION FOR THE MAJOR AND REQUIREMENTS FOR THE MINOR

SPAN 25A - Intermediate Spanish (4.00)



SPAN 4 - Intermediate Spanish I (5.00)

--- And ---

SPAN 5 - Intermediate Spanish II (5.00)

- Complete entire sequence at same institution prior to transfer

SPAN 25B - Intermediate Spanish (4.00)



SPAN 5 - Intermediate Spanish II (5.00)

--- And ---

SPAN 6 - Intermediate Spanish III (5.00)

- Complete entire sequence at same institution prior to transfer

--- Or ---

SPAN 20A - Spanish for Heritage Speakers I (4.00)



No Course Articulated

SPAN 20B - Spanish for Heritage Speakers II (4.00)



No Course Articulated

PREPARATION FOR THE MINOR AND PREREQUISITES FOR THE LOWER DIVISION MAJOR:

SPAN 1A - Elementary Spanish (4.00)



SPAN 1 - Elementary Spanish I (5.00)

--- And ---

SPAN 2 - Elementary Spanish II (5.00)

- Complete entire sequence at same institution prior to transfer

SPAN 1B - Elementary Spanish (4.00)



SPAN 2 - Elementary Spanish II (5.00)

--- And ---

SPAN 3 - Elementary Spanish III (5.00)

- Complete entire sequence at same institution prior to transfer

FOREIGN LANGUAGE REQUIREMENT

Consult an adviser

One additional year of a modern foreign language



No Course Articulated

END OF AGREEMENT

General Education Review Request

AREA VI - UNITED STATES CULTURES & COMMUNITIES

Course Number & Title: Steamfitting and Pipefitting 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 VI -United States Cultures & Communities:

United States Cultures and Communities courses critically explore the current and historical interaction of different groups of Americans. These courses discourage discriminatory attitudes towards others by providing an empirical understanding of and appreciation for the marginalized groups that have been important in the development of United States history and culture, and the value of diverse cultural groups to American society.

Courses meeting the GE requirement in United States Cultures and Communities *must* include *all of the following* student learning outcomes:

- U1. Demonstrate detailed knowledge of and sensitivity to at least one U.S. group categorized by race/ethnicity, gender, class, disability, sexual identity or religious belief who has suffered a history of systematic oppression and discrimination.
- U2. Critically analyze the degree of (or dynamics of) the interaction between at least one marginalized culture or community and the dominant U.S. culture, or between two marginalized communities or cultures.
- U3. Develop and articulate an awareness of one's own culturally-determined perspective and how it might be viewed from the perspective of others.

In addition, courses meeting the GE requirement for United States Cultures and Communities *must include at least three* of the following student learning outcomes:

- U4. Critically examine the contributions of many groups to a particular aspect of United States culture;
- U5. Evaluate and analyze the interaction of at least one marginalized culture with the dominant U.S. culture;
- U6. Evaluate and analyze the interaction between at least two marginalized cultures or communities within the framework of United States society;
- U7. Explain culture as a concept and how it can unite or divide people into various groups;
- U8. Apply information about groups presented in the class to contemporary social and cultural relations;
- U9. Analyze and interpret how culture shapes human development and behavior.

General Education Review Request
AREA VI - UNITED STATES CULTURES & COMMUNITIES

Course Number & Title: Steamfitting and Pipefitting 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:

U1. Demonstrate detailed knowledge of and sensitivity to at least one U.S. group categorized by race/ethnicity, gender, class, disability, sexual identity or religious belief who has suffered a history of systematic oppression and discrimination;

Matching course component(s):

Over their entire program, Steamfitter Pipefitter Technology students discuss, analyze, and critically engage in understanding how the trades generally, and unions specifically, increase the economic and social opportunities of historically marginalized groups.

APPT 141 Year 1 Semester 1 Union Heritage

The Union Heritage class discusses the history and importance of unions and the labor movement and how they helped address discrimination against systemically oppressed people from lower- and working-class and BIPOC groups. Students learn applied examples of this, such as how the Industrial Workers of the World (IWW) union wanted to abolish capitalism because of its systemic and negative effects on BIPOC people, women, children, and families.

APPT139A Year 5 Semester 5 Industrial Installations

Students in The Process Piping/Industrial Installation class are required to research and write a paper on Superfund (significantly polluted and hazardous areas with extensive soil and groundwater contamination) sites in the bay area, and their effects on the environment and policy making locally and nationwide. Students learn there are hundreds of Superfund sites in the state of California and dozens in Santa Clara County. This includes discussion of environmental racism (as environmental hazards and codes, or lack of them, disproportionately impact environments where BIPOC and other marginalized groups people live based on available resources), the disposal of toxic materials in American culture and history, and the importance of industry standards, code creation and enforcement. One example from this class is an examination of the Superfund Fairchild Semi-Conductor, Raytheon, and Intel sites. Students do an in-depth report on chemicals released at the sites, the status of the sites today, how monitoring is done, evident health hazards, local jurisdictions of the site and hazard mitigation for the future. In preparation for their projects, students learn things like that there are approximately 250,000 people in the county that live within a 15-mile radius of these sites (Fairchild / Raytheon and Intel-Mountain View are on the Superfund National Priorities List (NPL). All three sites are in the Middlefield-Ellis-Whisman (MEW) study area) and how this affects local populations by age, gender, social class, racial and ethnic group.

APPT 146 Year 3 Semester 2 Module 14-Steam Theory

Examples of demonstrated knowledge of and sensitivity to at least one US group/category from the above course are where students research case studies of disasters such as The Sultana Disaster of 1865, and the Grover Shoe Factory Disaster in Brockton, Massachusetts on March 10, 1905.

APPT 143B Year 2 semester 2 Module 12 OSHA 30 - Students become more aware and sensitized to specific cultural and economic encounters in American history in relation to the trades and steamfitting as applied examples through research and learning about case studies. Case studies consider how historical, cultural, and economic discrimination have resulted in foreign-born and Hispanic workers having suffered disproportionately higher fatality rates due to injuries in industrial accidents in America.

U2. Critically analyze the degree of (or dynamics of) the interaction between at least one marginalized culture or community and the dominant U.S. culture, or between two marginalized communities or cultures;

Matching course component(s):

Steamfitter Pipefitter Technology Program students not only receive implicit bias training in specific modules in their program, they also have this training reinforced through onsite job training, where real-

General Education Review Request

AREA VI - UNITED STATES CULTURES & COMMUNITIES

world expectations require students to both understand and navigate the power dynamics of the actual world.

APPT 141 Year 1 Semester 1 Union Heritage

The Union Heritage class discusses the history and importance of unions and the labor movement and how they helped address discrimination against systemically oppressed people from lower- and working-class and BIPOC groups. Students learn applied examples of this, such as how the Industrial Workers of the World (IWW) union wanted to abolish capitalism because of its systemic and negative effects on BIPOC people, women, children, and families.

APPT 134B Industrial Safety Year 2 Module 12-The Triangle Shirtwaist Factory fire in the Greenwich Village area of New York City.

Students learn about case studies such as the Triangle Shirtwaist Factory fire. The fire is the deadliest industrial disaster in the history of New York city, and one of the deadliest in U.S. history. It caused the deaths of 146 garment workers - who died from the fire, smoke inhalation, falling, or jumping to their deaths (the factory was located on the 8th, 9th, and 10th stories of the Asch building, built in 1901). A common employment practice at the time to prevent workers from taking unauthorized breaks and to reduce theft was for factory owners and managers to lock the doors to the stairwells and exits. As a result, many of the workers could not escape from the burning building and jumped from the high windows. There were no sprinklers in the building. Most of the victims were recently arrived Italian or Jewish immigrant women and young girls who were forced to work in unsafe conditions because they had no other option to survive. Students learn about the causes, consequences, and legacy of the disaster and how it affected immigrant women and girls disproportionately. The building is a National Historic Landmark and is a New York City landmark. The fire led to legislation requiring improved factory and industrial safety standards and helped create the International Ladies' Garment Workers' Union (ILGWU), which fought for better working conditions for sweatshop workers. The ILGWU was one of the first US unions to have a primarily female membership, and a central figure in American labor history in the 1920s and 1930s. It is the precursor to the Union of Needle trades, Industrial and Textile Employees (UNITE) which merged with the Hotel Employees and Restaurant Employees Union (HERE) to create the current union, UNITE HERE (which today has over 300,000 members).

APPT139A Year 5 Semester 5 Industrial Installations

Students learn about large scale geopolitical factors that interact to shape industrial work in the US and globally. One example used in this class is the US "Creating Helpful Incentives to Produce Semiconductors" (CHIPS) Act of 2022. The act is an industrial policy put in place due to an Artificial Intelligence (AI) Cold War between the US and China, as artificial intelligence technology relies on semiconductors that are largely produced in China amidst a global semiconductor shortage. Students learn to see the bigger picture of industrial work in the example of how the CHIPS essentially places embargos on Chinese equipment and overseas manufacturing and has a high level of geopolitical significance. The act provides billions of dollars of subsidies and tax credits to chip makers with operations in the United States that conduct research, build facilities, and train new workers. As applied examples, students specifically research CHIPS act industrial facilities in Austin and Phoenix and examine the interaction between politics, geographic regions, cultures and industries as inter-related cultural factors there.

Students in The Process Piping/Industrial Installation class are required to research and write a paper on Superfund (significantly polluted and hazardous areas with extensive soil and groundwater contamination) sites in the bay area, and their effects on the environment and policy making locally and nationwide. Students learn there are hundreds of Superfund sites in the state of California and dozens in Santa Clara County. This includes discussion of environmental racism (as environmental hazards and codes, or lack of them, disproportionately impact environments where BIPOC and other marginalized groups people live based on available resources), the disposal of toxic materials in American culture and history, and the importance of industry standards, code creation and enforcement.

APPT 146 Year 3 Semester 2 Module 14-Steam Theory

Examples of demonstrated knowledge of and sensitivity to at least one US group/category from the above course are where students research case studies of disasters such as The Sultana Disaster of 1865, and the

General Education Review Request AREA VI - UNITED STATES CULTURES & COMMUNITIES

Grover Shoe Factory Disaster in Brockton, Massachusetts on March 10, 1905. The Grover Shoe Factory Disaster was an industrial/boiler explosion, that caused a building collapse that leveled the factory and a fire that killed 58 people and injured 150. The four-story wooden building collapsed and burst into flames, trapping and incinerating workers in the wreckage.

Students learn how and why these disasters such as these happened and how they lead to the establishment of industrial safety measures such as the Boiler Testing Code in 1884, and the creation of the American Society of Mechanical Engineers (ASME). Students use these case studies to understand the extreme danger and loss from deadly disasters that took the lives of countless working-class people and thrust their families and communities into poverty and despair. Students learn about the gravity and utmost importance of stringent industrial safety laws and a national code governing the safe operation of steam boilers to protect and preserve all peoples' lives and communities.

APPT 141 Year 1 Semester 1 Union Heritage

The Wobblies (Industrial workers of the world) wanted to abolish capitalism. Inequalities of classes. Many Labor Acts due to inequalities of classes.

The Union Heritage class discusses the history and importance of unions and the labor movement and how they helped address discrimination against systemically oppressed people from lower- and working-class and BIPOC groups. Students learn applied examples of this, such as how the Industrial Workers of the World (IWW) union wanted to abolish capitalism because of its systemic and negative effects on BIPOC people, women, children, and families.

Prevention of Harassment training

All State Apprenticeship Programs, including the Steamfitter Pipefitter Technology Program students, must have policies and training in place on the prevention of harassment, including sexual and other forms of harassment, bias, bystander responsibilities, laws and rights, and procedures. All students take this training and are assessed on it.

Students learn about implicit bias and how bias affects the rights, responsibilities, and opportunities of various community members thereby demonstrating understanding of the interaction of marginalized people in groups.

U3. Develop and articulate an awareness of one's own culturally-determined perspective and how it might be viewed from the perspective of others.

Matching course component(s):

APPT 141 Year 1 Semester 1 Union Heritage

The Union Heritage class discusses the history and importance of unions and the labor movement and how they helped address discrimination against systemically oppressed people from lower- and working-class and BIPOC groups. Students learn applied examples of this, such as how the Industrial Workers of the World (IWW) union wanted to abolish capitalism because of its systemic and negative effects on BIPOC people, women, children, and families.

The study of our union's cultural traditions and "standards of excellence."

APPT 141 Year 1 Semester 1 Union Heritage

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APPT139A Year 5 Semester 5 Industrial Installations

Students in The Process Piping/Industrial Installation class are required to research and write a paper on Superfund (significantly polluted and hazardous areas with extensive soil and groundwater contamination)

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AREA VI - UNITED STATES CULTURES & COMMUNITIES

sites in the bay area, and their effects on the environment and policy making locally and nationwide. Students learn there are hundreds of Superfund sites in the state of California and dozens in Santa Clara County. This includes discussion of environmental racism (as environmental hazards and codes, or lack of them, disproportionately impact environments where BIPOC and other marginalized groups people live based on available resources), the disposal of toxic materials in American culture and history, and the importance of industry standards, code creation and enforcement. One example from this class is an examination of the Superfund Fairchild Semi-Conductor, Raytheon, and Intel sites. Students do an in-depth report on chemicals released at the sites, the status of the sites today, how monitoring is done, evident health hazards, local jurisdictions of the site and hazard mitigation for the future. In preparation for their projects, students learn things like that there are approximately 250,000 people in the county that live within a 15-mile radius of these sites (Fairchild / Raytheon and Intel-Mountain View are on the Superfund National Priorities List (NPL). All three sites are in the Middlefield-Ellis-Whisman (MEW) study area) and how this affects local populations by age, gender, social class, racial and ethnic group.

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

U4. Critically examine the contributions of many groups to a particular aspect of United States culture;

Matching course component(s):

APPT 134B Industrial Safety Year 2 semester 2 Module 12

OSHA 30- The Triangle Shirtwaist Factory fire in the Greenwich Village area of New York City.

Students learn about case studies such as the Triangle Shirtwaist Factory fire.

APPT139A Year 5 Semester 5 Industrial Installations

Students learn about large scale geopolitical factors that interact to shape industrial work in the US and globally. One example used in this class is the US “Creating Helpful Incentives to Produce Semiconductors” (CHIPS) Act of 2022.

APPT 141 Year 1 Semester 1 Union Heritage

The Union Heritage class discusses the history and importance of unions and the labor movement and how they helped address discrimination against systemically oppressed people from lower- and working-class and BIPOC groups. Students learn applied examples of this, such as how the Industrial Workers of the World (IWW) union wanted to abolish capitalism because of its systemic and negative effects on BIPOC people, women, children, and families.

The Study of the union’s cultural traditions and “standards of excellence.”

U5. Evaluate and analyze the interaction of at least one marginalized culture with the dominant U.S. culture;

Matching course component(s):

APPT 143B Year 2 semester 2 Module 12

OSHA 30-The study of foreign-born workers unproportionally Hispanic fatalities injured in America.

APPT 141 Year 1 Semester 1 Union Heritage

The Union Heritage class discusses the history and importance of unions and the labor movement and how they helped address discrimination against systemically oppressed people from lower- and working-class and BIPOC groups. Students learn applied examples of this, such as how the Industrial Workers of the World (IWW) union wanted to abolish capitalism because of its systemic and negative effects on BIPOC people, women, children, and families.

The study of the union’s cultural traditions and “standards of excellence.”

U6. Evaluate and analyze the interaction between at least two marginalized cultures or communities within the framework of United States society;

Matching course component(s):

General Education Review Request
AREA VI - UNITED STATES CULTURES & COMMUNITIES

APPT139A Year 5 Semester 5 Industrial Installations

Chip Act Embargos on Chinese equipment Overseas manufacturing Geo Political significance. Students in The Process Piping/Industrial installation class are required to research Superfund sites in the bay area and their effect on the environment and policy making locally and nationwide.

APPT 143B Year 2 semester 2 Module 12 OSHA 30-The study of foreign born workers unproportionally Hispanic fatalities injured in America.

U7. Explain culture as a concept and how it can unite or divide people into various groups;

Matching course component(s):

APPT 141 Year 1 Semester 1 Union Heritage

The Union Heritage class discusses the history and importance of unions and the labor movement and how they helped address discrimination against systemically oppressed people from lower- and working-class and BIPOC groups. Students learn applied examples of this, such as how the Industrial Workers of the World (IWW) union wanted to abolish capitalism because of its systemic and negative effects on BIPOC people, women, children, and families.

The Study of our union’s cultural traditions and “standards of excellence.”

Prevention of Harassment training

All State Apprenticeship Programs, including the Steamfitter Pipefitter Technology Program students, must have policies and training in place on the prevention of harassment, including sexual and other forms of harassment, bias, bystander responsibilities, laws and rights, and procedures. All students take this training and are assessed on it.

U8. Apply information about groups presented in the class to contemporary social and cultural relations;

Matching course component(s):

APPT139A Year 5 Semester 5 Industrial Installations

Students learn about large scale geopolitical factors that interact to shape industrial work in the US and globally. One example used in this class is the US “Creating Helpful Incentives to Produce Semiconductors” (CHIPS) Act of 2022. The act is an industrial policy put in place due to an Artificial Intelligence (AI) Cold War between the US and China, as artificial intelligence technology relies on semiconductors that are largely produced in China amidst a global semiconductor shortage. Students learn to see the bigger picture of industrial work in the example of how the CHIPS essentially places embargos on Chinese equipment and overseas manufacturing and has a high level of geopolitical significance. As applied examples, students specifically research CHIPS act industrial facilities in Austin and Phoenix and examine the interaction between politics, geographic regions, cultures and industries as inter-related cultural factors there.

Union Heritage

Prevention of Harassment training

All State Apprenticeship Programs, including the Steamfitter Pipefitter Technology Program students, must have policies and training in place on the prevention of harassment, including sexual and other forms of harassment, bias, bystander responsibilities, laws and rights, and procedures. All students take this training and are assessed on it.

APPT 134B Industrial Safety Year 2 semester 2 Module 12

OSHA 30- The Triangle Shirtwaist Factory fire in the Greenwich Village area of New York City.

Students learn about case studies such as the Triangle Shirtwaist Factory fire.

U9. Analyze and interpret how culture shapes human development and behavior.

Matching course component(s):

APPT139A Year 5 Semester 5 Industrial Installations

General Education Review Request AREA VI - UNITED STATES CULTURES & COMMUNITIES

Students learn about large scale geopolitical factors that interact to shape industrial work in the US and globally. One example used in this class is the US “Creating Helpful Incentives to Produce Semiconductors” (CHIPS) Act of 2022.

APPT 141 Year 1 Semester 1 Union Heritage

The Union Heritage class discusses the history and importance of unions and the labor movement and how they helped address discrimination against systemically oppressed people from lower- and working-class and BIPOC groups. Students learn applied examples of this, such as how the Industrial Workers of the World (IWW) union wanted to abolish capitalism because of its systemic and negative effects on BIPOC people, women, children, and families.

The Study of our union’s cultural traditions and “standards of excellence.”

Prevention of Harassment training

All State Apprenticeship Programs, including the Steamfitter Pipefitter Technology Program students, must have policies and training in place on the prevention of harassment, including sexual and other forms of harassment, bias, bystander responsibilities, laws and rights, and procedures. All students take this training and are assessed on it.

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):

Steamfitter Pipefitter Technology Program students must communicate in a variety of formats. Whether it is engaging with other apprenticeship students, workers, supervisors, or with customers and the public, students in this program are required to express themselves clearly, concisely, and persuasively using discipline specific terms.

Pipefitter Program courses demonstrating *B1 Communication* skills include but are not limited to:

APPT 144A Year 2 Module 2 Related Science - where apprentices are required to do a science project presentation or paper requiring a significant amount of research based on the scientific process and scientific evidence.

APPT139A Year 5 Semester 5 Industrial Installations

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

Matching course component(s):

Because the application of what Steamfitter Pipefitter Technology Program students learn and practice must be extremely precise to meet all existing codes and regulations, students learn and apply many mathematical concepts and data collection models.

Steamfitter Pipefitter Technology Program courses demonstrating *B2 Computation* include but are not limited to:

APPT 145 Year 3 Semester 1 Module 13 Advanced Trade Math

Apprentices are required to apply mathematical concepts in practical applications.

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

Matching course component(s):

Students in the Steamfitter Pipefitter Technology Program must communicate in a variety of formats. Whether it is engaging with other apprenticeship students, workers, supervisors, or with customers and the

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public, students in this program are required to express themselves clearly, concisely, and persuasively using discipline specific terms.

Pipefitter Program courses demonstrating Standard *B3* skills include but are not limited to:

APPT 134B Industrial Safety Year 2 semester 2 Module 12

OSHA 30- The Triangle Shirtwaist Factory fire in the Greenwich Village area of New York City.

Students learn to express their ideas in a logical and organized manner using discipline specific-appropriate language by researching, discussing and writing about or presenting on case studies such as the Triangle Shirtwaist Factory fire.

APPT 145 Year 3 Semester 1 Module 13 Advanced Trade Math

Apprentices are required to apply mathematical concepts in practical applications.

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):

Students in the Pipefitter Technology Program meet standard B4 in many ways. Their training includes courses on the environmental impact of their work on the planet. They also learn about the role of their union in advancing the social and economic opportunities for historically marginalized groups. And through on the job training and other required program elements, sheet metal students also learn the real-world importance of their actions and behaviors on others.

Pipefitter Program courses demonstrating Standard *B4* skills include but are not limited to:

APPT139A Year 5 Semester 5 Industrial Installations

Students expand their community and global consciousness and responsibility by learning about large scale geopolitical factors that interact to shape industrial work in the US and globally. One example used in this class is the US "Creating Helpful Incentives to Produce Semiconductors" (CHIPS) Act of 2022. As applied examples, students specifically research CHIPS act industrial facilities in Austin and Phoenix and examine the interaction between politics, geographic regions, cultures and industries as inter-related cultural factors there.

APPT 144A Year 2 Module 2 Related Science where apprentices are required to do a science project presentation or paper requiring a significant amount of research based on the scientific process and scientific evidence.

APPT 146 Year 3 Semester 2 Module 14-Steam Theory

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

Matching course component(s):

Because the application of what Steamfitter Pipefitter Technology Program students learn and practice must be extremely precise to meet all existing codes and regulations, students learn information competency - including digital literacy - throughout the program.

Pipefitter Program courses demonstrating Standard *B5* skills include but are not limited to:

APPT 144A Year 2 Module 2 Related where apprentices are required to do a science project presentation or paper requiring a significant amount of research based on the scientific process and scientific evidence.

APPT 134B Industrial Safety Year 2 semester 2 Module 12 OSHA 30

**General Education Review Request
AREA VI - UNITED STATES CULTURES & COMMUNITIES**

Requesting Faculty: PATRICIA GIBBS Date: 4/4/2024
Division Curr Rep: Tim Myres Date: 4/9/24

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

General Education Review Request AREA III - NATURAL SCIENCES

Course Number & Title: Air Conditioning and Refrigeration Technology Apprenticeship Program (Pathway #1 - Pipe Trades Training Center students)

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 III - Natural Sciences:

Natural science courses deal with the physical universe, the testable principles that govern its operations, its life forms, and its natural, measurable phenomena. One primary purpose of these courses is to promote an awareness of the methods of scientific inquiry and the power of scientific inquiry to describe the natural world. Emphasis is on understanding and applying the scientific method, which promotes a sense of discovery, fosters critical analysis, and encourages an understanding of the relationships between science and other human activities. A General Education natural science course should exhibit the same methods and skills used by scientists when seeking an understanding of the uncertainty and complexity of the natural world.

A successful General Education Natural Science course *must* promote in students:

- N1. An understanding of the scientific method, including its attributes and limitations;
- N2. The ability to make judgments regarding the validity of scientific evidence;
- N3. An understanding of the relationship between hypothesis, experiment, fact, theory and law;
- N4. The ability to use inductive and deductive reasoning;
- N5. The practice of thinking critically, including evaluating ideas and contrasting opinions;
- N6. The ability to evaluate, use and communicate scientific data;
- N7. An introduction to current scientific theories within the field of study;
- N8. Experience with laboratory activities using laboratory techniques consistent with those employed within the discipline;
- N9. Experience applying recognized scientific methodology in laboratory activities.*

Additional criterion thought to enhance a natural science course include any of the following:

- N10. An appreciation of the contributions of science to modern life;
- N11. An appreciation of the contributions to science of diverse people and cultures;
- N12. An understanding of the interdependence of humans and their environment;
- N13. A recognition of how human behavior has altered the environment;
- N14. A sense of the history of science and the ideas and experiments that have led to our present understanding.

Be advised that the following criteria for a GE lab is consistent with a definition provided by the National Research Council, 2005:

“Laboratory experiences provide opportunities for students to interact directly with the material world (or with data drawn from the material world), using the tools, data collection techniques, models, and theories of science. This definition includes student interaction with astronomical databases, genome databases, databases of climatic events over long time periods, and other large data sets derived directly from the material world. It does not include student manipulation or analysis of data created by a teacher to simulate direct interaction with the material world. For example, if a physics teacher presented students with a constructed data set on the weight and required pulling force for boxes pulled across desks with different surfaces and asked them to analyze these data, the students’ problem-

General Education Review Request AREA III - NATURAL SCIENCES

solving activity would not constitute a laboratory experience in the committee's definition."

- * To accomplish these goals a laboratory course *must* emphasize the methods of scientific inquiry by engaging students in:
 - NL15. Observation and collection of data through direct interaction with the material world;
 - NL16. Use of tools, data collection techniques, models and theories of science most prevalent in relevant research laboratories;
 - NL17. Data may be from large data sets derived directly from the material world, but may not rely exclusively on student manipulation or analysis of data created by a teacher to simulate direct interaction with the material world;
 - NL18. Analysis and interpretation of data;
 - NL19. Formulation and testing of hypotheses;
 - NL20. Communicating effectively through oral and/or written work;

- NL21. A minimum of one collaborative activity;
- NL22. A minimum of one laboratory unit or the equivalent of 33 hours of laboratory instruction per quarter.

Additional criterion thought to enhance a natural science laboratory include any of the following:

- NL23. Keep accurate and complete experimental records;
- NL24. Perform quantitative and qualitative measurements;
- NL25. Interpret experimental results and draw reasonable conclusions;
- NL26. Analyze data statistically and assess the reliability of results;
- NL27. Critically evaluate the design of an experiment;
- NL28. Design experiments to test hypotheses;
- NL29. Work effectively in small groups and teams.

Course Number & Title: Air Conditioning and Refrigeration Technology Apprenticeship Program (Pathway #1 - Pipe Trades Training Center students)

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:

N1. An understanding of the scientific method, including its attributes and limitations;

Matching course component(s):

Throughout their five years of study, HVAC students frequently learn about the scientific method as an approach to thinking about their work and as a practical application of their work. Apprentices learn the scientific method through hypothesis-driven troubleshooting of HVACR systems, as seen in year two, semester 2's focus on electrical controls and safety standards. Importantly, they learn the limitations of such thinking so as to make sure important redundancies ensure their work.

(Year 2, Semester 2, Module 10; Introduction to HVACR Automatics Controls)

(APPT 154, APPT 155, APPT 158)

N2. The ability to make judgments regarding the validity of scientific evidence;

Matching course component(s):

The assessment of validity is essential in all the trades and HVAC students are taught to make reasoned based judgements in a variety of areas they study, from airflow calculations, to the necessary safety standards that ensure public safety. Judgments on scientific evidence are integral, for example, in year three, semester one, where advanced electrical controls and heat pump systems demand rigorous evaluation of system performance.

(Year 3, Semester 1, Module 14; Heating and Air Conditioning Systems)

(APPT 152, APPT 159, APPT 155)

N3. An understanding of the relationship between hypothesis, experiment, fact, theory and law;

Matching course component(s):

HVAC students are taught to approach their work as thinkers and strategists. This requires developing hypotheses and testing those hypotheses through experimentation and refinement based on the facts of that experimentation. The relationship between hypothesis, experiment, fact, theory, and law is exemplified in year 5, semester one start test and balance activities involving air and hydronic systems.

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(Year 5, Semester 1, Module 23 & 24; Air and Water side balancing)

(APPT 152, APPT 159, APPT 155)

N4. The ability to use inductive and deductive reasoning;

Matching course component(s):

HVAC students learn the distinctions between inductive and deductive reasoning, but also how and when to employ each approach in their professional lives. As professionals, these students must know how to diagnose what is wrong with an existing building (for instance), to deduce the problems, and must also use this information to reason their way to a solution. Inductive and deductive reasoning are utilized in year two, semester one with mechanical systems and refrigeration principles leading to practical applications in system efficiency.

(Year 2, Semester 1, Module 8; Refrigeration)

(APPT 154, APPT 159, APPT 155)

N5. The practice of thinking critically, including evaluating ideas and contrasting opinions;

Matching course component(s):

HVAC students must know how to evaluate ideas and contrasting opinions. This application of critical thinking is essential in their study and excellent preparation for work in the field where the competing ideas of practitioners and stakeholders must be assessed and addressed. Critical thinking is developed throughout the program as apprentices evaluate and contrast various refrigeration and air conditioning system designs and diagnoses, such as those in year four, semester one.

(Year 4, Semester 1, Module 19; Commercial HVACR Equipment)

N6. The ability to evaluate, use and communicate scientific data;

Matching course component(s):

Apprentices encounter and learn to assess scientific data throughout their course of study. They must learn to interpret technical diagrams and schematics, understand specifications, and effectively communicate findings and recommendations to all stakeholders in a project. Apprentices evaluate, use, and communicate scientific data through exercises in reading system prints and gauging system characteristics, notably in year one, semester two.

(Year 1, Semester 2, Module 6; Basic Refrigeration and Heating)

(APPT 157, APPT 158, APPT 155)

N7. An introduction to current scientific theories within the field of study;

Matching course component(s):

Training in the HVAC program includes the latest scientific theories affecting trade practices, such as advancements in energy efficiency or sustainable materials. Current scientific theories are addressed in year three, two's study of pneumatic and electrical control systems, illustrating the advancements in building automation systems.

(Year 3, Semester 2, Module 15, 16 & 17; Control Systems, Pneumatic Controls, and DDC Controls)

(APPT 156, APPT 159, APPT 155)

N8. Experience with laboratory activities using laboratory techniques consistent with those employed within the discipline;

Matching course component(s):

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Hands-on lab sessions mimic real-world scenarios, teaching apprentices to apply theoretical knowledge using trade-specific tools and techniques. Laboratory activities consistent with HVACR disciplines are conducted in year one, semester one through hands-on tool usage and soldering exercises.

(Year 1, Semester 1, Module 4 & 5; Basic Tools & Soldering and Brazing)

(APPT 151, APPT 159, APPT 157)

N9. Experience applying recognized scientific methodology in laboratory activities.

Matching course component(s):

Apprentices systematically approach problem-solving in labs, reinforcing the application of scientific methods in their work. Recognized scientific methodology is applied in lab activities, particularly in year two, semester one's adjustments of TXV and system operations measurements.

(Year 2, Semester 1, Module 9; Refrigerant Controls)

(APPT 153, APPT 158, APPT 157)

Depth Map: Additionally, include any of the following:

N10. An appreciation of the contributions of science to modern life;

Matching course component(s):

Discussion sessions highlight how advances in trade technologies impact everyday life, from improved home heating systems to smart plumbing solutions. Apprentices appreciate the impact of science in HVACR through studies of advancements in refrigerant management and energy efficiency, emphasized in year two, semester two and year four, semester two.

(Year 2, Semester 2, Module 12; EPA Refrigerant Handling Guidelines, Year 4, Semester 2, Module 22; Chillers)

(APPT 152, APPT 154, APPT 155)

N11. An appreciation of the contributions to science of diverse people and cultures;

Matching course component(s):

Cultural and historical studies included in the curriculum underscore diverse contributions to trade sciences and technological advancements and the impact of the trades on the social mobility of underrepresented groups. The curriculum acknowledges the diverse contributions to HVACR science in year one, semester one's Apprentice Orientation & UA Heritage section.

(Year 1, Semester 1, Module 1; Union Heritage)

(APPT 152, APPT 151)

N12. An understanding of the interdependence of humans and their environment;

Matching course component(s):

Environmental studies emphasize sustainable practices, the importance of energy conservation, and the trades' roles in shaping the built environment. Year three, semester two's focus on DDC and building automation systems highlights the interdependence of humans and their environment through energy management.

(Year 3, Semester 2, Module 17; DDC Controls)

(APPT 156, APPT 159, APPT 154)

N13. A recognition of how human behavior has altered the environment;

Matching course component(s):

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Apprentices examine case studies on past and present trade practices, learning how they have contributed to environmental challenges and solutions. The program demonstrates how human behavior has altered the environment through environmentally responsible practices taught in refrigerant handling guidelines in year two, semester two.

(Year 2, Semester 2, Module 12; EPA Refrigerant Handling Guidelines)

(APPT 154, APPT 159, APPT 155)

N14. A sense of the history of science and the ideas and experiments that have led to our present understanding.

Matching course component(s):

The evolution of trade technologies is taught through an historical lens, connecting past innovations to current practices. Students in the HVAC program receive instruction on the evolution of the science and technology that have led to advancements not only in the field, but also in the building trades in general. Students in the program not only learn the specifics of their trade but the role of their trade in supporting modern life and the science that has enabled it.

(Year 1, Semester 2, Module 6; Basic Refrigeration and Electricity)

(APPT 152, APPT 159, APPT 155)

Depth Map: Additionally, must emphasize the following:

N15. Observation and collection of data through direct interaction with the material world;

Matching course component(s):

Apprentices collect data firsthand during installations, repairs, and maintenance, learning to observe and record accurately. Direct observation and data collection is integral to labs, especially those in Y5S1 that involve testing and balancing air and hydronic systems.

(Year 5, Semester 1, Module 23 & 24; Air and Water side balancing)

(APPT 157, APPT 159, APPT 155)

N16. Use of tools, data collection techniques, models and theories of science most prevalent in relevant research laboratories;

Matching course component(s):

Training includes the use of industry-standard tools and techniques for data collection, analysis, and application in the field. Tools and data collection techniques are used throughout the program, especially during Y1S1 with Basic Tools and Soldering, where the focus is on accurate measurements.

(Year 1, Semester 1, Module 4 & 5; Basic Tools and Soldering/ Brazing)

(APPT 152, APPT 159, APPT 155)

N17. Data may be from large data sets derived directly from the material world, but may not rely exclusively on student manipulation or analysis of data created by a teacher to simulate direct interaction with the material world;

Matching course component(s):

Apprentices are exposed to real-world data sets, learning to navigate and interpret extensive information for practical application. Apprentices work with data derived from material systems, particularly in Y2S1, where they adjust TXVs and measure system characteristics.

(Year 2, Semester 1, Module 9; Refrigerant Controls)

(APPT 153, APPT 154, APPT 155)

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N18. Analysis and interpretation of data;

Matching course component(s):

Analysis and interpretation of data: Data gathered from diagnostics and testing are analyzed, teaching apprentices to make informed decisions based on their findings. Data interpretation is crucial in Y4S1, where rigging techniques require understanding the effects of forces and loads.

(Year 4, Semester 1, Module 18; Rigging)

(APPT 152, APPT 157, APPT 155)

N19. Formulation and testing of hypotheses;

Matching course component(s):

Through troubleshooting exercises, apprentices formulate hypotheses and test them, refining their approach based on results. Hypothesis formulation and testing occur in Y5S1, where apprentices perform fan law calculations and air balance.

(Year 5, Semester 1, Module 23 & 24; Air and Water side balancing)

(APPT 156, APPT 159, APPT 158)

N20. Communicating effectively through oral and/or written work;

Matching course component(s):

Effective communication skills are emphasized, enabling apprentices to document and share detailed technical information clearly and concisely. This is essential in an industry where multiple disciplines must coordinate in order to achieve their collective goals. Effective communication is particularly stressed in Y1S1, which covers Customer Service and Union Heritage.

(Year 1, Semester 1, Module 1 & 2; Union Heritage and Customer Service)

(APPT 152, APPT 154, APPT 155, 157, 158)

N21. A minimum of one collaborative activity;

Matching course component(s):

Group projects foster teamwork, illustrating the importance of collaboration in solving complex trade-related problems. Collaborative activities are part of the program's pedagogy, as seen in the lab exercises of Y2S1's Mechanical Systems.

(Year 2, Semester 1, Module 9; Refrigerant Controls)

(APPT 152, APPT 154, APPT 155, 157, 158)

N22. A minimum of one laboratory unit or the equivalent of 33 hours of laboratory instruction per quarter.

Matching course component(s):

The program ensures ample lab time for hands-on learning, exceeding the minimum requirement to solidify practical skills. Each semester, including Y3S1's Advanced Electrical Controls, likely exceeds the minimum lab instruction time requirement.

(Year 3, Semester 1, Module 13; Advanced Electrical Controls)

(APPT 152, APPT 154, APPT 155, 157, 158)

Depth Map: Additionally, include any of the following:

N23. Keep accurate and complete experimental records;

Matching course component(s):

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Apprentices learn the importance of thorough documentation for maintaining system histories and supporting future troubleshooting efforts. Keeping experimental records might be taught within Y5S1's Start Test & Balance curriculum, emphasizing accurate documentation of test results.

(Year 5, Semester 1, Module 23 & 24; Air and Water side balancing)

(APPT 152, APPT 154, APPT 156, APPT 157, APPT 159)

N24. Perform quantitative and qualitative measurements;

Matching course component(s):

Precision in measuring and assessing system components and performance is stressed, critical for ensuring the efficacy of solutions. Quantitative and qualitative measurements are at the heart of the Y2S1 curriculum, focusing on practical labs involving system operating characteristics.

(Year 2, Semester 1, Module 9; Refrigerant Controls)

(APPT 153, APPT 154, APPT 156, APPT 157, APPT 159)

N25. Interpret experimental results and draw reasonable conclusions;

Matching course component(s):

Apprentices use their understanding of trade principles to interpret results from experiments or diagnostic tests, drawing conclusions that guide their actions. Interpreting experimental results is a key component of Y4S2's curriculum, where troubleshooting of boilers and chillers is taught.

(Year 4, Semester 2, Module 21 & 22; Boilers and Chillers)

(APPT 154, APPT 156, APPT 157, APPT 159)

N26. Analyze data statistically and assess the reliability of results;

Matching course component(s):

Statistical analysis tools are introduced, enabling apprentices to assess the reliability of their findings and understand variance in system performance. Statistical data analysis is applied when evaluating system performances, potentially during Y3S1's lab exercises on advanced control systems.

(Year 3, Semester 1, Module 13; Advanced Electrical Controls)

(APPT 152, APPT 154, APPT 155, APPT 157, APPT 158)

N27. Critically evaluate the design of an experiment;

Matching course component(s):

Apprentices critique lab exercises and real-world problem-solving approaches, learning to identify and improve upon experimental designs. The evaluation of experiment design could be an aspect of the Y5S1 curriculum, where apprentices learn to test and balance systems.

(Year 5, Semester 1, Module 23 & 24; Air and Water side balancing)

(APPT 159, APPT 154, APPT 157, APPT 158)

N28. Design experiments to test hypotheses;

Matching course component(s):

Advanced apprentices may design their own experiments to test theories or improve upon existing systems, applying a deep understanding of trade principles. Designing experiments to test hypotheses might be covered in Y5S1's labs, which involve direct interaction with testing instruments and systems.

(Year 5, Semester 1, Module 23 & 24; Air and Water side balancing)

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(APPT 159, APPT 154, APPT 157, APPT 158)

N29. Work effectively in small groups and teams.

Matching course component(s):

Teamwork is integral to the program, with apprentices often working in groups to tackle projects, fostering a collaborative learning environment. Working in small groups is a necessary part of the hands-on labs and projects throughout the program, like those in Y3S2's Pneumatic and Electrical Control Systems.

(Year 3, Semester 2, Module 15 & 16; Control Systems and Pneumatic Controls)

(APPT 154, APPT 157, APPT 158)

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):

HVAC apprenticeship students complete coursework using analytical reading, writing, speaking skills including evaluation, synthesis and research throughout the program - specifically students learn about and describe control systems, safe work practices including handling high pressure gas cylinders, various heating equipment, and Personal Protective Equipment (PPE).

(HVAC Program, Year 3, Semester 2, Module 15 - Control Systems); (HVAC Program, Year 3, Semester 2, Module 16 - Pneumatic Controls); (HVAC Program, Year 3, Semester 2, Module 17 - DDC Controls)

The following apprenticeship courses: (APPT 154)

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

Matching course component(s):

HVAC Apprenticeship students use computation throughout the program including in units such as "APPT 155 Advanced Electrical Controls" that requires use of Ohm's Law to determine wiring schematic values, discussion of meter usage diagrams in the electrical sequence of operation, conducting meter usage and alternating lights labs, and describing HVAC system load calculations, designs, and balancing.

(HVAC Program, Year 3, Semester 1, Module 13 - Advanced Electrical Controls)

The following apprenticeship courses: (APPT 155)

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

Matching course component(s):

HVAC Apprenticeship students analyze the relationships of business and economic activities to the functioning of society as a whole in units on the evolution of service, identifying customers and constructive communication styles, including developing listening, clarifying and empathy skills. This is done in the process of developing a critical eye.

(HVAC Program, Year 1, Semester 1, Module 2 - Customer Service)

The following apprenticeship courses: (APPT 151)

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):

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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):

Requesting Faculty: Robert Cormia Date: 4/17/24

Division Curriculum Rep: Tim Myres Date: 4/23/24

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: _____

General Education Review Request

AREA III - NATURAL SCIENCES

Course Number & Title: Steamfitting and Pipefitting 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 III - Natural Sciences:

Natural science courses deal with the physical universe, the testable principles that govern its operations, its life forms, and its natural, measurable phenomena. One primary purpose of these courses is to promote an awareness of the methods of scientific inquiry and the power of scientific inquiry to describe the natural world. Emphasis is on understanding and applying the scientific method, which promotes a sense of discovery, fosters critical analysis, and encourages an understanding of the relationships between science and other human activities. A General Education natural science course should exhibit the same methods and skills used by scientists when seeking an understanding of the uncertainty and complexity of the natural world.

A successful General Education Natural Science course *must* promote in students:

- N1. An understanding of the scientific method, including its attributes and limitations;
- N2. The ability to make judgments regarding the validity of scientific evidence;
- N3. An understanding of the relationship between hypothesis, experiment, fact, theory and law;
- N4. The ability to use inductive and deductive reasoning;
- N5. The practice of thinking critically, including evaluating ideas and contrasting opinions;
- N6. The ability to evaluate, use and communicate scientific data;
- N7. An introduction to current scientific theories within the field of study;
- N8. Experience with laboratory activities using laboratory techniques consistent with those employed within the discipline;
- N9. Experience applying recognized scientific methodology in laboratory activities.*

Additional criterion thought to enhance a natural science course include any of the following:

- N10. An appreciation of the contributions of science to modern life;
- N11. An appreciation of the contributions to science of diverse people and cultures;
- N12. An understanding of the interdependence of humans and their environment;
- N13. A recognition of how human behavior has altered the environment;
- N14. A sense of the history of science and the ideas and experiments that have led to our present understanding.

Be advised that the following criteria for a GE lab is consistent with a definition provided by the National Research Council, 2005:

“Laboratory experiences provide opportunities for students to interact directly with the material world (or with data drawn from the material world), using the tools, data collection techniques, models, and theories of science. This definition includes student interaction with astronomical databases, genome databases, databases of climatic events over long time periods, and other large data sets derived directly from the material world. It does not include student manipulation or analysis of data created by a teacher to simulate direct interaction with the material world. For example, if a physics teacher presented students with a constructed data set on the weight and required pulling force for boxes pulled across desks with different surfaces and asked them to analyze these data, the students’ problem-

General Education Review Request AREA III - NATURAL SCIENCES

solving activity would not constitute a laboratory experience in the committee's definition."

- * To accomplish these goals a laboratory course *must* emphasize the methods of scientific inquiry by engaging students in:
 - NL15. Observation and collection of data through direct interaction with the material world;
 - NL16. Use of tools, data collection techniques, models and theories of science most prevalent in relevant research laboratories;
 - NL17. Data may be from large data sets derived directly from the material world, but may not rely exclusively on student manipulation or analysis of data created by a teacher to simulate direct interaction with the material world;
 - NL18. Analysis and interpretation of data;
 - NL19. Formulation and testing of hypotheses;
 - NL20. Communicating effectively through oral and/or written work;

- NL21. A minimum of one collaborative activity;
- NL22. A minimum of one laboratory unit or the equivalent of 33 hours of laboratory instruction per quarter.

Additional criterion thought to enhance a natural science laboratory include any of the following:

- NL23. Keep accurate and complete experimental records;
- NL24. Perform quantitative and qualitative measurements;
- NL25. Interpret experimental results and draw reasonable conclusions;
- NL26. Analyze data statistically and assess the reliability of results;
- NL27. Critically evaluate the design of an experiment;
- NL28. Design experiments to test hypotheses;
- NL29. Work effectively in small groups and teams.

Course Number & Title: Steamfitting and Pipefitting 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:

N1. An understanding of the scientific method, including its attributes and limitations;

Matching course component(s):

The trades in general, and of pipe fitting in particular, apply a problem-solving approach in practice, and much of how this approach is deployed is informed and guided by the scientific method. Pipe fitters develop hypotheses, test them, and adjust their approaches to a task accordingly.

In Year 1, Semester 1, Module 3 (Use and Care of Tools), apprentices are introduced to the essential physics and chemistry underpinning materials and tools, laying a critical foundation for steam fitting practices. This module not only addresses the 'how' but also the 'why,' fostering a deeper appreciation for the scientific principles that guide the trade.

(APPT 141, APPT 143A, APPT 143B)

N2. The ability to make judgments regarding the validity of scientific evidence;

Matching course component(s):

Throughout their program pipe fitting students are taught to make judgements about the validity of scientific evidence. Judgements based on the validity of evidence are required because the decisions the students are making must be integrated into a complex project in which all systems must work together.

Module 10 (Related Science) in Year 2, Semester 2, delves into the intriguing properties of solids, water, and steam. It connects these properties to the pivotal concepts of matter states and energy transformations, setting the stage for advanced discussions on thermodynamics and system efficiency critical to steam systems.

(APPT 134B, APPT 145, APPT 139A)

N3. An understanding of the relationship between hypothesis, experiment, fact, theory and law;

Matching course component(s):

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The precision and safety requirements pipe fitting students must learn require they develop hypotheses, test those hypotheses through both practical and virtual experimentation. The facts derived from these experiments guide their approach to solving problems. Understanding the relationship between theory and law is also critical. For example, pipe fitters must consider the thermodynamics of a weld and the theories that shapes those laws

Chemical reactions take center stage in Year 1, Semester 1, Module 5 (Soldering and Brazing), where apprentices learn the chemistry behind metal bonding. This knowledge is indispensable for ensuring the integrity and safety of piping installations, highlighting the application of chemistry in achieving durable connections.

(APPT 141, APPT 147A, APPT 146, 147B)

N4. The ability to use inductive and deductive reasoning;

Matching course component(s):

The logic of induction and deduction are necessary for pipe fitting students to understand and apply throughout the program. Such reasoning comes into play for students as they choose everything from the materials needed for a project, to designing approaches to solve the logistical problems associated with complex real-world projects.

Year 4, Semester 2, Module 20 (Industrial Rigging) applies the conservation principles of energy and momentum to the practical challenges of lifting and moving materials. Apprentices learn to calculate forces and understand energy transfer, equipping them with the skills to perform rigging operations safely and efficiently.

(APPT 146, APPT 139B, APPT 143B)

N5. The practice of thinking critically, including evaluating ideas and contrasting opinions;

Matching course component(s):

Pipefitting students are taught to think critically and invite and evaluate contrasting opinions as foundational to their trade. In addressing the complexity of a large construction site for example, pipefitting students must not only understand their own discipline but must respond to the demands of other disciplines also work on the site.

The transformative effects of heat on metals are showcased in Year 2, Semester 1, Module 9 (Cutting and Welding), illustrating how energy from welding torches interacts with matter. This module serves as a vivid demonstration of physical science in action, revealing the critical role of heat in altering material properties for construction purposes.

(APPT 145, APPT 147B, APPT 143B)

N6. The ability to evaluate, use and communicate scientific data;

Matching course component(s):

Pipefitting students are taught to critical thinkers in all aspects of their study and work. This requires the students to study a problem scientifically and to communicate the results of that work to communicate to others within the profession and within the general trades field.

Year 1 Semester 1 Basic Steamfitting Skills (Hands on Lab Projects)

(APPT 141, APPT 143A, APPT 143B)

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N7. An introduction to current scientific theories within the field of study;

Matching course component(s):

The nature of the pipefitting field means that apprentices are learning the latest theories and practices in their profession and field. They are accredited and tested for this information before performing it in real-life settings.

Year 5 Semester 2 Steamfitter Final Turnout Exam

Year 5, Semester 1's Module 22 (Medical Gas Installations) indirectly broaches life science concepts by discussing the types and uses of medical gasses. This exploration not only highlights the trade's role in healthcare but also underscores the biological considerations essential in medical settings, reflecting on the interface between steam fitting and life sciences.

(APPT 130, APPT 139B, APPT 147A)

N8. Experience with laboratory activities using laboratory techniques consistent with those employed within the discipline;

Matching course component(s):

The curriculum's integration of CAD technology in Year 4, Semester 1, Module 17 (Advanced Drawing and Blueprint Reading), marks a significant evolution in steam fitting. This technological leap not only enhances precision and efficiency but also serves as a bridge between traditional steam fitting techniques and the digital age, illustrating the symbiotic relationship between technology and the scientific underpinnings of the trade.

(APPT 141, APPT 147A, APPT 146)

N9. Experience applying recognized scientific methodology in laboratory activities.

Matching course component(s):

Steam system design principles come to life in Year 3, Semester 2, Module 14 (Steam Theory and Application), where apprentices engage with the tangible aspects of engineering and design. This module not only challenges them to apply theoretical knowledge to practical scenarios but also fosters a deep understanding of system dynamics, efficiency, and sustainability in design.

(APPT 144A, APPT 143A, APPT 143B, 147A)

Depth Map: Additionally, include any of the following:

N10. An appreciation of the contributions of science to modern life;

Matching course component(s):

Pipefitters apply their trade in real-life settings and develop an understanding of and appreciation for the world they are working to shape in the modern world. Nothing in modern life would function well, if at all without pipefitting science.

Advanced Trade Math in Year 3, Semester 1, Module 13, exemplifies the application of mathematics in solving real-world steam fitting challenges. Apprentices employ algebra, geometry, and trigonometry to navigate complex piping systems, demonstrating the indispensable role of mathematics in scientific inquiry and practical problem-solving within the trade.

(APPT 141, APPT 143A, APPT 143B)

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N11. An appreciation of the contributions to science of diverse people and cultures;

Matching course component(s):

The curriculum encourages a methodical approach to problem-solving across Modules 6-8 in Year 1, Semester 2, blending scientific methods with technical skills in rigging, math, and drawing. This structured inquiry not only enhances critical thinking but also prepares apprentices for the complex decision-making required in steam fitting projects.

(APPT 141, APPT 143A, APPT 143B)

N12. An understanding of the interdependence of humans and their environment;

Matching course component(s):

N13. A recognition of how human behavior has altered the environment;

Matching course component(s):

Year 2 Semester 2 Steamfitter Science (Basic Refrigeration Module)

Pipefitting students work in an industry that terraforms the planet. Modern civilizations exist as a result of human behavior on the environment and pipefitting students play a role in this part of modern life, a role they take very seriously.

Year 2, Semester 2's Module 12 (Industrial Safety) introduces apprentices to the principles of environmental science and the importance of sustainability in steam fitting. Discussing hazardous waste management and ergonomic practices, the module reinforces the trade's impact on the environment and the collective responsibility to adopt sustainable practices.

(APPT 141, APPT 143A, APPT 143B)

N14. A sense of the history of science and the ideas and experiments that have led to our present understanding.

Matching course component(s):

Depth Map: Additionally, must emphasize the following:

N15. Observation and collection of data through direct interaction with the material world;

Matching course component(s):

Consider for a moment the thousands of miles of pipes crisscrossing the state of California, carrying everything from water to natural gas, to toxic chemicals. It is through direct interaction with the material world that pipefitting students ensure those miles of pipes accomplish their task, and when those pipes fail and need repair, it is the pipefitting students who analyze the source of failure not only for repair but also to avoid a repeat of the failure.

Medical Gas Installations, covered in Module 22 of Year 5, Semester 1, reflect on the significant societal impact of steam fitting, particularly in healthcare. Through the lens of science and technology, apprentices learn about the critical infrastructure they help build and maintain, underscoring trade's essential role in societal wellbeing and healthcare services.

(APPT 130, APPT 139B, APPT 147A)

N16. Use of tools, data collection techniques, models and theories of science most prevalent in relevant research laboratories;

Matching course component(s):

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In Module 5 (Soldering and Brazing) of Year 1, Semester 1, apprentices get a practical introduction to atomic and molecular structures through the chemistry of metal bonding. This insight bridges the gap between abstract chemical concepts and their tangible applications in steamfitting, reinforcing the scientific underpinnings of the trade.

(APPT 130, APPT 139B, APPT 147A, APPT 141, APPT 143A, APPT 143B)

N17. Data may be from large data sets derived directly from the material world, but may not rely exclusively on student manipulation or analysis of data created by a teacher to simulate direct interaction with the material world;

Matching course component(s):

Applying physics to the real-world task of rigging, Year 4, Semester 2's Module 20 (Industrial Rigging) delves into the principles of forces and motion. This module not only equips apprentices with the knowledge to navigate physical challenges but also instills an appreciation for the laws of physics that govern material movement, critical for ensuring safety and efficiency in steam fitting tasks.

(APPT 141, APPT 143A, APPT 143B)

N18. Analysis and interpretation of data;

Matching course component(s):

Through Module 9 (Cutting and Welding) in Year 2, Semester 1, apprentices explore the role of energy in chemical processes, particularly in welding and cutting. This examination highlights the practical significance of energy transformations in steam fitting, linking theoretical chemistry to the hands-on work that defines the trade.

(APPT 130, APPT 139B, APPT 147A, APPT 141, APPT 143A, APPT 143B)

N19. Formulation and testing of hypotheses;

Matching course component(s):

Modules 14-16 in Year 3, Semester 2, focus on steam generation, distribution, and heat transfer, grounding apprentices in the principles of kinetics and thermodynamics. This foundational knowledge is crucial for designing and operating efficient steam systems, emphasizing the role of science in optimizing steam fitting practices.

(APPT 130, APPT 139B, APPT 147A, APPT 141, APPT 143A, APPT 143B)

N20. Communicating effectively through oral and/or written work;

Matching course component(s):

The curriculum emphasizes the creation and significance of chemical bonds in Year 1, Semester 1, Module 5 (Soldering and Brazing), providing apprentices with a practical understanding of how chemical principles ensure the durability and safety of piping systems. This knowledge is fundamental for mastering soldering and brazing techniques, illustrating the direct application of chemistry in steam fitting.

(APPT 141, APPT 142, APPT 145)

N21. A minimum of one collaborative activity;

Matching course component(s):

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Pipefitting students work collaboratively as a cohort throughout their program, and most collaborate with others while on the job site.

Year 5 Semester 1 Industrial Rigging (Group Rigging Projects)

(APPT 130, APPT 139B, APPT 147A, APPT 141, APPT 143A, APPT 143B)

N22. A minimum of one laboratory unit or the equivalent of 33 hours of laboratory instruction per quarter.

Matching course component(s):

Pipefitting students study in “living” labs, receiving direct instruction on lab skills over the entire program.

Safety training, particularly on respiratory protection and hazardous materials handling, introduces apprentices to biochemical processes and their implications for health in steam fitting work. This aspect of the curriculum ensures apprentices are aware of the health risks associated with various chemicals and gasses, promoting safe handling practices and protective measures.

(APPT 141, APPT 143, APPT 146, APPT 130)

Depth Map: Additionally, include any of the following:

N23. Keep accurate and complete experimental records;

Matching course component(s):

Electromagnetic waves, especially as they relate to welding technologies discussed in Year 2, Semester 1, Module 9, offer apprentices a glimpse into the application of wave principles in steam fitting. Understanding heat transfer and electromagnetic interactions is pivotal for mastering welding techniques, illustrating the intersection of physics and practical trade skills.

(APPT 130, APPT 139B, APPT 147A, APPT 141, APPT 143A, APPT 143B)

N24. Perform quantitative and qualitative measurements;

Matching course component(s):

Year 2, Semester 1's focus on welding and cutting technologies, particularly in Module 9, brings electromagnetic principles to the forefront of steam fitting education. This module underscores the scientific basis of welding equipment and techniques, enhancing apprentices' technical skills with a deep understanding of the electromagnetic phenomena that drive their tools.

(APPT 141, APPT 143, APPT 146, APPT 130)

N25. Interpret experimental results and draw reasonable conclusions;

Matching course component(s):

The introduction of CAD and digital tools in Year 4, Semester 1, Module 17 (Advanced Drawing and Blueprint Reading), signifies the curriculum's commitment to integrating modern technologies in steam fitting. This approach not only modernizes the trade but also prepares apprentices for a future where digital communication and information management are integral to project planning and execution.

(APPT 141, APPT 147A, APPT 146)

N26. Analyze data statistically and assess the reliability of results;

Matching course component(s):

General Education Review Request AREA III - NATURAL SCIENCES

Steam theory and application modules, particularly in Year 3, Semester 2, emphasize water's critical role in steam systems and its broader environmental significance. These discussions bridge steam fitting practices with global water cycles and sustainability issues, highlighting the importance of responsible water use and management in the trade.

(APPT 130, APPT 139B, APPT 147A, APPT 141, APPT 143A, APPT 143B)

N27. Critically evaluate the design of an experiment;

Matching course component(s):

Environmental and sustainability topics, woven throughout the curriculum, touch on the steamfitting industry's impact on climate and weather. These discussions aim to foster a sense of responsibility among apprentices, highlighting the importance of eco-friendly practices in mitigating climate change.

Year 2 Semester 2 Steamfitter Science (LEED Green building)

(APPT 130, APPT 139B, APPT 147A, APPT 141, APPT 143A, APPT 143B)

N28. Design experiments to test hypotheses;

Matching course component(s):

The curriculum's emphasis on safety, sustainability, and responsible waste management reflects the steam fitting industry's awareness of its impact on Earth's systems. By advocating for responsible practices, the program underscores the trade's role in environmental stewardship.

Year 2 Semester 2 Steamfitter Science (LEED Green Building)

(APPT 141, APPT 143A, APPT 143B)

N29. Work effectively in small groups and teams.

Matching course component(s):

Pipefitting students work in groups during their on-the-job training.

Incorporating modern diagnostic and design technologies, such as CAD, the curriculum bridges traditional steam fitting skills with contemporary technological tools. This blend of old and new prepares apprentices for the future of the trade, emphasizing the importance of adaptability and continuous learning.

(APPT 130, APPT 139B, APPT 147A, APPT 141, APPT 143A, APPT 143B)

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):

Steamfitter Pipefitter Technology Program students must communicate in a variety of formats. Whether it is engaging with other apprenticeship students, workers, supervisors, or with customers and the public, students in this program are required to express themselves clearly, concisely, and persuasively using discipline specific terms.

Pipefitter Program courses demonstrating B1 Communication skills include but are not limited to: APPT 144A Year 2 Module 2 Related Science - where apprentices are required to do a science project presentation or paper requiring a significant amount of research based on the scientific process and scientific evidence. APPT139A Year 5 Semester 5 Industrial Installations.

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

Matching course component(s):

Because the application of what Steamfitter Pipefitter Technology Program students learn and practice must be extremely precise to meet all existing codes and regulations, students learn and apply many mathematical concepts and data collection models.

Steamfitter Pipefitter Technology Program courses demonstrating B2 Computation include but are not limited to APPT 145 Year 3 Semester 1 Module 13 Advanced Trade Math Apprentices are required to apply mathematical concepts in practical application.

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

Matching course component(s):

Students in the Steamfitter Pipefitter Technology Program must communicate in a variety of formats. Whether it is engaging with other apprenticeship students, workers, supervisors, or with customers and the public, students in this program are required to express themselves clearly, concisely, and persuasively using discipline specific terms.

Pipefitter Program courses demonstrating Standard B3 skills include but are not limited to: APPT 134B Industrial Safety Year 2 semester 2 Module 12 OSHA 30- The Triangle Shirtwaist Factory fire in the Greenwich Village area of New York City. Students learn to express their ideas in a logical and organized manner using discipline specific-appropriate language by researching, discussing and writing about or presenting on case studies such as the Triangle Shirtwaist Factory fire. APPT 145 Year 3 Semester 1 Module 13 Advanced Trade Math Apprentices are required to apply mathematical concepts in practical applications.

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):

Students in the Steamfitter Pipefitter Technology Program meet standard B4 in a variety of ways. Their training includes courses on the environmental impact of their work on the planet. They also learn about the role of their union in advancing the social and economic opportunities for historically marginalized groups. And through on the job training and other required program elements, sheet metal students also learn the real-world importance of their actions and behaviors on others.

Pipefitter Program courses demonstrating Standard B4 skills include but are not limited to: APPT139A Year 5 Semester 5 Industrial Installations Students expand their community and global consciousness.

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):

Requesting Faculty: Robert Cormia

Date: 4/17/24

Division Curriculum Rep: Tim Myres

Date: 4/23/24

**General Education Review Request
AREA III - NATURAL SCIENCES**

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
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FOR USE BY CURRICULUM OFFICE:

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

General Education Review Request AREA IV - SOCIAL & BEHAVIORAL SCIENCES

Course Number & Title: Steamfitting and Pipefitting 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: Steamfitting and Pipefitting 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):

Steam fitting students learn about the historical development of the union movement and union associations as representing labor organizations. As well, they learn the roles of various subgroups in the union movement and specifically about apprenticeship, the collective voice, roles and responsibilities of employers, contractors, and journey workers.

Apprenticeship courses including but not limited to (APPT 141, 139A)

Steamfitter Program- Basic Steam fitting Skills (Year one, Semester one/Module one)
Semester one / Module one (Union Heritage)

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

Matching course component(s):

Apprenticeship students exercise critical thinking and analytical oral and/or written skills in units on how to identify and interact with indifferent, irate, and/or demanding customers. Students describe various communication styles, identify methods of managing information and how to use critical thinking to create options and alternatives in outcomes. These skills are woven throughout the steam fitting curriculum. Students define the history and purpose of the Occupational, Safety and Health Administration (OSHA). Students describe the structure of OSHA standards. Students describe the rights and responsibilities of employees and employers.

Apprenticeship courses including but not limited to (APPT 141, APPT 134B)

Steamfitter Program- Basic Steam fitting Skills (Year one, Semester one/Module two)
Semester One - Module 2 (Construction Safety)

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):

Apprenticeship students demonstrate knowledge and application of the scientific method in conducting research and testing hypotheses against empirical data. Students learn the physics behind the application of their skills in a real-world setting. Students learn the proper methods of measuring using the English and metric systems. Students learn the scientific method and other methods of inquiry in relation to the steam fitting profession including how to use and read steel rules, calipers, tapes and rules, dial indicators, plumb bobs, squares and levels as well as converting decimals to fractions and how convert metric to English measurements.

Apprenticeship courses including but not limited to (APPT 144A, APPT 134B, APPT 139A, APPT 139B)

Steamfitter Program- Related Science (Year Two, Semester Two/Module 10)
Semester Three / Module 2.14 (30) (Related Science)

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;

General Education Review Request
AREA IV - SOCIAL & BEHAVIORAL SCIENCES

Matching course component(s):

Steam fitting students engage in learning designed to make them not only successful in the profession, but also in understanding the roles and responsibilities of their work in the communities they serve at the local, at state, and national levels. This instruction also includes an understanding of the role of labor in advancing the economic and social benefits to communities of color. Students study the union movement and how, out of many, unions provide a collective voice for labor organizations. Students define and discuss apprentice roles and responsibilities in the larger union movement.

Apprenticeship courses including but not limited to (APPT 141, APPT 134B,139A)

Steamfitter Program- Basic Steam fitting Skills (Year one, Semester one/Module one)
Semester one / Module one (Union Heritage)

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):

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

Matching course objective(s):

Steam fitting students are required to learn about the economics of their industry including how global supply and demand impact their industry and the state of California. Students also receive instruction on the role of labor in the economic development of the community's apprenticeship students serve.

Apprenticeship courses including but not limited to (APPT 146, APPT 147A, 147B, 139A)

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):

Steam fitting students engage in learning designed to make them not only successful in the profession, but also in understanding the roles and responsibilities of their work in the communities they serve at the local, at state, and national levels. This instruction also includes an understanding of the role of labor in advancing the economic and social benefits to communities of color. Students study the union movement and how, out of many, unions provide a collective voice for labor organizations. Students define and discuss apprentice roles and responsibilities in the larger union movement. These discussions and learning also include the role of political advocacy on the part of labor in the United States and abroad.

Apprenticeship courses including but not limited to (APPT 141, APPT 134B)

Steamfitter Program- Basic Steam fitting Skills (Year one, Semester one/Module one)
Semester one / Module one (Union Heritage)

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

Matching course component(s):

**General Education Review Request
AREA IV - SOCIAL & BEHAVIORAL SCIENCES**

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):

Steam fitting students must engage in reading and writing tasks throughout their course of study and learn to organize and present their ideas to other students, instructors, and work site employees logically and concisely. The ability to communicate effectively in writing and speaking is also emphasized as a practical on the job skill set necessary to be successful in the profession and a highlight literate world.

Apprenticeship courses including but not limited to (APPT 141, APPT 139A, APPT 146, 144A)

Steamfitter Program- Basic Steam fitting Skills (Year one, Semester one/Module one)
Semester one / Module one (Union Heritage)

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

Matching course component(s):

Apprenticeship students learn the physics behind the application of their skills in a real-world setting. Students learn the proper methods of measuring using the English and metric systems. Students learn the scientific method and other methods of inquiry in relation to the steam fitting profession including how to use and read steel rules, calipers, tapes and rules, dial indicators, plumb bobs, squares and levels as well as converting decimals to fractions and how convert metric to English measurements. All of these math concepts are embedded throughout the entire program.

Apprenticeship courses including but not limited to (APPT 145, APPT 134B, APPT 144A, APPT 139A, APPT 139B)

Steamfitter Program- Related Science (Year Two, Semester Two/Module 10)
Semester Three / Module 2.14 (30) (Related Science)

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

Matching course component(s):

Steam fitting students must engage in reading and writing tasks throughout their course of study and learn to organize and present their ideas to other students, instructors, and work site employees logically and concisely.

Apprenticeship courses including but not limited to (APPT 141, APPT 144A, APPT 146, APPT 145)

**General Education Review Request
AREA IV - SOCIAL & BEHAVIORAL SCIENCES**

Steamfitter Program- Basic Steam fitting Skills (Year one, Semester one/Module one)
Semester one / Module one (Union Heritage)

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):

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):

Requesting Faculty: PATRICIA GIBBS STAYTE Date: FEBRUARY, 8, 2024

Division Curr Rep: Tim Myres Date: 4/23/24

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: _____

FOOTHILL COLLEGE
College Curriculum Committee
Resolution to Approve the Foothill College Meta Major Groupings and Names

Whereas, meta majors are a recommended component of the Guided Pathways framework that are intended to make it easier for students to identify, pursue, and complete a program of study by grouping programs of study based on curricular overlap, Taxonomy of Program (TOP) code, and labor market information; and

Whereas, the Guided Pathways team has engaged campus constituents at division and department meetings, at Academic Senate, at Classified Senate, at Student Senate, at monthly Meta Major Work Team meetings, and at weekly Meta Major office hours, and has collaborated with faculty, students, staff, and administrators, to group meta majors at two campus-wide Sorting Day events; and

Whereas, the majority of campus constituents voiced preference for the Career and Academic Pathways groupings of meta majors, and that program placement impacted by the adoption of these groupings and their names, rather than another proposed option, has been considered and approved by individual departments; and

Whereas, the Academic Senate for California Community Colleges urges local senates to assert that determining the content, categories, and titles of the "meta majors" or "areas of focus" is a local curricular and educational program decision that falls within academic senate purview as defined by Title 5 §53200 (resolution F17 9.01), and that the College Curriculum Committee (CCC) is the sub-committee of the Academic Senate which establishes and approves campus-wide curriculum policies;

Resolved, that the Foothill College Curriculum Committee approve the proposed eight meta major groupings (listed below and attached), known collectively as "Career and Academic Pathways" (CAPs), and recommend their approval to the Foothill College Academic Senate.

- Health Sciences & Wellness
- Arts & Media
- Business
- Education
- Explorer
- Industrial Technology & Building Trades
- Society, Culture & Human Development
- Science, Technology, Engineering & Math (STEM)

Career & Academic Pathways

Arts & Media

- **Associate of Arts in Art**
 - **Certificate of Achievement in Art**
- **Associate of Arts for Transfer in Studio Arts**
- **Associate of Arts in Communication Studies**
 - **Certificate of Achievement in Communication Studies II**
 - **Certificate of Achievement in Communication Studies I**
- **Associate of Arts for Transfer in Communication Studies**
- **Associate of Arts in Film, Television, and Electronic Media**
- **Associate of Arts for Transfer in Film, Television, and Electronic Media, AS-T**
 - **Certificate of Achievement in Film, Television, and Electronic Media**
- **Graphic and Interactive Design**
 - **Certificate of Achievement in Graphic and Interactive Design**
 - **Certificate of Achievement in Web Design**
 - **Certificate of Achievement in Game Design**
 - **Certificate of Achievement in Graphic Design**
 - **Certificate of Achievement in Illustration**
- **Associate of Arts in Music Technology**
 - **Certificate of Achievement in Music Technology**
 - **Certificate of Achievement in Game Audio I**
 - **Certificate of Achievement in Game Audio II**
 - **Certificate of Achievement in Pro Tools**
 - **Certificate of Achievement in Audio Post Production**
 - **Certificate of Achievement in Electronic Music**
 - **Certificate of Achievement in Songwriting**
- **Associate of Arts in Music: General**
 - **Certificate of Achievement in Music History and Literature**
- **Associate of Arts in Photography**
 - **Certificate of Achievement in Photography**
 - **Certificate of Achievement in Photography Criticism**
 - **Certificate of Achievement in Commercial Photography**
 - **Certificate of Achievement in Digital Photography Techniques**
- **Associate of Arts in Theatre Arts**
 - **Certificate of Achievement in Acting**
- **Associate of Arts in Theatre Arts for Transfer**

- **Associate of Arts in Theatre Technology**
 - **Certificate of Achievement in Theatre Technology**

Business

- **Associate of Arts in Accounting**
 - **Certificate of Achievement in Accounting**
 - **Certificate of Achievement in Financial Accounting**
 - **Certificate of Achievement in CPA Exam Preparation - Audit**
 - **Certificate of Achievement in CPA Exam Preparation - Business Environment and Concepts**
 - **Certificate of Achievement in CPA Exam Preparation - Financial Accounting Reporting**
 - **Certificate of Achievement in CPA Exam Preparation - Regulations**
 - **Certificate of Achievement in Bookkeeping**
 - **Certificate of Achievement in Tax Specialist**
 - **Certificate of Achievement in Payroll Preparation**
 - **Certificate of Achievement in Accounting Ethics**
- **Associate of Science for Transfer in Business Administration 2.0**
- **Associate of Arts in Business Administration**
 - **Certificate of Achievement in Data Analytics**
 - **Certificate of Achievement in Digital Marketing**

Education

- **Associate of Arts for Transfer in Early Childhood Education**
 - **Certificate of Achievement in Early Childhood Education Fundamentals**
- **Associate of Arts for Transfer in Elementary Teacher Education**
- **Associate of Arts in Child Development**
 - **Certificate of Achievement in Child Development Teacher**
 - **Certificate of Achievement in Program Supervision and Mentoring**
 - **Certificate of Achievement in Infant and Toddler Development and Care**
 - **Certificate of Achievement in Elementary After Care Education**
 - **Certificate of Achievement in Early Childhood Special Education**
 - **Certificate of Achievement in Early Childhood Education Fundamentals**
- **Learning in New Media Classrooms**
 - **Certificate of Achievement in Education Technology Specialist**
 - **Certificate of Achievement in Emerging Educational Technology Leadership**

- **Certificate of Achievement in Makerspace Coordinator**
- **Certificate of Achievement in Online and Blended Instruction**
- **Certificate of Achievement in Research, Design and Development for Global Good**
- **Certificate of Achievement in STEAM Instructional Leadership**

Explorer

- **Associate of Science in General Studies: Science**
- **Associate of Arts in General Studies: Social Science**

Health Sciences & Wellness

- **Associate of Science for Transfer in Public Health Science**
 - **Certificate of Achievement in Community Health Worker**
 - ***Certificate of Achievement in Bio-Health Diversity and Inclusion Leadership**
- **Dental Assisting**
 - **Certificate of Achievement in Dental Assisting**
- **Bachelor of Science in Dental Hygiene**
- **Diagnostic Medical Sonography**
 - **Certificate of Achievement in Diagnostic Medical Sonography**
- **Associate of Arts for Transfer in Kinesiology**
- **Associate of Science for Transfer in Nutrition and Dietetics**
- **Associate of Science in Paramedic**
 - **Certificate of Achievement in Paramedic**
- **Associate of Science in Personal Trainer**
 - **Certificate of Achievement in Personal Trainer**
- **Associate of Science in Pharmacy Technician**
 - **Certificate of Achievement in Advanced-Level Pharmacy Technician (ASHP/ACPE Accredited)**
 - **Certificate of Achievement in Pharmacy Assistant (Aide/Clerk)**
 - **Certificate of Achievement in Basic Pharmacy Technician**
- **Associate of Science in Physical Education**
- **Associate of Science in Radiologic Technology**
- **Associate of Science in Respiratory Therapy**
 - **Certificate of Achievement in Interventional Pulmonology Assistant**

- **Associate of Science in Sports Medicine**
 - **Certificate of Achievement in Introduction to Sports Medicine**
 - **Certificate of Achievement in Advanced Sports Medicine**
- **Associate of Science in Veterinary Technology**
 - **Certificate of Achievement in Veterinary Assisting**

Industrial Technology & Building Trade

- **Associate of Science in Apprenticeship - Air Conditioning and Refrigeration Technology**
 - **Certificate of Achievement in Air Conditioning and Refrigeration Technology**
- **Associate of Science in Apprenticeship - Air Conditioning Mechanic**
 - **Certificate of Achievement in Air Conditioning Mechanic**
- **Associate of Science in Apprenticeship - Inside Wireman (formerly General Electrician)**
 - **Certificate of Achievement in Inside Wireman**
 - **Certificate of Achievement in Residential Wireman**
- **Associate of Science in Apprenticeship - Non-Destructive Testing (NDT) Technician**
 - **Certificate of Achievement in - Non-Destructive Testing (NDT) Technician**
- **Associate of Science in Apprenticeship - Plumbing and Pipefitting**
 - **Certificate of Achievement in - Plumbing and Pipefitting Apprenticeship**
- **Associate of Science in Apprenticeship - Plumbing Technology**
 - **Certificate of Achievement in Plumbing and Pipefitting Technology**
 - **Certificate of Achievement in Residential Plumbing**
- **Associate of Science in Apprenticeship - Sheet Metal**
 - **Certificate of Achievement in Sheet Metal Building Trades**
- **Associate of Science in Apprenticeship - Sound and Communication**
 - **Certificate of Achievement in Sound and Communication Installer**
- **Associate of Science in Apprenticeship - Steamfitting and Pipefitting Technology**
 - **Certificate of Achievement in Steamfitting and Pipefitting Technology**
- **Associate of Science in Apprenticeship - Test, Adjust and Balancing (TAB) Technician**
 - **Certificate of Achievement in Test, Adjust and Balancing (TAB) Technician**

Science, Technology, Engineering, & Math (STEM)

- **Associate of Science in Biochemistry**
- **Associate of Science in Biological Sciences**
- **Associate of Science for Transfer in Biology**
- **Associate of Science in Chemistry**
- **Associate of Science in Computer Science**
 - **Certificate of Achievement in Software Development in C++**
 - **Certificate of Achievement in Software Development in Java**
 - **Certificate of Achievement in Software Development in Python**
 - **Certificate of Achievement in Advanced Software Development**
 - **Certificate of Achievement in Cloud Computing**
 - **Certificate of Achievement in Cybersecurity**
 - **Certificate of Achievement in IT Support**
 - **Certificate of Achievement in Network Computing**
- **Associate of Science for Transfer in Computer Science**
- **Associate of Science in Engineering**
- **Associate of Science in Enterprise Networking**
- **Associate of Science in Environmental Horticulture and Design**
 - **Certificate of Achievement in Environmental Horticulture and Design**
 - **Certificate of Achievement in Landscape Technician**
- **Associate of Science for Transfer in Environmental Science**
- **Associate of Science in Geographic Information Systems Technology**
- **Associate of Science in Geography**
- **Associate of Science for Transfer in Geography**
- **Associate of Science in Mathematics**
- **Associate of Science for Transfer in Mathematics**
- **Associate of Science in Physics**
- **Associate of Science for Transfer in Physics**

Society, Culture, & Human Development

- **Associate of Arts in Anthropology**
- **Associate of Arts in Anthropology for Transfer**
- **Associate of Arts in Art History**
 - **Certificate of Achievement in Art History**
- **Associate of Arts for Transfer in Art History**

- **Associate of Arts for Transfer in Child and Adolescent Development**
 - ***Certificate of Achievement in Nanny, Child, and Family Studies**
- **Associate of Arts in Economics**
- **Associate of Arts for Transfer in Economics**
- **Associate of Arts in English**
- **Associate of Arts for Transfer in English**
- **Associate of Arts for Transfer in Global Studies**
- **Associate of Arts in History**
- **Associate of Arts for Transfer in History, AA-T**
- **Associate of Arts in Humanities**
 - **Certificate of Achievement in Humanities**
- **Associate of Arts in Japanese**
- **Associate of Arts in Philosophy**
- **Associate of Arts for Transfer in Philosophy**
- **Associate of Arts in Political Science**
- **Associate of Arts for Transfer in Political Science**
- **Associate of Arts in Psychology**
- **Associate of Arts for Transfer in Psychology**
- **Associate of Arts for Transfer in Social Justice Studies**
- **Associate of Arts for Transfer in Social Work and Human Services**
- **Associate of Arts in Sociology**
- **Associate of Arts for Transfer in Sociology**
- **Associate of Arts in Spanish**
- **Associate of Arts for Transfer in Spanish**
 - **Certificate of Achievement in Spanish**
- **Associate of Arts in Women's Studies**