College Curriculum Committee Meeting Agenda
Tuesday, February 16, 2021
2:00 p.m. – 3:30 p.m.
Meeting will be held virtually via ConferZoom

Item	Time*	Action	Attachment(s)	Presenter(s)
1. Minutes: February 2, 2021	5 min.	Action	#2/16/21-1	Kuehnl
2. Report Out from Division Reps	5 min.	Discussion		All
3. Public Comment on Items Not on Agenda (CCC cannot discuss or take action)	5 min.	Information		
4. Announcements a. New Course Proposal b. Notification of Proposed Requisites c. Business Administration 2.0 ADT	5 min.	Information	 #2/16/21-2 #2/16/21-3 #2/16/21-4	CCC Team
5. New Program Application: Education Technology Specialist CA	10 min.	1st Read	#2/16/21-5 & 8	Kuehnl
6. New Program Application: Emerging Educational Technology Leadership CA		1st Read	#2/16/21-6 & 8	Kuehnl
7. New Program Application: STEAM Instructional Leadership CA		1st Read	#2/16/21-7 & 8	Kuehnl
8. Stand Alone Approval Request: APPT 198	5 min.	1st Read	#2/16/21-9	Kuehnl
9. Adding Department FYI Notification to COR Workflow in CourseLeaf	10 min.	Discussion		Vanatta
10. Two COR Deadlines for 2022-23	10 min.	Discussion		Vanatta
11. Guided Pathways Mapping 101	30 min.	Discussion		Kuehnl
12. Good of the Order	5 min.			Kuehnl
13. Adjournment				Kuehnl

**Times listed are approximate*

Attachments:

#2/16/21-1	Draft Minutes: February 2, 2021
#2/16/21-2	New Course Proposal: PSYC 2
#2/16/21-3	CCC Notification of Proposed Requisites
#2/16/21-4	CCCCO Memo: Updated Business Administration Transfer Model Curriculum
#2/16/21-5 & 8	New Program Application: Education Technology Specialist CA
#2/16/21-6 & 8	New Program Application: Emerging Educational Technology Leadership CA
#2/16/21-7 & 8	New Program Application: STEAM Instructional Leadership CA
#2/16/21-9	Stand Alone Course Approval Request: APPT 198

2020-2021 Curriculum Committee Meetings:

Fall 2020 Quarter	Winter 2021 Quarter	Spring 2021 Quarter
~~10/6/20~~	~~1/19/21~~	4/20/21
~~10/20/20~~	~~2/2/21~~	5/4/21
~~11/3/20~~	2/16/21	5/18/21
~~11/17/20~~	3/2/21	6/1/21
~~12/1/20~~	3/16/21	6/15/21

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

2020-2021 Curriculum Deadlines:

~~*12/1/20*~~	Deadline to submit courses to CSU for CSU GE approval (Articulation Office).
~~*12/1/20*~~	Deadline to submit courses to UC/CSU for IGETC approval (Articulation Office).
2/16/21	Deadline to submit local GE applications for 2021-22 catalog (Faculty/Divisions).
TBD	Curriculum Sheet updates for 2021-22 catalog (Faculty/Divisions).
6/1/21	Deadline to submit new/revised courses to UCOP for UC transferability (Articulation Office).
TBD	COR/Title 5 updates for 2022-23 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 (LIBR), Chris Allen (Dean, APPR), Ben Armerding (LA), Rachelle Campbell (BH), Zachary Cembellin (PSME), Anthony Cervantes (Dean, Enrollment Services), Mark Ferrer (SRC), Owen Flannery (KA), Valerie Fong (Interim Dean—LA), Marnie Francisco (PSME), Evan Gilstrap (Articulation Officer), Hilary Gomes (FA), Allison Herman (LA), Kurt Hueg (Administrator Co-Chair), Maritza Jackson Sandoval (CNSL), Eric Kuehnl (Faculty Co-Chair), Andy Lee (CNSL), Debbie Lee (Acting Dean—FA & KA), Laurence Lew (BSS), Kristy Lisle (VP Instruction), Don Mac Neil (KA), Kathryn Maurer (AS President), Kent McGee (Evaluations), Michelle McNeary (LA), Ché Meneses (FA), Brian Murphy (APPR), Teresa Ong (AVP Workforce), Ron Painter (PSME), Kas Pereira (BSS), Katy Ripp (KA), Lisa Schultheis (BH), Ram Subramaniam (Dean—BH & PSME), Mary Vanatta (Curriculum Coordinator), Priya Vasu (ASFC), Anand Venkataraman (PSME)

Updated 10/19/20

COLLEGE CURRICULUM COMMITTEE

Committee Members – 2020-21

Meeting Date: 2/16/21

Co-Chairs (2)

✔	Eric Kuehnl	7479	Vice President, Academic Senate (tiebreaker vote only)	kuehnleric@fhda.edu
✔	Kurt Hueg	7179	Interim Associate Vice-President of Instruction	huegkurt@fhda.edu

Voting Membership (1 vote per division)

✔	Micaela Agyare	7086	Library	agyaremicaela@fhda.edu
✔	Ben Armerding	7453	LA	armerdingbenjamin@fhda.edu
	Rachelle Campbell	7469	BH	campbellrachelle@fhda.edu
✔	Zachary Cembellin	7383	PSME	cembellinzachary@fhda.edu
	Mark Ferrer		SRC	ferrermark@fhda.edu
✔	Owen Flannery	7213	KA	flanneryowen@fhda.edu
✔	Valerie Fong	7135	Interim Dean—LA	fongvalerie@fhda.edu
✔	Marnie Francisco	7420	PSME	franciscomarnie@fhda.edu
✔	Evan Gilstrap	7675	Articulation	gilstrapevan@fhda.edu
✔	Hilary Gomes	7585	FA	gomeshilary@fhda.edu
✔	Allison Herman	7460	LA	hermanallison@fhda.edu
	Maritza Jackson Sandoval	7409	CNSL	jacksonsandovalmaritza@fhda.edu
✔	Andy Lee	7783	CNSL	leeandrew@fhda.edu
✔	Debbie Lee	7497	Acting Dean—FA, KA	leedebbie@fhda.edu
✔	Laurence Lew	6138	BSS	lewlaurence@fhda.edu
✔	Don Mac Neil	7248	KA	macneildon@fhda.edu
✔	Ché Meneses	7015	FA	menesesche@fhda.edu
✔	Brian Murphy		APPR	brian@pttc.edu
✔	Ron Painter		PSME	painterron@fhda.edu
	Kas Pereira	7319	BSS	pereiracassandra@fhda.edu
	Lisa Schultheis	7780	BH	schultheislisa@fhda.edu
✔	Anand Venkataraman	7495	PSME	venkataramananand@fhda.edu

Non-Voting Membership (4)

	Priya Vasu		ASFC Rep.	asfc.priyav@gmail.com
✔	Mary Vanatta	7439	Curr. Coordinator	vanattamary@fhda.edu
	Kent McGee	7298	Evaluations	mcgeekent@fhda.edu
			SLO Coordinator	

Visitors

Chris Allen, Fatima Jinnah, Teresa Ong, Justin Sewell, Ram Subramaniam

College Curriculum Committee
Meeting Minutes
Tuesday, February 2, 2021
2:00 p.m. – 3:30 p.m.
Meeting held virtually via ConferZoom

Item	Discussion
1. Minutes: January 19, 2021	**Approved by consensus.**
2. Report Out from Division Reps	**Speaker: All** SRC: Finishing up Distance Learning Addendum submissions. PSME: No updates to report. Library: No updates to report. Language Arts: Holding off on developing Ethnic Studies course in Native American Studies—targeting June deadline; working on DL Addendum submissions. Planning division curriculum retreat, with primary focus on equity in curriculum. Kinesiology: No updates to report. Fine Arts: Art faculty and D. Lee will be meeting with De Anza faculty and dean to discuss revisiting Art course families and possible changes. Counseling: Completed DL Addendum submissions. BSS: No updates to report. Apprenticeship: No updates to report. Vanatta noted she is currently working with CourseLeaf to set training dates for curriculum sheet authors for next year's catalog—likely in mid-March. Divisions should have 4-5 weeks to submit their updates in the system. PSME rep expressed concerns regarding short timeline for submitting updates and overlap with winter quarter finals, spring break, and the start of spring quarter. Vanatta explained timeline dependent on Marketing's target for catalog publication, as well as time needed for Marketing to make adjustments to catalog content ahead of opening system to authors. Mentioned she has been suggesting to faculty (who have contacted her, curious about this year's deadline) to not delay discussing updates within dept. and making note of what needs to be changed; this will make the actual process of updating sheet in CourseLeaf much quicker. Hueg offered to speak with Marketing re: timeline for publication. Articulation: ETHN 51, 52, 53 & 55 have been submitted for CSU GE Areas D & F. Each year, UC Davis requests from us list of courses not going to be offered during spring term, related to TAG criteria—Gilstrap worked with Deans to submit list.
3. Public Comment on Items Not on Agenda	No comments.
4. Announcements a. Music Technology CA Approvals b. Collegiality in Action Visit	**Speakers: CCC Team** Vanatta shared that the CCCCO has approved the new Music Technology Certificates of Achievement: Audio Post Production, Electronic Music, Game Audio I, Songwriting. Visit from ASCCC, requested jointly by Pres. Nguyen and Academic

	Senate, to address issues that have come up. Happening this Friday from 9-11; all reps should have invite from Simon Pennington. Reach out to Kuehnl if you did not receive invite, or if you have any questions.
c. Courses not Taught in Four Years	CCC Team discussed and decided to put the process of requesting exceptions on hold, for this year, primarily due to COVID-19 disrupting scheduling. Intent is for divisions to discuss list internally and determine if any course(s) should be deactivated. Normal process of requesting extensions should resume next year.
5. Stand Alone Approval Request: BIOL 70R series	**Speaker: Eric Kuehnl** Second read of Stand Alone Approval Request for BIOL Independent Study course series (70R, 71R, 72R, 73R). No comments. Group agreed to vote on all Stand Alone requests as one motion. Motion to approve items 5-11 **M/S** (Armerding, Venkataraman). **Approved.**
6. Stand Alone Approval Requests: CHLD 80A, 80B, 80C	**Speaker: Eric Kuehnl** Second read of Stand Alone Approval Requests for CHLD 80A, 80B, 80C. No comments. *See item 5 for motion/approval details.*
7. Stand Alone Approval Request: C S 70R series	**Speaker: Eric Kuehnl** Second read of Stand Alone Approval Request for C S Independent Study course series (70R, 71R, 72R, 73R). No comments. *See item 5 for motion/approval details.*
8. Stand Alone Approval Requests: LINC 68G, 411, 412, 413, 414, 415, 416, 417	**Speaker: Eric Kuehnl** Second read of Stand Alone Approval Requests for LINC 68G, 411, 412, 413, 414, 415, 416, 417. No comments. *See item 5 for motion/approval details.*
9. Stand Alone Approval Request: NCEL 410	**Speaker: Eric Kuehnl** Second read of Stand Alone Approval Request for NCEL 410. No comments. *See item 5 for motion/approval details.*
10. Stand Alone Approval Requests: PHED 401, 402, 403, 404, 405, 406, 407, 408	**Speaker: Eric Kuehnl** Second read of Stand Alone Approval Requests for PHED 401, 402, 403, 404, 405, 406, 407, 408. No comments. *See item 5 for motion/approval details.*
11. Stand Alone Approval Requests: THTR 22, 24	**Speaker: Eric Kuehnl** Second read of Stand Alone Approval Requests for THTR 22, 24. PSME rep mentioned discussion during first read, re: UC transferable courses as Stand Alone, and asked if Lisle had a chance to follow up—Lisle does not have any updated information but will report back when she does. *See item 5 for motion/approval details.*
12. Adding Department FYI Notification to COR Workflow in CourseLeaf	**Speaker: Mary Vanatta** Continuing discussion from fall quarter, to consider adding dept. notification at beginning of COR workflow. Would be an FYI email, not an approval step, to allow for increased visibility into who is submitting a COR, since CourseLeaf does not allow for COR owners like C3MS did. Option to send to all faculty in dept. or just full-time (would need to be the same across depts.). Reps were asked to bring topic to faculty for discussion and report feedback to CCC. Language Arts rep asked if any depts. have widespread participation of part-time faculty. Per PSME rep, Computer Science dept. has part-time faculty informally involved in curriculum. Other PSME rep shared feedback from Math dept.—faculty do not want notification. Fine

	Arts rep noted most CORs in division updated by full-time faculty, with a few by part-time faculty; believes notification could be helpful. Other Fine Arts rep agreed, and shared feedback from division faculty re: importance of knowing who is assigned to each COR for Title 5 updates. Vanatta asked rep for clarification, noting that notification wouldn't set up any sort of ownership of CORs; simply an email notification (provided example). Fine Arts reps realized their division's discussion was about COR ownership and not this type of email notification. BSS rep asked how reps are supposed to know which faculty should be in charge of updating each COR, now that there are no longer ownerships. Vanatta mentioned she still has access to C3MS ownership list, which is accurate as of summer 2020 (when CORs were last submitted there) and could be used as a reference for some time. Added that CourseLeaf does list on COR the name of the person who submitted the most recent update, which will become helpful as more CORs move through the system. Suggested each division may need to determine process to keep track of COR owners; Kuehnl agreed that responsibility falls on the reps. Language Arts rep explained English dept.'s recent creation of documentation of faculty point-persons for courses, in response to CourseLeaf not having COR owners. Other Language Arts rep noted still determining where to house that information. Apprenticeship rep asked if he would receive notifications since he's not full-time faculty. Vanatta mentioned she would need list of full-time faculty if that is the decision made—Lisle offered to help with that, and suggested Apprenticeship be considered differently, due to its unique structure. PSME rep concerned that certain depts. in division don't want notification; Kuehnl suggested each division be able to make their own decision. Vanatta noted that intent has always been for notification to be a blanket decision, same across all divisions; expressed concern that allowing for each division to make separate decision would complicate things for her, especially when new faculty are hired. Lisle noted that new hires of full-time faculty are not numerous, and suggested she and Vanatta review list of full-time faculty to determine scope of project; agreed with allowing each division to make their own decision. Language Arts rep asked for clarification that faculty would receive an email whenever any COR is submitted, across campus—Vanatta clarified email is only for CORs within the dept. of the faculty. Noted there seems to be a lot of confusion about the notification—will email the reps with hopefully clear explanation. Kuehnl will bring topic back for further discussion and decision at future meeting.
13. Local Apprenticeship AS Degree	**Speaker: Eric Kuehnl** Apprenticeship rep recalled that the last time a Foothill GE application was presented to CCC for the Pipe Trades' Plumbing Technology program, CCC requested general discussion of creating an Apprenticeship AS degree using GE mapping, before considering further GE applications. Division ready to submit another GE app, Lifelong Learning. Allen provided background on Apprenticeship division and work on GE mapping project. Gilstrap thanked the Apprenticeship folks, and noted concerns re: GE mapping. Mentioned GE reciprocity agreements with other institutions and worry that we could lose agreement. Also mentioned concern re: students who may return to Foothill after completing the degree—how would the students' prior GE be handled? If that student wants to attend a different community college after completing the degree, it's unlikely that college will accept GE. PSME rep mentioned lengthy discussion in division on this topic, including faculty's passion about GE, specifically Humanities; stressed importance of students seeing the world through another person's point of view.

	Starer was involved in GE mapping, and noted Pipe Trades selected due to the program's rigor being analogous to the rigor of programs on campus, which is not necessarily true for other Apprenticeship programs. Would like to discuss the college expanding their understanding of what an associate degree could entail. Agreed with PSME rep's passion, and at the same time believes Apprenticeship students are being exposed to a wide breadth of knowledge throughout their program. In response to Gilstrap's concerns, Starer believes we will more likely get questions about how we were able to create this opportunity for students vs. issues of GE reciprocity/transfer. Brannvall agreed with Starer that life experience is valuable but believes academia is a particular language; would like to know more about how such experience is being measured. Starer clarified that GE mapping does not involve life experience—approach is that instead of using the traditional Carnegie unit method, in which students take specific courses in specific disciplines, these students are gaining the knowledge across the full duration of the five-year program (incl. on-the-job training). Apprenticeship rep noted his own experience, which included no formal college education. Noted that Pipe Trades graduates 85% of applicants, of which 100% become employed in their area of study—clear measure of student success. Mentioned mathematics, communication, and writing as examples of necessary skills for graduates. Hueg believes the forthcoming GE apps will honor the GE patterns; acknowledged some issues may come up, posed by Gilstrap, but believes the project important to continue. Gilstrap agreed that for Apprenticeship students who go on to work in their field, this degree makes sense. Just wants to ensure information to students is clear, in terms of how they will or will not be able to use this particular GE credit if they do decide to return to school later on. Kuehnl thanked the group; topic will return for further discussion, including the remaining GE applications.
14. Seat Counts	**Speaker: Eric Kuehnl** Topic was discussed at CCC last year, at request of Kathryn Maurer. Fine Arts rep has requested topic be revisited. Rep would like to hear other reps' thoughts about seat counts, especially now that everything is being taught online. Noted pedagogical challenges within own dept. when setting seat counts, and assumes other depts. experience the same. Clarified not advocating raising or lowering any seat counts. Shared request from faculty for CCC to devise clear policies for setting seat counts from a curricular pedagogical perspective, aligning COR elements and SLOs by course. Language Arts rep noted a lot of concern and opinions in division on this topic, and would like opportunity to collect feedback from constituents to discuss at future meeting. D. Lee asked if there will be a structure in terms of information being collected, noting that load is negotiated. Kuehnl has discussed with Maurer, but haven't had a chance to determine any structure; noted Faculty Association element and desire for someone from FA to be present for further discussion. Fine Arts rep acknowledged this can be a contentious topic and hopes CCC can model an environment where folks feel safe in sharing their concerns. Kuehnl mentioned Basic Aid, noting topic could become irrelevant if we're no longer on apportionment funding model. Fine Arts rep hopes discussion will focus around pedagogy and looks forward to additional conversation.
15. Good of the Order	Hueg shared that the Credit for Prior Learning summit went well; hope is to follow up with De Anza and add to our CPL offerings. Kuehnl again encouraged the reps to attend the Collegiality in Action meeting on Friday.
16. Adjournment	**3:30 PM**

Attendees: Micaela Agyare (LIBR), Chris Allen (Dean, APPR), Ben Armerding (LA), Cynthia Brannvall (FA), Zach Cembellin (PSME), Anthony Cervantes (Dean, Enrollment Services), Mark Ferrer (SRC), Owen Flannery (KA), Valerie Fong (Acting Dean, LA), Marnie Francisco (PSME), Evan Gilstrap (Articulation Officer), Hilary Gomes (FA), Allison Herman (LA), Kurt Hueg (Administrator Co-Chair), Maritza Jackson Sandoval (CNSL), Eric Kuehnl (Faculty Co-Chair), Andy Lee (CNSL), Debbie Lee (Acting Dean, FA & KA), Laurence Lew (BSS), Kristy Lisle (VP Instruction), Don Mac Neal (KA), Ché Meneses (FA), Brian Murphy (APPR), Teresa Ong (AVP Workforce), Ron Painter (PSME), Kas Pereira (BSS), Paul Starer (LA), Ram Subramaniam (Dean, BH & PSME), Mary Vanatta (Curriculum Coordinator), Priya Vasu (ASFC), Anand Venkataraman (PSME)

Minutes Recorded by: M. Vanatta

Course Change Request

New Course Proposal

Date Submitted: 01/13/21 10:14 am

Viewing: **PSYC F002. : CULTURAL PSYCHOLOGY**

Last edit: 01/13/21 10:14 am

Changes proposed by: Eta Lin (11250812)

In Workflow

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

Approval Path

1. 01/31/21 9:08 pm Cassandra Pereira (pereiracassandra) Approved for 1SS Curriculum Rep
2. 02/01/21 11:42 am Mary Vanatta (vanattamary): Approved for Curriculum Coordinator

Course Proposal Form

Faculty Author	Eta Lin and Florina Petcu		
Effective Term	Summer 2022		
Subject	Psychology (PSYC)	Course Number	F002.
Department	Psychology (PSYC)		
Division	Business and Social Sciences (1SS)		
Units	4		
Hours	4 hours lecture (48 hours total per quarter)		
Course Title	CULTURAL PSYCHOLOGY		
Short Title			

Proposed Transferability
UC/CSU

Proposed Description and Requisites:
Focuses on the reciprocal relationship of cultural factors on human emotional, cognitive, and behavioral processes. The course will explore cultural similarities and differences in self-identity and development, social behaviors and communication, and physical and mental well-being. Through critical evaluation of cultural psychology theories and research, the class will investigate cultural assumptions and their implications, including issues of social justice.

Proposed Discipline
Psychology

To which Degree(s) or Certificate(s) would this course potentially be added?
AA and AA-T degrees in psychology

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

Comments & Other Relevant Information for Discussion:
The field of psychology has historically been based on an overrepresentation of the Western, industrialized perspective which often fails to acknowledge the cultural diversity of other groups and countries. Since we are part of the global society, it is essential that our Psychology department provides a more varied and holistic picture of human behavior.
Matsumoto and Juang (2017) defined cultural psychology as “a subdiscipline within psychology that examines the cultural foundations of psychological processes and human behavior. It includes theoretical and methodological frameworks that posit an important role for culture and its influence on mental processes and behavior, and vice versa” (Culture and Psychology, p. 3). This course will not only cover past and current empirical research, but it will also provide an experiential learning approach in which students will reflect on their own cultures and their assumptions as well as in other cultures. Students will gain a broader perspective as a global citizen.

Reviewer Comments

CCC Notification of Proposed Prerequisites/Co-Requisites

The following courses are currently undergoing review for requisite additions or changes. Please contact the Division Curriculum Rep if you have any questions or comments.

Target Course Number & Title	COR Editor	Requisite Course Number & Title	New/Ongoing
C S 1M: Intermediate Algorithm & Data Structure Methodologies in Java	A. Venkataraman	Prereq: C S 1A (Object-Oriented Programming Methodologies in Java)	Ongoing
C S 10: Computer Architecture & Organization	M. Murphy	Prereq: C S 1A or 2A or 3A (Object-Oriented Programming Methodologies in Java or C++ or Python)	Adding C S 3A option to existing prereq (effective 2021-22)

California Community Colleges

MEMORANDUM
February 5, 2021

ESS 21-300-004 | Via Email

TO: Chief Executive Officers
Chief Instructional Officers
Chief Student Services Officers
Articulation Officers
Transfer Center Directors

FROM: Aisha Lowe, Vice Chancellor, Educational Services and Support

RE: Updated Business Administration Transfer Model Curriculum

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Background

Senate Bill 1440 (Padilla, 2010) enacted the Student Transfer Achievement Reform Act, which required the creation of The Associate Degree for Transfer. In order to implement the legislation, the Intersegmental Curriculum Workgroup (ICW) was created to oversee the components and development of the statewide Transfer Model Curriculum (TMC) for each discipline.

To ensure the Associate Degrees for Transfer continue to meet disciplinary standards, a 5-year review process of each TMC was instituted. During the 5-year review of the Business Administration TMC, substantial changes to the degree's curriculum were made such that versioning between the new and current college Business Administration Associate Degrees for Transfer is required. This memo provides further information regarding degree versioning and action the CSU intends to take regarding similarity declaration. The Chancellor's Office will release the updated Business Administration TMC on February 8.

Curriculum Guidance

Colleges are encouraged to initiate degree development as soon as possible and can begin awarding the new degree as early as Summer 2021. Colleges currently offering a Business ADT have a year to provide a business degree reflecting the new TMC version. Because both degree versions affect CSU admission decisions, it is essential that colleges clearly identify the degree version being offered. To accomplish this:

- When entering the new Business Administration program into the Chancellor's Office Curriculum Inventory (COCI), the program must be entered separately from the prior version presently in COCI. This will result in colleges having two active Business Administration degrees in COCI. The different titles and control numbers will allow CSU to differentiate which

version a student is using to transfer. New degrees must be labeled as Business Administration 2.0.

- Colleges must also locally list and transcript the new degrees to clearly differentiate versions. For example, an *AS-T in Business Administration 2.0*.
- Colleges will need to determine when to deactivate the prior version in COCI. This decision should be based on when there are no longer students in the process of completing the previous version.

Advising Guidance

It is important that students pursing an ADT in Business Administration are aware of both degree versions and understand which version is most appropriate for them.

- Beginning fall 2021, Calstate Apply will list both degree versions in the drop down window for selection when students declare an ADT during the application process.
- CSU campuses will continue to honor similar pathways for the prior degree version for students demonstrating continuous enrollment within the community college system.
- ADT search engines, such as provided on adegreewithaguarantee.com or calstate.edu, will list for selection both Business Administration and Business Administration 2.0. Similar pathways to a CSU campus will differ based on degree version. Since the Business Administration 2.0 accommodates additional CSU curriculum requirements, it is anticipated more similar pathways will be available via this version than the prior version.
- Each CSU campus will review existing similar-baccalaureate pathways based on the new Business Administration TMC by February 2021 and provide the similar lists to the CSUCO. Those lists will then be used to update degree search engines for display as community college Business Administration 2.0 degrees become available and are listed for search queries.
- CSU campuses will continue to follow a previously established process to remove a similar pathway. Campuses will request to the CSUCO the removal, and if approved, the similar pathway will be removed from search engine listings no sooner than one academic year from the date of request to ensure that community college students have sufficient time to plan accordingly. Additionally, the CSUCO has agreed to notify the Chancellor's Office when a

similar pathway is removed, and the Chancellor's Office will then notify college Transfer Center Directors.

For questions regarding this memorandum, please contact Dean Raul Arambula (rarambula@cccco.edu).

cc: Eloy Ortiz Oakley, Chancellor
Daisy Gonzales, Deputy Chancellor
Marty Alvarado, Executive Vice Chancellor, ESS
Rebecca Ruan-O'Shaughnessy, Vice Chancellor, ESS
CCCCO Staff

Foothill College
Credit Program Narrative
Certificate of Achievement in Education Technology Specialist

Item 1. Program Goals and Objectives

The Certificate of Achievement in Education Technology Specialist is designed for pre-service teachers, education technology professionals, education technology entrepreneurs, and educators or trainers at any level, who want to develop and enhance their skills in utilizing education technology. This program emphasizes best practices when integrating technology into educational settings, as well as critically assessing and identifying technologies to solve specific educational problems. The program will also focus on culturally responsive teaching strategies and issues of equity as they relate to technology integration. Skills learned include the ability to identify high quality technology tools to integrate into instruction, differentiating pedagogy to meet the needs of diverse groups of learners, and best practices for developing projects and curriculum with education technology. Upon completion of the program, students will be prepared to use technology to increase student achievement at all levels, as well as support technology initiatives within their organizations.

Program Learning Outcomes:

- Students will be able to identify effective education technology for schools and districts.
- Students will be able to develop instructional materials that incorporate education technology.
- Students will be able to apply education technology to project-based learning.
- Students will be able to create multimedia projects that integrate cloud-based publishing tools.
- Students will be able to use online collaboration tools to enhance instruction and communication.
- Students will be able to integrate technology into a standards-based curriculum.
- Students will be able to facilitate interactions and collaboration to build a community that fosters active learning.
- Students will be able to curate and create instructional materials, tools, strategies, and resources to engage all learners and ensure achievement goals.
- Students will be able to use culturally responsive practices when integrating education technology into their lessons.

Item 2. Catalog Description

The Certificate of Achievement in Education Technology Specialist is designed for students working in or planning for a career in K-12 education, extracurricular programs, or technology training in for-profit and nonprofit organizations, with a special focus on new and pre-service K-12 educators. The program provides 12 units of Instructional Design and Technology coursework to support the integration of technology throughout a specified educational program in a culturally responsive manner. Students will learn to apply educational best practices to developing instructional materials, creating multimedia resources, and facilitating projects and activities with current technology tools and applications. Upon completion of the program, students will be prepared to use technology to increase student achievement at all levels, as well as support technology initiatives within their organizations.

Item 3. Program Requirements

Requirements	Course #	Title	Units	Sequence
Core Courses (7 units)	LINC 50	Technology in the K-12 Classroom I	1	Year 1, Fall
	LINC 82B	Developing Instructional Materials	3	Year 1, Fall
	LINC 82C	Creating Interactive Media for Instruction	3	Year 1, Winter
Restricted Electives (select 5 units)	LINC 50A	Technology in the K-12 Classroom II	0.5	Year 1, Spring
	LINC 50F	Integrating Technology into a Standards-Based Curriculum I	2	Year 1, Spring
	LINC 57	Designing Learner-Centered Instruction	1	Year 1, Fall
	LINC 58	Global Project-Based Learning	2	Year 1, Winter
	LINC 62	Cloud-Based Word Processing Tools	1	Year 1, Winter
	LINC 66E	Cloud-Based Publishing Tools	1	Year 1, Spring
	LINC 75B	Instructional Technology Strategies	3	Year 1, Fall
	LINC 79	Multimedia Project Production	2	Year 1, Fall
	LINC 80A	Multimedia in the Classroom I	1	Year 1, Winter
	LINC 80B	Multimedia in the Classroom II	0.5	Year 1, Spring
	LINC 81	Using Digital Images	1	Year 1, Fall
	LINC 90C	Online Collaboration Tools	2	Year 1, Winter

TOTAL UNITS: 12 units

Proposed Sequence:
Year 1, Fall = 3-6 units
Year 1, Winter = 3-6 units
Year 1, Spring = 3-6 units
TOTAL UNITS: 12

Item 4. Master Planning
Foothill College's mission is to offer equitable programs and services that empower students to achieve their goals and become productive citizens. By offering the Certificate of Achievement in Education Technology Specialist, Foothill will provide an invaluable opportunity for educators, coordinators and instructors at all levels--particularly those who come from underrepresented minority backgrounds--to establish themselves as specialists in the integration of technology into education. These educators would, in turn, be able to improve the experiences and potential of their students by providing them with technology-enhanced experiences and preparing them for the future workforce. By modeling and practicing best practices specific to education technology, students in the program will experience opportunities to deepen their understanding of the ways that technology can be used in the classroom to enhance instruction and improve engagement.

Education has been an industry that has become more reliant on technology over the years. At first it was focused on hardware such as physical computers, printers, and the internet. Now,

edtech has become more dynamic and diverse in the tools that are available to an educator. A recent Gallup and NewSchools Venture Fund study found that 89% of all students use digital learning tools at least a few times per week. The same study found that 81% of teachers, 88% of principals, and 92% of all administrators see great value in using digital learning tools in the classroom [1].

In 2018, PricewaterhouseCoopers released a survey that focused on technology in US schools. The results indicated that many teachers in the US do not have adequate training or experiences using technology in the most effective ways. More specifically, only 10% of K-12 teachers feel confident incorporating higher-level technology into student learning [2].

[1] Carlson, M. A. C. V. B. J. (2020, December 16). *Educators Agree on the Value of Ed Tech.* Gallup.Com. https://www.gallup.com/education/266564/educators-agree-value-tech.aspx

[2] PwC, Schuyler, S., & Buckley, E. (2018, January). *Technology in US Schools: Are we preparing our kids for the jobs of tomorrow?* https://www.pwc.com/us/en/about-us/corporate-responsibility/assets/pwc-are-we-preparing-our-kids-for-the-jobs-of-tomorrow.pdf

Item 5. Enrollment and Completer Projections

In the initial year, approximately 50 students are projected to complete the program. Given the current shifts toward increasing technology in schools (due in part, but not entirely, to COVID-19), it is anticipated that the program will need to expand to 2-3 cohorts per year within the first five years, leading to approximately 100 students completing the program each year after five years. These projections are based on application and enrollment trends in the KCI MERIT program over the past decade.

		Year 1 (18-19)		Year 2 (19-20)	
Course #	**Course Title**	**Annual Sections**	**Annual Enrollment**	**Annual Sections**	**Annual Enrollment**
LINC 50	Technology in the K-12 Classroom I	1	50	1	40
LINC 82B	Developing Instructional Materials	1	44	2	75
LINC 82C	Creating Interactive Media for Instruction	N/A	N/A	N/A	N/A
LINC 50A	Technology in the K-12 Classroom II	N/A	N/A	N/A	N/A
LINC 50F	Integrating Technology into a Standards-Based Curriculum I	1	33	N/A	N/A
LINC 57	Designing Learner-Centered Instruction	1	35	1	30
LINC 58	Global Project-Based Learning	2	59	1	36

LINC 62	Cloud-Based Word Processing Tools	N/A	N/A	1	38
LINC 66E	Cloud-Based Publishing Tools	N/A	N/A	N/A	N/A
LINC 75B	Instructional Technology Strategies	N/A	N/A	1	21
LINC 79	Multimedia Project Production	2	69	1	24
LINC 80A	Multimedia in the Classroom I	N/A	N/A	N/A	N/A
LINC 80B	Multimedia in the Classroom II	2	62	1	61
LINC 81	Using Digital Images	1	64	1	35
LINC 90C	Online Collaboration Tools	1	35	2	57
Totals (using current enroll#)			359		425

Item 6. Place of Program in Curriculum/Similar Programs

Currently, Foothill College offers the Certificate of Achievement in Instructional Design and Technology. This 27-unit program provides a broad spectrum overview of instructional design, with particular focus on multimedia, graphic arts, and web design. Not yet in existence, but proposed, is a Certificate of Achievement in Emerging Educational Technology Leadership. The Certificate of Achievement in Education Technology Specialist focuses specifically on Education Technology from an instructional standpoint and can operate as a stand-alone program. Additionally, it can provide the foundational skills for students wishing to pursue either the Certificate of Achievement in Instructional Design and Technology or the Certificate of Achievement in Emerging Educational Technology Leadership, depending on their ultimate career goals.

Item 7. Similar Programs at Other Colleges in Service Area

There is a 12-credit education technology program offered at the University of San Francisco. Its goal is to evaluate a student's readiness to pursue a more formal graduate degree in pathways that do not typically include classroom instruction.

There are several colleges, universities, and city and state education departments that offer a certificate for education technology. The New York State Department of Education, Molloy College, Rutgers University, and Pace University have programs that relate to the type of program proposed in this document. CSU Sacramento offers a Certificate of Competency in Educational Technology for 12 units, and the University of San Francisco also offers a 12-credit program with graduate units.

Additional Information Required for State Submission:

TOP Code: 0860.00 - Educational Technology

Annual Completers: 50-100

Net Annual Labor Demand: 111,890-116,705 (Bay Region)

Faculty Workload: PT Adjunct faculty load would be between .133 and .266 each quarter (combined with CA in Emerging Educational Technology Leadership program)

New Faculty Positions: 0

New Equipment: 0

New/Remodeled Facilities: 0

Library Acquisitions: 0

Gainful Employment: Yes

Program Review Date: February, 2022

Distance Education: 50-99%

FOOTHILL COLLEGE
Temporary Program Creation Process
Feedback Form for New Programs

Until the new permanent program creation process has been determined, as part of the temporary program creation process this form shall be used by a department to gather feedback on a new program from key governance committees on campus. A complete program narrative and supporting documentation must be submitted to the groups listed below (simultaneous submission is recommended). Each committee will provide initial feedback via email within two weeks but might also provide additional feedback after their monthly meetings.

After a two-week period, regardless of whether feedback has been received from the three committees, the Division Curriculum Committee may consider the new program for approval. Following Division CC approval, please forward this completed form to the Office of Instruction.

Faculty Author(s): Cassandra Pereira
Division: Business and Social Science

Program Title: Education Technology Specialist
Program Units: 12

Workforce/CTE Program (Y/N): Yes
Please note that Workforce/CTE status is dependent on the TOP Code assigned to the program.

Type of Award:
_____ Non-transcriptable credit certificate
__X__ Certificate of Achievement
_____ Noncredit certificate
_____ AA/AS Degree (local)
_____ AA-T/AS-T Degree (ADT)

EQUITY & EDUCATION https://foothill.edu/gov/equity-and-education/
Date of meeting: **Comments:** Submitted to Equity and Education committee on January 7, 2021. No comments have been received.

REVENUE & RESOURCES https://foothill.edu/gov/revenue-and-resources/
Date of meeting: 1/22/21 **Comments:** No concerns. These certificates have the potential of increasing revenue for the college and make sense for KCI's work.

ADVISORY COUNCIL https://foothill.edu/gov/council/
Date of meeting: **Comments:** Submitted to Advisory Council committee on January 7, 2021. No comments have been received.

Division Curriculum Committee Approval Date: 1/25/2021

Division CC Representative: Cassandra Pereira & Laurence Lew

Foothill College
Credit Program Narrative
Certificate of Achievement in Emerging Educational Technology Leadership

Item 1. Program Goals and Objectives

The Certificate of Achievement in Emerging Educational Technology Leadership is designed for experienced educators, trainers, facilitators, school leaders, educational consultants, and educator coaches. This program will expand the capacity for teacher leadership through project-based learning, focused in emerging technologies. Participants will analyze and apply research in teacher leadership, current educational trends, and cutting-edge technological advancements. Skills learned include identifying high-quality technologies to integrate into instruction, differentiating pedagogy based on edtech use cases, and best practices for supporting peers and fellow educators with the use and development of technology-integrated curriculums. Upon completion of the program, students will be prepared to support emergent education technology initiatives in districts, schools, counties, or organizations, as well as provide relevant workshops and courses in edtech use and development.

Program Learning Outcomes:

- Students will be able to identify effective education technology for schools and districts based on research in emerging trends and applications.
- Students will be able to develop and share instructional materials that incorporate emerging education technologies.
- Students will be able to apply education technology trends, tools, and strategies to research-based pedagogies, such as project-based learning.
- Students will be able to create interactive multimedia projects that integrate emerging technologies.
- Students will be able to use online collaboration tools to enhance instruction and communication, and promote equitable learning environments.
- Students will be able to integrate emerging technologies into a standards-based curriculum.
- Students will be able to curate and create instructional materials, tools, strategies, and resources to engage all learners and ensure achievement goals.
- Students will be able to use culturally responsive practices when integrating education technology into their lessons.
- Students will be able to create training materials and deliver professional training to peers while demonstrating best practices using education technology.
- Students will be able to plan, facilitate, and assess a project involving emerging educational technology trends in a school, district, and/or educational organization.
- Students will be able to identify the positive and negative use cases of individual educational technology, and critically analyze current education technology trends.
- Students will be able to facilitate large group professional development around the best practices of educational technology.

Item 2. Catalog Description

The Certificate of Achievement in Emerging Educational Technology Leadership is designed for students working in or planning for a leadership-focused career in K-12 education, extracurricular programs, or edtech development in for-profit and nonprofit organizations.

Prerequisite skills in instructional design and use of common educational technologies are highly encouraged, but not required. Notably, this program is intended to assist educators and trainers in becoming leaders in their fields while remaining in their instructional spaces. The program seeks to provide an alternate pathway to teacher leadership besides administration. Students will complete 18 units of coursework in Instructional Design and Technology, with coursework specifically focusing on emerging technology trends, integration of edtech into curricular activities, evaluation of instructional programs, and data analysis tools. Upon completion of the program, students will be prepared to develop and support new education technology initiatives in schools, districts, counties, and communities, as well as lead other educators in the implementation of these initiatives.

Item 3. Program Requirements

Requirements	Course #	Title	Units	Sequence
Core Courses (13 units)	LINC 50	Technology in the K-12 Classroom I	1	Year 1, Fall
	LINC 82B	Developing Instructional Materials	3	Year 1, Fall
	LINC 82C	Creating Interactive Media for Instruction	3	Year 1, Winter
	LINC 83F	Introduction to Digital Video Editing	1	Year 1, Spring
	LINC 87	Seminar in Teaching with Educational Technology	5	Year 1, Spring
Restricted Electives (select 5 units)	LINC 50A	Technology in the K-12 Classroom II	0.5	Year 1, Spring
	LINC 50F	Integrating Technology into a Standards-Based Curriculum I	2	Year 1, Spring
	LINC 57	Designing Learner-Centered Instruction	1	Year 1, Fall
	LINC 58	Global Project-Based Learning	2	Year 1, Winter
	LINC 62	Cloud-Based Word Processing Tools	1	Year 1, Winter
	LINC 66E	Cloud-Based Publishing Tools	1	Year 1, Spring
	LINC 75B	Instructional Technology Strategies	3	Year 1, Fall
	LINC 79	Multimedia Project Production	2	Year 1, Fall
	LINC 80	Multimedia Overview	1	Year 1, Fall
	LINC 80A	Multimedia in the Classroom I	1	Year 1, Winter
	LINC 80B	Multimedia in the Classroom II	0.5	Year 1, Spring
	LINC 81	Using Digital Images	1	Year 1, Fall
	LINC 82A	Introduction to Designing Instructional Technology Projects	3	Year 1, Fall
	LINC 90C	Online Collaboration Tools	2	Year 1, Winter
	LINC 95C	Assessment Strategies for Technology Integration	1	Year 1, Spring

TOTAL UNITS: 18 units

Proposed Sequence:

Year 1, Fall = 5-8 units
Year 1, Winter = 5-8 units
Year 1, Spring = 5-8 units
TOTAL UNITS: 18

Item 4. Master Planning

Foothill College's mission is to offer equitable programs and services that empower students to achieve their goals and become productive citizens. By offering a Certificate of Achievement in Emerging Educational Technology Leadership, Foothill will provide an invaluable opportunity for educators, coordinators, and instructors at all levels--particularly those who come from underrepresented minority backgrounds--as well as edtech entrepreneurs, to establish themselves as current leaders in education technology. These leaders would be empowered to provide culturally responsive instruction and leadership in their organizations. By modeling best practices in education technologies, students in the program will experience opportunities to deepen their understanding of the way emerging trends and cutting edge technologies can be used in the classroom to enhance instruction and improve engagement.

Education is an industry that has steadily become more reliant on technology over the decades, with the tools available to educators becoming increasingly more dynamic and diverse. A recent Gallup and NewSchools Venture Fund study found that 89% of all students use digital learning tools at least a few times per week. The same study found that 81% of teachers, 88% of principals, and 92% of all administrators see great value in using digital learning tools in the classroom [1].

In 2018, PricewaterhouseCoopers released a survey that focused on technology in US schools. The results indicated that many teachers in the US do not have adequate training or experiences using technology in the most effective ways. More specifically, only 10% of K-12 teachers feel confident incorporating higher-level technology into student learning [2].

Most recently, in the summer of 2020, Digital Promise and Google for Education released a report focusing on the value of Edtech Coaches in the classroom, particularly during the shift to distance learning due to COVID-19. These findings indicated that Edtech Coaches played a key role as their districts and schools moved to online learning. The vast majority (77%) of all Edtech Coaches indicated that they provided professional development opportunities on the use of technology tools, and 57% provided learning resources and expectations about curriculum [3].

[1] Carlson, M. A. C. V. B. J. (2020, December 16). *Educators Agree on the Value of Ed Tech.* Gallup.Com. https://www.gallup.com/education/266564/educators-agree-value-tech.aspx

[2] PwC, Schuyler, S., & Buckley, E. (2018, January). *Technology in US Schools: Are we preparing our kids for the jobs of tomorrow?* https://www.pwc.com/us/en/about-us/corporate-responsibility/assets/pwc-are-we-preparing-our-kids-for-the-jobs-of-tomorrow.pdf

[3] Digital Promise, Bakhshaei, M., Seylar, J., Ruiz, P., & Chou Vang, M. (2020, August). *The Valuable Role of Edtech Coaches during the COVID-19 Pandemic: A National Survey.* https://digitalpromise.org/wp-content/uploads/2020/08/Natl-COVIDCoachingResponseSurveyReport.pdf

Item 5. Enrollment and Completer Projections

The intention of this certification is to build upon and advance the skills developed in the Certificate of Achievement in Education Technology Specialist program (also currently being proposed), so while initial year projections are low, they are expected to increase as the number of students completing the Education Technology Specialist certificate increases. Initially, approximately 24 students are projected to complete the program. It is anticipated that this number will grow each year as technology continues to be a central aspect of the education system, with a program increase to approximately 50-75 students per year after 5 years.

		Year 1 (18-19)		Year 2 (19-20)	
Course #	**Course Title**	**Annual Sections**	**Annual Enrollment**	**Annual Sections**	**Annual Enrollment**
LINC 50	Technology in the K-12 Classroom I	1	50	1	40
LINC 82B	Developing Instructional Materials	1	44	2	75
LINC 82C	Creating Interactive Media for Instruction	N/A	N/A	N/A	N/A
LINC 83F	Instruction to Digital Video Editing	1	32	2	126
LINC 87	Seminar in Teaching with Educational Technology	N/A	N/A	N/A	N/A
LINC 50A	Technology in the K-12 Classroom II	N/A	N/A	N/A	N/A
LINC 50F	Integrating Technology into a Standards-Based Curriculum I	1	33	N/A	N/A
LINC 57	Designing Learner-Centered Instruction	1	35	1	30
LINC 58	Global Project-Based Learning	2	59	1	36
LINC 62	Cloud-Based Word Processing Tools	N/A	N/A	1	38
LINC 66E	Cloud-Based Publishing Tools	N/A	N/A	N/A	N/A
LINC 75B	Instructional Technology Strategies	N/A	N/A	1	21
LINC 79	Multimedia Project Production	2	69	1	24
LINC 80	Multimedia Overview	3	132	2	107
LINC 80A	Multimedia in the Classroom I	N/A	N/A	N/A	N/A

LINC 80B	Multimedia in the Classroom II	2	62	1	61
LINC 81	Using Digital Images	1	64	1	35
LINC 82A	Introduction to Designing Instructional Technology Projects	1	44	N/A	N/A
LINC 90C	Online Collaboration Tools	1	35	2	57
LINC 95C	Assessment Strategies for Technology Education	N/A	N/A	1	31
Totals (using current enroll#)		17	659	16	646

Item 6. Place of Program in Curriculum/Similar Programs

Currently, Foothill College offers the Certificate of Achievement in Instructional Design and Technology. This 27-unit program provides a broad spectrum overview of instructional design, with particular focus on multimedia, graphic arts, and web design. Not yet in existence, but proposed, is a Certificate of Achievement in Education Technology Specialist. The Certificate of Achievement in Emerging Educational Technology Leadership would build on the foundation of the proposed Certificate of Achievement in Education Technology Specialist, with a specific focus on emerging technologies and educational leadership. It is a natural progression from one to the next.

Item 7. Similar Programs at Other Colleges in Service Area

There is a 12-credit education technology program offered at the University of San Francisco. Its goal is to evaluate a student's readiness to pursue a more formal graduate degree in pathways that do not typically include classroom instruction.

There are several colleges, universities, and city and state education departments that offer certificates in education technology, but none that focus specifically on emerging technologies and leadership. The New York State Department of Education, Molloy College, Rutgers University, and Pace University have programs that relate to the type of program proposed in this document. CSU Sacramento offers a Certificate of Competency in Educational Technology for 12 units, and the University of San Francisco also offers a 12-credit program with graduate units.

Additional Information Required for State Submission:

TOP Code: 0860.00 - Educational Technology

Annual Completers: 24-75

Net Annual Labor Demand: 111,890-116,705 (Bay Region)

Faculty Workload: PT Adjunct faculty load would be between .133 and .266 each quarter (combined with CA in Education Technology Specialist program)

New Faculty Positions: 0

New Equipment: 0

New/Remodeled Facilities: 0

Library Acquisitions: 0

Gainful Employment: Yes

Program Review Date: February, 2022

Distance Education: 50-99%

FOOTHILL COLLEGE
Temporary Program Creation Process
Feedback Form for New Programs

Until the new permanent program creation process has been determined, as part of the temporary program creation process this form shall be used by a department to gather feedback on a new program from key governance committees on campus. A complete program narrative and supporting documentation must be submitted to the groups listed below (simultaneous submission is recommended). Each committee will provide initial feedback via email within two weeks but might also provide additional feedback after their monthly meetings.

After a two-week period, regardless of whether feedback has been received from the three committees, the Division Curriculum Committee may consider the new program for approval. Following Division CC approval, please forward this completed form to the Office of Instruction.

Faculty Author(s): Cassandra Pereira
Division: Business and Social Science

Program Title: Emerging Educational Technology Leadership
Program Units: 18

Workforce/CTE Program (Y/N): Yes
Please note that Workforce/CTE status is dependent on the TOP Code assigned to the program.

Type of Award:
_____ Non-transcriptable credit certificate
__X__ Certificate of Achievement
_____ Noncredit certificate
_____ AA/AS Degree (local)
_____ AA-T/AS-T Degree (ADT)

EQUITY & EDUCATION https://foothill.edu/gov/equity-and-education/
Date of meeting: **Comments:** Submitted to Equity and Education committee on January 7, 2021. No comments have been received.

REVENUE & RESOURCES https://foothill.edu/gov/revenue-and-resources/
Date of meeting: 1/22/21 **Comments:** No concerns. These certificates have the potential of increasing revenue for the college and make sense for KCI's work.

ADVISORY COUNCIL https://foothill.edu/gov/council/
Date of meeting: **Comments:** Submitted to Advisory Council committee on January 7, 2021. No comments have been received.

Division Curriculum Committee Approval Date: 1/25/2021

Division CC Representative: Cassandra Pereira & Laurence Lew

Foothill College
Credit Program Narrative
Certificate of Achievement in STEAM Instructional Leadership

Item 1. Program Goals and Objectives

The Certificate of Achievement in STEAM Instruction Leadership is designed for pre-service teachers and educators at any level who want to grow as STEAM (Science, Technology, Engineering, Art, and Mathematics) leaders in their schools, districts, and/or counties. The focus of the program will be on interdisciplinary science, technology, engineering, and math topics that will provide participants with an opportunity to integrate those disciplines into all of their curriculum. The program will also focus on best practices to create a diverse workforce with materials that are culturally relevant to all participants. Skills learned include the ability to identify topics that can be interwoven into multiple subjects, including but not limited to foreign language, English and language arts, social sciences, history, business, math, computer science, engineering, and science. Upon completion of the program, students will be prepared to support any and all STEAM initiatives in their districts, schools, or counties, as well as provide relevant workshops and courses in STEAM instruction.

Program Learning Outcomes:

- Students will be able to integrate multiple STEAM disciplines into their curriculum.
- Students will be able to teach STEAM using culturally responsive practices that will support a diverse body of teachers and students.
- Students will be able to identify emerging STEAM fields that will influence instruction and workforce development.
- Students will be able to facilitate professional development for their peers/staff to incorporate STEAM into all subject areas.
- Students will be able to influence curriculum decisions around STEAM based on best practices and high content knowledge.
- Students will be able to facilitate interactions and collaboration to build a community that fosters active learning.
- Students will be able to identify technology that will facilitate the learning of STEAM in engaging and meaningful ways.
- Students will be able to curate and create STEAM instructional materials, tools, strategies, and resources to engage all learners and ensure achievement of academic goals.

Item 2. Catalog Description

The Certificate of Achievement in STEAM Instructional Leadership is designed for students working in or planning for a career in K-12 education, extracurricular programs, or STEAM outreach in for-profit and non-profit organizations. The program provides 12 units of instruction and support for the integration of STEAM throughout curriculum in a culturally responsive manner. Courses will focus on technology integration into STEAM lessons, evaluating instructional programs, and data analysis tools. Upon completion of the program, students will be prepared to develop and support STEAM initiatives in their districts, schools, counties, and communities, as well as provide relevant workshops and courses in STEAM instruction.

Item 3. Program Requirements

Requirements	Course #	Title	Units	Sequence
Core Courses (9 units)	LINC 53	Integrating Technology into Mathematics	1	Year 1, Fall
	LINC 63	Cloud-Based Data Analysis Tools	1	Year 1, Spring
	LINC 88	Introduction to Computer Operating Systems	4	Year 1, Winter
	LINC 91A	Introduction to Assessing Instructional Technology	3	Year 1, Fall
Restricted Electives (select 3 units)	LINC 50A	Technology in the K-12 Classroom II	0.5	Year 1, Winter
	LINC 50B	Technology in the K-12 Classroom III	0.5	Year 1, Spring
	LINC 53B	Integrating Technology into Mathematics Grades 6-8	0.5	Year 1, Fall
	LINC 78A	Computational Thinking for Educators	2	Year 1 Fall
	LINC 79	Multimedia Project Production	2	Year 1 Winter
	LINC 91B	Evaluating Technology-Based Learning Outcomes	3	Year 1, Spring
	LINC 91C	Evaluating Instructional Programs	3	Year 1, Spring
	LINC 96B	Handheld Digital Media Devices I	0.5	Year 1, Fall
	LINC 98A	Teaching & Learning in the Digital Age I	0.5	Year 1, Fall
	LINC 98B	Teaching & Learning in the Digital Age II	0.5	Year 1, Winter

TOTAL UNITS: 12 units

Proposed Sequence:
Year 1, Fall = 4-6 units
Year 1, Winter = 4-6 units
Year 1, Spring = 4-6 units
TOTAL UNITS: 12

Item 4. Master Planning
Foothill's mission is to offer equitable programs and services that empower students to achieve their goals and become productive citizens. By offering the Certificate of Achievement in STEAM Instructional Leadership, Foothill will provide an invaluable opportunity for educators, coordinators, and instructors at all levels, particularly those who come from underrepresented minority backgrounds, to establish themselves as leaders in STEAM instruction. These leaders would be empowered to provide culturally responsive instruction and leadership to their districts and counties. By modeling best practices in STEAM instruction, students in the program will experience opportunities to deepen their understanding of the interdisciplinary ways in which STEAM can be incorporated into learning experiences at all levels.

According to the Cambridge University Press, many of the top journals in STEAM have a 'WEIRD' problem, in that their focus is on Western, Educated, Industrialized, Rich, and

Democratic societies [1]. Black and Hispanic workers are underrepresented in the STEAM workforce, with Black workers representing 9% of the STEAM workforce and Hispanic workers making up only 7%, while combined they make up 27% of the total workforce [2]. There is a systemic need for programs to provide underrepresented minority educators with an opportunity to become leaders in STEAM education. This certificate will enable educators, coordinators, and instructors, particularly those of color, to establish themselves as thought leaders in STEAM education and engage in culturally responsive practices within this field.

In 2018, a report released by the Society for College and University Planning stated the importance of community colleges in tackling workforce development in STEAM, particularly focusing on the California Community College System. If coordinated properly, the CCCS could alleviate the problem and develop programs that diversify and grow the STEAM workforce [3]. Upon completion of the STEAM Instructional Leadership program, students will be able to provide high quality STEAM instruction, as well as high quality workshops and webinars on best practices of STEAM instruction.

[1] Henrich, J. (2010, June 15). *The weirdest people in the world? | Behavioral and Brain Sciences*. Cambridge Core. https://www.cambridge.org/core/journals/behavioral-and-brain-sciences/article/weirdest-people-in-the-world/BF84F7517D56AFF7B7EB58411A554C17

[2] Funk, C., & Parker, K. (2020, May 30). 1. *Diversity in the STEAM workforce varies widely across jobs*. Pew Research Center's Social & Demographic Trends Project. https://www.pewsocialtrends.org/2018/01/09/diversity-in-the-STEAM-workforce-varies-widely-across-jobs/

[3] Monis, I. (2018). Designing for STEAM: California Community Colleges Are Helping Shape the STEAM Workforce of the Future. *Planning for Higher Education, 47*(1), 32+.

Item 5. Enrollment and Completer Projections

In the first year, there are projected to be 30 students who complete the certificate. After the first year, there will be two cohorts of 30 students. After five years, approximately 270 students will have completed the program. This projection is based on data from student participation in the Krause Center for Innovation's FAME and EMPowered programs over the past decade.

		Year 1 (18-19)		Year 2 (19-20)	
Course #	**Course Title**	**Annual Sections**	**Annual Enrollment**	**Annual Sections**	**Annual Enrollment**
LINC 53	Integrating Technology into Mathematics	1	30	1	20
LINC 63	Cloud-Based Data Analysis Tools	1	41	1	30
LINC 88	Introduction to Computer Operating Systems	N/A	N/A	N/A	N/A
LINC 91A	Introduction to Assessing Instructional Technology	N/A	N/A	1	22

LINC 50A	Technology in the K-12 Classroom II	N/A	N/A	N/A	N/A
LINC 50B	Technology in the K-12 Classroom III	N/A	N/A	N/A	N/A
LINC 53B	Integrating Technology into Mathematics Grades 6-8	N/A	N/A	1	20
LINC 78A	Computational Thinking for Educators	1	58	3	66
LINC 79	Multimedia Project Production	2	99	1	24
LINC 91B	Evaluating Technology-Based Learning Outcomes	1	25	1	32
LINC 91C	Evaluating Instructional Programs	1	18	1	17
LINC 96B	Handheld Digital Media Devices I	N/A	N/A	1	70
LINC 98A	Teaching & Learning in the Digital Age I	N/A	N/A	N/A	N/A
LINC 98B	Teaching & Learning in the Digital Age II	N/A	N/A	N/A	N/A
Totals (using current enroll#)			271		301

Item 6. Place of Program in Curriculum/Similar Programs

Currently, Foothill College doesn't offer a STEAM Instruction program, and this will tangentially relate to the Instructional Design and Technology certificate as there is a focus on the integration of technology into the curriculum. This certificate reflects the Krause Center for Innovation's mission to empower teachers and transform the learning experience through innovative and effective practices.

Item 7. Similar Programs at Other Colleges in Service Area

San Jose State University offers a Certificate in Math Instruction, but there is not a certification in the immediate area that offers a more holistic STEAM Instructional Leadership certification.

There are several colleges and universities that offer STEAM Instruction certificates, including Johns Hopkins University, Drexel University, National Institute of STEAM Education, Colorado University, Fresno Pacific University, California State University, San Bernardino, and several other schools across the country. The CSUSB certificate consists of 4 units of credit upon completion, whereas at Drexel students earn 12 units of credit.

Additional Information Required for State Submission:

TOP Code: 0860.00 - Educational Technology

Annual Completers: 50

Net Annual Labor Demand: 111,890-116,705 (Bay Region)

Faculty Workload: PT Adjunct faculty load would be between .044 and .133 each quarter

New Faculty Positions: 0

New Equipment: 0

New/Remodeled Facilities: 0

Library Acquisitions: 0

Gainful Employment: Yes

Program Review Date: February, 2022

Distance Education: 50-99%

FOOTHILL COLLEGE
Temporary Program Creation Process
Feedback Form for New Programs

Until the new permanent program creation process has been determined, as part of the temporary program creation process this form shall be used by a department to gather feedback on a new program from key governance committees on campus. A complete program narrative and supporting documentation must be submitted to the groups listed below (simultaneous submission is recommended). Each committee will provide initial feedback via email within two weeks but might also provide additional feedback after their monthly meetings.

After a two-week period, regardless of whether feedback has been received from the three committees, the Division Curriculum Committee may consider the new program for approval. Following Division CC approval, please forward this completed form to the Office of Instruction.

Faculty Author(s): Cassandra Pereira
Division: Business and Social Science

Program Title: STEAM Instructional Leadership
Program Units: 12

Workforce/CTE Program (Y/N): Yes
Please note that Workforce/CTE status is dependent on the TOP Code assigned to the program.

Type of Award:
_____ Non-transcriptable credit certificate
__X__ Certificate of Achievement
_____ Noncredit certificate
_____ AA/AS Degree (local)
_____ AA-T/AS-T Degree (ADT)

EQUITY & EDUCATION https://foothill.edu/gov/equity-and-education/
Date of meeting: **Comments:** Submitted to Equity and Education committee on January 7, 2021. No comments have been received.

REVENUE & RESOURCES https://foothill.edu/gov/revenue-and-resources/
Date of meeting: 1/22/21 **Comments:** No concerns. These certificates have the potential of increasing revenue for the college and make sense for KCI's work.

ADVISORY COUNCIL https://foothill.edu/gov/council/
Date of meeting: **Comments:** Submitted to Advisory Council committee on January 7, 2021. No comments have been received.

Division Curriculum Committee Approval Date: 1/25/2021

Division CC Representative: Cassandra Pereira & Laurence Lew

Education Technology Occupations
Labor Market Information Report
Foothill College

Prepared by the San Francisco Bay Center of Excellence for Labor Market Research

February 2021

Recommendation

Based on all available data, there appears to be an "undersupply" of Education Technology workers compared to the demand for this cluster of occupations in the Bay region and in the Silicon Valley sub-region (Santa Clara county). There is a projected annual gap of about 9,648 students in the Bay region and 2,841 students in the Silicon Valley Sub-Region. In addition, because Foothill College's intent with the three proposed new certificates is to train incumbent teachers in educational technology with varying specialties, the gap analysis that is normally done between supply and demand is not as relevant in this report.

Introduction

This report provides student outcomes data on employment and earnings for TOP 0860.00 - Educational Technology programs in the state and region. It is recommended that these data be reviewed to better understand how outcomes for students taking courses on this TOP code compare to potentially similar programs at colleges in the state and region, as well as to outcomes across all CTE programs at Foothill College and in the region.

This report profiles Education Technology Occupations in the 12 county Bay region and in the Silicon Valley sub-region for three separate proposed new Certificates of Achievement in 1) Steam Instructional Leadership 2) Emerging Technology Leadership and 3) Education Technology Specialist at Foothill College. Foothill College indicates: "the three mentioned certificates are to train teachers in educational technology with varying specialties."

- **Computer Occupations, All Other (15-1299):** All computer occupations not listed separately. Excludes "Computer and Information Systems Managers" (11-3021), "Computer Hardware Engineers" (17-2061), "Electrical and Electronics Engineers" (17-2070), "Computer Science Teachers, Postsecondary" (25-1021), "Multimedia Artists and Animators" (27-1014), "Graphic Designers" (27-1024), "Computer Operators" (43-9011), and "Computer, Automated Teller, and Office Machine Repairs" (49-2011).
  Entry-Level Educational Requirement: Bachelor's degree
  Training Requirement: Moderate-term on-the-job training
  Percentage of Community College Award Holders or Some Postsecondary Coursework: 26%

- **Elementary School Teachers, Except Special Education (25-2021):** Teach students basic academic, social, and other formative skills in public or private schools at the elementary level. Substitute teachers are included in "Teachers and Instructors, All Other" (25-3099). Excludes "Special Education Teachers" (25-2050).
  Entry-Level Educational Requirement: Bachelor's degree
  Training Requirement: None
  Percentage of Community College Award Holders or Some Postsecondary Coursework: 5%

- **Middle School Teachers, Except Special and Career/Technical Education (25-2022):** Teach students in one or more subjects in public or private schools at the middle, intermediate, or junior high level, which falls between elementary and senior high school as defined by applicable laws and regulations. Substitute teachers are

included in "Teachers and Instructors, All Other" (25-3099). Excludes "Career/Technical Education Teachers, Middle School" (25-2023) and "Special Education Teachers" (25-2050).

Entry-Level Educational Requirement: Bachelor's degree

Training Requirement: None

Percentage of Community College Award Holders or Some Postsecondary Coursework: 5%

- **Secondary School Teachers, Except Special and Career/Technical Education (25-2031):** Teach students in one or more subjects, such as English, mathematics, or social studies at the secondary level in public or private schools. May be designated according to subject matter specialty. Substitute teachers are included in "Teachers and Instructors, All Other" (25-3099). Excludes "Career/Technical Education Teachers, Secondary School" (25-2032) and "Special Education Teachers" (25-2050).

  Entry-Level Educational Requirement: Bachelor's degree

  Training Requirement: None

  Percentage of Community College Award Holders or Some Postsecondary Coursework: 4%

- **Instructional Coordinators (25-9031):** Develop instructional material, coordinate educational content, and incorporate current technology in specialized fields that provide guidelines to educators and instructors for developing curricula and conducting courses. Includes educational consultants and specialists, and instructional material directors.

  Entry-Level Educational Requirement: Master's degree

  Training Requirement: None

  Percentage of Community College Award Holders or Some Postsecondary Coursework: 13%

Occupational Demand

Table 1. Employment Outlook for Education Technology Occupations in Bay Region

Occupation	2019 Jobs	2024 Jobs	5-yr Change	5-yr % Change	5-yr Total Openings	Annual Openings	25% Hourly Earning	Median Hourly Wage
Computer Occupations, All Other	38,984	41,907	2,923	7%	18,757	3,751	$ 41.02	$ 56.52
Elementary School Teachers, Except Special Education	37,582	38,291	709	2%	14,960	2,992	$ 29.42	$ 38.09
Middle School Teachers, Except Special and Career/Technical Education	9,109	9,398	289	3%	3,739	748	$ 28.28	$ 35.56
Secondary School Teachers, Except Special and Career/Technical Education	21,926	22,466	540	2%	8,386	1,677	$ 34.67	$ 42.92
Instructional Coordinators	4,289	4,643	354	8%	2,416	483	$ 26.45	$ 34.30
Total	**111,890**	**116,705**	**4,815**	**4%**	**48,258**	**9,651**	**$34.28**	**$45.11**

Source: EMSI 2020.4

Bay Region includes: Alameda, Contra Costa, Marin, Monterey, Napa, San Benito, San Francisco, San Mateo, Santa Clara, Santa Cruz, Solano and Sonoma Counties

Table 2. Employment Outlook for Education Technology Occupations in Silicon Valley Sub-region

Occupation	2019 Jobs	2024 Jobs	5-yr Change	5-yr % Change	5-yr Total Openings	Annual Openings	25% Hourly Earning	Median Hourly Wage
Computer Occupations, All Other	14,091	15,207	1,116	8%	6,826	1,365	$ 47.30	$ 64.70
Elementary School Teachers, Except Special Education	8,927	9,040	113	1%	3,457	691	$ 32.93	$ 42.33

Occupation	2019 Jobs	2024 Jobs	5-yr Change	5-yr % Change	5-yr Total Openings	Annual Openings	25% Hourly Earning	Median Hourly Wage
Middle School Teachers, Except Special and Career/Technical Education	1,857	1,899	42	2%	737	147	$ 31.52	$ 36.81
Secondary School Teachers, Except Special and Career/Technical Education	7,183	7,264	81	1%	2,629	526	$ 34.83	$ 43.59
Instructional Coordinators	940	1,043	103	11%	558	112	$ 28.42	$ 36.63
Total	**32,998**	**34,453**	**1,455**	**4%**	**14,207**	**2,841**	**$39.27**	**$51.68**

Source: EMSI 2020.4
Silicon Valley Sub-Region includes: Santa Clara County

Job Postings in Bay Region and Silicon Valley Sub-Region

Table 3. Number of Job Postings by Occupation for latest 12 months (Feb 2020 - Jan 2021)

Occupation	Bay Region	Silicon Valley
Middle School Teachers, Except Special and Career/Technical Education	5,202	1,223
Elementary School Teachers, Except Special Education	3,632	707
Secondary School Teachers, Except Special and Career/Technical Education	2,453	444
Instructional Coordinators	501	122

Source: Burning Glass

Table 4a. Top Job Titles for Education Technology Occupations for latest 12 months (Feb 2020 - Jan 2021)
Bay Region

Title	Bay	Title	Bay
Nanny	201	Middle School Science Teacher	60
Teacher	191	High School Math Teacher	54
English Teacher	148	Middle School Teacher	52
Elementary Teacher	128	Physical Education Teacher	51
Spanish Teacher	120	Regular Babysitter For 3 Children	50
Science Teacher	95	History Teacher	45
Elementary School Teacher	72	High School English Teacher	40
Math Teacher	71	Occasional Babysitter For 3 Children	37
Middle School Math Teacher	65	English Language Arts Teacher	37

Source: Burning Glass

Table 4b. Top Job Titles for Education Technology Occupations for latest 12 months (Feb 2020 - Jan 2021)
Silicon Valley Sub-Region

Title	Silicon Valley	Title	Silicon Valley
Nanny	50	Elementary Teacher In Training	18
Teacher	46	Social Studies Teacher	15
English Teacher	43	Physical Education Teacher	15
Elementary Teacher	42	Middle School Science Teacher	15
Elementary School Teacher	26	Middle School Teacher	13
Science Teacher	23	Middle School Math Teacher	13
Spanish Teacher	19	Lunch And Extended Teacher	13

Title	Silicon Valley	Title	Silicon Valley
Math Teacher	19	Education Coordinator	12
Elementary Floater Teacher	19	Regular Babysitter For 3 Children	11

Source: Burning Glass

Industry Concentration

Table 5. Industries hiring Education Technology Workers in Bay Region

Industry – 6 Digit NAICS (No. American Industry Classification) Codes	Jobs in Industry (2019)	Jobs in Industry (2024)	% Change (2019-24)	% Occupation Group in Industry (2019)
Elementary and Secondary Schools (Local Government)	53,676	52,199	-3%	47%
Elementary and Secondary Schools	14,993	15,484	3%	13%
Custom Computer Programming Services	8,136	9,190	13%	7%
Computer Systems Design Services	4,654	4,975	7%	4%
Software Publishers	2,695	3,260	21%	3%
Internet Publishing and Broadcasting and Web Search Portals	2,481	2,920	18%	2%
Federal Government, Civilian, Excluding Postal Service	2,484	2,449	-1%	2%
Data Processing, Hosting, and Related Services	1,869	2,237	20%	2%
Corporate, Subsidiary, and Regional Managing Offices	1,425	1,304	-8%	1%
Other Computer Related Services	1,170	1,418	21%	1%

Source: EMSI 2020.4

Table 6. Top Employers Posting Education Technology Occupations in Bay Region and Silicon Valley Sub-Region (Feb 2020 - Jan 2021)

Employer	Bay	Employer	Silicon Valley
Oakland Unified School District	784	San Jose Unified School District	100
San Ramon Valley Unified School District	278	Stratford School	74
Pajaro Valley Unified School District	118	Alpha Public Schools	61
Envision	118	Nobel Learning Communities	46
Stratford School	107	Milpitas Unified	43
Pleasanton Unified School District	103	Santa Clara Unified School District	42
San Jose Unified School District	100	Ace Charter Schools	35
National Alliance For Public Charter Schools	95	Palo Alto Unified School District	32
Vacaville Unified School District	92	Summit Public Schools	31
Aspire Public Schools	92	Union Elementary School	30
Summit Public Schools	90	Campbell Union School District	29
Kipp Bay Area Schools	83	Foothill De Community College District	27
Dublin Unified School District	81	Diocese Of San Jose Dsj	27
Swing Education	70	Challenger School	26

Source: Burning Glass

Educational Supply

There is a one (1) community college in the Bay Region issuing 3 awards on average annually (last 3 years ending 2018-19) on TOP 0860.00 - Educational Technology. In the Silicon Valley Sub-Region, there are no community colleges issuing awards on average annually (last 3 years) on this TOP code. There are no other CTE educational institutions in the Bay Region issuing awards on average annually (last 3 years ending 2016-17) on TOP 0860.00 - Educational Technology.

Table 7. Community College Awards on TOP 0860.00 - Educational Technology in Bay Region

College	Subregion	Certificate Low	Total
Merritt	East Bay	3	3
Total		**3**	**3**

Source: Data Mart

Note: The annual average for awards is 2016-17 to 2018-19.

Gap Analysis

Based on the data included in this report, there is a large labor market gap in the Bay region with 9,651 annual openings for the Education Technology occupational cluster and 3 annual (3-year average) awards for an annual undersupply of 9,648 students. In the Silicon Valley Sub-Region, there is also a gap with 2,841 annual openings and no annual (3-year average) awards for an annual undersupply of 2,841 students. In addition, because Foothill College's intent with the three proposed new certificates is to train incumbent teachers in educational technology with varying specialties, the gap analysis that is normally done between supply and demand is not as relevant in this report.

Student Outcomes

Table 8. Four Employment Outcomes Metrics for Students Who Took Courses on TOP 0860.00 - Educational Technology

2018-19	Bay All CTE Program	Foothill All CTE Program	State 0860.00	Bay 0860.00	Silicon Valley 0860.00	Foothill College 0860.00
Students with a Job Closely Related to Their Field of Study *	75%	88%	74%	82%	71%	71%
Median Annual Earnings for SWP Exiting Students	$45,864	$67,768	$85,052	$87,140	$91,848	$91,792
Median Change in Earnings for SWP Exiting Students	31%	46%	10%	10%	12%	11%
Exiting Students Who Attained the Living Wage	53%	72%	80%	84%	87%	90%

Source: Launchboard Strong Workforce Program (Version 2018-19). *Asterisk shows(Version 2017-18)

Skills, Certifications and Education

Table 9. Top Skills for Education Technology Occupations in Bay Region (Feb 2020 - Jan 2021)

Skill	Posting	Skill	Posting
Teaching	10,601	Learning Styles	304
Lesson Planning	1,215	Cardiopulmonary Resuscitation (CPR)	298
Special Education	688	Assessment Data	275
Tutoring	549	Child Development	259
Social Studies	446	Physics	259
Scheduling	442	Managing Student Data	238
Music	382	Group Instruction	235

Skill	Posting	Skill	Posting
Child Care	375	Customer Service	208
Progress Reports	375	Faculty Training	201
Educational Programs	355	Staff Development	199
Biology	353	Empower	190
Curriculum Development	352	Data Analysis	186
Chemistry	318	Working with Under-served Students	184
History	315	Early Childhood Education	180

Source: Burning Glass

Table 10. Certifications for Education Technology Occupations in Bay Region (Feb 2020 - Jan 2021)

Certification	Posting	Certification	Posting
Certified Teacher	1,071	Project Management Certification	27
Driver's License	280	Special Education Certification	22
Cross-Cultural Language and Academic Development	230	Food Handler Certification	13
First Aid Cpr Aed	227	Ca License	9
Certified Outpatient Coding (COC)	152	Board Certified/Board Eligible	9
Teaching English As A Foreign Language (TEFL)	44	Cdl Class C	6
Teachers of English To Speakers of Other Languages (TESOL)	44	Spanish Certification	5
Child Development Associate (CDA)	40	Security Clearance	5
Administrative Services Credential	32	Registered Dietitian	5
American Institute of Architects	30	Chartered Financial Analyst (CFA)	5

Source: Burning Glass

Note: 82% of records have been excluded because they do not include a certification. As a result, the chart below may not be representative of the full sample.

Table 11. Education Requirements for Education Technology Occupations in Bay Region

Education (minimum advertised)	Latest 12 Mos. Postings	Percent 12 Mos. Postings
Associate's degree	206	4%
Bachelor's degree	4,532	78%
Master's degree and higher	1,034	18%

Source: Burning Glass

Note: 51% of records have been excluded because they do not include a degree level. As a result, the chart below may not be representative of the full sample.

Methodology

Occupations for this report were identified by use of skills listed in O*Net descriptions and job descriptions in Burning Glass. Labor demand data is sourced from Economic Modeling Specialists International (EMSI) occupation data and Burning Glass job postings data. Educational supply and student outcomes data is retrieved from multiple sources, including CTE Launchboard and CCCCO Data Mart.

Sources

O*Net Online
Labor Insight/Jobs (Burning Glass)
Economic Modeling Specialists International (EMSI)
CTE LaunchBoard www.calpassplus.org/Launchboard/

Statewide CTE Outcomes Survey
Employment Development Department Unemployment Insurance Dataset
Living Insight Center for Community Economic Development
Chancellor's Office MIS system

Contacts

For more information, please contact:

• Leila Jamoosian, Research Analyst, for Bay Area Community College Consortium (BACCC) and Centers of Excellence (CoE), leila@baccc.net

• John Carrese, Director, San Francisco Bay Center of Excellence for Labor Market Research, jcarrese@ccsf.edu or (415) 267-6544

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

FOOTHILL COLLEGE
Stand-Alone Course Approval Request

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

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

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

Course #: APPT 198

Course Title: PLUMBING SERVICE & REPAIR

Credit Status:

X Credit course
_____ Noncredit course

Catalog Description:

This course provides students with a working knowledge of service and repair work. Students will learn basic identification and troubleshooting skills needed to complete repairs in a safe and timely manner.

Prerequisite: Per California Code of Regulations, this course is limited to students admitted to the Plumbing & Pipefitting Apprenticeship Program.

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

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

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

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

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

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

Criteria A. Appropriateness to Mission

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

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

_____ Transfer
X Workforce/CTE
_____ Basic Skills

Criteria B. Need

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

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

There is a need to advance the skills of our workforce through training at the Pipe Trades Training Center in Monterey and Santa Cruz Counties in the area of basic plumbing techniques. These skills will be applied and mastered through on-the-job training at the employer's work site.

Criteria C. Curriculum Standards (please initial as appropriate)

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

Faculty Requestor: Stephen Cry **Date:** 12/10/20

Division Curriculum Representative: Brian Murphy **Date:** 2/9/21

Date of Approval by Division Curriculum Committee: 2/9/21

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

Foothill College
Submission Course Outlines

For Faculty and Staff use only

Apprenticeship

APPT 198 PLUMBING SERVICE & REPAIR — Summer 2021

123 hours total: 37 hours lecture, 86 hours laboratory. **5 Units**

Total Contact Hours: 0 *(Total of All Lecture and Lab hours X 12)*

Total Student Learning Hours: 0 *(Total of All Lecture, Lab hours and Out of Class X 12)*

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

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

Repeatability -

Statement: Not Repeatable.

Status -

Course Status: Active
Grading: Letter Grade with P/NP option
Degree Status: Applicable
Credit Status: Credit
Degree or Certificate Requirement: Stand Alone Course
GE Status: Non-GE

Articulation Office Information -

C.I.D. Notation:

Transferability:
Validation: 7/19

Division Dean Information -

Seat Count:	Load Factor:	FOAP Code:
30	.185	115000142221095230

Instruction Office Information -

FSA Code:

Distance Learning: no

Stand Alone Designation: no

Program Title:

Program TOPs Code:

Program Unique Code:

Content Review Date:

Former ID:

1. Description -

This course provides students with a working knowledge of service and repair work. Students will learn basic identification and troubleshooting skills needed to complete repairs in a safe and timely manner.

Prerequisite: Per California Code of Regulations, this course is limited to students admitted to the Plumbing & Pipefitting Apprenticeship Program.

2. Course Objectives -

The student will be able to:

A. Troubleshoot defective plumbing system
B. Identify proper tools needed to complete repair
C. Safely complete system repair
D. Communicate clearly with customer the extent of repairs needed
E. Complete work order paperwork legibly and correctly

3. Special Facilities and/or Equipment -

A. Classroom facilities with AV capabilities
B. Plumbing lab with tools and training equipment
C. Personal protective equipment

4. Course Content (Body of knowledge) -

A. Plumbing service and repair tools
    1. Hand tools
    2. Fixture tools
    3. Power tools
    4. Snakes and drain cleaners
    5. Miscellaneous
B. Safety
    1. Material safety sheets
    2. Job area
    3. Fire
    4. Confined space entry
    5. Trenching and shoring
C. Drain waste and vent
    1. Drain cleaning
    2. Video inspection
    3. Pipe repair
    4. Water jetting
    5. Sewage ejector repair and maintenance
D. Water distribution
    1. Systems
    2. Supply piping
    3. Pipe repair
    4. Flow detection
    5. Cross contamination
E. Gas systems
    1. Piping
    2. Regulator repair
    3. Gas service valves
    4. Flame control
    5. Combustion
F. Plumbing fixtures
    1. Commercial fixtures
    2. Residential fixtures
    3. Bathtubs and showers
    4. Drinking fountains/water coolers
G. Appliances
    1. Disposers
    2. Dishwashers
    3. Water softeners/filters
    4. Reverse osmosis
H. Water heaters
    1. Electric/gas fired
    2. Hot water supply
    3. Tankless
    4. Combination
    5. Accessories
    6. Troubleshooting
    7. Code requirements
I. Boilers and hydronic systems

1. Operation
2. Hot water boilers
3. Terminal devices
4. Radiant and convection heating
5. Controls
6. Troubleshooting

5. Repeatability - Moved to header area.

6. Methods of Evaluation -

A. Written exams
B. Hands-on demonstration
C. Classroom discussion
D. Group exercise

7. Representative Text(s) -

United Association. Plumbing Service, Maintenance, and Repair. Washington D.C.: International Pipe Trades Joint Training Committee, 2017.

8. Disciplines -

Plumbing

9. Method of Instruction -

A. Discussion
B. Demonstration
C. Hands-on learning

10. Lab Content -

A. Students will work individually and in teams to troubleshoot faulty plumbing systems.
B. Site safety check to identify any hazards.
C. Rebuild and/or repair faulty systems.

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

12. Examples of Required Reading and Writing and Outside of Class Assignments -

A. Reading
    1. Material safety sheets
    2. Equipment specification sheets
    3. Manufacturers recommendations/repair manuals
    4. Textbook
    5. Internet resources
B. Written
    1. Textbook worksheets
    2. Written analysis of defective system
    3. Daily report forms
    4. Material order forms

13. Need/Justification -

There is a need to advance the skills of our workforce through training at the Pipe Trades Training Center in Monterey and Santa Cruz Counties in the area of basic plumbing techniques. These skills will be applied and mastered through on-the-job training at the employer's work site.

Course status: *Active*