

College Curriculum Committee Meeting Agenda
Tuesday, November 30, 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: November 16, 2021	2 min.	Action	#11/30/21-1	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. Consent Calendar a. New Program Application: Business Administration 2.0 ADT	5 min.	Action	#11/30/21-2	Kuehnl
5. New Program Application: Introduction to Sports Medicine CA	10 min.	2nd Read/ Action	#11/30/21-3 & 5	Kuehnl
6. New Program Application: Advanced Sports Medicine CA		2nd Read/ Action	#11/30/21-4 & 5	Kuehnl
7. New Program Application: Plumbing & Pipefitting Apprenticeship AS		2nd Read/ Action	#11/30/21-6	Kuehnl
8. Planning for Winter CCC Meetings & Division CC Meetings	40 min.	Discussion		Hueg & Kuehnl
9. Program Pathways Mapper Proposal	10 min.	2nd Read/ Action	#11/30/21-7	Kuehnl
10. Good of the Order	3 min.			Kuehnl
11. Adjournment				Kuehnl

**Times listed are approximate*

Consent Calendar

New Program Application: Business Administration 2.0 ADT (attachment #11/30/21-2)

Attachments:

- #11/30/21-1 Draft Minutes: November 16, 2021
- #11/30/21-3 New Program Application: Introduction to Sports Medicine CA
- #11/30/21-4 New Program Application: Advanced Sports Medicine CA
- #11/30/21-5 Foothill Sports Medicine Diagram
- #11/30/21-6 New Program Application: Plumbing & Pipefitting Apprenticeship AS
- #11/30/21-7 GP Proposal to CCC to Recommend Foothill College's Purchase, Implementation, and Maintenance of Program Pathways Mapper

2021-2022 Curriculum Committee Meetings:

<u>Fall 2021 Quarter</u>	<u>Winter 2022 Quarter</u>	<u>Spring 2022 Quarter</u>
10/5/21	1/18/22	4/19/22
10/19/21	2/1/22	5/3/22
11/2/21	2/15/22	5/17/22
11/16/21	3/1/22	5/31/22
11/30/21	3/15/22	6/14/22

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

2021-2022 Curriculum Deadlines:

- ~~11/5/21~~ Deadline to submit certain types of course updates for 2022-23 catalog—[see PDF for details](#) (Faculty/Divisions).
- ~~11/5/21~~ Deadline to submit local GE applications for 2022-23 catalog (Faculty/Divisions).
- 12/1/21 Deadline to submit courses to CSU for CSU GE approval (Articulation Office).
- 12/1/21 Deadline to submit courses to UC/CSU for IGETC approval (Articulation Office).
- TBD Deadline to submit curriculum sheet updates for 2022-23 catalog (Faculty/Divisions).
- 6/1/22 Deadline to submit new/revised courses to UCOP for UC transferability (Articulation Office).
- TBD Deadline to submit course updates for 2023-24 catalog (Faculty/Divisions).
- Ongoing Submission of courses for C-ID approval and course-to-course articulation with individual colleges and universities (Articulation Office).

Distribution:

Micaela Agyare (LRC), Chris Allen (Dean, APPR), Ben Armerding (LA), Kathy Armstrong (PSME), Rachelle Campbell (BH), Anthony Cervantes (Dean, Enrollment Services), Roosevelt Charles (Dean—CNSL), Valerie Fong (Dean—LA), Evan Gilstrap (Articulation Officer), Hilary Gomes (FA), Allison Herman (LA; LRC), Kurt Hueg (Administrator Co-Chair), Maritza Jackson Sandoval (CNSL), Julie Jenkins (BSS), Ben Kaupp (SRC), Eric Kuehnl (Faculty Co-Chair), Andy Lee (CNSL), Dixie Macias (KA), Don Mac Neil (KA), Kathryn Maurer (AS President), Kent McGee (Evaluations), Allison Meezan (BSS), Ché Meneses (FA), Brian Murphy (APPR), Tim Myres (APPR), Teresa Ong (AVP Workforce), Lisa Schultheis (BH), Ram Subramaniam (Dean—BH & PSME), Kella Svetich (LA), Mary Vanatta (Curriculum Coordinator), Anand Venkataraman (PSME)

COLLEGE CURRICULUM COMMITTEE

Committee Members – 2021-22

Meeting Date: 11/30/21Co-Chairs (2)

<input checked="" type="checkbox"/>	Eric Kuehnl	7479	Vice President, Academic Senate (tiebreaker vote only)	kuehneric@fhda.edu
<input checked="" type="checkbox"/>	Kurt Hueg	7179	Interim Vice President of Instruction	huegkurt@fhda.edu

Voting Membership (1 vote per division)

<input checked="" type="checkbox"/>	Micaela Agyare	7086	LRC	agyaremicaela@fhda.edu
<input checked="" type="checkbox"/>	Ben Armerding	7453	LA	armerdingbenjamin@fhda.edu
<input checked="" type="checkbox"/>	Kathy Armstrong	7487	PSME	armstrongkathy@fhda.edu
<input type="checkbox"/>	Rachelle Campbell	7469	BH	campbellrachelle@fhda.edu
<input checked="" type="checkbox"/>	Roosevelt Charles	7219	Dean–CNSL	charlesroosevelt@fhda.edu
<input checked="" type="checkbox"/>	Valerie Fong	7135	Dean–LA	fongvalerie@fhda.edu
<input checked="" type="checkbox"/>	Evan Gilstrap	7675	Articulation	gilstrapevan@fhda.edu
<input checked="" type="checkbox"/>	Hilary Gomes	7585	FA	gomeshilary@fhda.edu
<input checked="" type="checkbox"/>	Allison Herman	7460	LA; LRC (advisory)	hermanallison@fhda.edu
<input checked="" type="checkbox"/>	Maritza Jackson Sandoval	7409	CNSL	jacksonsandovalmaritza@fhda.edu
<input checked="" type="checkbox"/>	Julie Jenkins		BSS	jenkinsjulie@fhda.edu
<input checked="" type="checkbox"/>	Ben Kaupp		SRC	kauppben@fhda.edu
<input checked="" type="checkbox"/>	Dixie Macias	7271	KA	maciasdixie@fhda.edu
<input checked="" type="checkbox"/>	Don Mac Neil	7248	KA	macneildon@fhda.edu
<input checked="" type="checkbox"/>	Allison Meezan	7166	BSS	meezankaren@fhda.edu
<input checked="" type="checkbox"/>	Ché Meneses	7015	FA	menesesche@fhda.edu
<input checked="" type="checkbox"/>	Brian Murphy		APPR	brian@pttc.edu
<input type="checkbox"/>	Tim Myres		APPR	timm@smw104jatc.org
<input checked="" type="checkbox"/>	Lisa Schultheis	7780	BH	schultheislisa@fhda.edu
<input checked="" type="checkbox"/>	Ram Subramaniam	7472	Dean–BH & PSME	subramaniamram@fhda.edu
<input type="checkbox"/>	Kella Svetich	7924	LA	svetichkella@fhda.edu
<input checked="" type="checkbox"/>	Anand Venkataraman	7495	PSME	venkataramananand@fhda.edu

Non-Voting Membership (4)

<input type="checkbox"/>			ASFC Rep.	
<input checked="" type="checkbox"/>	Mary Vanatta	7439	Curr. Coordinator	vanattamary@fhda.edu
<input type="checkbox"/>	Kent McGee	7298	Evaluations	mcgeekent@fhda.edu
<input type="checkbox"/>			SLO Coordinator	

Visitors

Chris Allen, Isaac Escoto, Natalie Latteri, Debbie Lee, Amy Leonard, Teresa Ong

**College Curriculum Committee
Meeting Minutes
Tuesday, November 16, 2021
2:00 p.m. – 3:30 p.m.
Meeting held virtually via ConferZoom**

Item	Discussion
1. Reaffirmation of Remote Meetings Resolution	<p>Speaker: Eric Kuehnl CCC approved Resolution Authorizing Remote Teleconference Meetings Pursuant to Brown Act Provisions Included in AB 361 at Oct. 5th meeting. At that time, the group intended resolution to apply to the entirety of fall quarter, we are required to reaffirm it every 30 days.</p> <p>Motion to reaffirm resolution M/S (Herman, Venkataraman). Approved. 1 abstention</p>
2. Minutes: November 2, 2021	Approved by consensus.
3. Report Out from Division Reps	<p>Speaker: All PSME: No updates to report.</p> <p>LRC: No updates to report.</p> <p>Language Arts: Working on updating ESL mirrored courses; reapplying for Foothill GE Area II for ESLL 26; working on ideas for Journalism and other English activities.</p> <p>Kinesiology: Two new certificates on today's agenda; starting on self-evaluation.</p> <p>Fine Arts: Questions and concerns re: Guided Pathways (do Programs Maps go through division CC? are approved Maps available for students to see?)— contacted the GP team and received a response but wondering if others have similar questions/concerns. Hoping for clarity when topic discussed later today. Requested CCC discuss AB 928, which mentions Guided Pathways. Kuehnl noted that last year CCC decided that division CCs will approve completed Maps, but no process has been created for ongoing review—will need to be determined.</p> <p>SRC: Ran into some issues re: Title 5 courses which prompted questions, so still wrapping up that work.</p> <p>Counseling: No updates to report.</p> <p>BSS: Working on new certificates—trying to determine process, since governance groups no longer exist. Have been told to skip Feedback Form step, at this time. Kuehnl noted that the interim council is not going to be able to review new programs during the two-week window—not necessarily skipping Feedback Form step but it's sort of a formality, at this time.</p> <p>Bio Health: No updates to report.</p> <p>Apprenticeship: No updates to report.</p> <p>Gilstrap reported he's currently working on Computer Science ADT and Business Administration 2.0 ADT. Mentioned that AB 928, which creates a single transfer GE pattern, is currently in the very early stages. Technically, we already have one transfer GE pattern (IGETC), but there are concerns (mostly re: CSU GE allowing things that IGETC does not). Is part of group</p>

	<p>of Articulation Officers which has sent a letter to ICAS to voice concerns re: fairness and equity for students. Reminded the group about the upcoming Dec. 1st deadline for new submissions for CSU GE and IGETC.</p> <p>Hueg reported that the Interim AVP Instruction position will be posted soon. Is part of group that met today to discuss reactivating SLO process; hoping that it will be not a compliance exercise but a valuable process to increase focus on teaching and learning.</p> <p>Vanatta thanked the group for their hard work on getting most Title 5 courses in before the deadline. Would like to have discussion about how things went with having two COR deadlines, which was unique for this year.</p>
<p>4. Public Comment on Items Not on Agenda</p>	<p>Lee asked if there are actions we can take early to prepare for some of the possibilities that may happen re: changes to IGETC related to Ethnic Studies; for example, proactively submitting ETHN courses for Areas 3 & 4. Gilstrap believes IGETC will create new Area 7 but will not add additional units to full GE pattern—is not involved, but has heard about conversations. Does believe students will be able to double-count (use ETHN course for two different Areas). Plans to submit ETHN courses for Area 4; if faculty want to submit them for Area 3, please reach out to him.</p>
<p>5. Announcements a. ASCCC Fall Plenary Update b. GE Subcommittees & Ad Hoc Groups</p>	<p>Speakers: CCC Team Packet of adopted resolutions was attached as info item. Reach out to Kuehnl with any questions.</p> <p>GE subcommittees looking pretty good—Kuehnl thanked everyone who stepped up. Could still use help in Areas 3 & 5 (each has only one member), so please reach out if you'd like to join. Also, a few faculty have reached out to him about being involved in Equity Action Plan group—please reach out if you're interested in that group and/or the one for Faculty and Student Curriculum Primers (goal is to start work in January). Also moving forward with finalizing new program creation process, and still looking for folks to participate in ad hoc group to review Foothill GE process—reach out to him if interested in either of these, as well.</p>
<p>6. Cross-List Request: HUMN 11 & MDIA 11</p>	<p>Speaker: Eric Kuehnl Cross-listed Course Approval Request for HUMN 11 (new course for 2022-23) & MDIA 11 (existing course). No comments.</p> <p><i>See item 9 for motion/approval details.</i></p>
<p>7. Cross-List Request: HUMN 11H & MDIA 11H</p>	<p>Speaker: Eric Kuehnl Cross-listed Course Approval Request for HUMN 11H (new course for 2022-23) & MDIA 11H (existing course). No comments.</p> <p><i>See item 9 for motion/approval details.</i></p>
<p>8. Cross-List Request: HUMN 12 & MDIA 12</p>	<p>Speaker: Eric Kuehnl Cross-listed Course Approval Request for HUMN 12 (new course for 2022-23) & MDIA 12 (existing course). No comments.</p> <p><i>See item 9 for motion/approval details.</i></p>
<p>9. Cross-List Request: HUMN 13 & MDIA 13</p>	<p>Speaker: Eric Kuehnl Cross-listed Course Approval Request for HUMN 13 (new course for 2022-23) & MDIA 13 (existing course). No comments.</p> <p>Group agreed to vote on items 6-9 as one motion. Motion to approve Items 6-9 M/S (Armstrong, Gomes). Approved.</p>
<p>10. New Program Application: Introduction to Sports Medicine CA</p>	<p>Speaker: Eric Kuehnl First read of new Introduction to Sports Medicine Certificate of Achievement. No specific comments (<i>see item 11 for related comments</i>).</p>

<p>11. New Program Application: Advanced Sports Medicine CA</p>	<p>Second read and possible action will occur at next meeting.</p> <p>Speaker: Eric Kuehnl First read of new Advanced Sports Medicine Certificate of Achievement. Ong noted concerns about how student completes program; tried to map it out, and concerned there are too many permutations. Wonders how many students will actually take KINS 62C/D/E, since enrollment numbers are so low. Wonders if the program should be tightened up some. Kuehnl asked if KINS 62 courses are stacked—Lee responded that they are, but agreed that Ong's point is important (re: enrollment), as well as frequency of offerings. Ong compared program with those at other colleges, which have fewer units required for internship. Hueg noted similar concerns re: ITRN courses, which are supposed to be used for paid internship work; noted that ITRN courses can be used for any discipline. Vanatta mentioned email conversation w/ Warren Voyce, which explained that KINS 62 courses intended to be used for Foothill's Athletic Treatment Center, and ITRN courses used for local clinics, outside of Foothill. Students may take units from both KINS 62 courses and ITRN courses, if they wish to do both (but would not use ITRN courses for Athletic Treatment Center).</p> <p>PSME rep commented on master's degree requirement mentioned in LMI—Lee responded that to become an athletic trainer, education requirements recently changed from needing a bachelor degree to needing a master degree. Rep asked how this corresponds to an increased demand for the program—Ong responded that this change did somewhat diminish the need for athletic training program pathways to CSUs. Unsure how much this was discussed within the dept., but has been brought up at regional meetings.</p> <p>Second read and possible action will occur at next meeting.</p>
<p>12. New Program Application: Plumbing & Pipefitting Apprenticeship AS</p>	<p>Second read and possible action will occur at next meeting.</p> <p>Speaker: Eric Kuehnl First read of new Plumbing & Pipefitting Apprenticeship AS degree. Gilstrap commented on two pathways, which have different units—Allen responded that each pathway corresponds to a training program at a specific site. Gilstrap noted narrative states 24 students will be able to obtain AS degree and asked if these students have completed GE requirements—Allen responded that this number refers to the current class, who would have the ability to move forward with completing the degree if it is approved.</p> <p>Second read and possible action will occur at next meeting.</p>
<p>13. Planning for Winter CCC Meetings</p>	<p>Speakers: Kurt Hueg & Eric Kuehnl Starting in winter quarter, CCC will need to have a quorum meeting in person. Need to determine if we will be able to regularly achieve a quorum—first meeting is Jan. 18th. BSS rep asked if there has been any discussion of setting up rooms on campus in order to have effective, equitable hybrid meetings; has prior experience in COOL Committee of trying to hold hybrid meetings, but found that folks attending online were unable to effectively participate. Need a fairly high-tech room with multiple screens and mics. Kuehnl mentioned tentative plans for CCC to use a room in the KCI; Academic Senate (AS) will be holding a trial run of a meeting in this room, which is supposedly ideally suited for a hybrid meeting. PSME rep asked if this room is available to be used for regular meetings—Kuehnl unsure. Hueg noted deans met with Bill Matsumoto, from ETS, to create list of meeting rooms and classrooms which are top priority, including this room in the KCI. High priorities are Toyon Room and President's Conference Room, where CCC usually meets; then rooms in PSEC. Believes KCI room may be used to schedule regular meetings. Mentioned supply chain issues, since many companies/schools also trying to beef up meeting room setups to accommodate hybrid meetings. Acknowledged that it is very frustrating to hold hybrid meetings, which the deans have been doing using the Library conference room. Has asked Matsumoto to help find interim solutions, to</p>

	<p>use rooms more effectively until we can get the new hardware.</p> <p>Bio Health rep noted that she and other rep unable to attend CCC meetings during winter quarters, because of their schedules, which will impact CCC's ability to reach a quorum; asked if other members of division CC could attend on their behalf. PSME rep asked if participating virtually counts as being in the quorum—Kuehnl cautioned that there are a lot of requirements, including being within the service area, and posting the agenda at the place you're meeting from (even if it's your home). Hoping to avoid that by being able to have a quorum on campus. Fine Arts rep suggested polling attendees to see who might be able to attend—looks close. Kuehnl asked if anyone who doesn't think they can make it to campus lives within the service area. BSS rep noted Wejoinin sheets and Microsoft Teams, which could be used for members to sign up beforehand, to help ensure quorum—Kuehl agreed this is a good idea. Vanatta also cautioned against using virtual attendees for quorum, noting that attendee's meeting place must be posted on agenda, and would need to allow members of public to enter if they wish to attend (even if it's your home). Apprenticeship rep noted he may not be able to attend all meetings; agreed that sign-up is a good idea, for planning ahead. Bio Health rep asked for clarification, if a replacement faculty member attending would count toward quorum—Kuehnl noted there is a proxy option, but will need to look into it. Believes rep can designate a substitute to act as proxy, without that person having to be formally approved as a rep. But might make sense for someone else to step up as a rep during winter quarter.</p> <p>SRC rep noted he will be on campus but will need to leave early to teach at 3:30, and asked if this affects the quorum—Kuehnl believes should be fine, but will need to ensure any committee business happens before rep leaves (if his leaving affects quorum). Subramaniam noted that being on the cusp of having quorum will mean no flexibility, re: emergency situations or anything preventing folks from being unable to attend, in person, at the last minute. Cautioned against being on the cusp of a quorum.</p> <p>Kuehnl noted these Brown Act rules will affect division CC meetings, as well: publishing agenda 72 hours in advance, having a quorum attend in person, having a student rep on each division CC. Kuehnl has reached out to ASFC (re: student reps) but hasn't made progress, yet. PSME rep asked about if mandatory for student to attend every meeting—Kuehnl responded that student reps should be appointed by CCC and it's then up to them to attend the meetings. There should be a confirmed student rep for each division CC, and their attendance does affect quorum. Fine Arts rep asked if student needs to be from within their division, and if the student will be voting—Kuehnl believes they are a voting member. Vanatta noted her attendance sheet lists student rep as non-voting member, so should confirm; Kuehnl noted AS's student rep is voting member. BSS rep asked what constitutes a quorum—Kuehnl responded 50% + 1. Rep asked if division CC meetings need to be in a public place or if reps can use their offices—Hueg responded that the purpose of the Brown Act is to enable public to attend meetings. Rep asked if divisions will need to schedule meeting room to allow for hybrid meetings—Kuehnl responded if division believes folks will attend virtually, then yes. Rep asked for guidance from AS regarding how divisions should hold these meetings. Kuehnl noted that some divisions use division conference rooms for division CC meetings.</p>
<p>14. Program Mapper Demo</p>	<p>Speaker: Eric Kuehnl Guest presenters: Isaac Escoto, Natalie Latteri, Amy Leonard—all involved in Guided Pathways (GP). First read of GP Proposal to CCC to Recommend Foothill College's Purchase, Implementation, and Maintenance of Program Pathways Mapper. CCC being asked to approve</p>

	<p>proposal, so college can move forward with adopting Program Pathways Mapper technology. Hueg noted decision has not yet been made regarding whether or not to buy software; has been in discussions about resources, including staffing, and hopes to have a decision in the next few weeks. Latteri shared link to software, but would like to first address questions and concerns about Program Maps.</p> <p>Escoto reminded the group that Maps are used to help students see a path, especially if they're overwhelmed by all of the options they're seeing, or are feeling lost. Last year, Maps reviewed by dept. chairs, who had time to share with their colleagues; GP team worked with Gilstrap on articulation-related details. Policy approved by CCC in June mentions need to create additional policy for ongoing review of Maps. Acknowledged some faculty have felt left out, during the GP process, but others are very excited about GP and Maps. Noted that link on GP webpage to last year's Maps is to grant access to folks who want it (primarily counselors), but is not being widely marketed/shared. Leonard shared link to Canvas page, which is not student-facing; mentioned requests to create Canvas shell that is available to students, and suggested reps share Canvas link. Those who have concerns can reach out to Leonard, Escoto, Latteri. Echoed importance of drafting process for ongoing review of Maps.</p> <p>Lee noted that process is to submit Maps to division CCs for approval, but hasn't seen Maps mentioned in division CC minutes from last year. Also asked if following steps listed in process occurred last year: conversation w/ faculty outside of division (for Maps that include courses from outside the division); Maps being sent to CCC as info items. Leonard explained that process for new Maps was approved after last year's Maps were created. Lee asked what the process would be for faculty who want to update their Maps—Leonard responded that faculty should contact division reps if updates need to be made, who may then reach out to Leonard with any questions. Fine Arts rep recalled that process for updating Maps hasn't been created—Kuehnl noted that new and updated Maps will go through division CCs, but specific process/steps for updating Maps have not been determined. PSME rep asked if Maps will be integrated with DegreeWorks—Escoto responded that DegreeWorks has a different use than Program Pathways Mapper. DegreeWorks is a degree audit system, but it doesn't create a path for students. Program Pathways Mapper is intended to complement DegreeWorks. Latteri added it is intended for students to see different program paths before they're even enrolled in school.</p> <p>Latteri shared example of Map from Bakersfield College, which shows specific requirements that expand to show multiple course options—better than static PDF Maps. Noted that GP team not only researched other schools but did outreach to many students and faculty, and received a lot of positive feedback about Program Pathways Mapper.</p> <p>Second read and possible action will occur at next meeting.</p>
15. Good of the Order	
16. Adjournment	3:32 PM

Attendees: Micaela Agyare (LRC), Chris Allen (Dean—APPR), Ben Armerding (LA), Kathy Armstrong (PSME), Roosevelt Charles (Dean—CNSL), Isaac Escoto (CNSL), Valerie Fong (Dean—LA), Evan Gilstrap (Articulation Officer), Hilary Gomes (FA), Allison Herman (LA & LRC), Kurt Hueg (Administrator Co-Chair), Maritza Jackson Sandoval (CNSL), Julie Jenkins (BSS), Ben Kaupp (SRC), Eric Kuehnl (Faculty Co-Chair), Natalie Latteri (BSS), Amy Leonard (De Anza), Debbie Lee (Acting Dean—FA & KA), Dixie Macias (KA), Don Mac Neil (KA), Allison Meezan (BSS), Ché Meneses (FA), Brian Murphy (APPR), Tim Myres (APPR), Teresa Ong (AVP Workforce), Lisa Schultheis (BH), Ram Subramaniam (Dean—BH & PSME), Mary Vanatta (Curriculum Coordinator), Anand Venkataraman (PSME)

Minutes Recorded by: M. Vanatta

Foothill College
Program Application
Associate in Science in Business Administration 2.0 for Transfer Degree

Item 1. Statement of Program Goals and Objectives

The Associate in Science in Business Administration 2.0 for Transfer Degree meets the requirements set forth by Education Code section 66746 to prepare students to transfer to local California State Universities (CSUs). Students who complete the Associate in Science in Business Administration 2.0 for Transfer Degree will be ensured preferential and seamless transfer status to CSUs for Business Administration majors and majors in related disciplines. The Associate in Science in Business Administration 2.0 for Transfer Degree requirements will fulfill the lower division major requirements at many local CSUs. Students are advised, however, to meet with a counselor to assess the course requirements for specific CSUs.

Program Learning Outcomes

- Students will develop skills to interpret resource allocation through research in basic financial literacy skills (computation, critical thinking skills) by analyzing the data with understanding of communication/leadership locally and in the global sphere of the business world. This is accomplished in writing and in their oral presentations.
- As a result of these basic business experiences, students will develop strategies on to which area of business they may enter.

Item 2. Catalog Description

The Associate in Science in Business Administration 2.0 for Transfer Degree is intended for students who plan to transfer and complete a bachelor's degree in Business Administration and majors in a related discipline at a CSU campus. Students completing this program are guaranteed admission to the CSU system but not necessarily to a particular campus or major of choice. Students should consult with a counselor for more information on admission to specific universities and their transfer requirements as individual schools may require different or additional coursework to that listed for the Associate in Science in Business Administration 2.0 for Transfer Degree.

In addition, the student must complete the following:

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

Transfer Model Curriculum (TMC) Template for Business Administration 2.0

Template # 2006

CCC Major or Area of Emphasis: Business Administration

Rev. 5: 02/08/21

TOP Code: 050500

CSU Major(s): Business Administration

Total Units: 24 (all units are minimum semester units)

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

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

or the ASSIST website:

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

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

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

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

Attach the appropriate ASSIST documentation as follows:

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

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

<http://www.assist.org>.

Associate in Science in Business Administration for Transfer Degree 2.0						
College Name: Foothill College						
TRANSFER MODEL CURRICULUM (TMC)		COLLEGE PROGRAM REQUIREMENTS				
Course Title (units)	C-ID Descriptor	Course ID	Course Title	Units	GE Area	
					CSU	IGETC
REQUIRED CORE: (24 units)						
Financial Accounting (3)	ACCT 110	ACTG 1A	Financial Accounting I	5	N/A	N/A
		and ACTG 1B	Financial Accounting II	5	N/A	N/A
		or ACTG 1BH	Honors Financial Accounting II	5	N/A	N/A
Managerial Accounting (3)	ACCT 120	ACTG 1C	Managerial Accounting	5	N/A	N/A
		or ACTG 1CH	Honors Managerial Accounting	5	N/A	N/A
Principles of Microeconomics (3)	ECON 201	ECON 1B	Principles of Microeconomics	5	D	4
Principles of Macroeconomics (3)	ECON 202	ECON 1A	Principles of Macroeconomics	5	D	4
Business Law (3) OR Legal Environment of Business (3)	BUS 125 OR BUS 120	BUSI 18	Business Law I	5	N/A	N/A

Business Calculus (3) OR Finite Mathematics (3) OR a Math course (excluding Statistics) articulated for the Business major at a CSU campus	MATH 140 OR MATH 130 OR AAM	MATH 12 or MATH 1A or MATH 1AH	Calculus for Business & Economics Calculus Honors Calculus I	5 5 5	B4 B4 B4	2 2 2
Introduction to Statistics (3)	MATH 110	MATH 10 or MATH 17 or PSYC 7 or SOC 7	Elementary Statistics Integrated Statistics II Statistics for the Behavioral Sciences Statistics for the Behavioral Sciences	5 5 5 5	B4 B4 B4 B4	2 2 2 2
Introduction to Business (3) OR Business Communication (3)	BUS 110 OR BUS 115	BUSI 22 or BUSI 22H	Principles of Business Honors Principles of Business	5 5	N/A N/A	N/A N/A
Total Units for the Major:	24	Total Units for the Major:		45		
Total Units that may be double-counted <i>(The transfer GE Area limits must <u>not</u> be exceeded)</i>					15	15
General Education (CSU-GE or IGETC) Units					39	37
Elective (CSU Transferable) Units					2	11
Total Degree Units (maximum)					60	

Foothill College
Credit Program Narrative
Certificate of Achievement in Introduction to Sports Medicine

Item 1. Program Goals and Objectives

The Certificate of Achievement in Introduction to Sports Medicine is designed to provide students with a strong foundation in knowledge and experience in a variety of sports medicine fields. Completion of the requirements prepares students for aide positions in physical therapy clinics, chiropractic offices and personal training facilities. When combined with additional coursework, students also can prepare for transfer and additional study in sports medicine fields at the four-year or professional educational program setting.

Program Learning Outcomes:

- Students will demonstrate an entry level of knowledge and skill in a variety of sports medicine disciplines, including athletic training, physical therapy, strength and conditioning, and emergency medical care.
- Students will gain skills applicable in providing quality medical care for active populations.

Knowledge and Skills:

- identify basic musculo-skeletal anatomy.
- employ knowledge of muscle anatomy by designing sport specific pre-activity warm-ups.
- apply various strapping and wrapping techniques to prevent injuries.
- demonstrate flexibility exercises to stretch major muscle groups.
- demonstrate basic athletic injury recognition.
- recognize basic signs and symptoms of athletic injury trauma.
- apply basic first aid skills to mock athletic injuries.
- explain the phases of tissue healing.
- design treatment protocols for the different phases of healing.
- understand the indications and contra-indications of different therapeutic treatments.
- demonstrate proper use of machine and free weight exercise equipment.
- formulate exercise protocols to strengthen different areas of the body.
- discuss cultural differences in prevention, emergence care, treatment and rehabilitation.

Item 2. Catalog Description

Sports medicine is a multi-disciplinary educational experience. Instruction emphasizes injury prevention, emergency care and rehabilitation through the principles of anatomy, physiology, pathology, bio-mechanics, and psychology. Hands-on experience is available to the student intern through the Athletic Treatment Center from an array of sports medicine professionals. Students interested in medicine, athletic training, physical therapy, chiropractic, nutrition or other allied health fields are candidates for this program.

The Certificate of Achievement in Introduction to Sports Medicine is designed to provide students with a strong foundation in knowledge and experience in a variety of sports medicine

fields. Completion of the requirements prepares students for aide positions in physical therapy clinics, chiropractic offices and personal training facilities. When combined with additional coursework, students also can prepare for transfer and additional study in sports medicine fields at the four-year or professional educational program setting.

Item 3. Program Requirements

Requirements	Course #	Title	Units	Sequence
Core Courses (9 units)	KINS 16A	Prevention of Athletic Injuries	3	Year 1 Fall
	KINS 16B	Emergency Athletic Injury Care	3	Year 1 Winter
	KINS 16C	Treatment & Rehabilitation of Athletic Injuries	3	Year 1 Spring
Restricted Electives (Select a minimum of 5 units)	KINS 1	Introduction to Kinesiology	5	Year 1 Spring
	KINS 9	Basic Nutrition for Sports & Fitness	5	Year 1 Spring
	KINS 62A	Clinical Experiences in Sports Medicine I	3	Year 1 Fall
	KINS 62B	Clinical Experiences in Sports Medicine II	3	Year 1 Winter
	ITRN 50	Internship	1	Year 1 Fall/Winter/Spring
	ITRN 51	Internship	2	Year 1 Fall/Winter/Spring
	ITRN 52	Internship	3	Year 1 Fall/Winter/Spring
	ITRN 53	Internship	4	Year 1 Fall/Winter/Spring
ITRN 54	Internship	5	Year 1 Fall/Winter/Spring	

TOTAL UNITS: 14-15 units

Proposed Sequence:

Year 1, Fall = 3-8 units

Year 1, Winter = 3-8 units

Year 1, Spring = 3-8 units

TOTAL UNITS: 14-15 units

Item 4. Master Planning

The Certificate of Achievement in Introduction to Sports Medicine will be integral in fulfilling the Foothill College Mission Statement. Providing students with education and skills that can be applied in the workforce, as future students and as global citizens, is central to the goals of the certificate. The certificate provides opportunities for students in many areas, including our dual enrollment populations at the high school level. Students are exposed to a variety of sports medicine careers and learn knowledge and skills that may help them along their pathway towards those careers. The certificate also serves traditional, returning and retraining students who are preparing for professional education programs in medicine, athletic training, physical therapy and chiropractic medicine. Finally, the certificate design allows for more distance and virtual

teaching and learning, providing students with options outside the traditional face-to-face instruction model. In all, the Certificate of Achievement in Introduction to Sports Medicine is well in line with the goals and direction of Foothill College, higher education and professional education in medicine.

Item 5. Enrollment and Completer Projections

With the number of students in our on-campus and dual enrollment programs, we project 10-15 completers per year. As the popularity of the program grows, with possible expansion of the dual enrollment program, we hope to have 20+ completers at the 5-year mark.

Course #	Course Title	Year 1		Year 2	
		Annual Sections	Annual Enrollment	Annual Sections	Annual Enrollment
KINS 1	Introduction to Kinesiology	10	334	9	325
KINS 9	Basic Nutrition for Sports & Fitness	5	199	4	178
KINS 16A	Prevention of Athletic Injuries	3	46	3	34
KINS 16B	Emergency Athletic Injury Care	3	70	3	68
KINS 16C	Treatment & Rehabilitation of Athletic Injuries	2	41	4	80
KINS 62A	Clinical Experiences in Sports Medicine I	5	26	4	32
KINS 62B	Clinical Experiences in Sports Medicine II	5	13	4	12
ITRN 50	Internship	7	74	7	67
ITRN 51	Internship	8	45	9	49
ITRN 52	Internship	4	17	7	31
ITRN 53	Internship	3	16	5	13
ITRN 54	Internship	4	16	4	8

Item 6. Place of Program in Curriculum/Similar Programs

The Certificate of Achievement in Introduction to Sports Medicine fits well into the current offerings in the Foothill College Kinesiology catalog. First, it is an introduction and foundation that students can build on and earn the Associate in Science Degree in Sports Medicine. For sports medicine-focused students who complete the Associate Degree for Transfer in Kinesiology in order to take advantage of the guaranteed transfer opportunities, the Certificate of Achievement in Introduction to Sports Medicine provides evidence of study and skills in specific sports medicine areas that will be useful in advanced education programs in sports medicine or the workforce. Finally, the certificate is aligned with the Certificate of Achievement in Personal Trainer, promoting crossover opportunities for students interested in both disciplines.

Item 7. Similar Programs at Other Colleges in Service Area

No similar programs are available in our service area. In nearby service areas, Ohlone College in Fremont offers a Certificate of Achievement in Kinesiology: Sports Medicine (16 semester

units), and Las Positas College in Livermore offers a Certificate of Achievement in Sports Medicine (28 semester units).

Additional Information Required for State Submission:

TOP Code: 1228.00 - Athletic Training and Sports Medicine

Annual Completers: 10-15

Net Annual Labor Demand: 400 jobs in Bay Area according to LMI

Faculty Workload: No change

New Faculty Positions: 0

New Equipment: \$0

New/Remodeled Facilities: \$0

Library Acquisitions: \$0

Gainful Employment: Yes

Program Review Date: November, 2023

Distance Education: 1-49%

Athletic Training and Sports Medicine Occupations Labor Market Information Report Foothill College

Prepared by the San Francisco Bay Center of Excellence
for Labor Market Research
June 2020

Recommendation

Based on all available data, there appears to be a close alignment between the supply of Athletic Training and Sports Medicine workers and the demand for this cluster of occupations in both the Bay region and Silicon Valley sub-region (Santa Clara County). However, this “gap analysis” will be changing soon with the implementation of a new education requirement of a Masters Degree for students seeking employment as an Athletic Trainer (see CAATE standard outlining this change below). And because community colleges are not able to grant Masters Degrees, they cannot prepare students for this occupation.

This report also provides student outcomes data on employment and earnings for programs on TOP 1228.00-Athletic Training and Sports Medicine 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.

Introduction

This report profiles Athletic Training and Sports Medicine Occupations in the 12 county Bay region and in the Silicon Valley sub-region for exploratory purposes for Foothill College. It is important to note that the educational requirement for accredited professional athletic training programs will soon be a Masters degree. This is outlined in the information below by the Commission on Accreditation of Athletic Training Education (CAATE):

Standard 2: CAATE accredited professional athletic training programs must result in the granting of a master’s degree in Athletic Training. The program must be identified as an academic athletic training degree in institutional academic publications. The degree must appear on the official transcript similar to normal designations for other degrees at the institution. (Timeline for Compliance with Standard 2: Baccalaureate programs may not admit, enroll, or matriculate students into the athletic training program after the start of the fall term 2022).

- **Athletic Trainers (SOC 29-9091):** Evaluate and advise individuals to assist recovery from or avoid athletic-related injuries or illnesses, or maintain peak physical fitness. May provide first aid or emergency care.
Entry-Level Educational Requirement: Bachelor's degree
Training Requirement: None
Percentage of Community College Award Holders or Some Postsecondary Coursework: 22%

Occupational Demand

Table 1. Employment Outlook for Athletic Training and Sports Medicine Occupations in Bay Region

Occupation	2019 Jobs	2024 Jobs	5-Yr Change	5-Yr % Change	5-Yr Openings	Average Annual Openings	25% Hourly Wage	Median Hourly Wage
Athletic Trainers	367	435	68	19%	182	36	\$19.63	\$29.09

Source: EMSI 2020.1

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 Athletic Training and Sports Medicine Occupations in Silicon Valley Sub-Region

Occupation	2019 Jobs	2024 Jobs	5-Yr Change	5-Yr % Change	5-Yr Openings	Average Annual Openings	25% Hourly Wage	Median Hourly Wage
Athletic Trainers	120	144	24	20%	60	12	\$22.23	\$31.12

Source: EMSI 2020.1

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 (June 2019 - May 2020)

Occupation	Bay Region	Silicon Valley
Athletic Trainers	191	64

Source: Burning Glass

Table 4a. Top Job Titles for Athletic Training and Sports Medicine Occupations for latest 12 months (June 2019 - May 2020) Bay Region

Common Title	Bay	Common Title	Bay
Athletic Trainer	167	Sports Trainer, Information And Technology Industry	1
Sports Trainer	10	Senior Director/Administrator	1
Athletics Professional	3	Personal Trainer	1
Do Have Any Artistic Or Athletic Hobby Will Teach It To A Kid Impacted By Chronic Illness	2	Lead Claims Trainer	1
Athletic Trainer	2	Director	1
Trainer	1	Assistant Director, Equipment, Services	1

Table 4b. Top Job Titles for Athletic Training and Sports Medicine Occupations for latest 12 months (June 2019 - May 2020) Silicon Valley Sub-Region

Common Title	Silicon Valley	Common Title	Silicon Valley
Athletic Trainer	51	Personal Trainer	1
Sports Trainer	10	Assistant Director, Equipment, Services	1
Sports Trainer, Information And Technology Industry	1		

Source: Burning Glass

Industry Concentration

Table 5. Industries hiring Athletic Training and Sports Medicine Workers in Bay Region

Industry – 6 Digit NAICS (No. American Industry Classification) Codes	Jobs in Industry (2019)	Jobs in Industry (2022)	% Change (2019-24)	% Occupation Group in Industry (2019)
Colleges, Universities, and Professional Schools (611310)	41	51	24%	11%
Offices of Physical, Occupational and Speech Therapists, and Audiologists (621340)	40	55	38%	11%
Fitness and Recreational Sports Centers (713940)	36	44	22%	10%
Offices of All Other Miscellaneous Health Practitioners (621399)	34	40	18%	9%
Offices of Mental Health Practitioners (except Physicians) (621330)	30	36	20%	8%
General Medical and Surgical Hospitals (622110)	28	30	7%	8%

Colleges, Universities, and Professional Schools (State Government) (902612)	25	27	8%	7%
Offices of Physicians (except Mental Health Specialists) (621111)	20	20	0%	5%
Elementary and Secondary Schools (Local Government) (903611)	16	18	13%	4%
Hospitals (Local Government) (903622)	16	18	13%	4%
Elementary and Secondary Schools (611110)	14	16	14%	4%

Source: EMSI 2020.1

Table 6. Top Employers Posting Athletic Training and Sports Medicine Occupations in Bay Region and Silicon Valley Sub-Region (June 2019 - May 2020)

Employer	Bay	Employer	Bay	Employer	Silicon Valley
Select Medical	11	University San Francisco	3	Lucile Packard Children's Hospital	7
Lucile Packard Children's Hospital	7	University Of California Berkeley	3	Stanford University	5
Workcare	5	University California	3	Workcare	4
Work Right Nw	5	Stretchlab Area	3	Villasport Athletic Club And Spa	4
Stanford University	5	Sonoma State University	3	Villasport	4
Pivot Onsite Innovations	5	Marin General Hospital	3	Foothill De Community College District	4
Villasport Athletic Club And Spa	4	Biokinetix	3	Work Care	3
Villasport	4	University Of California Santa Cruz	2	Villa Sport	3
Vibrantcare Rehabilitation	4	University Of California San Francisco	2	Stretchlab Area	3
University Of California	4	Sportsplus	2	Sportsplus	2
San Mateo County Community College District	4	San Lorenzo Valley Unified	2	San Jose State University	2
Muir Orthopaedic Specialists	4	San Jose State University	2	San Jos State University	2
Kaiser Permanente	4	San Jos State University	2	Foothill College	2
Holy Names University	4	Pivot Physical Therapy	2	West Valley Mission Community College District	1
Foothill De Community College District	4	Pajaro Valley Unified School District	2	West Valley Mission Community College	1
Work Care	3	Foothill College	2	West Valley College	1
Villa Sport	3	Dorn Company	2	Stanford Health Care	1

Source: Burning Glass

Educational Supply

There are five (5) community colleges in the Bay Region issuing 18 awards on average annually (last 3 years ending 2018-19) on TOP 1228.00- Athletic Training and Sports Medicine. There are two colleges in the Silicon Valley Sub-Region issuing eight (8) awards on average annually (last 3 years) on this TOP code.

There is one (1) Other Educational Institution in the Bay Region issuing one (1) award on average annually (last 3 years ending 2016-17) on TOP 1228.00-Athletic Training and Sports Medicine. There are no Other Educational Institutions in the Silicon Valley Sub-Region Region issuing awards on this TOP code.

There is one (1) four-year institution in the Bay Region (San Jose State University) issuing 14 Bachelors Degrees on average annually (last 3 years) on this TOP code. San Jose State University is located in the Silicon Valley Sub-Region.

Table 7a. Awards on TOP 1228.00-Athletic Training and Sports Medicine in Bay Region

College	Sub-Region	Associates	Certificate Low Unit	Total
Diablo Valley	East Bay	2		2
Foothill	Silicon Valley	2		2
Ohlone	East Bay	4		4
Santa Rosa	North Bay	4		4
West Valley	Silicon Valley		6	6
Total Bay Region		12	6	18
Total Silicon Valley Sub-Region		2	6	8

Source: Data Mart

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

Table 7b. Other Educational Institution Awards on TOP 1228.00-Athletic Training and Sports Medicine in Bay Region

College	Sub-Region	Award < 1 academic yr	Total
Gurnick Academy of Medical Arts	Mid-Peninsula	1	1
Total Bay Region		1	1
Total Silicon Valley Sub-Region		0	0

Source: Data Mart

Note: The annual average for awards is 2014-15 to 2016-17.

Table 7c. Other CTE Institution Bachelor's Degree Awards on TOP 1228.00-Athletic Training and Sports Medicine in Bay Region

College	Sub-Region	Bachelor's Degree
San Jose State University	Silicon Valley	14
Total Bay Region		14
Total Silicon Valley Sub-Region		14

Source: Data Mart

Note: The annual average for awards is 2014-15 to 2016-17.

Gap Analysis

Based on all available data, there appears to be a close alignment between the supply of Athletic Training and Sports Medicine workers and the demand for this cluster of occupations in both the Bay region and Silicon Valley sub-region (Santa Clara County). However, this “gap analysis” will be changing soon with the implementation of a new education requirement of a Masters Degree for students seeking employment as an Athletic Trainer. And because community colleges are not able to grant Masters Degrees, they cannot prepare students for this occupation.

In the Bay region, there are 36 annual openings for the Athletic Training and Sports Medicine occupational cluster and 33 annual (3-year average) total awards, with 14 of these awards at the Bachelor's degree level. In the Silicon Valley Sub-Region, there are 12 annual openings and 22 annual (3-year average) total awards, with 14 of these awards at the Bachelor's degree level, for an annual oversupply of students.

Student Outcomes

Table 8. Four Employment Outcomes Metrics for Students Who Took Courses on TOP 1228.00-Athletic Training and Sports Medicine

2015-16	Bay (All CTE Programs)	Foothill College (All CTE Programs)	State (1228.00)	Bay (1228.00)	Silicon Valley (1228.00)	Foothill College (1228.00)
% Employed Four Quarters After Exit	74%	77%	62%	n/a	n/a	n/a

Median Quarterly Earnings Two Quarters After Exit	\$10,550	\$15,310	\$4,450	n/a	n/a	n/a
Median % Change in Earnings	46%	82%	64%	n/a	n/a	n/a
% of Students Earning a Living Wage	63%	76%	n/a	n/a	n/a	n/a

Source: Launchboard Pipeline (version available on 5/28/20)

Skills, Certifications and Education

Table 9. Top Skills for Athletic Training and Sports Medicine Occupations in Bay Region (June 2019 - May 2020)

Skill	Postings	Skill	Postings	Skill	Postings
Cardiopulmonary Resuscitation (CPR)	96	Physiology	20	Strength and Conditioning	13
Rehabilitation	91	Health Insurance Portability and Accountability Act (HIPAA)	18	Therapeutic Intervention	13
Injury Prevention	88	Injury Treatment	18	Customer Contact	11
Sports Injuries	62	Medical Assistance	18	Anatomy	10
Scheduling	49	Treatment Planning	18	Case Management	10
Therapy Modalities	38	Electronic Medical Records	17	Health Screening	10
Occupational Health and Safety	37	First Aid	17	Inventory Maintenance	10
Physical Therapy	36	Medical Records Maintenance	17	Lesson Planning	10
Budgeting	29	Patient/Family Education and Instruction	17	Bandage Application	9
Emergency Care	26	Staff Management	17	Blood Pressure Measurement	9
Patient Care	25	Bloodborne Pathogens	14	Concussion Diagnosis / Treatment	9
Prevent And Treat Injuries	25	Data Entry	13	Copying	9
Customer Service	23	Employee Coaching	13	Interaction with Patients / Medical Personnel	9
Medical Coding	22	Health Promotion Programs	13	Training Programs	9
Teaching	22	Illness Prevention	13	Biomechanics	8

Source: Burning Glass

Table 10. Certifications for Athletic Training and Sports Medicine Occupations in Bay Region (June 2019 - May 2020)

Certification	Postings	Certification	Postings
Athletic Trainer Certification	113	Group Exercise Instructor	3
First Aid CPR AED	80	Certified Strength and Conditioning Specialist	3
Driver's License	45	Subspecialty Certification in Cardiac Surgery	2
Basic Life Saving (BLS)	19	Personal Fitness Trainer Certification	2
Boc Certified	14	Massage Therapist Certification	2
Basic Cardiac Life Support Certification	9	Citrix Certified Advanced Administrator (CCAA)	2
American Heart Association Certification	8	Certified ScrumMaster (CSM)	2
CDL Class B	6	Occupational Safety and Health Administration Certification	1
Certified Fitter	5	Emergency Medical Technician (EMT)	1
ABC Certified	5	Certified Medical Assistant	1
Exercise Physiologist Certified	4	Certified Fitness Instructor	1
Sports Medicine Certification	3		

Source: Burning Glass

Table 11. Education Requirements for Athletic Training and Sports Medicine Occupations in Bay Region

Note: 31% 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.

Education (minimum advertised)	Latest 12 Mos. Postings	Percent 12 Mos. Postings
High school or vocational training	32	24%
Associate Degree	1	1%
Bachelor's Degree or Higher	89	75%

Source: Burning Glass

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 CCCCCO 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:

- Doreen O'Donovan, Research Analyst, for Bay Area Community College Consortium (BACCC) and Centers of Excellence (CoE), doreen@baccc.net or (831) 479-6481
- 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
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): Warren Voyce MS, ATC
Division: Kinesiology and Athletics

Program Title: Introduction to Sports Medicine
Program Units: 14-15 units

Workforce/CTE Program (Y): 1228.00 - Athletic Training and Sports Medicine
Please note that Workforce/CTE status is dependent on the TOP Code assigned to the program.

Type of Award:

Non-transcriptable credit certificate
 Certificate of Achievement
 Noncredit certificate

AA/AS Degree (local)
 AA-T/AS-T Degree (ADT)

EQUITY & EDUCATION https://foothill.edu/gov/equity-and-education/
<p>Date of meeting:</p> <p>Comments: Submitted to Equity & Education committee on January 21, 2021. No feedback has been received.</p>

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

REVENUE & RESOURCES https://foothill.edu/gov/revenue-and-resources/
Date of meeting:
Comments: Submitted to Revenue & Resources committee on January 21, 2021. No feedback has been received.

ADVISORY COUNCIL https://foothill.edu/gov/council/
Date of meeting:
Comments: Submitted to Advisory Council on January 21, 2021. No feedback has been received.

Division Curriculum Committee Approval Date: 9/3/20

Division CC Representative: Katy Ripp

Foothill College
Credit Program Narrative
Certificate of Achievement in Advanced Sports Medicine

Item 1. Program Goals and Objectives

The Certificate of Achievement in Advanced Sports Medicine is designed to provide students with a strong foundation in knowledge and experience in a variety of sports medicine fields. It builds on the foundation of the Certificate of Achievement in Introduction to Sports Medicine with more in-depth coursework and experience opportunities, as well as options within related disciplines such as personal training and adaptive fitness. Completion of the requirements prepares students for aide positions in physical therapy clinics and chiropractic offices, as well as positions in personal training and adaptive fitness. When combined with additional coursework, students also can prepare for transfer and additional study in sports medicine fields at the four-year or professional educational program setting.

Program Learning Outcomes:

- Students will demonstrate an entry level of knowledge and skill in a variety of sports medicine disciplines, including athletic training, physical therapy, strength and conditioning and emergency medical care.
- Students will gain skills applicable in providing quality medical care for active populations.

Knowledge and Skills:

- identify basic musculo-skeletal anatomy.
- employ knowledge of muscle anatomy by designing sport specific pre-activity warm-ups.
- apply various strapping and wrapping techniques to prevent injuries.
- demonstrate flexibility exercises to stretch major muscle groups.
- demonstrate basic athletic injury recognition.
- recognize basic signs and symptoms of athletic injury trauma.
- apply basic first aid skills to mock athletic injuries.
- explain the phases of tissue healing.
- design treatment protocols for the different phases of healing.
- understand the indications and contra-indications of different therapeutic treatments.
- demonstrate proper use of machine and free weight exercise equipment.
- formulate exercise protocols to strengthen different areas of the body.
- discuss cultural differences in prevention, emergency care, treatment and rehabilitation.

Item 2. Catalog Description

Sports Medicine is a multi-disciplinary educational experience. Instruction emphasizes injury prevention, emergency care and rehabilitation through the principles of anatomy, physiology, pathology, bio-mechanics, and psychology. Hands-on experience is available to the student intern through the Athletic Treatment Center from an array of sports medicine professionals. Students interested in medicine, athletic training, physical therapy, chiropractic, nutrition or other allied health fields are candidates for this program.

The Certificate of Achievement in Advanced Sports Medicine is designed to provide students with a strong foundation in knowledge and experience in a variety of sports medicine fields. It builds on the foundation of the Certificate of Achievement in Introduction to Sports Medicine with more in-depth coursework and experience opportunities, as well as options within related disciplines such as personal training and adaptive fitness. The emphasis on clinical experience and hands-on practical skills prepares the students not only with the knowledge they need to be successful in the workforce, but also with the skills and experience that are critical to that success. Completion of the requirements prepares students for aide positions in physical therapy clinics and chiropractic offices, as well as positions in personal training and adaptive fitness. When combined with additional coursework, students also can prepare for transfer and additional study in sports medicine fields at the four-year or professional educational program setting.

Item 3. Program Requirements

Requirements	Course #	Title	Units	Sequence
Core Courses (9 units)	KINS 16A	Prevention of Athletic Injuries	3	Year 1 Fall
	KINS 16B	Emergency Athletic Injury Care	3	Year 1 Winter
	KINS 16C	Treatment & Rehabilitation of Athletic Injuries	3	Year 1 Spring
Restricted Electives (15-18 units)	Experience: Select minimum of 6 units			
	KINS 62A	Clinical Experiences in Sports Medicine I	3	Year 1 Fall/Winter/Spring
	KINS 62B	Clinical Experiences in Sports Medicine II	3	Year 1 Fall/Winter/Spring
	KINS 62C	Clinical Experiences in Sports Medicine III	3	Year 1 Fall/Winter/Spring
	KINS 62D	Clinical Experiences in Sports Medicine IV	3	Year 1 Fall/Winter/Spring
	KINS 62E	Clinical Experiences in Sports Medicine V	3	Year 1 Fall/Winter/Spring
	ITRN 50	Internship	1	Year 1 Fall/Winter/Spring
	ITRN 51	Internship	2	Year 1 Fall/Winter/Spring
	ITRN 52	Internship	3	Year 1 Fall/Winter/Spring
	ITRN 53	Internship	4	Year 1 Fall/Winter/Spring
	ITRN 54	Internship	5	Year 1 Fall/Winter/Spring
	Select minimum of 9 units			
	KINS 1	Introduction to Kinesiology	5	Year 1 Spring
	KINS 8A	Theory & Concepts of Exercise Physiology I	5	Year 1 Fall

	KINS 8B	Theory & Concepts of Exercise Physiology II	5	Year 1 Winter
	KINS 9	Basic Nutrition for Sports & Fitness	5	Year 1 Spring
	KINS 48	Fitness Assessment Techniques for the Personal Trainer	4	Year 1 Winter
	KINS 81	Introduction to Adaptive Fitness	4	Year 1 Winter
	KINS 82	Applied Principles of Adaptive Fitness	4	Year 1 Winter
	KINS 84	Functional Fitness & Adaptive Movement	3	Year 1 Spring

TOTAL UNITS: 24-27 units

Proposed Sequence:

Year 1, Fall = 9-14 units

Year 1, Winter = 9-14 units

Year 1, Spring = 3-13 units

TOTAL UNITS: 24-27 units

Item 4. Master Planning

The Certificate of Achievement in Advanced Sports Medicine will be integral in fulfilling the Foothill College Mission Statement. Providing students with education and skills that can be applied in the workforce, as future students and as global citizens, is central to the goals of the certificate. The certificate provides opportunities for students in many areas, including our dual enrollment populations at the high school level. Students are exposed to a variety of sports medicine careers and learn knowledge and skills that may help them along their pathway towards those careers. The certificate also serves traditional, returning and retraining students who are preparing for professional education programs in medicine, athletic training, physical therapy and chiropractic medicine. Finally, the certificate design allows for more distance and virtual teaching and learning, providing students with options outside the traditional face-to-face instruction model. In all, the Certificate of Achievement in Advanced Sports Medicine is well in line with the goals and direction of Foothill College, higher education and professional education in medicine.

Perhaps the most important aspect of the Certificate of Achievement in Advanced Sports Medicine is the focus on hands-on experience and practical knowledge and skills. Feedback from industry professionals and educational program directors indicates that the greatest weakness in entry-level candidates is not in their lack of knowledge, it is in their lack of ability to apply that knowledge in a practical setting. By incorporating clinical experience and emphasizing hands-on skills within the certificate, we hope to close that achievement gap and produce graduates who are successful in both conceptual and practical knowledge and skills, making for a stronger workforce.

Item 5. Enrollment and Completer Projections

With the number of students in the Sports Medicine Program and the close alignment with the Personal Trainer and Adaptive Programs, we project 5-10 completers per year. As we grow our populations and strengthen the relationships between programs, we project 15-20 completers per year by the 5-year mark.

Course #	Course Title	Year 1		Year 2	
		Annual Sections	Annual Enrollment	Annual Sections	Annual Enrollment
KINS 1	Introduction to Kinesiology	10	334	9	325
KINS 8A	Theory & Concepts of Exercise Physiology I	3	75	3	85
KINS 8B	Theory & Concepts of Exercise Physiology II	1	20	2	36
KINS 9	Basic Nutrition for Sports & Fitness	5	199	4	178
KINS 16A	Prevention of Athletic Injuries	3	46	3	34
KINS 16B	Emergency Athletic Injury Care	3	70	3	68
KINS 16C	Treatment & Rehabilitation of Athletic Injuries	2	41	4	80
KINS 48	Fitness Assessment Techniques for the Personal Trainer	N/A	N/A	1	30
KINS 62A	Clinical Experiences in Sports Medicine I	5	26	4	32
KINS 62B	Clinical Experiences in Sports Medicine II	5	13	4	12
KINS 62C	Clinical Experiences in Sports Medicine III	3	7	4	6
KINS 62D	Clinical Experiences in Sports Medicine IV	2	4	4	7
KINS 62E	Clinical Experiences in Sports Medicine V	4	6	5	8
KINS 81	Introduction to Adaptive Fitness	1	12	2	22
KINS 82	Applied Principles of Adaptive Fitness	N/A	N/A	N/A	N/A
KINS 84	Functional Fitness & Adaptive Movement	N/A	N/A	N/A	N/A
ITRN 50	Internship	7	74	7	67
ITRN 51	Internship	8	45	9	49
ITRN 52	Internship	4	17	7	31
ITRN 53	Internship	3	16	5	13
ITRN 54	Internship	4	16	4	8

Item 6. Place of Program in Curriculum/Similar Programs

The Certificate of Achievement in Advanced Sports Medicine fits well into the current offerings in the Foothill College Kinesiology catalog. First, it is an introduction and foundation that students can build on and earn the Associate in Science Degree in Sports Medicine. For sports

medicine-focused students who complete the Associate Degree for Transfer in Kinesiology in order to take advantage of the guaranteed transfer opportunities, the Certificate of Achievement in Advanced Sports Medicine provides evidence of study and skills in specific sports medicine areas that will be useful in advanced education programs in sports medicine or the workforce. Finally, the certificate is aligned with the Certificate of Achievement in Personal Trainer and potentially the Adaptive Fitness Program, promoting crossover opportunities for students interested in multiple disciplines.

Item 7. Similar Programs at Other Colleges in Service Area

No similar programs are available in our service area. In nearby service areas, Ohlone College in Fremont offers a Certificate of Achievement in Kinesiology: Sports Medicine (16 semester units), and Las Positas College in Livermore offers a Certificate of Achievement in Sports Medicine (28 semester units).

Additional Information Required for State Submission:

TOP Code: 1228.00 - Athletic Training and Sports Medicine

Annual Completers: 5-10

Net Annual Labor Demand: 400 jobs in Bay Area according to LMI

Faculty Workload: No change

New Faculty Positions: 0

New Equipment: \$0

New/Remodeled Facilities: \$0

Library Acquisitions: \$0

Gainful Employment: Yes

Program Review Date: November, 2023

Distance Education: 1-49%

Athletic Training and Sports Medicine Occupations Labor Market Information Report Foothill College

Prepared by the San Francisco Bay Center of Excellence
for Labor Market Research
June 2020

Recommendation

Based on all available data, there appears to be a close alignment between the supply of Athletic Training and Sports Medicine workers and the demand for this cluster of occupations in both the Bay region and Silicon Valley sub-region (Santa Clara County). However, this “gap analysis” will be changing soon with the implementation of a new education requirement of a Masters Degree for students seeking employment as an Athletic Trainer (see CAATE standard outlining this change below). And because community colleges are not able to grant Masters Degrees, they cannot prepare students for this occupation.

This report also provides student outcomes data on employment and earnings for programs on TOP 1228.00-Athletic Training and Sports Medicine 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.

Introduction

This report profiles Athletic Training and Sports Medicine Occupations in the 12 county Bay region and in the Silicon Valley sub-region for exploratory purposes for Foothill College. It is important to note that the educational requirement for accredited professional athletic training programs will soon be a Masters degree. This is outlined in the information below by the Commission on Accreditation of Athletic Training Education (CAATE):

Standard 2: CAATE accredited professional athletic training programs must result in the granting of a master’s degree in Athletic Training. The program must be identified as an academic athletic training degree in institutional academic publications. The degree must appear on the official transcript similar to normal designations for other degrees at the institution. (Timeline for Compliance with Standard 2: Baccalaureate programs may not admit, enroll, or matriculate students into the athletic training program after the start of the fall term 2022).

- **Athletic Trainers (SOC 29-9091):** Evaluate and advise individuals to assist recovery from or avoid athletic-related injuries or illnesses, or maintain peak physical fitness. May provide first aid or emergency care.
Entry-Level Educational Requirement: Bachelor's degree
Training Requirement: None
Percentage of Community College Award Holders or Some Postsecondary Coursework: 22%

Occupational Demand

Table 1. Employment Outlook for Athletic Training and Sports Medicine Occupations in Bay Region

Occupation	2019 Jobs	2024 Jobs	5-Yr Change	5-Yr % Change	5-Yr Openings	Average Annual Openings	25% Hourly Wage	Median Hourly Wage
Athletic Trainers	367	435	68	19%	182	36	\$19.63	\$29.09

Source: EMSI 2020.1

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 Athletic Training and Sports Medicine Occupations in Silicon Valley Sub-Region

Occupation	2019 Jobs	2024 Jobs	5-Yr Change	5-Yr % Change	5-Yr Openings	Average Annual Openings	25% Hourly Wage	Median Hourly Wage
Athletic Trainers	120	144	24	20%	60	12	\$22.23	\$31.12

Source: EMSI 2020.1

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 (June 2019 - May 2020)

Occupation	Bay Region	Silicon Valley
Athletic Trainers	191	64

Source: Burning Glass

Table 4a. Top Job Titles for Athletic Training and Sports Medicine Occupations for latest 12 months (June 2019 - May 2020) Bay Region

Common Title	Bay	Common Title	Bay
Athletic Trainer	167	Sports Trainer, Information And Technology Industry	1
Sports Trainer	10	Senior Director/Administrator	1
Athletics Professional	3	Personal Trainer	1
Do Have Any Artistic Or Athletic Hobby Will Teach It To A Kid Impacted By Chronic Illness	2	Lead Claims Trainer	1
Athletic Trainer	2	Director	1
Trainer	1	Assistant Director, Equipment, Services	1

Table 4b. Top Job Titles for Athletic Training and Sports Medicine Occupations for latest 12 months (June 2019 - May 2020) Silicon Valley Sub-Region

Common Title	Silicon Valley	Common Title	Silicon Valley
Athletic Trainer	51	Personal Trainer	1
Sports Trainer	10	Assistant Director, Equipment, Services	1
Sports Trainer, Information And Technology Industry	1		

Source: Burning Glass

Industry Concentration

Table 5. Industries hiring Athletic Training and Sports Medicine Workers in Bay Region

Industry – 6 Digit NAICS (No. American Industry Classification) Codes	Jobs in Industry (2019)	Jobs in Industry (2022)	% Change (2019-24)	% Occupation Group in Industry (2019)
Colleges, Universities, and Professional Schools (611310)	41	51	24%	11%
Offices of Physical, Occupational and Speech Therapists, and Audiologists (621340)	40	55	38%	11%
Fitness and Recreational Sports Centers (713940)	36	44	22%	10%
Offices of All Other Miscellaneous Health Practitioners (621399)	34	40	18%	9%
Offices of Mental Health Practitioners (except Physicians) (621330)	30	36	20%	8%
General Medical and Surgical Hospitals (622110)	28	30	7%	8%

Colleges, Universities, and Professional Schools (State Government) (902612)	25	27	8%	7%
Offices of Physicians (except Mental Health Specialists) (621111)	20	20	0%	5%
Elementary and Secondary Schools (Local Government) (903611)	16	18	13%	4%
Hospitals (Local Government) (903622)	16	18	13%	4%
Elementary and Secondary Schools (611110)	14	16	14%	4%

Source: EMSI 2020.1

Table 6. Top Employers Posting Athletic Training and Sports Medicine Occupations in Bay Region and Silicon Valley Sub-Region (June 2019 - May 2020)

Employer	Bay	Employer	Bay	Employer	Silicon Valley
Select Medical	11	University San Francisco	3	Lucile Packard Children's Hospital	7
Lucile Packard Children's Hospital	7	University Of California Berkeley	3	Stanford University	5
Workcare	5	University California	3	Workcare	4
Work Right Nw	5	Stretchlab Area	3	Villasport Athletic Club And Spa	4
Stanford University	5	Sonoma State University	3	Villasport	4
Pivot Onsite Innovations	5	Marin General Hospital	3	Foothill De Community College District	4
Villasport Athletic Club And Spa	4	Biokinetix	3	Work Care	3
Villasport	4	University Of California Santa Cruz	2	Villa Sport	3
Vibrantcare Rehabilitation	4	University Of California San Francisco	2	Stretchlab Area	3
University Of California	4	Sportsplus	2	Sportsplus	2
San Mateo County Community College District	4	San Lorenzo Valley Unified	2	San Jose State University	2
Muir Orthopaedic Specialists	4	San Jose State University	2	San Jos State University	2
Kaiser Permanente	4	San Jos State University	2	Foothill College	2
Holy Names University	4	Pivot Physical Therapy	2	West Valley Mission Community College District	1
Foothill De Community College District	4	Pajaro Valley Unified School District	2	West Valley Mission Community College	1
Work Care	3	Foothill College	2	West Valley College	1
Villa Sport	3	Dorn Company	2	Stanford Health Care	1

Source: Burning Glass

Educational Supply

There are five (5) community colleges in the Bay Region issuing 18 awards on average annually (last 3 years ending 2018-19) on TOP 1228.00- Athletic Training and Sports Medicine. There are two colleges in the Silicon Valley Sub-Region issuing eight (8) awards on average annually (last 3 years) on this TOP code.

There is one (1) Other Educational Institution in the Bay Region issuing one (1) award on average annually (last 3 years ending 2016-17) on TOP 1228.00-Athletic Training and Sports Medicine. There are no Other Educational Institutions in the Silicon Valley Sub-Region Region issuing awards on this TOP code.

There is one (1) four-year institution in the Bay Region (San Jose State University) issuing 14 Bachelors Degrees on average annually (last 3 years) on this TOP code. San Jose State University is located in the Silicon Valley Sub-Region.

Table 7a. Awards on TOP 1228.00-Athletic Training and Sports Medicine in Bay Region

College	Sub-Region	Associates	Certificate Low Unit	Total
Diablo Valley	East Bay	2		2
Foothill	Silicon Valley	2		2
Ohlone	East Bay	4		4
Santa Rosa	North Bay	4		4
West Valley	Silicon Valley		6	6
Total Bay Region		12	6	18
Total Silicon Valley Sub-Region		2	6	8

Source: Data Mart

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

Table 7b. Other Educational Institution Awards on TOP 1228.00-Athletic Training and Sports Medicine in Bay Region

College	Sub-Region	Award < 1 academic yr	Total
Gurnick Academy of Medical Arts	Mid-Peninsula	1	1
Total Bay Region		1	1
Total Silicon Valley Sub-Region		0	0

Source: Data Mart

Note: The annual average for awards is 2014-15 to 2016-17.

Table 7c. Other CTE Institution Bachelor's Degree Awards on TOP 1228.00-Athletic Training and Sports Medicine in Bay Region

College	Sub-Region	Bachelor's Degree
San Jose State University	Silicon Valley	14
Total Bay Region		14
Total Silicon Valley Sub-Region		14

Source: Data Mart

Note: The annual average for awards is 2014-15 to 2016-17.

Gap Analysis

Based on all available data, there appears to be a close alignment between the supply of Athletic Training and Sports Medicine workers and the demand for this cluster of occupations in both the Bay region and Silicon Valley sub-region (Santa Clara County). However, this “gap analysis” will be changing soon with the implementation of a new education requirement of a Masters Degree for students seeking employment as an Athletic Trainer. And because community colleges are not able to grant Masters Degrees, they cannot prepare students for this occupation.

In the Bay region, there are 36 annual openings for the Athletic Training and Sports Medicine occupational cluster and 33 annual (3-year average) total awards, with 14 of these awards at the Bachelor's degree level. In the Silicon Valley Sub-Region, there are 12 annual openings and 22 annual (3-year average) total awards, with 14 of these awards at the Bachelor's degree level, for an annual oversupply of students.

Student Outcomes

Table 8. Four Employment Outcomes Metrics for Students Who Took Courses on TOP 1228.00-Athletic Training and Sports Medicine

2015-16	Bay (All CTE Programs)	Foothill College (All CTE Programs)	State (1228.00)	Bay (1228.00)	Silicon Valley (1228.00)	Foothill College (1228.00)
% Employed Four Quarters After Exit	74%	77%	62%	n/a	n/a	n/a

Median Quarterly Earnings Two Quarters After Exit	\$10,550	\$15,310	\$4,450	n/a	n/a	n/a
Median % Change in Earnings	46%	82%	64%	n/a	n/a	n/a
% of Students Earning a Living Wage	63%	76%	n/a	n/a	n/a	n/a

Source: Launchboard Pipeline (version available on 5/28/20)

Skills, Certifications and Education

Table 9. Top Skills for Athletic Training and Sports Medicine Occupations in Bay Region (June 2019 - May 2020)

Skill	Postings	Skill	Postings	Skill	Postings
Cardiopulmonary Resuscitation (CPR)	96	Physiology	20	Strength and Conditioning	13
Rehabilitation	91	Health Insurance Portability and Accountability Act (HIPAA)	18	Therapeutic Intervention	13
Injury Prevention	88	Injury Treatment	18	Customer Contact	11
Sports Injuries	62	Medical Assistance	18	Anatomy	10
Scheduling	49	Treatment Planning	18	Case Management	10
Therapy Modalities	38	Electronic Medical Records	17	Health Screening	10
Occupational Health and Safety	37	First Aid	17	Inventory Maintenance	10
Physical Therapy	36	Medical Records Maintenance	17	Lesson Planning	10
Budgeting	29	Patient/Family Education and Instruction	17	Bandage Application	9
Emergency Care	26	Staff Management	17	Blood Pressure Measurement	9
Patient Care	25	Bloodborne Pathogens	14	Concussion Diagnosis / Treatment	9
Prevent And Treat Injuries	25	Data Entry	13	Copying	9
Customer Service	23	Employee Coaching	13	Interaction with Patients / Medical Personnel	9
Medical Coding	22	Health Promotion Programs	13	Training Programs	9
Teaching	22	Illness Prevention	13	Biomechanics	8

Source: Burning Glass

Table 10. Certifications for Athletic Training and Sports Medicine Occupations in Bay Region (June 2019 - May 2020)

Certification	Postings	Certification	Postings
Athletic Trainer Certification	113	Group Exercise Instructor	3
First Aid CPR AED	80	Certified Strength and Conditioning Specialist	3
Driver's License	45	Subspecialty Certification in Cardiac Surgery	2
Basic Life Saving (BLS)	19	Personal Fitness Trainer Certification	2
Boc Certified	14	Massage Therapist Certification	2
Basic Cardiac Life Support Certification	9	Citrix Certified Advanced Administrator (CCAA)	2
American Heart Association Certification	8	Certified ScrumMaster (CSM)	2
CDL Class B	6	Occupational Safety and Health Administration Certification	1
Certified Fitter	5	Emergency Medical Technician (EMT)	1
ABC Certified	5	Certified Medical Assistant	1
Exercise Physiologist Certified	4	Certified Fitness Instructor	1
Sports Medicine Certification	3		

Source: Burning Glass

Table 11. Education Requirements for Athletic Training and Sports Medicine Occupations in Bay Region

Note: 31% 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.

Education (minimum advertised)	Latest 12 Mos. Postings	Percent 12 Mos. Postings
High school or vocational training	32	24%
Associate Degree	1	1%
Bachelor's Degree or Higher	89	75%

Source: Burning Glass

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 CCCCCO 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:

- Doreen O'Donovan, Research Analyst, for Bay Area Community College Consortium (BACCC) and Centers of Excellence (CoE), doreen@baccc.net or (831) 479-6481
- John Carrese, Director, San Francisco Bay Center of Excellence for Labor Market Research, jcarrese@ccsf.edu or (415) 267-6544

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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): Warren Voyce MS, ATC
Division: Kinesiology and Athletics

Program Title: Advanced Sports Medicine
Program Units: 24-27 units

Workforce/CTE Program (Y): 1228.00 - Athletic Training and Sports Medicine
Please note that Workforce/CTE status is dependent on the TOP Code assigned to the program.

Type of Award:

Non-transcriptable credit certificate
 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 & Education committee on January 21, 2021. No feedback has been received.

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REVENUE & RESOURCES https://foothill.edu/gov/revenue-and-resources/
Date of meeting: 1/22/21
Comments: No concerns. These are exciting proposals that we fully endorse and we see potential for increased revenue for the college, which is positive.

ADVISORY COUNCIL https://foothill.edu/gov/council/
Date of meeting:
Comments: Submitted to Advisory Council on January 21, 2021. No feedback has been received.

Division Curriculum Committee Approval Date: 9/3/20

Division CC Representative: Katy Ripp

ADVANCED SPORTS MEDICINE CAREERS

Certified Athletic Trainer, Physical Therapist, Orthopedic Surgeon, Chiropractor, Etc.

ADVANCED EDUCATION PROGRAM

Areas of Related Study
Entry-Level Master's in Athletic Training
Physical Therapy School
Medical School
Chiropractic College

WORKFORCE OPPORTUNITIES

Strength and Conditioning Specialist
Coach
Kinesiology / Physical Education Instructor

FOUR-YEAR SCHOOL

Kinesiology Degree
Areas of Related Study
(Pre-Athletic Training, Pre-Physical Therapy, Pre-Medicine, etc)

WORKFORCE OPPORTUNITIES

Physical Therapy Aide
Chiropractic Aide
Personal Trainer

RELATED EDUCATION PROGRAMS

Physical Therapy Assistant
EMT/Paramedic

FOOTHILL SPORTS MEDICINE



Associate of Science Degree, Kinesiology AA-T,
Certificate (pending)

DUEL-ENROLLMENT WITH HIGH SCHOOL PROGRAMS

Foothill College
Credit Program Narrative
Associate in Science in Plumbing and Pipefitting Apprenticeship

Item 1. Program Goals and Objectives

The Associate in Science in Plumbing and Pipefitting Apprenticeship is offered in partnership with the UA Local 62 and the UA Local 467 Plumbers & Steamfitters. It is a 5-year registered apprenticeship program. The program goals and objectives are to provide students with in-class instruction and paid on-the-job training. The students will learn how to build, assemble, and maintain sophisticated piping systems in various industrial and residential facilities.

Program Learning Outcomes:

- Students will be able to recognize and classify materials used in the plumbing industry
- Students will be able to demonstrate proper use and care of industry tools and equipment
- Students will be able to recognize and apply on-the-job safety standards
- Students will be able to assemble piping systems using the latest codes and industry standards
- Students will be able to draw, interpret, read plans in the plumbing industry

Item 2. Catalog Description

Plumbing and Pipefitting Apprenticeship is offered in partnership with the UA Local 62 and the UA Local 467 Plumbers & Steamfitters. It is a 5-year registered apprenticeship program. The program provides students with in-class instruction and paid on-the-job training. Students will learn how to build, assemble, and maintain sophisticated piping systems in various industrial and residential facilities and will learn basic and advanced skills in plumbing and building mechanical systems related to new construction and remodels.

Per California Code of Regulations, this program is limited to students admitted to the UA Local 62 and the UA Local 467 Plumbers & Steamfitters.

Item 3. Program Requirements

Requirements	Course #	Title	Units	Sequence
Required Core (42.5-49 units)	Pathway #1 - Offered in San Mateo, CA - Local 467 (42.5 units):			
	APPT 161	SAFETY/OSHA/TOOLS/HERITAGE/ SERVICE	4	Year 1, Fall
	APPT 162	MATHEMATICS/SCIENCE FOR THE PLUMBING TRADE	4.5	Year 1, Win
	APPT 163	CODE/WATER SUPPLY SYSTEMS	4	Year 2, Fall
	APPT 164	DRAWING I FOR THE PLUMBING TRADE	4.5	Year 2, Win
	APPT 165	DRAWING II FOR THE PLUMBING TRADE	4	Year 3, Fall

APPT 166	WELDING/OXY-ACETYLENE TRAINING	4.5	Year 3, Win
APPT 167	STEAM SYSTEMS/RIGGING/PIPE FITTING & SERVICE	4	Year 4, Fall
APPT 168	MEDICAL GAS/HYDRONICS/SIGNAL PERSON	4.5	Year 4, Win
APPT 169	ADVANCED DRAWING/LAYOUT FOR THE PLUMBING TRADES/UA FOREMAN TRAINING	4	Year 5, Fall
APPT 170	CODE II/JUNIOR MECHANICS REVIEW & EXAM	4.5	Year 5, Win
Pathway #2 - Offered in Monterey, CA - Local 62 (47-49 units):			
APPT 147B	SF 401B INDUSTRIAL RIGGING	2.5	Year 5, Fall
APPT 171 or APPT 190	BASIC REFRIGERATION/HERITAGE/ CFC/OSHA 10 PIPE FITTING WITH A CALCULATOR	4 5	Year 5, Win Year 5, Win
APPR 160A APPT 185	HVAC TECH, CUSTOMER SERVICE PIPE MATERIALS, SAFETY & TOOLS, SOLDERING & BRAZING	5 5	Year 5, Win Year 1, Fall
APPT 186	MATHEMATICS/RIGGING & SIGNALING	5	Year 1, Win
APPT 187	DRAWING INTERPRETATION & PLAN READING/SCIENCE	5	Year 2, Fall
APPT 189 or APPT 196 or APPT 198 APPT 191	WELDING/OXYGEN-ACETYLENE BASIC ELECTRICITY, ELECTRICAL CONTROLS FOR MECHANIC EQUIPMENT PLUMBING SERVICE & REPAIR PLUMBING CODE APPLICATION, PLUMBING FIXTURES	4 5 5 5	Year 4, Win Year 4, Win Year 4, Win Year 3, Fall
APPT 192	NATURAL GAS INSTALLATION, DRAINAGE	5	Year 2, Win
APPT 193 APPT 194	WATER SUPPLY, PATTERNS MEDICAL GAS, REVIEW EXIT EXAM/ FINAL EXAM	5 1.5	Year 3, Win Year 5, Fall
APPT 195	HYDRONICS/STEAM SYSTEMS/PUMPS	5	Year 4, Fall

TOTAL UNITS: 42.5-49 units

Pathway #1 Proposed Sequence:

Year 1, Fall = 4 units

Year 1, Winter = 4.5 units

Year 4, Fall = 4 units

Year 4, Winter = 4.5 units

Year 2, Fall = 4 units
 Year 2, Winter = 4.5 units
 Year 3, Fall = 4 units
 Year 3, Winter = 4.5 units

Year 5, Fall = 4 units
 Year 5, Winter = 4.5 units

TOTAL UNITS: 42.5 units

Pathway #2 Proposed Sequence:

Year 1, Fall = 5 units
 Year 1, Winter = 5 units
 Year 2, Fall = 5 units
 Year 2, Winter = 5 units
 Year 3, Fall = 5 units
 Year 3, Winter = 5 units

Year 4, Fall = 5 units
 Year 4, Winter = 4-5 units
 Year 5, Fall = 4 units
 Year 5, Winter = 4-5 units

TOTAL UNITS: 47-49 units

Item 4. Master Planning

The Plumbing and Pipefitting Apprenticeship program aligns with the Foothill College Mission statement. As part of a state registered apprenticeship program, it provides high level technical training to diverse student populations from different socio-economic backgrounds. The program serves students who live in San Mateo and Monterey counties and provides on-the-job training with local employers. The program provides students with full-time employment with livable wages and benefits to support themselves and their families in the Bay Area. The associate degree provides an opportunity for students who want to advance in their profession.

Item 5. Enrollment and Completer Projections

With two cohorts, we project to have at least 24 students completing the existing Certificate of Achievement in Plumbing and Pipefitting Apprenticeship at the end of fiscal 2021-22. All of these students will be eligible to petition for an Associate in Science in Plumbing and Pipefitting Apprenticeship once this degree is approved. After five years, we project to have at least 150 students complete the certificate of achievement program. Students will be eligible to complete all general education requirements and any electives to obtain the required 90 units for the associate degree.

Pathway #1 - Local 467		Year 1 (FY 20-21)		Year 2 (FY 19-20)	
Course #	Title	Annual Sections	Annual Enrollment	Annual Sections	Annual Enrollment
APPT 161	Safety/OSHA/Tools/Heritage/Service	1	27	1	20
APPT 162	Mathematics/Science for the Plumbing Trade	1	26	1	20
APPT 163	Code/Water Supply Systems	1	24	1	20
APPT 164	Drawing I for the Plumbing Trade	1	24	1	20
APPT 165	Drawing II for The Plumbing Trade	1	26	1	24
APPT 166	Welding/Oxy-Acetylene Training	1	24	1	23

APPT 167	Steam Systems/Rigging/Pipe Fitting & Service	1	16	1	19
APPT 168	Medical Gas/Hydronics/Signal Person	1	16	1	19
APPT 169	Advanced Drawing/Layout for the Plumbing Trades/UA Foreman Training	1	16	1	17
APPT 170	Code II/Junior Mechanics Review & Exam	1	16	1	17

Pathway #2 - Local 62		Year 1 (FY 20-21)		Year 2 (FY 19-20)	
Course #	Title	Annual Sections	Annual Enrollment	Annual Sections	Annual Enrollment
APPR 160A	HVAC Tech, Customer Service	1	21	0	0
APPT 147B	SF 401B Industrial Rigging	0	0	0	0
APPT 171	Basic Refrigeration/Heritage/CFC/OSHA 10	0	0	0	0
APPT 185	Pipe Materials, Safety & Tools, Soldering & Brazing	0	0	0	0
APPT 186	Mathematics/Rigging & Signaling	0	0	0	0
APPT 187	Drawing Interpretation & Plan Reading/Science	0	0	0	0
APPT 189	Welding/Oxygen-Acetylene	0	0	0	0
APPT 190	Pipe Fitting with a Calculator	0	0	0	0
APPT 191	Plumbing Code Application, Plumbing Fixtures	0	0	0	0
APPT 192	Natural Gas Installation, Drainage	0	0	1	16
APPT 193	Water Supply, Patterns	0	0	1	18
APPT 194	Medical Gas, Review Exit Exam/ Final Exam	0	0	1	9
APPT 195	Hydronics/Steam Systems/Pumps	1	18	0	0
APPT 196	Basic Electricity, Electrical Controls for Mechanic Equipment	0	0	1	11
APPT 198	Plumbing Service & Repair	0	0	0	0

Item 6. Place of Program in Curriculum/Similar Programs

The curriculum of the Plumbing and Pipefitting Apprenticeship Program overlaps with more than half of the curriculum in Plumbing Technology and Pipefitting and Steamfitting programs. However, the curriculum of this program is created to meet the needs of the local contractors who serve in the San Mateo and Monterey counties.

Item 7. Similar Programs at Other Colleges in Service Area

According to the labor market report provided by SF Center of Excellence, four colleges in the Bay Region issued 59 awards on average annually for TOP Code 0952.30 - Plumbing, Pipefitting

and Steamfitting. However, our program is unique because it provides comprehensive in-class instruction and paid on-the-job training. In addition, Plumbing and Pipefitting Apprenticeship is a registered apprenticeship program that is offered in partnership with UA Local 467 and UA Local 62.

Additional Information Required for State Submission:

TOP Code: 0952.30 - Plumbing, Pipefitting and Steamfitting

Annual Completers: 1-10

Net Annual Labor Demand: 1,813

Faculty Workload: N/A

New Faculty Positions: Zero

New Equipment: Zero

New/Remodeled Facilities: Zero

Library Acquisitions: Zero

Gainful Employment: Yes

Program Review Date: June, 2025

Distance Education: 25%



Plumbing Occupations Labor Market Information Report Foothill College

Prepared by the San Francisco Bay Center of Excellence for Labor Market Research
May 2021

Recommendation

Based on all available data, there appears to be an “undersupply” of Plumbing 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 1,754 students in the Bay region and 350 students in the Silicon Valley Sub-Region.

Introduction

This report provides student outcomes data on employment and earnings for TOP 0952.30 - Plumbing, Pipefitting and Steamfitting 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 Plumbing Occupations in the 12 county Bay region and in the Silicon Valley sub-region for a program modification at Foothill College.

- **Plumbers, Pipefitters, and Steamfitters (47-2152):** Assemble, install, alter, and repair pipelines or pipe systems that carry water, steam, air, or other liquids or gases. May install heating and cooling equipment and mechanical control systems. Includes sprinklerfitters.
 Entry-Level Educational Requirement: High school diploma or equivalent
 Training Requirement: Apprenticeship
 Percentage of Community College Award Holders or Some Postsecondary Coursework: 34%

Occupational Demand

Table 1. Employment Outlook for Plumbing 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
Plumbers, Pipefitters, and Steamfitters	13,623	14,833	1,210	9%	9,066	1,813	\$ 24.29	\$ 34.03
Total	13,623	14,833	1,210	9%	9,066	1,813	\$24.29	\$34.03

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 Plumbing 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
Plumbers, Pipefitters, and Steamfitters	2,520	2,935	415	16%	1,902	380	\$ 25.03	\$ 34.02
Total	2,520	2,935	415	16%	1,902	380	\$25.03	\$34.02

Source: EMSI 2020.4

Silicon Valley Sub-Region includes: Santa Clara Counties

Job Postings in Bay Region and Silicon Valley Sub-Region**Table 3. Number of Job Postings by Occupation for latest 12 months (Apr 2020 - Mar 2021)**

Occupation	Bay Region	Silicon Valley
Plumbers	1,012	254

Source: Burning Glass

Table 4a. Top Job Titles for Plumbing Occupations for latest 12 months (Apr 2020 - Mar 2021) Bay Region

Title	Bay	Title	Bay
Plumbing Service Technician	143	Plumbing Service Technician- Military/Veteran	16
Plumber	130	Residential Service Plumber	15
Service Plumber	49	Plumber Journeyman In , Careers At	15
Plumbing Technician	48	Residential Plumber	13
Journeyman Plumber	44	Plumbing Drain Technician	10
Plumbers	32	Plumber In , Careers At	10
Water Heater Technician	23	Plumbing Service Technician/Residential Plumber	9
Plumber Journeyman	22	Lead Plumber, Bay Areas Gc On Yelp	8
Lead Plumber	22	Sewer/Underground Technician	7

Source: Burning Glass

Table 4b. Top Job Titles for Plumbing Occupations for latest 12 months (Apr 2020 - Mar 2021)**Silicon Valley Sub-Region**

Title	Silicon Valley	Title	Silicon Valley
Plumbing Service Technician	32	Construction Plumber	5
Plumber	29	Water Heater Technician	4
Plumbing Technician	15	Technician/Plumber	4
Service Plumber	14	Residential Plumbing Technician/Plumber	4
Journeyman Plumber	14	Plumber Journeyman In , Careers At	4
Plumbing Drain Technician	10	Plumbing Technician S Req	3
Plumbers	8	Construction Installation Plumber	3
Residential Plumber	5	Service/Journeyman Plumber	2
Plumber Journeyman	5	Service & Repair Plumber	2

Source: Burning Glass

Industry Concentration

Table 5. Industries hiring Plumbing 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)
Plumbing, Heating, and Air-Conditioning Contractors	8,712	7,906	-9%	66%
Residential Remodelers	434	495	14%	4%
Natural Gas Distribution	381	381	0%	4%
Commercial and Institutional Building Construction	343	316	-8%	3%
Local Government, Excluding Education and Hospitals	251	220	-13%	2%
Electrical Contractors and Other Wiring Installation Contractors	227	200	-12%	2%
New Single-Family Housing Construction (except For-Sale Builders)	200	191	-4%	2%
All Other Specialty Trade Contractors	199	182	-9%	2%
Water and Sewer Line and Related Structures Construction	216	183	-15%	2%
Site Preparation Contractors	141	125	-11%	1%

Source: EMSI 2020.4

Table 6. Top Employers Posting Plumbing Occupations in Bay Region and Silicon Valley Sub-Region (Apr 2020 - Mar 2021)

Employer	Bay	Employer	Silicon Valley
Roto Rooter	56	Mike Counsil Plumbing Incorporated	11
Skylight	29	Skylight	8
Roto Rooter Plumbing Drain	25	Ars Rescue Rooter	8
Mike Counsil Plumbing Incorporated	22	Ars	7
Life Chiropractic College West	22	American Residential Services	7
Jazz Home Services	20	Rooter Hero Plumbing	6
Rooter Hero Plumbing	19	Beutler Air Conditioning And Plumbing	6
Lunt Marymor Company	18	Benson Systems	6
Ars Rescue Rooter	15	Advanced Home Services	5
Kaiser Permanente	14	Giant Plumbing	4

Source: Burning Glass

Educational Supply

There are four (4) community colleges in the Bay Region issuing 59 awards on average annually (last 3 years ending 2018-19) on TOP 0952.30 - Plumbing, Pipefitting and Steamfitting. In the Silicon Valley Sub-Region, there are two (2) community colleges that issued 30 awards on average annually (last 3 years) on this TOP code.

Table 7. Community College Awards on TOP 0952.30 - Plumbing, Pipefitting and Steamfitting in Bay Region

College	Subregion	Certificate Low	Total
Diablo Valley	East Bay	22	22
Foothill	Silicon Valley	20	20

College	Subregion	Certificate Low	Total
Mission	Silicon Valley	10	10
San Francisco	Mid-Peninsula	7	7
Total		59	59

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 1,813 annual openings for the Plumbing occupational cluster and 59 annual (3-year average) awards for an annual undersupply of 1,754 students. In the Silicon Valley Sub-Region, there is also a gap with 380 annual openings and 30 annual (3-year average) awards for an annual undersupply of 350 students.

Student Outcomes

Table 8. Four Employment Outcomes Metrics for Students Who Took Courses on TOP 0952.30 - Plumbing, Pipefitting and Steamfitting

Metric Outcomes	Bay All CTE Programs	Foothill All CTE Programs	State 0952.30	Bay 0952.30	Silicon Valley 0952.30	Foothill College 0952.30
Students with a Job Closely Related to Their Field of Study	75%	88%	91%	92%	92%	100%
Median Annual Earnings for SWP Exiting Students	\$44,575	\$63,206	\$67,451	\$103,140	\$115,704	\$115,927
Median Change in Earnings for SWP Exiting Students	31%	63%	96%	121%	145%	150%
Exiting Students Who Attained the Living Wage	52%	67%	77%	85%	93%	94%

Source: Launchboard Strong Workforce Program from version 2017-18.

Skills, Certifications and Education

Table 9. Top Skills for Plumbing Occupations in Bay Region (Apr 2020 - Mar 2021)

Skill	Posting	Skill	Posting
Plumbing	987	Plumbing Maintenance	76
Repair	534	Service Plumbing	74
Water Heaters	201	Soldering	73
Residential Plumbing	146	Commercial Plumbing	69
Personal Protective Equipment (PPE)	140	Pipe Installation	63
Plumbing Systems	139	Schematic Diagrams	60
Cost Estimation	128	New Construction	58
Drain Cleaning	128	Building Codes	57
Pipe Repair	99	Valve Installation	51
Customer Service	96	Scheduling	50
Plumbing Repairs	92	Power Tools	49
Hand Tools	88	Pipe Systems	43
Video Conferencing	88	Faucet Repair	40
Cleaning	79	Retrofitting	40

Source: Burning Glass

Table 10. Certifications for Plumbing Occupations in Bay Region (Apr 2020 - Mar 2021)

Certification	Posting	Certification	Posting
Driver's License	523	Epa 608	2
Plumbing Certification	123	Ca License	2
Plumbing License	116	Business License	2
Backflow Prevention Certification	50	Occupational Safety and Health Administration Certification	1
Social Work License	18	OSHA Safety 10 Hour	1
Licensed Clinical Social Worker (LCSW)	18	Hazwoper	1
CDL Class A	7	Cdl Class B	1
Cdl Class C	4	Building Trade Certificate	1
Contractors License	3	Back-Flow Prevention Certificate	1

Source: Burning Glass

Note: 42% 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 Plumbing Occupations in Bay Region

Education (minimum advertised)	Latest 12 Mos. Postings	Percent 12 Mos. Postings
High school or vocational training	172	97%
Associate's degree	6	3%

Source: Burning Glass

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 CCCCCO 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:

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GP Proposal to CCC to Recommend Foothill College's Purchase, Implementation, and Maintenance of Program Pathways Mapper

Proposal:

The Guided Pathways Leadership Team proposes that the College Curriculum Committee vote to recommend the purchase, implementation, and maintenance of the marketing software, Program Pathways Mapper (PPM), by Foothill College.

Product:

Developed and first implemented by Craig Hayward, Dean of Institutional Effectiveness at Bakersfield Community College, during the 2016-2017 academic year, PPM is at the forefront of program-mapping marketing software. Due to significant gains in student success correlated to clear visualization of pathways to degree and completion transfer, PPM has earned the endorsement of the Chancellor's Office as well as contracts with more California Community Colleges than any other software of its kind to date. In addition to PPM's partnership with California Community Colleges, the software has also been adopted by 2 California State Universities, and is in negotiation with the University of California System.

PPM provides program-specific visual representations of required and recommended courses. It displays groupings of aligned programs of study (meta majors); customized program learning outcomes; national, state, and (coming soon) regional career and labor market information; as well as term-by-term program maps, created by individual colleges, for prospective and current students. This information is found on three landing pages.

- The first landing page displays meta major groupings using icons and terminology that are easy for students to understand. Each meta major is linked to a second landing page.
- The second landing page has the option of including videos and text that introduce students to concepts and skills developed in the chosen meta major, some career fields that are associated with this grouping of programs, as well as a clear listing of programs that are linked to a third landing page.
- The third landing page is devoted to individual programs of study. These have the option of including additional videos explaining the program, as well as editable text for SLOs/PLOs, career and labor market information, and program maps.

**Note: PPM does not create an individualized educational plan for students, populate students' schedules, or register students for classes. All PPM maps are created by the colleges that purchase and maintain this marketing software.*

Initial Cost & Funding:

The one-time cost of PPM is \$50,000.00, which includes logistical support for the duration of implementation and ongoing access to office hours. Guided Pathways funding has been budgeted to cover the cost of purchasing PPM. The initial cost and annual maintenance associated with verifying and transferring course data from the PDF program maps to the mapping templates, the editing and uploading of individual program descriptions, potentially altering meta major descriptions and career and labor market information, and creating promotional videos to include on landing pages are not included in the one-time \$50,000.00 cost of PPM.

**Note: The GP Program Mapping and Meta Major Team has researched models of implementation and maintenance that include a variety of staffing options to be reviewed further.*

GP Recommendation:

Foothill's Guided Pathways Leadership Team recommends that Foothill College purchase and maintain PPM with the express purposes of advancing equity, accessibility, and student success by facilitating transparency regarding program expectations and outcomes. This recommendation is a result of careful consideration of qualitative and quantitative research presented to the GP Program Mapping and Meta Majors Team and colleagues, GP Program Mapping and Meta Majors Team presentation feedback and polling, and GP Program Mapping and Meta Majors Team interviews with GP college representatives throughout California.

- The GP Program Mapping and Meta Majors Team has reviewed or attended the following presentations: Craig Hayward's presentation of PPM to the RP Group, conducted in Fall of 2020; presentations to GP Team Leads and members of the Steering Committee by PPM partner, Steve Middleton of Concentric Sky, conducted over the Fall and Winter of 2020-2021; and presentations and dialogue with Craig Hayward in the Winter and Spring of 2021.
- The GP Program Mapping and Meta Majors Team has presented PPM at the Academic Senate, CCC, CNSL and BSS Division Meetings during the 2020-2021 academic year. In the Spring of 2021, the GP Program Mapping and Meta Majors Team presented PPM to the Meta Majors Work Team and GP Steering Committee along with other mapping software. On these occasions, PPM was voted the best option for displaying program maps.
- During the Summer of 2021, the GP Program Mapping and Meta Majors Team interviewed 11 California Community Colleges that have implemented PPM and found that 90% were satisfied with the product. While the colleges interviewed have not conducted formal research on the gains to student success and equity correlated to PPM's implementation, many commented on positive student engagement with the platform.