**College Curriculum Committee Meeting Agenda**
**Tuesday, January 18, 2022**
**2:00 p.m. – 3:30 p.m.**
**Meeting held virtually via Zoom**

| Item | Time* | Action | Attachment(s) | Presenter(s) |
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| 1. Reaffirmation of Remote Meetings Resolution | 3 min. | Action | #1/18/22-1 | Kuehnl |
| 2. Minutes: November 30, 2021 | 2 min. | Action | #1/18/22-2 | Kuehnl |
| 3. Report Out from Division Reps | 5 min. | Discussion | | All |
| 4. Public Comment on Items Not on Agenda (CCC cannot discuss or take action) | 5 min. | Information | | |
| 5. Announcements<br>a. New Course Proposal<br>b. Notification of Proposed Requisites<br>c. Ad Hoc Groups | 5 min. | Information | <br>#1/18/22-3<br>#1/18/22-4 | CCC Team |
| 6. New Subject Code: AATA | 2 min. | Information | #1/18/22-5 | Kuehnl |
| 7. Consent Calendar<br>a. GE Application | 5 min. | Action | <br>#1/18/22-6 | Kuehnl |
| 8. New Program Application: Advanced Sports Medicine CA | 10 min. | 3rd Read/ Action | #1/18/22-7 | Kuehnl |
| 9. Request to Update AA/AS Degree Minimum Proficiency List for English | 5 min. | 1st Read | #1/18/22-8 | Kuehnl |
| 10. Stand Alone Approval Requests: APCA 100, 101, 102, 104, 105, 106 | 10 min. | 1st Read | #1/18/22-9-14 | Kuehnl |
| 11. Stand Alone Approval Requests: C S 77A, 77B | | 1st Read | #1/18/22-15-16 | Kuehnl |
| 12. Stand Alone Approval Request: D A 67 | | 1st Read | #1/18/22-17 | Kuehnl |
| 13. Stand Alone Approval Request: NCBS 449 | | 1st Read | #1/18/22-18 | Kuehnl |
| 14. Stand Alone Approval Requests: NCEL 401B, 401C | | 1st Read | #1/18/22-19-20 | Kuehnl |
| 15. Stand Alone Approval Request: SPAN 51 | | 1st Read | #1/18/22-21 | Kuehnl |
| 16. AB 705 Improvement Plan Requirements | 45 min. | Discussion | #1/18/22-22 | Finkelstein/ Bui |
| 17. Good of the Order | 3 min. | | | Kuehnl |
| 18. Adjournment | | | | Kuehnl |

**Times listed are approximate*

**Consent Calendar:**

Foothill General Education (attachment #1/18/22-6)

*Area IV—Social & Behavioral Sciences:* PSYC 2

**Attachments:**

#1/18/22-1 Resolution Authorizing Remote Teleconference Meetings Pursuant to Brown Act Provisions Included in AB 361
#1/18/22-2 Draft Minutes: November 30, 2021
#1/18/22-3 New Course Proposal: ALCB 470Y
#1/18/22-4 CCC Notification of Proposed Requisites

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| #1/18/22-5 | New Subject Code: AATA (Apprenticeship: Aerospace) |
| #1/18/22-7 | New Program Application: Advanced Sports Medicine CA (updated) |
| #1/18/22-8 | Language Arts Request to Update Minimum Proficiency in English |
| #1/18/22-9 | Stand Alone Approval Request: APCA 100 |
| #1/18/22-10 | Stand Alone Approval Request: APCA 101 |
| #1/18/22-11 | Stand Alone Approval Request: APCA 102 |
| #1/18/22-12 | Stand Alone Approval Request: APCA 104 |
| #1/18/22-13 | Stand Alone Approval Request: APCA 105 |
| #1/18/22-14 | Stand Alone Approval Request: APCA 106 |
| #1/18/22-15 | Stand Alone Approval Request: C S 77A |
| #1/18/22-16 | Stand Alone Approval Request: C S 77B |
| #1/18/22-17 | Stand Alone Approval Request: D A 67 |
| #1/18/22-18 | Stand Alone Approval Request: NCBS 449 |
| #1/18/22-19 | Stand Alone Approval Request: NCEL 401B |
| #1/18/22-20 | Stand Alone Approval Request: NCEL 401C |
| #1/18/22-21 | Stand Alone Approval Request: SPAN 51 |
| #1/18/22-22 | CCCCO Memo Re: Equitable Placement and Completion 11/18/21 |

**2021-2022 Curriculum Committee Meetings:**

| Fall 2021 Quarter | Winter 2022 Quarter | Spring 2022 Quarter |
|---|---|---|
| ~~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:**

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| ~~*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)

*Updated 1/3/22*

# COLLEGE CURRICULUM COMMITTEE

Committee Members – 2021-22

Meeting Date: 1/18/22

Co-Chairs (2)

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

Voting Membership (1 vote per division)

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| ✔ | Micaela Agyare | 7086 | LRC | agyaremicaela@fhda.edu |
| ✔ | Ben Armerding | 7453 | LA | armerdingbenjamin@fhda.edu |
| ✔ | Kathy Armstrong | 7487 | PSME | armstrongkathy@fhda.edu |
| ✔ | Rachelle Campbell | 7469 | BH | campbellrachelle@fhda.edu |
| ✔ | Roosevelt Charles | 7219 | Dean—CNSL | charlesroosevelt@fhda.edu |
| ✔ | Valerie Fong | 7135 | Dean—LA | fongvalerie@fhda.edu |
| ✔ | Evan Gilstrap | 7675 | Articulation | gilstrapevan@fhda.edu |
| ✔ | Hilary Gomes | 7585 | FA | gomeshilary@fhda.edu |
| ✔ | Allison Herman | 7460 | LA; LRC (advisory) | hermanallison@fhda.edu |
| ✔ | Maritza Jackson Sandoval | 7409 | CNSL | jacksonsandovalmaritza@fhda.edu |
| ✔ | Julie Jenkins | | BSS | jenkinsjulie@fhda.edu |
| ✔ | Ben Kaupp | | SRC | kauppben@fhda.edu |
| ✔ | Andy Lee | 7783 | CNSL | leeandrew@fhda.edu |
| | Dixie Macias | 7271 | KA | maciasdixie@fhda.edu |
| ✔ | Don Mac Neil | 7248 | KA | macneildon@fhda.edu |
| ✔ | Allison Meezan | 7166 | BSS | meezankaren@fhda.edu |
| ✔ | Ché Meneses | 7015 | FA | menesesche@fhda.edu |
| ✔ | Brian Murphy | | APPR | brian@pttc.edu |
| | Tim Myres | | APPR | timm@smw104jatc.org |
| | Lisa Schultheis | 7780 | BH | schultheislisa@fhda.edu |
| ✔ | Ram Subramaniam | 7472 | Dean—BH & PSME | subramaniamram@fhda.edu |
| | Kella Svetich | 7924 | LA | svetichkella@fhda.edu |
| ✔ | Anand Venkataraman | 7495 | PSME | venkataramananand@fhda.edu |

Non-Voting Membership (4)

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| | | | ASFC Rep. | |
| ✔ | Mary Vanatta | 7439 | Curr. Coordinator | vanattamary@fhda.edu |
| | | | Evaluations | |
| | | | SLO Coordinator | |

Visitors

Chris Allen, Kennedy Bui, Hilda Fernandez, Doreen Finkelstein, Elaine Kuo, Brian Lewis,

Michelle McNeary, Natalia Menendez, Paul Starer, Warren Voyce

**FOOTHILL COLLEGE**
**College Curriculum Committee**
**Resolution Authorizing Remote Teleconference Meetings Pursuant to Brown Act Provisions Included in Assembly Bill (AB) 361 (Rivas)**

WHEREAS, the Foothill-De Anza Community College District is committed to preserving and nurturing public access and participation in meetings of the Foothill College Curriculum Committee; and

WHEREAS, all meetings of Foothill-De Anza Community College District's legislative bodies, which include the Foothill Academic Senate and its autonomous subcommittee, the College Curriculum Committee, are open and public, as required by the Ralph M. Brown Act (Cal. Gov. Code 54950–54963), so that any member of the public may attend, participate, and watch the District's legislative bodies conduct their business; and

WHEREAS, the Brown Act, Government Code section 54953(e), makes provisions for remote participation in meetings by members of a legislative body, without compliance with the requirements of Government Code section 54953(b)(3), subject to the existence of certain conditions; and

WHEREAS, a required condition is that a state of emergency is declared by the Governor pursuant to Government Code section 8625, proclaiming the existence of conditions of disaster or of extreme peril to the safety of persons and property within the state caused by conditions as described in Government Code section 8558; and

WHEREAS, a proclamation is made when there is an actual incident, threat of disaster, or extreme peril to the safety of persons and property within the jurisdictions that are within the District's boundaries, caused by natural, technological, or human-caused disasters; and

WHEREAS, it is further required that state or local officials have imposed or recommended measures to promote social distancing, or, the legislative body meeting in person would present imminent risks to the health and safety of attendees; and

WHEREAS, on March 4, 2020, Governor Gavin Newsom declared a statewide emergency arising from the coronavirus (COVID-19); and

WHEREAS, on March 17, 2020, the Board of Trustees of Foothill-De Anza Community College District officially declared a state of emergency for the district; and

WHEREAS, on March 17, 2020, Governor Newsom issued Executive Order N-29-20

suspending certain provisions of the Brown Act pertaining to teleconferenced meetings; and

WHEREAS, following the issuance of Executive Order N-29-20, the Foothill College Curriculum Committee began to conduct all public meetings virtually using the Zoom teleconference platform and has continued conducting all public meetings virtually since that time; and

WHEREAS, on June 11, 2021, Governor Newsom issued Executive Order N-08-21, which indicated that the authorization for holding virtual meetings outlined in Executive Order N-29-20 would expire on September 30, 2021; and

WHEREAS, on September 16, 2021, Governor Newsom signed Assembly Bill (AB) 361 (Rivas) as urgency legislation to be effective immediately, which provides that legislative bodies may continue to meet remotely during a declared State of Emergency subject to certain conditions; and

WHEREAS, AB 361 amends the Brown Act (Government Code Section 54953) to add the following:

(e)(1) A local agency may use teleconferencing without complying with the requirements of paragraph (3) of subdivision (b) if the legislative body complies with the requirements of paragraph (2) of this subdivision in any of the following circumstances:

(A) The legislative body holds a meeting during a proclaimed state of emergency, and state or local officials have imposed or recommended measures to promote social distancing.

(B) The legislative body holds a meeting during a proclaimed state of emergency for the purpose of determining, by majority vote, whether as a result of the emergency, meeting in person would present imminent risks to the health or safety of attendees.

(C) The legislative body holds a meeting during a proclaimed state of emergency and has determined, by majority vote, pursuant to subparagraph (B), that, as a result of the emergency, meeting in person would present imminent risks to the health or safety of attendees; and

WHEREAS, AB 361 amends the Brown Act (Government Code section 54953) to add the following:

(3) If a state of emergency remains active, or state or local officials have imposed or recommended measures to promote social distancing, in order to continue to teleconference without compliance with paragraph (3) of subdivision (b), the legislative body shall, not later than 30 days after teleconferencing for the first time pursuant to subparagraph (A), (B), or (C) of paragraph (1), and every 30 days thereafter, make the following findings by majority vote:

(A) The legislative body has reconsidered the circumstances of the state of emergency.

(B) Any of the following circumstances exist:
(i) The state of emergency continues to directly impact the ability of the members to meet safely in person.
(ii) State or local officials continue to impose or recommend measures to promote social distancing.

NOW, THEREFORE, BE IT RESOLVED, that the Foothill College Curriculum Committee finds that the March 4, 2020, declaration of a State of Emergency due to the COVID-19 pandemic by Governor Gavin Newsom remains active and that the state of emergency continues to directly impact the ability of members of the public to meet safely in person.

BE IT FURTHER RESOLVED, that the Foothill College Curriculum Committee authorizes the continuation of virtual meetings pursuant to Assembly Bill 361 (Rivas); and

BE IT FURTHER RESOLVED, that this resolution shall take effect immediately upon its adoption and shall be effective until the earlier of 90 days from the date of adoption or such time the Foothill College Curriculum Committee adopts a subsequent resolution in accordance with Government Code section 54953(e)(3) to extend the time during which the Foothill College Curriculum Committee may continue to teleconference without compliance with paragraph (3) of subdivision (b) of Government Code section 54953.

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

| Item | Discussion |
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| 1. Minutes: November 16, 2021 | **Approved by consensus.** |
| 2. Report Out from Division Reps | **Speaker: All**<br>Apprenticeship: Allen provided update. Going to be onboarding new Apprenticeship partner in winter—unique program working primarily with veterans and underserved communities in the aerospace field.<br><br>Bio Health: Tying up a few loose ends; Horticulture dept. working on new certs.<br><br>BSS: Child Development and Business depts. working on new certs.<br><br>SRC: Finished up Title 5 updates.<br><br>Fine Arts: Guided Pathways folks attended recent division CC meeting to discuss process. Brainstorming curriculum-based newsletter, and asked other reps to let them know if their division has done anything similar or if they can recommend best practices.<br><br>Language Arts: Finishing up updates to noncredit courses.<br><br>LRC: Tying up loose ends re: Distance Learning. Developing new courses for a new cert. involving Research & Service Leadership Symposium and other independent learning opportunities for students within the LRC.<br><br>PSME: Working on updating Distance Learning addenda for courses previously approved for state of emergency-only (but need full approval).<br><br>Gilstrap reminded the group about the upcoming deadline for new CSU GE and IGETC submissions—end of day tomorrow.<br><br>Hueg mentioned recent discussions re: software for SLOs and curriculum; working w/ Paul Starer to form a group to review our SLO process/system. Noted still have another CourseLeaf module to implement, for programs; may also look into implementing their scheduling module. If anyone interested in being involved in any of these discussions, reach out to him. |
| 3. Public Comment on Items Not on Agenda | Language Arts rep reminded the group that Research & Service Leadership Symposium application period is now open; encouraged folks to share out to students. Have until end of winter to apply.<br><br>Lee requested future CCC discussion of Program Maps, specifically process for bringing Maps to CCC for approval and process for updating Maps. Noted no Maps have come to CCC for approval. Stressed importance of discussing process for courses on Maps that fall outside of division, especially re: scheduling. Kuehnl mentioned that the process approved by CCC states that Maps approved at the division CC level, not at CCC; currently talking with Isaac Escoto to determine specifics of process. Lee mentioned Maps which include courses outside the division and asked if those go to CCC for approval. Hueg mentioned recent conversation at deans meeting about extenuating circumstances re: short staffing, and need for deans to review Maps to identify potential issues re: scheduling. |

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| | Fine Arts rep mentioned recent situation in which dept. was ready for division CC to review their Map, but rep felt unprepared to consult w/ other divisions re: their courses. Believes administrators should be involved and it should not necessarily be the responsibility of the reps. Suggested that this aspect of the process approved last year be revisited. Kuehnl clarified that outside consultation is required only when the core courses for the program fall within another division/dept., and that reps shouldn't feel obligated to become involved if only support/GE courses fall within another division. Kuehnl assured group that topic will be brought back to CCC for further discussion; is currently in discussions to determine mechanism for approval of Maps, and hopes to have something to bring to CCC in January. |
| 4. Consent Calendar<br>a. New Program Application: Business Administration 2.0 ADT | **Speaker: Eric Kuehnl**<br>No comments.<br><br>Motion to approve **M/S** (Venkataraman, Armstrong). **Approved.** |
| 5. New Program Application: Introduction to Sports Medicine CA | **Speaker: Eric Kuehnl**<br>Second read of new Introduction to Sports Medicine Certificate of Achievement. No comments.<br><br>Motion to approve **M/S** (Murphy, Schultheis). **Approved.** |
| 6. New Program Application: Advanced Sports Medicine CA | **Speaker: Eric Kuehnl**<br>Second read of new Advanced Sports Medicine Certificate of Achievement. Ong took comments from first read back to Warren Voyce, and KINS 62C/D/E being removed from program, as they don't need to be included. (Changes aren't reflected on today's attachments.) PSME rep would like to view edited documents before voting; Ong shared updated narrative with the group. PSME rep recalled discussion at first read about LMI (re: master's degree); Ong responded that while a person does need a master degree to become a certified athletic trainer, these certs. would allow them to work at a gym or in other businesses as an assistant to an athletic trainer. PSME noted confusion re: the statement about the master's degree requirement, because comes off as being connected to justification for creating these certs. Ong added that the students currently taking these courses tend to be dual-enrollment students; these shorter pathways are targeted toward entry-level work and not intended to train students into a master's level.<br><br>BSS rep asked about the ITRN courses, noting that their dept. has used them in the past and ran into a lot of trouble with them; asked for details. Ong responded that the hands-on experience portion of the cert. allows for students to gain experience at Foothill's Athletic Treatment Center via KINS 62A/B, but to allow students to gain experience elsewhere (e.g., gym, chiropractor's office), ITRN courses would be used (would be overseen by Voyce). Hueg asked about evaluation of LMI data; Ong noted that, while there aren't a lot of jobs available in the lower-mid salary ranges, the dept. still believes worthwhile to provide the cert. Lee mentioned new program creation process being developed, and asked what happens if CCC doesn't believe a program should be created based on LMI. Ong noted we don't have any such standards, for the purposes of discussion/decision making at CCC; believes these standards are important to determine. Noted that BACCC does have these standards, and program will be submitted to that group. Kuehnl asked if BACCC would reject a program that showed growth but didn't achieve livable wage; Ong noted that what does get attention is when a college proposes a program very similar to one offered by a nearby college—then job availability is scrutinized. PSME asked when LMI required for a cert.—Ong responded, only CTE programs.<br><br>PSME rep believes Foothill wouldn't want to market a program to students if |

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| | there aren't available job prospects or if wage growth is sluggish. Kuehnl agreed that this is an important discussion, re: do we want to approve a cert. if wage growth does not match a living wage in the region; but doesn't recall ever discussing this about any other new program and cautioned against scrutinizing this cert. in a way that others have not been. Vanatta noted that once cert. is approved by CCC it will go to BACCC for approval—new CTE programs do not get sent to FHDA board for approval until after approved by BACCC. Ong suggested bringing cert. back for additional read, to allow dept. faculty to attend meeting and discuss and advocate for program. The group agreed.<br><br>Third read and possible action will occur at next meeting. |
| 7. New Program Application: Plumbing & Pipefitting Apprenticeship AS | **Speaker: Eric Kuehnl**<br>Second read of new Plumbing & Pipefitting Apprenticeship AS degree. No comments.<br><br>Motion to approve **M/S** (Murphy, Venkataraman). **Approved.** |
| 8. Planning for Winter CCC Meetings & Division CC Meetings | **Speakers: Kurt Hueg & Eric Kuehnl**<br>Continuing discussion from previous meeting, re: need to return to partially in-person meetings starting in winter quarter, as CCC will need to have a quorum meeting in person. Additional, related discussion of process/ guidance for division CCs, to ensure following Brown Act. Kuehnl has been discussing topics with Academic Senate (AS) leadership—noted that recently AS added student rep and classified rep as voting members. AS leadership's guidance is to not allocate a vote to student rep, at either CCC or division CCs; would be members in advisory capacity. CCC not required to follow this advice if we don't want to. PSME rep asked for clarification—Kuehnl responded that student reps may still vote, but in an advisory capacity, so would not affect voting outcome. Fine Arts rep asked if students may participate in subcommittees (e.g., GE), as their input could be helpful—Kuehnl agreed with and encouraged this idea. BSS rep asked what progress being made to guide/mentor students through curriculum process, noting there's already a learning curve for reps, even those who have been involved in curriculum for some time. Kuehnl has been talking with ASFC leadership and Daphne Small about appointments of student reps by ASFC; taking longer than he'd hoped so unsure if student reps will be on board by first meetings in January. Hoping to create onboarding/ training materials, but in the meantime can use the same materials we use to train CCC reps. PSME rep suggested taking advisory votes separately during meetings, to reduce confusion; Kuehnl noted that normally votes aren't taken separately unless it's a roll call situation, which isn't common at CCC but does sometimes happen at AS. Recommends using roll call process for momentous voting situations. Plans to draft resolution related to student representation; will eventually be included in CCC bylaws.<br><br>Kuehnl will come up with system for CCC reps to use, on per-meeting basis, to confirm in-person attendance, in order to achieve quorum. Plans to have this in place within next few weeks, to be ready for our first meeting in January. Noted that if there is a meeting during which we cannot achieve quorum, meeting will be cancelled. PSME rep suggested some folks may be willing to attend in person if meeting in danger of not reaching quorum—Kuehnl will definitely put out an announcement, in that type of situation. AS leadership has advised CCC not to meet if we can't achieve quorum, due to Brown Act provisions, even if no voting items on the agenda. BSS rep asked if any clarification given re: division CCs following Brown Act, including quorum—Kuehnl has discussed w/ AS leadership, and noted that each entity may determine their own quorum. CCC uses 50% + 1. Noted that some large bodies with historically low attendance have quorum lower than 50%, so it's not unprecedented, but it's good practice to at least use |

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| | 50% + 1. Each division CC will need to determine what its membership is, for purposes of achieving quorum; cautioned against including all division faculty as members of division CC.<br><br>BSS rep noted goal of maximizing faculty participation in curriculum—their virtual division CC meetings have had much higher participation than previous in-person meetings; pushed back a little on the need to return to in-person meetings. Hueg clarified that Brown Act was created to allow for public access to meetings; while virtual meetings have allowed for greater participation among folks at Foothill, Brown Act is related to public participation. Believes we need to solve the question of whether division CC meetings are, indeed, subject to Brown Act. Kuehnl mentioned meeting with ASCCC reps in the spring, who advised that if we want to continue with our unique decentralized division CC structure, division CCs should follow Brown Act, as they are approving curriculum (e.g., new courses). Otherwise, our structure/process does not meet legal requirements. Hueg agreed this does mean that division CCs will need to meet in person.<br><br>PSME rep asked about "grey areas" re: Brown Act, especially re: 72-hour rule for agendas. Kuehnl responded that this rule will apply to division CCs, as well as rule for two reads before approval. Bio Health rep provided info on how their division has been operating: they don't have meetings, and conduct everything over email; due to their schedules they can't find a time when they can all meet. Rep sends email to curriculum group, with deadline for voting (usually a week or two); keeps tally of votes on a spreadsheet. Certain things handled by this small group, with larger items sent to full division (also via email). Have discussed setting quorum for their division to be one rep—that person will have a designated meeting spot, on campus, open to public attendance, but will continue to conduct meetings via email as they have been. Rep asked the group if this sounds reasonable—Kuehnl responded that this idea "doesn't feel right" but that it might be okay; ideally, the student rep would attend. Hueg doesn't think this meets the spirit of the Brown Act, in that the actual work not being done in public—it's being done in a closed group, over email. Kuehnl noted that the way CCC is conducted is that reps discuss topics with their constituents and get feedback outside of CCC (so, not a public forum), and suggested this idea is similar. Kuehnl cautioned against having a quorum of just one person.<br><br>Fine Arts rep shared their division's tentative plan, noting they have been meeting on Zoom since before shelter-in-place, which has garnered higher attendance. Plan is for the two reps to be on campus every two weeks, in a public room; will have Zoom running, as well. Will post agenda and minutes on campus, and possibly also on their division's website (cannot use Canvas as it's not open to the public). Will take into consideration Kuehnl's suggestion for student rep to attend in person. Asked if quorum can still be achieved if another faculty subs for one of the reps (if they're sick, etc.)—Kuehnl noted use of proxy rep, who does not need to be a confirmed rep; that person may vote and help meet quorum. Noted that proxy must be given in writing, and that AS uses proxy reps when needed. Believes that Fine Arts' plan seems reasonable and should work.<br><br>BSS rep hopes CCC will revisit this topic once division CCs have started to meet in winter quarter, to discuss how things are working. Wants to ensure spirit of Brown Act being met while still getting high faculty participation. Language Arts rep asked if state has made any updates to Brown Act—Kuehnl noted that ASCCC lobbying for virtual meeting allowance to be permanently added to law, but this hasn't gone anywhere. Language Arts rep asked about potential repercussions if we aren't in full compliance with Brown Act, especially considering campus is still in flux re: reopening. |

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| | Noted it will be much easier to fully comply once everyone is back on campus. Kuehnl responded that there's not much chance of our getting in trouble, but the spirit of Brown Act is for openness and transparency. Believes it is disingenuous for us to continue to say it's unsafe to meet in person, especially considering kids are back in school.<br><br>Subramaniam suggested keeping decentralized structure, with division CCs functioning as they currently do, but that they don't take a formal vote and instead send their recommendations to CCC for voting. Kuehnl noted this would effectively re-centralize our curriculum process. Currently, divisions have autonomy to create new courses, and CCC has no authority to block creation of a new course. Kuehnl suggested that to make this change simply because of Brown Act would be a mistake; mentioned many prior discussions at CCC re: centralizing our structure, none of which ended in favor of the idea. PSME rep suggested at each CCC meeting, each division present their voting agenda for that day, with only the reps for that division voting on the items for their division. Kuehnl noted that making such a change to our process would require a resolution, and worried that general faculty might take issue with this type of change. Does not believe it's a realistic plan for January. Hueg suggested that division CC meeting process is a larger conversation, noting that pre-COVID some divisions had very little participation in their division CC meetings. Kuehnl believes that this is a separate issue, and doesn't think that the lack of participation in certain divisions should subvert the process for those divisions that have more robust participation.<br><br>BSS rep believes it might be time to again float the idea suggested by PSME rep; again mentioned how encouraged they were by the increase in participation on their division CC. Worried that having to ensure full Brown Act compliance may be beyond the scope of reps' responsibilities, in what is a volunteer position.<br><br>Kuehnl encouraged the reps to reach out to him to let him know how they plan to hold their division CC meetings, noting that student reps for division CCs likely won't be in place right away. Encouraged the reps to do the best they can to make this work, for winter quarter. |
| 9. Program Pathways Mapper Proposal | **Speaker: Eric Kuehnl**<br>Second read of GP Proposal to CCC to Recommend Foothill College's Purchase, Implementation, and Maintenance of Program Pathways Mapper. Hueg noted that adoption of software pending resource/budget review; Kuehnl acknowledged that this aspect is beyond the scope of CCC.<br><br>Motion to approve **M/S** (Armstrong, Meezan). **Approved.** |
| 10. Good of the Order | |
| 11. Adjournment | **3:37 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), Teresa Ong (AVP Workforce), Lisa Schultheis (BH), Ram Subramaniam (Dean—BH & PSME), Mary Vanatta (Curriculum Coordinator), Anand Venkataraman (PSME)

**Minutes Recorded by:** M. Vanatta

# Course Change Request

## New Course Proposal

Date Submitted: 01/10/22 4:14 pm

## Viewing: ALCB F470Y : POETRY APPRECIATION

Last edit: 01/11/22 7:46 am

Changes proposed by: Benjamin Kaupp (10691847)

### In Workflow

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

### Approval Path

1. 01/10/22 4:15 pm Benjamin Kaupp (kauppben): Approved for 1SR Curriculum Rep

### Course Proposal Form

| | | | |
|---|---|---|---|
| Faculty Author | Benjamin Kaupp | | |
| Effective Term | Summer 2023 | | |
| Subject | Adaptive Learning: Community Based (ALCB) | Course Number | F470Y |
| Department | Adaptive Learning (A L) | | |
| Division | Student Resource and Support Programs (1SR) | | |
| Units | 0 | | |
| Hours | 2 hours lecture | | |
| Course Title | POETRY APPRECIATION | | |
| Short Title | POETRY APPRECIATION | | |

| | |
|---|---|
| Proposed Transferability | None |
| Proposed Description and Requisites: | Through the weekly reading (both aloud and in print) and discussion of English-language poetry, students will improve their skills in listening, comprehension, interpretation and verbal response to spoken and written poetry. As class composition allows, instructor will present for discussion examples of the elements of poetry (form, rhyme, metaphor, etc.) and will encourage sharing of student's own poetry. Poetry selections will reflect cultural diversity; students will expand historical and contemporary analysis skills to describe poetic works, will learn to interpret and contextualize poetic forms. Students will gain a better understanding of why people make poetry for self expression, as political statements and to reflect diverse perspectives. Through the lens of poetry appreciation, disabled students will improve or rehabilitate verbal confidence, public speaking ability, and cognitive function. |
| Proposed Discipline | Specialized Instruction (Disabled Students Programs and Services): Noncredit |

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

Non-applicable

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

No

Comments & Other Relevant Information for Discussion:

This course is intended for disabled adults as a rehabilitation and skills mastery course.

Reviewer Comments

Key: 8757

## CCC Notification of Proposed Prerequisites/Co-Requisites

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

| Target Course Number & Title | COR Editor | Requisite Course Number & Title | New/Ongoing |
|---|---|---|---|
| C S 77A PROJECTS IN WEB APPLICATION DEVELOPMENT | B.K. Weusijana | Prereq: C S 77A ADVANCED WEB APPLICATION DEVELOPMENT | New course for 2022-23 |
| PHYS 2AM GENERAL PHYSICS: CALCULUS SUPPLEMENT | D. Marasco | Prereq: MATH 1A (CALCULUS) or MATH 1AH (HONORS CALCULUS I)<br>Coreq: MATH 1B (CALCULUS) or MATH 1BH (HONORS CALCULUS II), and PHYS 2A (GENERAL PHYSICS) | Ongoing (no forms on file) |
| PHYS 2BM GENERAL PHYSICS: CALCULUS SUPPLEMENT | D. Marasco | Prereq: MATH 1B (CALCULUS) or MATH 1BH (HONORS CALCULUS II)<br>Coreq: PHYS 2B (GENERAL PHYSICS) | Ongoing (no forms on file) |
| PHYS 2CM GENERAL PHYSICS: CALCULUS SUPPLEMENT | D. Marasco | Prereq: MATH 1B (CALCULUS) or MATH 1BH (HONORS CALCULUS II)<br>Coreq: PHYS 2C (GENERAL PHYSICS) | Ongoing (no forms on file) |

# New Subject Code Proposal

# AATA: Apprenticeship: Aerospace

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This is a proposal to create a new subject code, Apprenticeship: Aerospace (AATA), for a new apprenticeship program in non-destructive testing. Foothill College will be the Local Education Agency (LEA) for the American Aerospace Technical Academy. The Apprenticeship curriculum committee will bring forward new course proposals in collaboration with AATA.

The TOP code for this subject is: 0956.80 - Industrial Quality Control

The FSA for this subject is: Industrial Technology

The following discipline (state minimum qualifications) is approved to teach in AATA: Industrial Safety

The division for AATA is: Apprenticeship

Approved by the Apprenticeship division curriculum committee: 12/8/21

Foothill GE application for Area IV—Social & Behavioral Sciences
Approved by GE subcommittee 12/9/21
Subcommittee members: Kay Thornton

# PSYC F002. : CULTURAL PSYCHOLOGY

**Effective Term**
Summer 2022

**Subject**
Psychology (PSYC)
**Course Number**
F002.

**Department**
Psychology (PSYC)

**Division**
Business and Social Sciences (1SS)

**Units**
4

**Course Title**
CULTURAL PSYCHOLOGY

**Former ID**

**Cross Listed**

**Related Courses**

**Maximum Units**
4

**Does this course meet on a weekly basis?**
Yes

**Weekly Lecture Hours**
4

**Weekly Lab Hours**
0

**Weekly Out of Class Hours**
8

**Special Hourly Notation**

**Total Contact Hours**
48

**Total Student Learning Hours**
144

**Repeatability Statement**
Not Repeatable

**Credit Status**
Credit

**Degree Status**
Applicable

**Is Basic Skills applicable to this course?**
No

**Grading**
Letter Grade (Request for Pass/No Pass)

**Will credit by exam be allowed for this course?**
No

**Honors**
No

**Distance Learning**
No

**Degree or Certificate Requirement**
AA Degree
AA-T Degree
Foothill GE

**Foothill GE Status**
Area IV: Social & Behavioral Sciences

**Need/Justification**
This course is a restricted support course for the AA degree and ADT in Psychology, and satisfies the Foothill GE requirement for Area IV, Social & Behavioral Sciences.

**Course Description**
Focuses on the empirical investigations of the cultural factors on emotional, cognitive, and behavioral processes in humans. Topics include, but are not limited to: the impact of culture on the self, development, personality, gender, cognition, emotion, language and communication, health, psychological disorders and their treatments, social behaviors, organizations and the effects of systemic oppression. Emphasis on analyzing theories, research methods, and empirical evidence, as well as their applications to everyday life.

Importance of reflecting on cultural assumptions and their associated implications, as well as learning about cultural similarities and differences.

**Course Prerequisites**

**Course Corequisites**

**Course Advisories**
Advisory: PSYC 1 or 1H, and one of the following: ENGL 1A, 1AH or 1S & 1T.

**Course Objectives**

The student will be able to:

1. Demonstrate knowledge of major theories and research findings in the field of cultural psychology
2. Analyze research methodology in cultural psychology (including quantitative research, qualitative research, measures, research paradigms)
3. Examine and apply evidence for empirical claims in cultural psychology research to other subfields in psychology, including cognition, neuroscience, perception (time, space, color), language, emotions, lifespan development, gender, motivation, behaviors, identity, morality, relationships, personality, physical health, and mental health
4. Identify and explore how emotions, cognitions, values, and choices may impact and influence culture and vice-versa (i.e., mutual constitution)
5. Apply the principles and theories of cultural psychology to social justice issues and daily life situations
6. Gain a better understanding of self and others in the world, especially as it relates to one's cultural lens
7. Develop an understanding of issues of intersectionality, prejudice, microaggressions, discrimination, privilege, and their roles in eliminating bias and discrimination

**Course Content**

1. An introduction to culture and psychology
    1. Psychology with a cultural perspective
    2. What is culture?
    3. Contents of culture
    4. Influence of culture on human behaviors and mental processes
2. Cross-cultural research methods
    1. Types of cross-cultural comparisons
    2. Designing cross-cultural comparative research
    3. Bias and equivalence
3. Enculturation

    1. Cultural learning
    2. Enculturation and socialization
    3. Culture, parenting, and families
    4. Culture and peers
    5. Culture and the educational system
4. Culture and developmental processes
    1. Culture and temperament
    2. Culture and attachment
    3. Cognitive development
    4. Moral reasoning and justice
5. Culture, self, and identity
    1. Culture and self
    2. Culture, self-esteem, and self-enhancement
    3. Culture and identity
6. Culture and personality
    1. Defining personality
    2. Cross-cultural studies on personality traits: The five-factor model and five-factor theory
    3. Cross-cultural studies on other dimensions of personality
    4. Indigenous personalities
    5. Integrating universal and cultural-specific understanding of personality
7. Culture and gender
    1. Sex and gender
    2. Gender differences across cultures
    3. Culture, gender roles, and gender stereotypes
    4. Changing cultures, changing gender roles
8. Culture and cognition
    1. Culture as cognition
    2. Culture and attention
    3. Culture and perception
    4. Culture and thinking
    5. Culture and memory
    6. Culture and consciousness
    7. Culture and intelligence (e.g., racism, eugenics)
9. Culture and emotion
    1. Evolution of human emotion
    2. Biological bases of emotion
    3. Cultural influences on emotions
    4. Cultural regulation of basic emotions
    5. Cultural construction of emotional experience
    6. Cultural construction of concepts, attitudes, values, and beliefs about emotions
10. Culture, language, and communication
    1. Co-evolution of language and human culture

    2. Cultural influences on verbal language
    3. Cultural influences on nonverbal communication
    4. Intracultural and intercultural communication
    5. Bilingualism and culture
11. Culture and health
    1. Cultural differences in the definition of health
    2. Three indicators of health worldwide
    3. Genetic influences on physical health and disease
    4. Psychosocial influences on physical health and disease
    5. Sociocultural influences on physical health and disease (e.g., childhood adverse events)
    6. Differences in health care and medical delivery systems
12. Culture and psychological disorders
    1. Defining abnormality
    2. Culture and the categorization and assessment of psychological disorders
    3. Cross-cultural research on psychological disorders
    4. Cultural syndromes of distress
    5. Mental health of ethnic minorities, migrants, and refugees
13. Culture and treatment of psychological disorders
    1. Culture and psychotherapy
    2. Receiving treatment and barriers to treatment
    3. Treatment issues
    4. Culturally competent services
    5. Indigenous and traditional healing
    6. A community approach to treatment
    7. Culture and clinical training
14. Culture and social behavior
    1. Cultural differences in how we perceive people
    2. Culture and attributions
    3. Mate selection, love, and marriage across cultures
    4. Culture and conformity, compliance, and obedience
    5. Culture and cooperation
    6. Culture and intergroup relations
    7. Culture and aggression, violence, and war
    8. Acculturation
15. Culture and organizations
    1. Cultural differences in work-related values: Hofstede's cultural dimensions
    2. Organizational culture and organizational climate
    3. Culture and attitudes about work and organizations
    4. Culture, motivation, and productivity
    5. Culture, leadership, and management styles
    6. Culture and decision-making processes
    7. Culture and negotiation
    8. Systems of oppression

**Lab Content**

Not applicable.

**Special Facilities and/or Equipment**
When taught as an online distance learning section, students and faculty need ongoing and continuous internet and email access.

**Methods of Evaluation**

| Methods of Evaluation |
|---|
| Quizzes |
| Examinations (e.g., mix of multiple choice, short answer, and/or essay questions) |
| Problem-solving exercises |
| Paper(s) integrating personal observations/experiences to theories and research findings in cultural psychology |
| Research project (individual or group) |
| Interviews of other cultural group members |
| Oral presentations |

**Method(s) of Instruction**

| Method(s) of Instruction |
|---|
| Lecture |
| Class discussions |
| Active learning exercises |
| Group work |
| Films, videos |
| Service learning and/or community building activities |
| Field trips may be included |

**Representative Text(s)**

| Author(s) | Title | Publication Date |
|---|---|---|
| Matsumoto, D., and L. Juang | Culture and Psychology | 2106 |
| Heine, S.J. | Cultural Psychology | 2019 |
| Cohen, D., and S. Kitayama | Handbook of Cultural Psychology | 2019 |
| Holmes, R.M. | Cultural Psychology: Exploring Culture and Mind in Diverse Communities | 2020 |

**Please provide justification for any texts that are older than 5 years**

**Other Required Materials**

**Types and/or Examples of Required Reading, Writing, and Outside of Class Assignments**

1. Reading assignments (examples):
    1. Past and current journal articles on various topics in the field of cultural psychology
    2. Websites
    3. Popular media sources (e.g., YouTube, social media, TV shows, news, magazines)
2. Writing assignments (examples):
    1. Conducting/writing an interview
    2. Watching a select film and reflecting on cultural similarities and dissimilarities
    3. Self-reflection paper on student's own cultural identity
    4. Observational report on national and/or global conflict due to cultural values
    5. Analysis of daily life situation (e.g., grocery stores, places of worship, restaurants, schools, family dynamics) among different cultural groups

**Authorized Discipline(s):**
Psychology

**Faculty Service Area (FSA Code)**
PSYCHOLOGY

**Taxonomy of Program Code (TOP Code)**
2001.00 - Psychology, General

## Breadth Criteria for Foothill General Education Courses

*At Foothill College, the primary objective of the general education requirements is to provide students with the depth and breadth of knowledge and understanding required to be independent, thinking persons who are able to interact successfully with others as educated and productive members of our diverse society. Design and implementation of the general education curriculum ensures that students have exposure to all major disciplines, understand relationships among the various disciplines, and appreciate and evaluate the collective knowledge and experiences that form our cultural and physical heritage. General education courses provide content that is broad in scope and at an introductory depth, and all require critical thinking.*

*A general education enables students to clarify and present their personal views as well as respect, evaluate, and be informed by the views of others. This academic program is designed to facilitate a process that enables students to reach their fullest potential as individuals, national and global citizens, and lifelong learners for the 21st century.*

*In order to be successful, students are expected to have achieved minimum proficiency in math (MATH 105 or 180) and English (ENGL 1A or 1AH or 1S & 1T) before enrolling in a GE course.*

*A completed pattern of general education courses provides students with opportunities to acquire, practice, apply, and become proficient in each of the core competencies listed below.*

*B1. Communication (analytical reading, writing, speaking, and listening skills including evaluation, synthesis, and research).*
*B2. Computation (application of mathematical concepts, and/or using principles of data collection and analysis*

*to solve problems).*
*B3. Creative, critical, and analytical thinking (reasoning, questioning, problem solving, and consideration of consequence).*
*B4. Community and global consciousness and responsibility (consideration of one's role in society at the local, regional, national, and global level in the context of cultural constructs and historical and contemporary events and issues).*
*B5. Information competency (ability to identify an information need, to find, evaluate and use information to meet that need in a legal and ethical way) and digital literacy (to teach and assess basic computer concepts and skills so that people can use computer technology in everyday life to develop new social and economic opportunities for themselves, their families, and their communities).*

**Please map each appropriate component from the course outline of record to the appropriate breadth criteria. You can use any part of your COR.**

## Breadth Mapping: Please indicate all that apply

**B1. Communication (analytical reading, writing, speaking, and listening skills including evaluation, synthesis, and research). Matching course component(s):**

Course objectives:
1. Demonstrate knowledge of major theories and research findings in the field of cultural psychology
2. Analyze research methodology in cultural psychology (including quantitative research, qualitative research, measures, research paradigms)
3. Examine and apply evidence for empirical claims in cultural psychology research to other subfields in psychology including cognition, neuroscience, perception (time, space, color), language, emotions, lifespan development, gender, motivation, behaviors, identity, morality, relationships, personality, physical health, and mental health
4. Identify and explore how emotions, cognitions, values, and choices may impact and influence culture and vice-versa (i.e., mutual constitution)
5. Apply the principles and theories of cultural psychology to social justice issues and daily life situations
6. Gain a better understanding of self and others in the world, especially as it relates to one's cultural lens
7. Develop an understanding of issues of intersectionality, prejudice, microaggressions, discrimination, privilege, and their roles in eliminating bias and discrimination

Methods of Evaluation:
Examinations (e.g., mix of multiple choice, short answer, and/or essay questions)
Problem-solving exercises
Paper(s) integrating personal observations/experiences to theories and research findings in cultural psychology
Research project (individual or group)
Interviews of other cultural group members
Oral presentations

Types and/or Examples of Required Reading, Writing, and Outside of Class Assignments:
1. Past and current journal articles on various topics in the field of cultural psychology

**B2. Computation (application of mathematical concepts, and/or using principles of data collection and analysis to solve problems). Matching course component(s):**

**B3. Clearly and precisely express their ideas in a logical and organized manner using the discipline-appropriate language. Matching course component(s):**

Methods of Evaluation:
Paper(s) integrating personal observations/experiences to theories and research findings in cultural psychology
Research project (individual or group)
Oral presentations

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

Course Objectives:
5. Apply the principles and theories of cultural psychology to social justice issues and daily life situations
6. Gain a better understanding of self and others in the world, especially as it relates to one's cultural lens
7. Develop an understanding of issues of intersectionality, prejudice, microaggressions, discrimination, privilege, and their roles in eliminating bias and discrimination

Course Content:
10. Culture, Language, and Communication
d. Intracultural and intercultural communication
11. Culture and Health
e. Sociocultural influences on physical health and disease
f. Differences in health care and medical delivery systems
12. Culture and Psychological Disorders
e. Mental health of ethnic minorities, migrants, and refugees
13. Culture and Treatment of Psychological Disorders
d. Culturally competent services
e. Indigenous and traditional healing
f. A community approach to treatment
15. Culture and Organizations
h. Systems of oppression

**B5. Information competency (ability to identify an information need, to find, evaluate and use information to meet that need in a legal and ethical way) and digital literacy (to teach**

**and assess basic computer concepts and skills so that people can use computer technology in everyday life to develop new social and economic opportunities for themselves, their families, and their communities). Matching course component(s):**

Course objective:
2. Analyze research methodology in cultural psychology (including quantitative research, qualitative research, measures, research paradigms)
3. Examine and apply evidence for empirical claims in cultural psychology research to other subfields in psychology including cognition, neuroscience, perception (time, space, color), language, emotions, lifespan development, gender, motivation, behaviors, identity, morality, relationships, personality, physical health, and mental health

Methods of Evaluation:
Paper(s) integrating personal observations/experiences to theories and research findings in cultural psychology
Research project (individual or group)

Types and/or Examples of Required Reading, Writing, and Outside of Class Assignments:
1. Past and current journal articles on various topics in the field of cultural psychology

## Depth Criteria for Area IV - Social & Behavioral Sciences

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

*Courses meeting the General Education Requirement in Social and Behavioral Sciences must include all of the following student learning outcomes:*
*S1. Explain the interactions of people as members of societies, cultures and social subgroups;*
*S2. Exercise critical thinking and analytical oral and/or written skills including consideration of events and ideas from multiple perspectives;*
*S3. Demonstrate knowledge and application of the scientific method in conducting research and in other methods of inquiry relative to the discipline.*

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

**Please map each appropriate component from the course outline of record to the appropriate depth criteria. You can use any part of your COR.**

## Depth Mapping: Must include the following

**S1. Explain the interactions of people as members of societies, cultures and social subgroups; Matching course component(s):**

Course objective:
4. Identify and explore how emotions, cognitions, values, and choices may impact and influence culture and vice-versa (i.e., mutual constitution)
5. Apply the principles and theories of cultural psychology to social justice issues and daily life situations
6. Gain a better understanding of self and others in the world, especially as it relates to one's cultural lens
7. Develop an understanding of issues of intersectionality, prejudice, microaggressions, discrimination, privilege, and their roles in eliminating bias and discrimination

Course content:
1. An Introduction to Culture and Psychology
a. Psychology with a cultural perspective
b. What is culture?
c. Contents of culture
d. Influence of culture on human behaviors and mental processes
3. Enculturation
a. Cultural learning
b. Enculturation and socialization
c. Culture, parenting, and families
d. Culture and peers
e. Culture and the educational system
10. Culture, Language, and Communication
a. Co-evolution of language and human culture
b. Cultural influences on verbal language
c. Cultural influences on nonverbal communication
d. Intracultural and intercultural communication
e. Bilingualism and culture
14. Culture and Social Behavior
a. Cultural differences in how we perceive people
b. Culture and attributions
c. Mate selection, love, and marriage across cultures
d. Culture and conformity, compliance, and obedience
e. Culture and cooperation
f. Culture and intergroup relations
g. Culture and aggression, violence, and war
h. Acculturation

15. Culture and Organizations
a. Cultural differences in work-related values: Hofstede's cultural dimensions
b. Organizational culture and organizational climate
c. Culture and attitudes about work and organizations
d. Culture, motivation, and productivity
e. Culture, leadership, and management styles
f. Culture and decision-making processes
g. Culture and negotiation
h. Systems of oppression

**S2. Exercise critical thinking and analytical oral and/or written skills including consideration of events and ideas from multiple perspectives; Matching course component(s):**

Course objectives:
3. Examine and apply evidence for empirical claims in cultural psychology research to other subfields in psychology including cognition, neuroscience, perception (time, space, color), language, emotions, lifespan development, gender, motivation, behaviors, identity, morality, relationships, personality, physical health, and mental health
5. Apply the principles and theories of cultural psychology to social justice issues and daily life situations
6. Gain a better understanding of self and others in the world, especially as it relates to one's cultural lens
7. Develop an understanding of issues of intersectionality, prejudice, microaggressions, discrimination, privilege, and their roles in eliminating bias and discrimination

Course Content:
2. Cross-cultural Research Methods
a. Types of cross-cultural comparisons
b. Designing cross-cultural comparative research
c. Bias and equivalence

Methods of Evaluation:
Paper(s) integrating personal observations/experiences to theories and research findings in cultural psychology
Interview of other cultural group members

**S3. Demonstrate knowledge and application of the scientific method in conducting research and in other methods of inquiry relative to the discipline. Matching course component(s):**

Course objectives:
2. Analyze research methodology in cultural psychology (including quantitative research, qualitative research, measures, research paradigms)
3. Examine and apply evidence for empirical claims in cultural psychology research to other

subfields in psychology including cognition, neuroscience, perception (time, space, color), language, emotions, lifespan development, gender, motivation, behaviors, identity, morality, relationships, personality, physical health, and mental health

Course Content:
2. Cross-cultural Research Methods
a. Types of cross-cultural comparisons
b. Designing cross-cultural comparative research
c. Bias and equivalence

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

**S4. Demonstrate appreciation of and sensitivity towards diverse cultures -- their social, behavioral and organizational structure; Matching course component(s):**

Course objective:
3. Examine and apply evidence for empirical claims in cultural psychology research to other subfields in psychology including cognition, neuroscience, perception (time, space, color), language, emotions, lifespan development, gender, motivation, behaviors, identity, morality, relationships, personality, physical health, and mental health
4. Identify and explore how emotions, cognitions, values, and choices may impact and influence culture and vice-versa (i.e., mutual constitution)
5. Apply the principles and theories of cultural psychology to social justice issues and daily life situations
g. Gain a better understanding of self and others in the world, especially as it relates to one's cultural lens
7. Develop an understanding of issues of intersectionality, prejudice, microaggressions, discrimination, privilege, and their roles in eliminating bias and discrimination

Course content:
1. An Introduction to Culture and Psychology
a. Psychology with a cultural perspective
b. What is culture?
c. Contents of culture
d. Influence of culture on human behaviors and mental processes
3. Enculturation
a. Cultural learning
b. Enculturation and socialization
4. Culture and Developmental Processes
b. Culture and attachment
c. Cognitive development
d. Moral reasoning and justice
5. Culture, Self, and Identity
6. Culture and Personality
b. Cross-cultural studies on personality traits

c. Cross-cultural studies on other dimensions of personality
d. Indigenous personalities
e. Integrating universal and cultural-specific understanding of personality
7. Culture and Gender
b. Gender differences across cultures
d. Changing cultures, changing gender roles
8. Culture and Cognition
g. Culture and intelligence (e.g., racism, eugenics)
9. Culture and Emotion
e. Cultural construction of emotional experience
f. Cultural construction of concepts, attitudes, values, and beliefs about emotions
10. Culture, Language, and Communication
b. Cultural influences on verbal language
c. Cultural influences on nonverbal language
d. Intracultural and intercultural communication
e. Bilingualism and culture
11. Culture and Health
a. Cultural differences in the definition of health
c. Genetic influences on physical health and disease
d. Psychosocial influences on physical health and disease
e. Sociocultural influences on physical health and disease (e.g., childhood adverse events)
f. Differences in health care and medical delivery systems
12. Culture and Psychological Disorders
b. Culture and the categorization and assessment of psychological disorders
c. Cross-cultural research on psychological disorders
d. Cultural syndromes of distress
e. Mental health of ethnic minorities, migrants, and refugees
13. Culture and Treatment of Psychological Disorders
a. Culture and psychotherapy
b. Receiving treatment and barriers to treatment
c. Treatment issues
d. Culturally competent services
e. Indigenous and traditional healing
f. A community approach to treatment
g. Culture and clinical training
14. Culture and Social Behavior
a. Cultural differences in how we perceive people
b. Culture and attributions
c. Mate selection, love, and marriage across cultures
d. Culture and conformity, compliance, and obedience
e. Culture and cooperation
f. Culture and intergroup relations
g. Culture and aggression, violence, and war
h. Acculturation

15. Culture and Organizations
a. Cultural differences in work-related values
b. Organizational culture and organizational climate
c. Culture and attitudes about work and organizations
d. Culture, motivation, and productivity
e. Culture, leadership, and management styles
f. Culture and decision-making processes
g. Culture and negotiation
h. Systems of oppression

**S5. Explain world development and global relationships; Matching course component(s):**

Course content:
14. Culture and Social Behavior
a. Cultural differences in how we perceive people
b. Culture and attributions
c. Mate selection, love, and marriage across cultures
d. Culture and conformity, compliance, and obedience
e. Culture and cooperation
f. Culture and intergroup relations
g. Culture and aggression, violence, and war
h. Acculturation
15. Culture and Organizations
a. Cultural differences in work-related values
b. Organizational culture and organizational climate
c. Culture and attitudes about work and organizations
d. Culture, motivation, and productivity
e. Culture, leadership, and management styles
f. Culture and decision-making processes
g. Culture and negotiation
h. Systems of oppression

**S6. Recognize the rights, duties, responsibilities, and opportunities of community members; Matching course component(s):**

**S7. Analyze the relationship of business and economic activities to the functioning of society as a whole; Matching course component(s):**

**S8. Assess the distribution of power and influence; Matching course component(s):**

Course Objectives:
5. Apply the principles and theories of cultural psychology to social justice issues and daily

life situations
7. Develop an understanding of issues of intersectionality, prejudice, microaggressions, discrimination, privilege, and their roles in eliminating bias and discrimination

**S9. Analyze current events and global issues in the context of historic, ethical and social patterns; Matching course component(s):**

Course Objectives:
5. Apply the principles and theories of cultural psychology to social justice issues and daily life situations
6. Gain a better understanding of self and others in the world, especially as it relates to one's cultural lens
7. Develop an understanding of issues of intersectionality, prejudice, microaggressions, discrimination, privilege, and their roles in eliminating bias and discrimination

**S10. Comprehend and engage in social, economic and political issues at the local, national and global level; Matching course component(s):**

**S11. Display knowledge of human motivations, behaviors and relationships; Matching course component(s):**

Course Objectives:
3. Examine and apply evidence for empirical claims in cultural psychology research to other subfields in psychology including cognition, neuroscience, perception (time, space, color), language, emotions, lifespan development, gender, motivation, behaviors, identity, morality, relationships, personality, physical health, and mental health
4. Identify and explore how emotions, cognitions, values, and choices may impact and influence culture and vice-versa (i.e., mutual constitution)

Course content:
3. Enculturation
a. Cultural learning
b. Enculturation and socialization
c. Culture, parenting, and families
d. Culture and peers
e. Culture and the educational system
14. Culture and Social Behavior
a. Cultural differences in how we perceive people
b. Culture and attributions
c. Mate selection, love, and marriage across cultures
d. Culture and conformity, compliance, and obedience
e. Culture and cooperation
f. Culture and intergroup relations

g. Culture and aggression, violence, and war
h. Acculturation

**S12. Understand the evolutionary origins of humanity and how this relates to present day human interactions; Matching course component(s):**

Course content:
9. Culture and Emotion
a. Evolution of human emotion
b. Biological bases of emotion
10. Culture, Language, and Communication
a. Co-evolution of language and human culture
11. Culture and Health
c. Genetic influence on physical health and disease

**S13. Describe how individual interaction with the natural world and external societies shapes and influences human behavior; Matching course component(s):**

Course Objectives:
3. Examine and apply evidence for empirical claims in cultural psychology research to other subfields in psychology including cognition, neuroscience, perception (time, space, color), language, emotions, lifespan development, gender, motivation, behaviors, identity, morality, relationships, personality, physical health, and mental health
4. Identify and explore how emotions, cognitions, values, and choices may impact and influence culture and vice-versa (i.e., mutual constitution)
5. Apply the principles and theories of cultural psychology to social justice issues and daily life situations
6. Gain a better understanding of self and others in the world, especially as it relates to one's cultural lens
7. Develop an understanding of issues of intersectionality, prejudice, microaggressions, discrimination, privilege, and their roles in eliminating bias and discrimination

Course content:
1. An Introduction to Culture and Psychology
d. Influence of culture on human behaviors and mental processes
3. Enculturation
a. Cultural learning
b. Enculturation and socialization
c. Culture, parenting, and families
d. Culture and peers
e. Culture and the educational system
7. Culture and Gender
d. Changing culture, changing gender roles
8. Culture and cognition
g. Culture and intelligence (e.g., racism, eugenics)

9. Culture and Emotion
c. Cultural influences on emotions
d. Cultural regulation of basic emotions
e. Cultural construction of emotional experience
f. Cultural construction of concepts, attitudes, values, and beliefs about emotions
10. Culture, Language, and Communication
d. Intracultural and intercultural communication
e. Bilingualism and culture
11. Culture and Health
f. Differences in health care and medical delivery systems
12. Culture of Psychological Disorders
d. Cultural syndromes of distress
e. Mental health of ethnic minorities, migrants, and refugees
13. Culture and Treatment of Psychological Disorders
b. Receiving treatment and barriers to treatment
d. Culturally competent services
e. Indigenous and traditional healing
f. A community approach to treatment
g. Culture and clinical training
14. Culture and Social Behavior
a. Cultural differences in how we perceive people
c. Mate selection, love, and marriage across cultures
h. Acculturation
15. Culture and Organizations
b. Organizational culture and organizational climate
e. Culture, leadership, and management styles
h. Systems of oppression

**S14. Explain the association between psychological well-being, mental processes, emotions societal functioning. Matching course component(s):**

Course objectives:
3. Examine and apply evidence for empirical claims in cultural psychology research to other subfields in psychology including cognition, neuroscience, perception (time, space, color), language, emotions, lifespan development, gender, motivation, behaviors, identity, morality, relationships, personality, physical health, and mental health
4. Identify and explore how emotions, cognitions, values, and choices may impact and influence culture and vice-versa (i.e., mutual constitution)
5. Apply the principles and theories of cultural psychology to social justice issues and daily life situations
6. Gain a better understanding of self and others in the world, especially as it relates to one's cultural lens
7. Develop an understanding of issues of intersectionality, prejudice, microaggressions, discrimination, privilege, and their roles in eliminating bias and discrimination

Course Content:
5. Culture, Self, and Identity
a. Culture and self
b. Culture, self-esteem, and self-enhancement
c. Culture and identity
8. Culture and cognition
a. Culture as cognition
b. Culture and attention
c. Culture and perception
d. Culture and thinking
e. Culture and memory
f. Culture and consciousness
g. Culture and intelligence (e.g., racism, eugenics)
9. Culture and Emotion
a. Evolution of human emotion
b. Biological bases of emotion
c. Cultural influences on emotions
d. Cultural regulation of basic emotions
e. Cultural construction of emotional experience
f. Cultural construction of concepts, attitudes, values, and beliefs about emotions
14. Culture and Social Behavior
a. Cultural differences in how we perceive people
b. Culture and attributions
c. Mate selection, love, and marriage across cultures
d. Culture and conformity, compliance, and obedience
e. Culture and cooperation
f. Culture and intergroup relations
g. Culture and aggression, violence, and war
h. Acculturation

**Attach Historical Forms/Documents (if applicable)**

Articulation Office Only

**C-ID Notation**

**IGETC Notation**

**CSU GE Notation**

**Transferability**
CSU/UC

**Validation Date**
10/18/21

## Division Dean Only

**Seat Count**
50

**Load**
.100

**FOAP Codes:**

**Fund Code**
114000 - General Operating- Unrestricted

**Org Code**
121101 - Psychology

**Account Code**
1320

**Program Code**
200100 - Psychology, General

**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, 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 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 |
| | 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.

| | | Year 1 | | Year 2 | |
|---|---|---|---|---|---|
| Course # | Course Title | Annual Sections | Annual Enrollment | Annual Sections | Annual Enrollment |
| KINS 1 | Introduction to Kinesiology | 10 | 334 | 9 | 325 |
| KINS 8A | Theory & Concepts of | 3 | 75 | 3 | 85 |

| | | | | | |
|---|---|---|---|---|---|
| | Exercise Physiology I | | | | |
| 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 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 Open-ings | Average Annual Open-ings | 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 Open-ings | Average Annual Open-ings | 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 CCCCO Data Mart.

## Sources

O*Net Online
Labor Insight/Jobs (Burning Glass)
Economic Modeling Specialists International (EMSI)
CTE LaunchBoard www.calpassplus.org/Launchboard/
Statewide CTE Outcomes Survey
Employment Development Department Unemployment Insurance Dataset
Living Insight Center for Community Economic Development
Chancellor's Office MIS system

## Contacts

For more information, please contact:


- 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:** 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
_X__ Certificate of Achievement
_____ Noncredit certificate
_____ AA/AS Degree (local)
_____ AA-T/AS-T Degree (ADT)

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

| **REVENUE & RESOURCES**<br>https://foothill.edu/gov/revenue-and-resources/ |
|---|
| **Date of meeting:** 1/22/21<br><br>**Comments:**<br>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**<br>https://foothill.edu/gov/council/ |
|---|
| **Date of meeting:**<br><br>**Comments:**<br>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)

**RELATED EDUCATION PROGRAMS**

Physical Therapy Assistant

EMT/Paramedic

**WORKFORCE OPPORTUNITIES**

Physical Therapy Aide

Chiropractic Aide

Personal Trainer

# FOOTHILL SPORTS MEDICINE

FOOTHILL SPORTS MEDICINE

Associate of Science Degree, Kinesiology AA-T,

Certificate (pending)

DUEL-ENROLLMENT WITH HIGH SCHOOL PROGRAMS

To: CCC
From: Language Arts CC
Date: 11/22/2021

**The Language Arts curriculum committee respectively requests that the language for the minimum proficiency in English for Foothill AA/AS degrees be changed.**

Given below is the Title V requirement for ESLL courses applicable to the AA/AS degree:

Effective for all students admitted to a community college for the Fall 2019 term or any term thereafter, competence in written expression shall be demonstrated by obtaining a satisfactory grade in an English course at the level of the course typically known as Freshman Composition (either Freshman Composition or another English course at the same level and with the same rigor, approved locally) or by demonstrating competency that is comparable to satisfactory completion of the specified English course, determined locally. Satisfactory completion of an English course at the level of Freshman Composition shall satisfy both this competency requirement and the coursework requirement set forth in subdivision (b)(1)(D)(i) of this section.

Current Language:

Minimum proficiency: ENGL 1A or ENGL 1AH or ENGL 1S and ENGL 1T.

We're requesting to add the course back to the minimum proficiency list as part of the reactivation of this course, updating the language to:

Minimum proficiency: ENGL 1A or ENGL 1AH or ENGL 1S and ENGL 1T or ESLL 26.

# APCA F100. : CULINARY SAFETY & SANITATION

**Effective Term**
Summer 2022

**Subject**
Apprenticeship: Culinary Arts (APCA)
**Course Number**
F100.

**Department**
Apprenticeship (A P)

**Division**
Apprenticeship (1ED)

**Units**
2.5

**Course Title**
CULINARY SAFETY & SANITATION

**Former ID**

**Cross Listed**

**Related Courses**

**Maximum Units**
2.5

**Does this course meet on a weekly basis?**
No

**Total Lecture Hours per quarter**
32

**Total Lab Hours per quarter**
8

**Total Out of Class Hours per quarter**
64

**Special Hourly Notation**

**Total Contact Hours**
40

**Total Student Learning Hours**
104

**Repeatability Statement**
Not Repeatable

**Credit Status**
Credit

**Degree Status**
Applicable

**Is Basic Skills applicable to this course?**
No

**Grading**
Letter Grade (Request for Pass/No Pass)

**Will credit by exam be allowed for this course?**
No

**Honors**
No

**Distance Learning**
No

**Degree or Certificate Requirement**
None of the above (Stand Alone course)

## Stand Alone

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

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

**• Temporary means the course will be incorporated into a new degree or certificate that is not yet State approved.**
**• Permanent means there are no plans to add the course to a State approved degree or certificate, nor to the Foothill GE pattern.**

**Please select**
Permanent

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

**Criteria A. Appropriateness to Mission**

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

**Please indicate how your course supports the Foothill College Mission:**
Workforce/CTE

**Criteria B. Need**

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

**Evidence**

This course will help students gain and retain jobs within the culinary arts profession. The course teaches job skills for employability and life skills. Food service jobs are expected to increase at an annual rate of 1.7% in the Santa Clara County through 2024 per EDD LMI short term projections (http://www.labormarketinfo.edd.ca.gov/data/employment-projections.html#Short), approximately 2400 additional jobs a year. Students completing these courses and the Apprenticeship will be immediately employable in this growing market.

**Attach evidence**

**Need/Justification**
This course is part of the culinary arts apprenticeship program and will help students gain and retain jobs within the culinary arts profession. Sanitation is required, and a certificate in food handling is now required by the State of California for any and all who work with food that is served to the public.

**Course Description**
Students will study first aid, food safety management and other safety issues related to food service operations. They will learn how to assess the threat of contamination, prevention

measures, and alternative responses to food safety and other concerns, such allergens. The course also presents other material critical to safety in the modern day professional kitchen, including Hazard Analysis Critical Control Point (HACCP) and active managerial control. A case study in the form of food safety inspection and audit of the cafeteria and culinary classroom kitchen will give students a chance to see the difficulties that face food service operators every day.

**Course Prerequisites**
Prerequisite: Per California Code of Regulations, this course is limited to students admitted to the Culinary Arts Apprenticeship Program.

**Course Corequisites**

**Course Advisories**

**Course Objectives**

The student will be able to:

1. Complete CPR and first aid training and obtain certification.
2. Demonstrate temperature checks on refrigeration equipment.
3. Complete ServSafe Food Handler Program and obtain certificate in food handling.
4. Demonstrate sanitizer level checks on three-compartment sinks.
5. Demonstrate safe work practices.
6. Describe proper techniques to prevent injuries while using and cleaning food service equipment and tools.
7. Describe basic cuts and burns and how to treat these wounds.
8. Identify the different classes of fire extinguishers and describe how to use one.
9. Demonstrate temperature checks on refrigeration equipment.
10. Prepare for and pass the ServSafe Food Protection Manager Certification exam.

**Course Content**

1. Providing safe food (Lec)
2. The microworld (Lec)
3. Contamination and food allergens (Lec)
4. Hygiene and safe food handling (Lec and Lab)
5. The flow of food (Lec and Lab)
6. Purchasing, receiving, and storage (Lec and Lab)
7. Preparation (Lec and Lab)
8. Service (Lec and Lab)
9. Food safety management systems (Lec and Lab)
10. Facilities and equipment (Lec)
11. Cleaning and sanitizing (Lec and Lab)

12. Integrated pest management (Lec)
13. Food safety regulations and standards (Lec)
14. Employee food safety training (Lec)
15. First aid (Lec and Lab)

**Lab Content**

The audit of the cafeteria run by Sodexo and the Patio Room run by the San Jose Job Corps Patio Room will be an intense look at food service operations and the sanitation challenges that they face leading to the assigned comparative study.

**Special Facilities and/or Equipment**

1. Laptop computer and projector or TV screen
2. Whiteboard with erasable markers
3. Access to commercial kitchen for demonstrations and practice

**Methods of Evaluation**

| Methods of Evaluation |
|---|
| Written examinations |
| Routine checks for understanding |
| Evaluation of notebook |
| Student presentations |
| Quizzes based on the units |

**Method(s) of Instruction**

| Method(s) of Instruction |
|---|
| Lecture |
| Discussion |
| Demonstration: Sodexo Cafeteria at San Jose Job Corps (HACCP) and San Jose Job Corps Center Culinary Patio Room (active managerial control). Students will compare and contrast the two food service safety systems and see the protocols in action |

**Representative Text(s)**

| Author(s) | Title | Publication Date |
|---|---|---|
| National Restaurant Association | ServSafe Manager Book, 7th ed. (English, with exam answer sheet) | 2017 |

**Please provide justification for any texts that are older than 5 years**

**Other Required Materials**

**Types and/or Examples of Required Reading, Writing, and Outside of Class Assignments**

1. Required reading of the ServSafe Manager textbook; students will take quizzes after each chapter.
2. Students will be certified food handlers and earn the certification of ServSafe Food Protection Manager.
3. Students will write an 1800-word compare and contrast paper regarding their audit of the San Jose Job Corps Center Patio Room and the Sodexo Cafeteria at the San Jose Job Corps. Students will also make a team presentation of their findings to Sodexo and SJJC representatives using PowerPoint.

**Authorized Discipline(s):**
Culinary Arts/Food Technology

**Faculty Service Area (FSA Code)**
INDUSTRIAL TECH

**Taxonomy of Program Code (TOP Code)**
*1306.30 - Culinary Arts

**Attach Historical Forms/Documents (if applicable)**

## Articulation Office Only

**C-ID Notation**

**IGETC Notation**

**CSU GE Notation**

**Transferability**
None

**Validation Date**

## Division Dean Only

**Seat Count**
30

**Load**
.060

**FOAP Codes:**

**Fund Code**
115000 - Apprenticeship-Foothill

**Org Code**
142226 - Apprentice-Culinary Program

**Account Code**
1320

**Program Code**
130630 - Culinary Arts

# APCA F101. : BASIC CULINARY THEORY

**Effective Term**
Summer 2022

**Subject**
Apprenticeship: Culinary Arts (APCA)
**Course Number**
F101.

**Department**
Apprenticeship (A P)

**Division**
Apprenticeship (1ED)

**Units**
2.5

**Course Title**
BASIC CULINARY THEORY

**Former ID**

**Cross Listed**

**Related Courses**

**Maximum Units**
2.5

**Does this course meet on a weekly basis?**
No

**Total Lecture Hours per quarter**
32

**Total Lab Hours per quarter**
8

**Total Out of Class Hours per quarter**
64

**Special Hourly Notation**

**Total Contact Hours**
40

**Total Student Learning Hours**
104

**Repeatability Statement**
Not Repeatable

**Credit Status**
Credit

**Degree Status**
Applicable

**Is Basic Skills applicable to this course?**
No

**Grading**
Letter Grade (Request for Pass/No Pass)

**Will credit by exam be allowed for this course?**
No

**Honors**
No

**Distance Learning**
No

**Degree or Certificate Requirement**
None of the above (Stand Alone course)

## Stand Alone

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

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

**• Temporary means the course will be incorporated into a new degree or certificate that is not yet State approved.**
**• Permanent means there are no plans to add the course to a State approved degree or certificate, nor to the Foothill GE pattern.**

**Please select**
Permanent

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

**Criteria A. Appropriateness to Mission**

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

**Please indicate how your course supports the Foothill College Mission:**
Workforce/CTE

**Criteria B. Need**

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

**Evidence**

This course will help students gain and retain jobs within the culinary arts profession. The course teaches job skills for employability and life skills. Food service jobs are expected to increase at an annual rate of 1.7% in the Santa Clara County through 2024 per EDD LMI short term projections (http://www.labormarketinfo.edd.ca.gov/data/employment-projections.html#Short), approximately 2400 additional jobs a year. Students completing these courses and the Apprenticeship will be immediately employable in this growing market.

**Attach evidence**

**Need/Justification**
This course is part of the culinary arts apprenticeship program and will help students gain and retain jobs within the culinary arts industry.

**Course Description**
Students will be exposed to food chemistry and the vocabulary necessary to succeed in an industrial food service setting. Topics will range from baking to cold kitchen preparation to various understandings of dry and moist cooking techniques. In addition, students will learn

product identification and protocols in food handling and preferred cooking methods for meats, poultry, fruits, vegetables, starches, legumes, fish and shellfish.

**Course Prerequisites**
Prerequisite: Per California Code of Regulations, this course is limited to students admitted to the Culinary Apprenticeship Program.

**Course Corequisites**

**Course Advisories**

**Course Objectives**

The student will be able to:

1. Know the qualities and properties of food items and ingredients used in food preparation, including meat, poultry, fruits, vegetables, starches, dairy products, and seafood
2. Identify the cuts and structure of beef, pork, lamb, chicken, fish, and shellfish
3. Demonstrate an extensive vocabulary in regards to the culinary profession
4. Summarize the details of meat inspection, grading, handling, storage and desired cooking methods of various cuts of beef, pork, lamb, poultry, fish, and shellfish
5. Distinguish between the different market forms of fish and shellfish, and the types of mollusks, crustaceans, and other seafood, like squid
6. Distinguish between various market forms of fruits, vegetables, herbs, spices, and grains via product ID test
7. Identify dry and moist cooking methods for fruits, vegetables, grains, and legumes
8. Understand purchasing and storage concerns for fresh, canned, frozen, and dried vegetables
9. Understand the concepts of coagulation, caramelization, fermentation, radiation, heat conduction, and emulsification in food chemistry
10. Know the principle of mise en place, including the placement and order of use of ingredients, tools, and supplies
11. Produce salads, sandwiches, cold soups, dressings, and forcemeats, including sausages
12. Know the qualities and properties of food items and ingredients used for baked goods, pastries, and desserts

**Course Content**

1. Theories and chemistry of stocks, soups, and sauces (Lec)
2. Knives: proper use, sharpening, and maintenance of kitchen knives (Lec and Lab)
3. Meat, poultry, and game identification and fabrication (Lec and Lab)
4. Fish and shellfish identification and fabrication (Lec and Lab)

5. Guidelines in regard to fruits, vegetables, herbs, spices (Lec and Lab)
6. Starches, grains, and dry goods identification (Lec and Lab)
7. Cooking methods: grilling, broiling, and roasting (Lec and Lab)
8. Cooking methods: sauteing, pan frying, and deep frying (Lec and Lab)
9. Cooking methods: steaming and poaching (Lec and Lab)
10. Cooking methods: braising and stewing (Lec and Lab)
11. Egg cookery and the science of eggs (Lec and Lab)
12. Baking basics (Lec and Lab)
13. Garde manger: the science of the cold kitchen (Lec and Lab)

**Lab Content**

Students will be handling different products and must identify them, check them for quality, and store them safely. Students will practice knife identification, sharpening and maintenance.

**Special Facilities and/or Equipment**

1. Classroom with a flat screen television and laptop or computer for presentations
2. Whiteboard with markers
3. Fully equipped commercial kitchen for demonstrations and practice

**Methods of Evaluation**

| Methods of Evaluation |
|---|
| Written examinations (20%) |
| Routine checks for understanding (5%) |
| Evaluation of notebook (10%) |
| Student presentations and papers (40%) |
| Quizzes based on the units (15%) |
| Participation, uniform dress code, and professionalism |

**Method(s) of Instruction**

| Method(s) of Instruction |
|---|
| Lecture |
| Discussion - vocabulary |
| Demonstration (e.g., showing students what some items look like, how an emulsification is made) |

**Representative Text(s)**

| Author(s) | Title | Publication Date |
|---|---|---|
| Labensky, Sarah, et al. | On Cooking: A Textbook for Culinary Fundamentals | 2017 |

**Please provide justification for any texts that are older than 5 years**

**Other Required Materials**

**Types and/or Examples of Required Reading, Writing, and Outside of Class Assignments**

1. Student will have about 500 pages of reading; must look up vocabulary terms and write them down.
2. Weekly presentations on certain topics, like rice or potatoes.
3. Five 1200-word papers on food topics. Even though these papers will be broad, they will hopefully inspire interest for the student to gain further knowledge.

**Authorized Discipline(s):**
Culinary Arts/Food Technology

**Faculty Service Area (FSA Code)**
INDUSTRIAL TECH

**Taxonomy of Program Code (TOP Code)**
*1306.30 - Culinary Arts

**Attach Historical Forms/Documents (if applicable)**

## Articulation Office Only

**C-ID Notation**

**IGETC Notation**

**CSU GE Notation**

**Transferability**
None

**Validation Date**

## Division Dean Only

**Seat Count**
30

**Load**
.060

**FOAP Codes:**

**Fund Code**
115000 - Apprenticeship-Foothill

**Org Code**
142226 - Apprentice-Culinary Program

**Account Code**
1320

**Program Code**
130630 - Culinary Arts

# APCA F102. : CULINARY MATH, MEASUREMENTS & CALCULATIONS

**Effective Term**
Summer 2022

**Subject**
Apprenticeship: Culinary Arts (APCA)
**Course Number**
F102.

**Department**
Apprenticeship (A P)

**Division**
Apprenticeship (1ED)

**Units**
2.5

**Course Title**
CULINARY MATH, MEASUREMENTS & CALCULATIONS

**Former ID**

**Cross Listed**

**Related Courses**

**Maximum Units**
2.5

**Does this course meet on a weekly basis?**
No

**Total Lecture Hours per quarter**
32

**Total Lab Hours per quarter**
8

**Total Out of Class Hours per quarter**
64

**Special Hourly Notation**

**Total Contact Hours**

40

**Total Student Learning Hours**
104

**Repeatability Statement**
Not Repeatable

**Credit Status**
Credit

**Degree Status**
Applicable

**Is Basic Skills applicable to this course?**
No

**Grading**
Letter Grade (Request for Pass/No Pass)

**Will credit by exam be allowed for this course?**
No

**Honors**
No

**Distance Learning**
No

**Degree or Certificate Requirement**
None of the above (Stand Alone course)

## Stand Alone

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

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

**• Temporary means the course will be incorporated into a new degree or certificate that is not yet State approved.**
**• Permanent means there are no plans to add the course to a State approved degree or certificate, nor to the Foothill GE pattern.**

**Please select**
Permanent

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

**Criteria A. Appropriateness to Mission**

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

**Please indicate how your course supports the Foothill College Mission:**
Workforce/CTE

**Criteria B. Need**

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

**Evidence**

This course will help students gain and retain jobs within the culinary arts profession. The course teaches job skills for employability and life skills. Food service jobs are expected to increase at an annual rate of 1.7% in the Santa Clara County through 2024 per EDD LMI short term projections (http://www.labormarketinfo.edd.ca.gov/data/employment-projections.html#Short), approximately 2400 additional jobs a year. Students completing these courses and the Apprenticeship will be immediately employable in this growing market.

**Attach evidence**

**Need/Justification**
This course is part of the culinary arts apprenticeship program and will help students gain and retain jobs within the culinary arts profession.

**Course Description**

One of the most important courses in culinary arts, this course instills methods to measure ingredients (volume, weight, time and temperature), convert from U.S. to Metric systems of measurement, calculate portion cost and recipe cost. Also covers pricing strategies and instills an understanding of order guides and invoices. Students will work with ratios and fractions with key ratios applied to achieve an edible result without a recipe. Students will learn to detect flaws in a recipe if the ratio is not correct. Students will produce a portfolio of their own recipe calculations.

**Course Prerequisites**
Prerequisite: Per California Code of Regulations, this course is limited to students admitted to the Culinary Apprenticeship Program.

**Course Corequisites**

**Course Advisories**

**Course Objectives**

The student will be able to:

1. Identify whole numbers, decimals, fractions, and ratios used in food service calculations.
2. Demonstrate basic whole number, fraction, and decimal calculations (add, subtract, multiply, and divide).
3. Describe various methods used to measure ingredients (volume, weight, count, length, time, and temperature) and their units of measure.
4. Identify common tools used to measure in a kitchen.
5. Identify abbreviations for common units of measure.
6. Demonstrate the conversion of common units of measure within the U.S. and Metric measurement systems.
7. Demonstrate accurate measurements using the following methods: volume, weight, count, length, time, and temperature.
8. Identify various expenses in operating a food service establishment (food, labor, etc.).
9. Describe menu item food cost and how it is determined.
10. Explain how a menu item's selling price is determined.
11. Describe how portion control, proper measurement of recipe ingredients, and product waste and loss affects an operation.
12. Demonstrate the ability to assist with the receiving of a food order and check the invoice for receipt of all items listed.
13. Understand and calculate Cost Volume Profit analysis and break even points.
14. Read a Profit and Loss (PNL) statement.
15. Understand and apply concepts in budget making.

**Course Content**

1. Math basics and basic word problems (Lec and Lab)
2. Units of measure in weight, volume, and temperature, and their abbreviations in culinary arts (Lec and Lab)
3. Metric system of measurements and conversions to equivalents in the U.S. Standard system (Lec and Lab)
4. Units of measure and conversions using the bridge method (Lec)
5. Conversion of mixed measurements (Lec)
6. Advanced conversions between weight and volume (Lec and Lab)
7. Yield percentages (Lec)
8. As Purchased vs. Edible Portion, and applying yield percentages (Lec and Lab)
9. Cost per unit and total cost formulas (Lec)
10. Edible Portion cost (Lec and Lab)
11. Recipe costing (Lec)
12. Labor cost (Lec)
13. Menu engineering and revenue management (Lec)
14. The importance of beverage costing and cost control (Lec)
15. Recipe size conversion (Lec)
16. Ratios and their importance ((Lec and Lab)
17. The Profit and Loss (income) statement (Lec)

**Lab Content**

Students will observe and participate in exercises in an operating commercial kitchen to prepare and test recipes. For example: edible portion, where in order to make 10 pounds of chopped fresh pineapple, students will be taught that they need to order 18-20 lbs (two cases) of pineapple to get that yield. In addition, students will observe shrinkage in meat after cooking (fat melts) and be taught that loss needs to be accounted for when planning.

**Special Facilities and/or Equipment**

1. Commercial kitchen for observation, demonstration and practice
2. Laptop computer and projector or TV screen
3. Whiteboard with erasable markers

**Methods of Evaluation**

| Methods of Evaluation |
|---|
| Midterm and final exams |
| Quizzes |
| Homework |
| Submission of recipe costing portfolio project |
| Routine checks for understanding |

**Method(s) of Instruction**

| Method(s) of Instruction |
|---|
| Lecture |
| Demonstration: students will see yield percentages in action |
| Integrated discussion on application |
| Portfolio: students will cost out their own recipes as part of a project |
| Case study: restaurant cost control, and Profit and Loss statement impact |

**Representative Text(s)**

| Author(s) | Title | Publication Date |
|---|---|---|
| Hill, Julia, and Linda Blocker | Culinary Math, 3rd ed. (ISBN: 978-0-470-06821-2) | 2012 |

**Please provide justification for any texts that are older than 5 years**
Although this text may be older than the suggested "5 years or newer" standard, it remains a seminal text in this area of study.

**Other Required Materials**

**Types and/or Examples of Required Reading, Writing, and Outside of Class Assignments**

1. Students will research their own recipes and calculate the total recipe cost and cost per portion. This is critical in developing a pricing strategy for menus.
2. Homework will focus on calculations and will be intense; will also include a real case study of a confidential company, a Profit and Loss statement, and cost control.

**Authorized Discipline(s):**
Culinary Arts/Food Technology

**Faculty Service Area (FSA Code)**
INDUSTRIAL TECH

**Taxonomy of Program Code (TOP Code)**
*1306.30 - Culinary Arts

**Attach Historical Forms/Documents (if applicable)**

Articulation Office Only

**C-ID Notation**

**IGETC Notation**

**CSU GE Notation**

**Transferability**
None

**Validation Date**

## Division Dean Only

**Seat Count**
30

**Load**
.060

**FOAP Codes:**

**Fund Code**
115000 - Apprenticeship-Foothill

**Org Code**
142226 - Apprentice-Culinary Program

**Account Code**
1320

**Program Code**
130630 - Culinary Arts

# APCA F104. : BASIC COOKING TECHNIQUES

**Effective Term**
Summer 2022

**Subject**
Apprenticeship: Culinary Arts (APCA)
**Course Number**
F104.

**Department**
Apprenticeship (A P)

**Division**
Apprenticeship (1ED)

**Units**
5

**Course Title**
BASIC COOKING TECHNIQUES

**Former ID**

**Cross Listed**

**Related Courses**

**Maximum Units**
5

**Does this course meet on a weekly basis?**
No

**Total Lecture Hours per quarter**
30

**Total Lab Hours per quarter**
90

**Total Out of Class Hours per quarter**
60

**Special Hourly Notation**

**Total Contact Hours**
120

**Total Student Learning Hours**
180

**Repeatability Statement**
Not Repeatable

**Credit Status**
Credit

**Degree Status**
Applicable

**Is Basic Skills applicable to this course?**
No

**Grading**
Letter Grade (Request for Pass/No Pass)

**Will credit by exam be allowed for this course?**
No

**Honors**
No

**Distance Learning**
No

**Degree or Certificate Requirement**
None of the above (Stand Alone course)

## Stand Alone

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

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

**• Temporary means the course will be incorporated into a new degree or certificate that is not yet State approved.**
**• Permanent means there are no plans to add the course to a State approved degree or certificate, nor to the Foothill GE pattern.**

**Please select**
Permanent

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

**Criteria A. Appropriateness to Mission**

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

**Please indicate how your course supports the Foothill College Mission:**
Workforce/CTE

**Criteria B. Need**

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

**Evidence**

This course will help students gain and retain jobs within the culinary arts profession. The course teaches job skills for employability and life skills. Food service jobs are expected to increase at an annual rate of 1.7% in the Santa Clara County through 2024 per EDD LMI short term projections (http://www.labormarketinfo.edd.ca.gov/data/employment-projections.html#Short), approximately 2400 additional jobs a year. Students completing these courses and the Apprenticeship will be immediately employable in this growing market.

**Attach evidence**

**Need/Justification**
This course is part of the culinary arts apprenticeship program and will help students gain and retain jobs within the culinary arts industry.

**Course Description**
Covers basic cooking. Students will make stocks, soups, sauces; prepare vegetables, starches, salads; fabricate and cook various cuts of meat and poultry. Highlights basic cooking techniques, such as sauteing, roasting, poaching, braising, and frying, while following industrial recipes.

**Course Prerequisites**
Prerequisite: Per California Code of Regulations, this course is limited to students admitted to the Culinary Apprenticeship Program.

**Course Corequisites**

**Course Advisories**

**Course Objectives**

The student will be able to:

1. Use, maintain, and store the tools, utensils, equipment, and appliances appropriate for preparing a variety of food items.
2. Make the five mother sauces: bechamel, espagnole, tomato, hollandaise, and veloute, and a sub sauce of each, and store them properly.
3. Produce soups, stocks, and broths, and cool and store them properly.
4. Demonstrate proper receiving and storage protocols of various items, including meats, dairy products, eggs, fish, shellfish, produce, dry goods, and other items utilized in food production.
5. Differentiate between the types of mollusks, crustaceans, and other seafood, like squid.
6. Identify dry and moist cooking methods for fruits, vegetables, grains, and legumes.
7. Understand purchasing and storage concerns for fresh, canned, frozen, and dried vegetables.
8. List quality characteristics and cooking or preparatory methods for legumes.
9. Identify different kinds, classes, and market forms of poultry.
10. Handle, store, and prepare poultry for safe cooking.
11. Explain problems and concerns that occur when stuffing poultry.
12. Cook poultry using dry and moist cooking methods safely and effectively.
13. Make breakfast items, such as omelets, quiche, and fritattas, and understand the concept of mise en place for short order breakfast cooks.
14. Summarize the details of meat inspection, grading, handling, storage, and desired cooking methods of various cuts of beef, pork, and lamb.
15. Understand the principle of mise en place, including the placement and order of use of ingredients, tools, and supplies.
16. Prepare food by using the correct techniques and procedures specified in recipes and formulas.
17. Produce salads, sandwiches, cold soups, dressings, and forcemeats, including sausages.
18. Use plating techniques, including accurate portioning and aesthetic presentation skills.

19. Plan and follow a food production schedule, including timing and prioritizing of tasks and activities.
20. Understand the qualities and properties of food items and ingredients used for baked goods, pastries, and desserts.
21. Produce baked goods, pastries, and desserts, by using correct techniques, procedures, and various finishing techniques.

**Course Content**

1. Knife skills and kitchen equipment (Lec and Lab)
2. Soups, stocks and sauces (Lab)
3. Vegetables and fruits (Lab)
4. Legumes (Lab)
5. Starches and grains (Lab)
6. Meat and meat fabrication (Lec and Lab)
7. Poultry and poultry fabrication (Lec and Lab)
8. Eggs and breakfast cookery (Lab)
9. Fish and shellfish (Lec and Lab)
10. Basic baking skills (Lec and Lab)
11. Garde manger—the cold kitchen (Lec and Lab)
12. Dairy products (Lec and Lab)

**Lab Content**

Lab content will consist of intense time in the kitchen, where students will produce dishes with the following components:

1. Soups, stocks and sauces
2. Vegetables and fruits
3. Legumes
4. Starches and grains
5. Meat and meat fabrication
6. Poultry and poultry fabrication
7. Eggs and breakfast cookery
8. Fish and shellfish
9. Basic baking skills
10. Garde manger—the cold kitchen (several hours on this)
11. Dairy products

**Special Facilities and/or Equipment**

1. A fully equipped kitchen with NSF or Underwriter Lab certified refrigeration units, a freezer, ovens with 12 range burners, a grill, a salamander broiler, and flat top. A one-compartment dish machine, along with food safe sanitizer dispensary should also be

available in the facility.
2. Television with ability to link directly to a laptop for instructional videos.

**Methods of Evaluation**

| Methods of Evaluation |
|---|
| Practical examination: students are assessed on professionalism, sanitation, recipe execution, flavor, and presentation (70%) |
| Routine checks for understanding (5%) |
| Evaluation of notebook and journals (15%) |
| Quizzes based on the units covered (10%) |

**Method(s) of Instruction**

| Method(s) of Instruction |
|---|
| Demonstration |
| Quizzes |
| Cooperative learning (teamwork in performance) |
| Summarizing and note-taking |
| Identifying similarities and differences (e.g., if four groups are given the same recipe, why are there differences in the end product?) |
| Homework and practice |

**Representative Text(s)**

| Author(s) | Title | Publication Date |
|---|---|---|
| Labensky, Sarah, et al. | On Cooking: A Text of Culinary Fundamentals, 5th ed. | 2015 |

**Please provide justification for any texts that are older than 5 years**
Although this text is older than the suggested "5 years or newer" standard, it remains a seminal text in this area of study.

**Other Required Materials**

**Types and/or Examples of Required Reading, Writing, and Outside of Class Assignments**

1. Students will write journals analyzing the feedback of their execution of recipes.
2. Students will read, take notes, and record recipes from the textbook.
3. Students will produce a notebook, which they can later use as part of a portfolio.

**Authorized Discipline(s):**
Culinary Arts/Food Technology

**Faculty Service Area (FSA Code)**
INDUSTRIAL TECH

**Taxonomy of Program Code (TOP Code)**
*1306.30 - Culinary Arts

**Attach Historical Forms/Documents (if applicable)**

## Articulation Office Only

**C-ID Notation**

**IGETC Notation**

**CSU GE Notation**

**Transferability**
None

**Validation Date**

## Division Dean Only

**Seat Count**
30

**Load**
.180

**FOAP Codes:**

**Fund Code**
115000 - Apprenticeship-Foothill

**Org Code**
142226 - Apprentice-Culinary Program

**Account Code**
1320

**Program Code**
130630 - Culinary Arts

# APCA F105. : CULINARY MENU DEVELOPMENT

**Effective Term**
Summer 2022

**Subject**
Apprenticeship: Culinary Arts (APCA)
**Course Number**
F105.

**Department**
Apprenticeship (A P)

**Division**
Apprenticeship (1ED)

**Units**
3.5

**Course Title**
CULINARY MENU DEVELOPMENT

**Former ID**

**Cross Listed**

**Related Courses**

**Maximum Units**
3.5

**Does this course meet on a weekly basis?**
No

**Total Lecture Hours per quarter**
40

**Total Lab Hours per quarter**
20

**Total Out of Class Hours per quarter**
80

**Special Hourly Notation**

**Total Contact Hours**
60

**Total Student Learning Hours**
140

**Repeatability Statement**
Not Repeatable

**Credit Status**
Credit

**Degree Status**
Applicable

**Is Basic Skills applicable to this course?**
No

**Grading**
Letter Grade (Request for Pass/No Pass)

**Will credit by exam be allowed for this course?**
No

**Honors**
No

**Distance Learning**
No

**Degree or Certificate Requirement**
None of the above (Stand Alone course)

## Stand Alone

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

**• Temporary means the course will be incorporated into a new degree or certificate that is not yet State approved.**
**• Permanent means there are no plans to add the course to a State approved degree or certificate, nor to the Foothill GE pattern.**

**Please select**
Permanent

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

**Criteria A. Appropriateness to Mission**

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

**Please indicate how your course supports the Foothill College Mission:**
Workforce/CTE

**Criteria B. Need**

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

**Evidence**

This course will help students gain and retain jobs within the culinary arts profession. The course teaches job skills for employability and life skills. Food service jobs are expected to increase at an annual rate of 1.7% in the Santa Clara County through 2024 per EDD LMI short term projections (http://www.labormarketinfo.edd.ca.gov/data/employment-projections.html#Short), approximately 2400 additional jobs a year. Students completing these courses and the Apprenticeship will be immediately employable in this growing market.

**Attach evidence**

**Need/Justification**
This course is part of the culinary arts apprenticeship program and will help students gain and retain jobs within the culinary arts industry. The course enables students to showcase a knowledge base to potential employers.

**Course Description**
Students develop their own menus for breakfast, lunch, and dinner; develop a beverage program; and cost out the menu items. Students design pricing strategies and submit as a portfolio.

**Course Prerequisites**
Prerequisite: Per California Code of Regulations, this course is limited to students admitted to the Culinary Arts Apprenticeship Program.

**Course Corequisites**

**Course Advisories**

**Course Objectives**

The student will be able to:

1. Explain the difference between commercial and noncommercial food service operations and describe examples of each.
2. Describe the three levels of management and identify the various production and service positions in a food and beverage operation.
3. Explain marketing in terms of providing guest-pleasing service and discuss the elements and importance of feasibility studies, marketing research, and marketing plans.
4. Discuss nutrition and special dietary concerns as they relate to the food service industry and contrast the nutritional concerns and obligations of commercial and noncommercial operations.
5. Describe menu pricing styles, menu schedules, menu types, and the menu planning process.
6. Explain how a menu dictates operations in a food and beverage establishment and describe its importance as a marketing tool.
7. Explain how to create and use a standard recipe and how to calculate costs.
8. Explain basic menu engineering, menu scoring, and goal value method.
9. Understand and identify the concepts that prevail in truth in menu.
10. Identify and describe the types of service that food and beverage operations can provide and explain how to provide excellent guest service.
11. Describe the factors involved in facility design and equipment selection for a food and beverage operation and understand effects the menu may impose.
12. Explain the importance of staffing in menu development.
13. Analyze the impacts of menu changes and how they can affect the restaurant not only at a unit level but at a strategic level as well.

**Course Content**

This course examines the role of the menu in a food service establishment as the driving force and the primary management tool. Every aspect of food service operation is menu driven, including such areas as facility design, inventory controls, pricing and costing,

equipment selection, staffing, and style of service. Proper techniques for costing of menu items and proper purchasing techniques will also be covered. Topics include:

1. Menu planning (Lec)
2. Cost control (Lec)
3. Menu pricing strategies (Lec)
4. Menu mechanics (Lec)
5. Menu analytics (Lec)
6. Beverage menu (Lec)
7. Service considerations in menu planning (Lec)
8. Production concerns in menu execution (Lec)
9. Financial planning and the menu (Lec)
10. Ethics and menu (Lec)

**Lab Content**

Students will have the opportunity to create a menu for breakfast, lunch, and dinner, order all products for the menu with a cost analysis and work in the culinary lab to cook the planned menu for reservations between 10-15 people. This laboratory time provides on-the-job training, ensuring all student learning objectives are met with this final project.

**Special Facilities and/or Equipment**

1. Laptop computer and projector or TV screen
2. Whiteboard with erasable markers

**Methods of Evaluation**

| Methods of Evaluation |
| --- |
| Written portfolio of recipes, costing and marketing plan |
| Routine checks for understanding |
| Evaluation of notebook |
| Student presentations |
| Quizzes based on the units |

**Method(s) of Instruction**

| Method(s) of Instruction |
| --- |
| Lecture |
| Discussion |
| Group projects |
| Portfolio |

**Representative Text(s)**

| Author(s) | Title | Publication Date |
|---|---|---|
| Kotschevar, Lendal, and Diane WIthrow | Management by Menu, 4th ed. | 2008 |

**Please provide justification for any texts that are older than 5 years**
Although this text is older than the suggested "5 years or newer" standard, it remains a seminal text in this area of study.

**Other Required Materials**

**Types and/or Examples of Required Reading, Writing, and Outside of Class Assignments**

1. Students will produce a breakfast, lunch and dinner menu.
2. Students will cost out 12 recipes for one of their menus as part of a portfolio.
3. Students will submit a base feasibility for their concept and describe their food service operation in detail.
4. Students will present a basic marketing plan for their concept.

**Authorized Discipline(s):**
Culinary Arts/Food Technology

**Faculty Service Area (FSA Code)**
INDUSTRIAL TECH

**Taxonomy of Program Code (TOP Code)**
*1306.30 - Culinary Arts

**Attach Historical Forms/Documents (if applicable)**

Articulation Office Only

**C-ID Notation**

**IGETC Notation**

**CSU GE Notation**

**Transferability**
None

**Validation Date**

Division Dean Only

**Seat Count**
30

**Load**
.090

**FOAP Codes:**

**Fund Code**
115000 - Apprenticeship-Foothill

**Org Code**
142226 - Apprentice-Culinary Program

**Account Code**
1320

**Program Code**
130630 - Culinary Arts

# APCA F106. : SUSTAINABILITY IN FOOD SERVICE OPERATIONS

**Effective Term**
Summer 2022

**Subject**
Apprenticeship: Culinary Arts (APCA)
**Course Number**
F106.

**Department**
Apprenticeship (A P)

**Division**
Apprenticeship (1ED)

**Units**
2.5

**Course Title**
SUSTAINABILITY IN FOOD SERVICE OPERATIONS

**Former ID**

**Cross Listed**

**Related Courses**

**Maximum Units**
2.5

**Does this course meet on a weekly basis?**
No

**Total Lecture Hours per quarter**
32

**Total Lab Hours per quarter**
8

**Total Out of Class Hours per quarter**
64

**Special Hourly Notation**

**Total Contact Hours**

40

**Total Student Learning Hours**
104

**Repeatability Statement**
Not Repeatable

**Credit Status**
Credit

**Degree Status**
Applicable

**Is Basic Skills applicable to this course?**
No

**Grading**
Letter Grade (Request for Pass/No Pass)

**Will credit by exam be allowed for this course?**
No

**Honors**
No

**Distance Learning**
No

**Degree or Certificate Requirement**
None of the above (Stand Alone course)

## Stand Alone

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

**• Temporary means the course will be incorporated into a new degree or certificate that is not yet State approved.**
**• Permanent means there are no plans to add the course to a State approved degree or certificate, nor to the Foothill GE pattern.**

**Please select**
Permanent

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

**Criteria A. Appropriateness to Mission**

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

**Please indicate how your course supports the Foothill College Mission:**
Workforce/CTE

**Criteria B. Need**

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

**Evidence**

This course will help students gain and retain jobs within the culinary arts profession. The course teaches job skills for employability and life skills. Food service jobs are expected to increase at an annual rate of 1.7% in the Santa Clara County through 2024 per EDD LMI short term projections (http://www.labormarketinfo.edd.ca.gov/data/employment-projections.html#Short), approximately 2400 additional jobs a year. Students completing these courses and the Apprenticeship will be immediately employable in this growing market.

**Attach evidence**

**Need/Justification**
This course is part of the culinary arts apprenticeship program and will greatly help students gain and retain jobs within the culinary arts industry. It maintains currency for students, with trends in food service and food ethics.

**Course Description**

Covers the principles of sustainability, including issues of animal welfare, nutrition, climate change, farm to table; other issues that impact people and the environment, such as water consumption, wage and supply chain ethics, and the reduction of our environmental footprint. The future of food and technology emerge as topics of discussion, and case studies feature menu innovation, actual operations, and a field trip to a sustainable restaurant or food service operation.

**Course Prerequisites**
Prerequisite: Per California Code of Regulations, this course is limited to students admitted to the Culinary Apprenticeship Program.

**Course Corequisites**

**Course Advisories**

**Course Objectives**

The student will be able to:

1. Define and understand the impacts of sustainability.
2. Define terminology related to food and food service sustainability (recycling, biodegradable, composting, sustainable, organic, local, regional, seasonal, Amish, free range, food miles, heirloom, energy efficient, etc.).
3. Describe the benefits of food sustainability practices.
4. Demonstrate the ability to explore current trends in food and food service sustainability using print sources and/or the internet.
5. Identify products being used in a facility that can be recycled.
6. Identify products appropriate for composting.
7. Identify a variety of areas where waste control is used in the kitchen (product, water, energy, etc.).
8. Identify sources for purchasing local foods (produce, meats, etc., as applicable).
9. Identify sustainable proteins and seafood.
10. Identify the benefits of establishing a facility garden to provide produce and herbs for the kitchen.
11. Identify environmentally friendly cleaning products.

**Course Content**

1. Definition of sustainability (Lec)
2. Impacts of sustainability: 3 Ps—People, Plate and Planet, as opposed to conservation (Lec)
3. Demographics and consumer preferences (Lec)
4. Nutrition, health and sustainable food (Lec)
5. Food ethics: science and policy issues (Lec)

6. Menu development (Lec)
7. Fishing and seafood issues (Lec)
8. Farm to table and local food movements (Lec and Lab)
9. Supply chain issues (Lec and Lab)
10. Water sustainability (Lec)
11. Climate change (Lec)

**Lab Content**

1. Field trip to Stanford University Residential Dining Hall
2. Field trip to Full Circle Farm in Sunnyvale

These field trips give the students the chance to see sustainable food service operations and assess the challenges that they undertake. Students will take notes applicable to case studies and papers related to the locations.

**Special Facilities and/or Equipment**

1. Laptop computer and projector or TV screen
2. Whiteboard with erasable markers
3. Access to commercial kitchen for observation, demonstration and practice

**Methods of Evaluation**

| Methods of Evaluation |
|---|
| Written examination |
| Routine checks for understanding |
| Evaluation of submitted notebook |
| Student presentations |
| Quizzes based on the units |
| Homework assignments |

**Method(s) of Instruction**

| Method(s) of Instruction |
|---|
| Lecture |
| Discussion |
| Laboratory |
| Demonstration: case study of Stanford University and Full Circle Farms |

**Representative Text(s)**

| Author(s) | Title | Publication Date |
|---|---|---|
| Harvard TH Chan School of Public Health and the Culinary Institute of America | Menus of Change: The Business of Health, Sustainable, Delicious Food Choices | 2016 |

**Please provide justification for any texts that are older than 5 years**
Although this text is older than the suggested "5 years or newer" standard, it remains a seminal text in this area of study.

**Other Required Materials**

**Types and/or Examples of Required Reading, Writing, and Outside of Class Assignments**

1. Two 1800-word (minimum) papers:
    1. One is a case study on Stanford University Residential Hall Dining and how it practices sustainability.
    2. The second will focus on the supply side and a visit to an organic farm, Full Circle farm in Sunnyvale, CA.
2. Required reading from the listed text.
3. Assessment includes one 1200-word essay on the movie Food Inc., in which students express their thoughts on the challenges of sustainability in an economy where mass food production is required. Students also discuss the difficult encounters not just to the food production system but socio-economic concerns as well.

**Authorized Discipline(s):**
Culinary Arts/Food Technology

**Faculty Service Area (FSA Code)**
INDUSTRIAL TECH

**Taxonomy of Program Code (TOP Code)**
*1306.30 - Culinary Arts

**Attach Historical Forms/Documents (if applicable)**

Articulation Office Only

**C-ID Notation**

**IGETC Notation**

**CSU GE Notation**

**Transferability**
None

**Validation Date**

## Division Dean Only

**Seat Count**
30

**Load**
.060

**FOAP Codes:**

**Fund Code**
115000 - Apprenticeship-Foothill

**Org Code**
142226 - Apprentice-Culinary Program

**Account Code**
1320

**Program Code**
130630 - Culinary Arts

# C S F077A : ADVANCED WEB APPLICATION DEVELOPMENT

**Effective Term**
Summer 2022

**Subject**
Computer Science (C S)
**Course Number**
F077A

**Department**
Computer Science (C S)

**Division**
Physical Sciences, Mathematics & Engineering (1PS)

**Units**
4.5

**Course Title**
ADVANCED WEB APPLICATION DEVELOPMENT

**Former ID**

**Cross Listed**

**Related Courses**

**Maximum Units**
4.5

**Does this course meet on a weekly basis?**
Yes

**Weekly Lecture Hours**
4

**Weekly Lab Hours**
2

**Weekly Out of Class Hours**
8

**Special Hourly Notation**

**Total Contact Hours**

72

**Total Student Learning Hours**
168

**Repeatability Statement**
Not Repeatable

**Credit Status**
Credit

**Degree Status**
Applicable

**Is Basic Skills applicable to this course?**
No

**Grading**
Letter Grade (Request for Pass/No Pass)

**Will credit by exam be allowed for this course?**
No

**Honors**
No

**Distance Learning**
No

**Degree or Certificate Requirement**
None of the above (Stand Alone course)

## Stand Alone

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

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

**• Temporary means the course will be incorporated into a new degree or certificate that is not yet State approved.**
**• Permanent means there are no plans to add the course to a State approved degree or certificate, nor to the Foothill GE pattern.**

**Please select**
Temporary

**In this case, identify the degree/certificate to which the course will be added:**

Web Application Development Certificate and Advanced Web Application Development Certificate

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

Summer 2022 or earlier

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

**Criteria A. Appropriateness to Mission**

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

**Please indicate how your course supports the Foothill College Mission:**
Workforce/CTE

**Criteria B. Need**

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

**Evidence**

This is a temporary stand-alone course with two certificates that are planned to be submitted in the 2021-2022 academic year.

**Attach evidence**

**Need/Justification**

This course will be included in the forthcoming certificates of achievement in Web Application Development and Advanced Web Application Development.

**Course Description**
Design and develop applications that deliver similar features and functions normally associated with desktop applications using modern web client and server technologies.

**Course Prerequisites**

**Course Corequisites**

**Course Advisories**
Advisory: C S 22A, C S 30A, C S 40A, C S 84A, and GID 55.

**Course Objectives**

The student will be able to:

1. Understand the history of the web, and use web tags, and Application Programming Interfaces (API).
2. Design, create, and organize modern HTML documents.
3. Construct basic web forms using HyperText Markup Language (HTML).
4. Embed audio and video in applications.
5. Use web API in rich internet applications.
6. Improve caching and storage for rich internet applications.
7. Use Cascading Style Sheets (CSS) to enhance and style rich internet applications.
8. Use modern HTML controls in applications.
9. Evaluate client/middleware/server development tools.
10. Create data-driven web applications.
11. Discuss and analyze professional ethics and societal power structures.
12. Use responsive web design for differing screen sizes.
13. Use security techniques.

**Course Content**

1. Explore web history, tags, and Application Programming Interfaces (API)
    1. History of HyperText Markup Languages (HTML)
    2. Modern HTML features
    3. Structural, content, and application-focused tags
2. Explore designing, creating, and structuring modern HTML documents
    1. Content models
    2. Understanding the outline algorithm
    3. The role of div tags
    4. Using ID and class attributes

5. DOCTYPE declarations
6. Character encoding
7. Compatibility testing using browsers and mobile devices
8. Structure of basic page, top level elements and interior content
9. Building headers
10. Checking document outlines and ensuring cross browser structure

3. Construct basic forms using HTML
    1. Modern input types
    2. Setting form autofocus
    3. Using placeholder data
    4. Marking required fields
    5. Working with number inputs
    6. Using date pickers
4. Embed audio and video in applications
    1. Adding audio
    2. Encoding audio
    3. Adding video
    4. Encoding video
5. Learn and apply usage of web API in rich internet applications
    1. Canvas API overview
    2. Adding canvas content
    3. Drawing in the canvas environment
    4. Drag-and-drop API overview
    5. REpresentation State Transfer (REST)ful API and Create, Read, Update, and Delete (CRUD) operations overview
6. Improve caching and storage for rich internet applications
    1. Offline applications overview
    2. Geolocation API overview
    3. Web storage API overview
7. Demonstrate usage of Cascading Style Sheets (CSS) to enhance and style rich internet applications
    1. Modern CSS overview
    2. Enhancing typography
    3. Using @font-face
    4. Styling modern HTML with modern CSS
    5. Using CSS transitions
8. Demonstrate usage of modern HTML controls in applications
    1. Email address input
    2. URL input
    3. Telephone number input
    4. Search field input
    5. Datalist form control
    6. Slider form control
    7. Spinner form control

        8. Calendar form control
        9. Color form control
    9. Evaluate client/middleware/server development tools
        1. Tradeoff analysis some of the current languages, tools, frameworks, and/or libraries
    10. Create data-driven web applications
        1. Use client and/or server storage systems
    11. Discuss and analyze professional ethics and societal power structures
        1. Ethical and societal topics and issues that arise in the news
        2. Nuclear war historical effects on internet infrastructure design and implications for web and cloud services
        3. Professional ethics codes and laws
        4. Ethical implications of computer hardware production, reusing, recycling, and disposal
        5. Analyze how software developers contribute to, resist, or otherwise intersect with structures of inequality and hierarchy in societies
        6. Societal implications of different types of software producing organizations (such as not for profits, for profits, non-profits, worker cooperatives, customer cooperatives, benefit corporations, B corporations, etc.)
        7. Computer related industries and customer capture economic models
        8. Unionization in technology companies and organizations
        9. Designing web applications with low and sustainable environmental footprints
        10. Societal implications of software licenses and terms of service
        11. Power of web-based computing to transform society
        12. Web application design to support privacy
        13. Data ethics and data stewardship
        14. Digital Rights Management in web browsers
        15. Net Neutrality and the internet as a ubiquitous public utility
        16. Societal need and technological support for “Do Not Track” Global Privacy Control
    12. Use responsive web design for differing screen sizes
        1. CSS media queries
        2. Flexible images and media elements
        3. Flexible grid
    13. Use security techniques
        1. SSL/TLS, HTTPS, SSH, SFTP
        2. Sessions, cookies, and web storage API
        3. Single sign on (such as via OAuth)

**Lab Content**

The following are the general lab topics that must be covered. Any following lab topic may be separated and/or combined with any other lab topic(s).

1. Semantic web
    1. Modern HyperText Markup Language (HTML) documents
    2. Basic forms using HTML
2. Web/Rich internet applications
    1. Tags and Application Programming Interfaces (API) to build web/rich internet applications
    2. Modern Cascading Style Sheets (CSS) to enhance and style web/rich internet applications
3. Front end and media technology in web applications
    1. Audio and video media
    2. 2-D and/or 3-D web API(s)
    3. Widgets and/or animation/effects
4. Middleware and server technology
    1. Web servers and data servers
    2. APIs and controllers
5. Front and back end data storage and modeling for web/rich internet applications
    1. Databases
    2. Caching and offline storage
6. Native apps
    1. Mobile apps
    2. Desktop apps

Labs will typically be structured as follows:

1. Read and run the code that utilizes the associated lab topic(s)
2. Create a web application using the associated lab topic(s)
3. Discuss design and implementation tradeoffs of related techniques and tools

**Special Facilities and/or Equipment**

1. Access to a computer laboratory with web browsers, web development software, web server and middleware software, and database software. Computer laboratory can be provided as a web-based and/or virtualized online service(s).
2. A website or course management system with an assignment posting component (through which all lab assignments are to be submitted) and a forum component (where students can discuss course material and receive help from the instructor). This applies to all sections, including on-campus (i.e., face-to-face) offerings.
3. When taught via the internet, the college will provide a fully functional and maintained course management system through which the instructor and students can interact.
4. When taught via the internet, students must have currently existing email accounts and ongoing access to computers with internet capabilities.

**Methods of Evaluation**

| Methods of Evaluation |
| --- |
| Formative exercises, projects, and quizzes requiring students to write code applying covered technology topics |
| Formative exercises, discussion forums, projects, papers, and/or quizzes regarding covered ethics and societal power topics |
| Final examination requiring students to present projects applying topics covered in the lectures, reading, and programming assignments |
| Evaluation of programming assignments based on correctness, documentation, code quality, and test plan executions |

**Method(s) of Instruction**

| Method(s) of Instruction |
| --- |
| Blended instruction including discussion of topics |
| Online labs (for all sections, including those meeting face-to-face/on campus) consisting of:<br>1. An assignment webpage located on a college-hosted course management system or other department-approved internet environment. Here, the students will review the specification of each assignment and submit their completed lab work<br>2. A discussion webpage located on a college-hosted course management system or other department-approved internet environment. Here, students can request assistance from the instructor and interact publicly with other class members<br>3. Collaborative team projects |
| When course is taught fully online:<br>1. Instructor-authored lecture materials, handouts, syllabus, assignments, tests, and other relevant course material will be delivered through a college-hosted course management system or other department-approved internet environment |

**Representative Text(s)**

| Author(s) | Title | Publication Date |
| --- | --- | --- |
| Benjamin, Ruha | Race After Technology: Abolitionist Tools for the New Jim Code | 2019 |
| Boduch, Adam, and Roy Derks | React and React Native: A Complete Hands-on Guide to Modern Web and Mobile Development with React.js, 3rd ed. | 2020 |
| Robbins, Jennifer | Learning Web Design, 5th ed. | 2018 |
| Subramanian, Vasan | Pro Mern Stack: Full Stack Web App Development with Mongo, Express, React, and Node | 2019 |

**Please provide justification for any texts that are older than 5 years**

**Other Required Materials**

**Types and/or Examples of Required Reading, Writing, and Outside of Class Assignments**

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

**Authorized Discipline(s):**
Computer Science

**Faculty Service Area (FSA Code)**
COMPUTER SCIENCE

**Taxonomy of Program Code (TOP Code)**
*0707.10 - Computer Programming

**Attach Historical Forms/Documents (if applicable)**

## Articulation Office Only

**C-ID Notation**

**IGETC Notation**

**CSU GE Notation**

**Transferability**
CSU

**Validation Date**
6/3/2021

## Division Dean Only

**Seat Count**
40

**Load**
.121

**FOAP Codes:**

**Fund Code**
114000 - General Operating- Unrestricted

**Org Code**
125111 - FH-Computer Sciences (C S)

**Account Code**
1320

**Program Code**
070600 - Computer Science (transfer)

# C S F077B : PROJECTS IN WEB APPLICATION DEVELOPMENT

**Effective Term**
Summer 2022

**Subject**
Computer Science (C S)
**Course Number**
F077B

**Department**
Computer Science (C S)

**Division**
Physical Sciences, Mathematics & Engineering (1PS)

**Units**
4.5

**Course Title**
PROJECTS IN WEB APPLICATION DEVELOPMENT

**Former ID**

**Cross Listed**

**Related Courses**

**Maximum Units**
4.5

**Does this course meet on a weekly basis?**
Yes

**Weekly Lecture Hours**
4

**Weekly Lab Hours**
2

**Weekly Out of Class Hours**
8

**Special Hourly Notation**

**Total Contact Hours**

72

**Total Student Learning Hours**
168

**Repeatability Statement**
Not Repeatable

**Credit Status**
Credit

**Degree Status**
Applicable

**Is Basic Skills applicable to this course?**
No

**Grading**
Letter Grade (Request for Pass/No Pass)

**Will credit by exam be allowed for this course?**
No

**Honors**
No

**Distance Learning**
No

**Degree or Certificate Requirement**
None of the above (Stand Alone course)

## Stand Alone

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

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

**• Temporary means the course will be incorporated into a new degree or certificate that is not yet State approved.**
**• Permanent means there are no plans to add the course to a State approved degree or certificate, nor to the Foothill GE pattern.**

**Please select**
Temporary

**In this case, identify the degree/certificate to which the course will be added:**

Web Application Development Certificate and Advanced Web Application Development Certificate

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

The related programs are not yet approved. Creation of the related programs cannot begin until the new courses are approved.

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

**Criteria A. Appropriateness to Mission**

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

**Please indicate how your course supports the Foothill College Mission:**
Workforce/CTE

**Criteria B. Need**

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

**Evidence**

See attached Web Applications Occupations Labor Market Information report

**Attach evidence**
LMI_Foothill_Web Applications_November 2020-2.pdf

**Need/Justification**
This course will be included in the forthcoming certificates of achievement in Web Application Development and Advanced Web Application Development.

**Course Description**
Team-based applied web application projects as determined in consultation with the instructor. Students meet at least twice per week with the instructor; about half of the lecture periods are team project-based interactions. Volunteer or work-based learning portfolio, progress reports, oral presentations, final report, teamwork assessments, and evaluation by project supervisor or client will be used to demonstrate the mastery of competencies identified as goals prior to, or near the start of, the project(s). Project work can be within the context of an internship or developing an internship or start-up opportunity.

**Course Prerequisites**
Prerequisite: C S 77A.

**Course Corequisites**

**Course Advisories**

## Content Review

**Faculty participant(s) in this content review process***
Baba Kofi Weusijana, Anand Venkataraman

**If the Content Review requirement is waived (requisite is required by a baccalaureate institution or by statute or regulation) only one faculty participant is necessary. Otherwise, at least two faculty from the target course discipline or related discipline must participate.*

*In order to ensure that limitations on enrollment are both appropriate and necessary for student success, Title 5 requires faculty to complete a rigorous content review whenever new pre- or co-requisites ("requisites") are being considered for a course. Rigorous content review of requisites must also be completed during the regular Title 5 compliance review cycle. It is imperative that discipline faculty work with their college curriculum committee reps during this process.*
*Please Note: Content review is unnecessary if the course is part of a closely related lecture and laboratory pairing within a discipline (e.g. anatomy laboratory course is co-requisite with anatomy lecture course).*

**Type of Requisite**
Prerequisite

**Number Title of Requisite Course(s)**
C S 77A Advanced Web Application Development

**The Content Review requirement may be satisfied by one of the following:**

**Do baccalaureate institutions require a particular requisite(s) for articulation?**

No

**Is a particular requisite required by statute or regulation?**

No

## Additional Considerations

**Does De Anza College offer an equivalent course?**

No

**Is there a C-ID descriptor for the target course?**

No

## Establishing New Requisites

**Identify the skills and knowledge students must have prior to enrolling in the target course and list them here (these may be contained in the Course Objectives section of the requisite course's COR):**

1. Understand the history of the Web, and use Web tags, and Application Programming Interfaces (API).
2. Design, create, and organize modern HTML documents.
3. Construct basic Web forms using HyperText Markup Language.
4. Embed Audio and Video in applications.
5. Use Web Application Programming Interfaces (API) in Rich Internet Applications
6. Improve caching and storage for Rich Internet Applications.
7. Use Cascading Style Sheets (CSS) to enhance and style Rich Internet Applications.
8. Use modern HTML controls in applications.
9. Evaluate client/middleware/server development tools
10. Create data-driven web applications
11. Discuss and analyze professional ethics and societal power structures
12. Use Responsive Web Design for differing screen sizes
13. Use security techniques

**Is the requisite a new course? If so, please state this below. If not, please Contact the Institutional Researcher to gather and analyze data comparing success rates for students who have completed versus those that have not yet completed the identified prerequisite and document here.**

Yes, the prerequisite is a new course.

The target course is also a new course that is designed to be the capstone course for the Web Application Development Certificate and the Advanced Web Application Development Certificate. In the target course students are required to build and deploy a Web Application

for a real client, so they must have all the skills in the prerequisite course before taking the capstone target course. We are pioneers in developing such certificates (and new courses) in the California Community College system. However the AS Major in Web and Mobile Application Development of the Computer and Information Science department at the College of San Mateo (part of the San Mateo County Community College District) also has a capstone course, CIS 200, that has most of the other required major courses as prerequisites.

See: https://collegeofsanmateo.edu/cis/degrees_wmad_as.asp

### Previously Implemented Requisites

**Contact the Institutional Researcher to gather and analyze student success data disaggregated according to race, ethnicity, gender, age, economic circumstances and disability. Document methodology and findings here:**

**Review course syllabi (at least one from each faculty who taught a section in the previous year) and artifacts such as exams, assignments and grading criteria. Use the following space to document which of these provides explicit evidence that the identified requisite skills are necessary in ALL sections being offered.**

---

### Content Review Attachments

**Baccalaureate Institution Attachments**

**Statute and/or Regulation Attachments**

**Course Objectives**

The student will be able to:

1. Value, investigate, and analyze the problems of human clients and relevant communities.
2. Work ethically in a web application production environment.
3. Use professional ethics and analyze societal power structures.
4. Create, deploy, and maintain web applications by using software quality assurance, continuous integration, and continuous deployment techniques.

**Course Content**

1. Value, investigate, and analyze the problems of human clients and relevant communities
    1. Communication and empathetic gathering of data on their needs, wants, and proposed solutions
    2. Getting stakeholder buy-in with sketches, wireframes, and/or prototypes
    3. Deduce and propose improved workflow and processes
2. Working in a production environment
    1. Effectively and ethically working and communicating with supervisors, developers, non-developers, and clients
3. Discuss and analyze professional ethics and societal power structures
    1. Ethical and societal topics and issues that arise during the overall project work or in the news
    2. Data ethics and data stewardship
    3. Anti-racist and accessible universal design
    4. Designing web applications with low and sustainable environmental footprints
4. Software quality assurance, continuous integration, and continuous deployment
    1. Tools and infrastructure
    2. Behavior driven development
    3. Debugging clients and servers
    4. Code optimization
    5. Internationalization for localization
    6. Scalable deployment

**Lab Content**

Students will be guided through various stages of developing a web application via the following online labs. Each stage will be applied to the student's project. Stages are listed here roughly in order but it is common for a student to revisit any stage, particularly based on the nature of the project development, testing results, and/or stakeholder feedback. Any following lab topic may be separated and/or combined with any other lab topic(s).

1. Ideation stage
    1. Find a client and then empathetically document and verify their needs, ideas, proposed solutions, and requirements
    2. Research resources, environmental sustainability, markets, societal ethics, security, and end-user requirements of the project
    3. Define the basic use cases, user stories, and functionalities of the project
2. Design stage
    1. Sketch the web application
    2. Plan your workflow
    3. Wireframe the User Interface (UI) and develop prototype(s)
    4. Validate designs and budgets with contexts, users, stakeholders, and client(s)
3. Development and deployment stage

    1. Architect your database/data storage
    2. Develop your frontend
    3. Develop your backend and any middleware
    4. Test and host your web application
    5. Deploy your web application
4. Revalidation and refactoring stage
    1. Revisions based on more testing with contexts, users, stakeholders, and client(s)
    2. Maintenance of your web application
    3. Redeployment of your web application

**Special Facilities and/or Equipment**

1. Access to a computer laboratory with web browsers, web development software, web server and middleware software, and database software. Computer laboratory can be provided as a web-based and/or virtualized online service(s).
2. A website or course management system with an assignment posting component (through which all lab assignments are to be submitted) and a forum component (where students can discuss course material and receive help from the instructor). This applies to all sections, including on-campus (i.e., face-to-face) offerings.
3. When taught via the internet, the college will provide a fully functional and maintained course management system through which the instructor and students can interact.
4. When taught via the internet, students must have currently existing email accounts and ongoing access to computers with internet capabilities.

**Methods of Evaluation**

| Methods of Evaluation |
| --- |
| Volunteer or work-based learning portfolio |
| Signed Memorandum of Understanding (MOU) between clients and students |
| Progress reports |
| Oral presentations |
| Final report |
| Teamwork assessments (for those working on a team) |
| Formative and summative quizzes on technology topics |
| Formative exercises, discussion forums, papers, and/or formative and summative quizzes regarding covered ethics and societal power topics |
| Evaluation by instructor, and project supervisor or client, will be used to demonstrate the mastery of competencies identified as goals prior to, or near the start of, the project(s) |

**Method(s) of Instruction**

| Method(s) of Instruction |
| --- |
| The central idea of this capstone course is to give students experience developing a web application that is used by, or needed by, a real human client. For students who don’t already |

| Method(s) of Instruction |
|---|
| have such a project, the instructor will design one and assist in the process of finding a client. Student projects must be web application development projects. The resulting web applications are to be used by, or needed by, a real human client, and the instructor determines if a project meets those requirements and is completable (deployed and evaluated) within the timeframe of the course. The instructor will develop a Memorandum of Understanding (MOU) between clients and students for each project and verify that they are signed by all parties. Student achievement is partially tied to students adhering to the MOU.<br>The course instructor is the project supervisor for students who are not doing their web application project in the context of an internship or employment. Such students will typically work in collaborative project teams of 2-7 people. Students will be allowed to work alone usually only if the nature of the project is in the context of an internship or employment.<br>The instructor will provide blended instruction, including discussion, of the course content topics. This will be completely online (synchronously and/or asynchronously) for online-only sections of the course.<br>The instructor will provide or arrange online tutorials and demonstrations of how to develop web application solutions for hypothetical clients' needs.<br>The instructor will assign online labs (for all sections, including those meeting face-to-face/on campus) consisting of:<br>1. An assignment webpage located on a college-hosted course management system or other department-approved internet environment. Here, the students will review the specification of each assignment and submit their completed lab work.<br>2. A discussion webpage located on a college-hosted course management system or other department-approved internet environment. Here, students can request assistance from the instructor and interact publicly with other class members. |

**Representative Text(s)**

| Author(s) | Title | Publication Date |
|---|---|---|
| Riley, Scott | Mindful Design How and Why to Make Design Decisions for the Good of Those Using Your Product, 1st ed. | 2019 |

**Please provide justification for any texts that are older than 5 years**

**Other Required Materials**

Doorley, Scott, et al. "Design thinking bootleg." 2018. Internet resource:
https://dschool.stanford.edu/s/9wuqfxx68fy8xu67khdiliueusae4i
https://dschool.stanford.edu/resources/design-thinking-bootleg

**Types and/or Examples of Required Reading, Writing, and Outside of Class Assignments**

1. Reading

1. Reading instructor supplied handouts and modules
2. Reading online resources as directed by instructor though links pertinent to the course objectives
3. Reading library and reference material directed by instructor through course handouts

2. Writing
    1. Writing technical prose documentation that supports and describes the programs and materials that are submitted for evaluation
    2. Writing documentation and reports that describe and/or provide a record of communication with stakeholders

**Authorized Discipline(s):**
Computer Science

**Faculty Service Area (FSA Code)**
COMPUTER SCIENCE

**Taxonomy of Program Code (TOP Code)**
*0707.10 - Computer Programming

**Attach Historical Forms/Documents (if applicable)**

## Articulation Office Only

**C-ID Notation**

**IGETC Notation**

**CSU GE Notation**

**Transferability**
CSU

**Validation Date**
6/9/2021

## Division Dean Only

**Seat Count**
40

**Load**
.121

**FOAP Codes:**

**Fund Code**
114000 - General Operating- Unrestricted

**Org Code**
125111 - FH-Computer Sciences (C S)

**Account Code**
1320

**Program Code**
070600 - Computer Science (transfer)

# Web Applications Occupations
# Labor Market Information Report
# Foothill College

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

## Recommendation

Based on all available data, there appears to be an undersupply of Web Applications 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 19,476 students in the Bay region and 9,707 students in the Silicon Valley Sub-Region.

## Introduction

This report provides student outcomes data on employment and earnings for TOP 0614.30-Website Design and Development 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 Web Applications Occupations in the 12 county Bay region and in the Silicon Valley sub-region for a proposed new program at Foothill College.

- **Web Developers / Web Developers and Digital Interface Designers (15-1134 / 15-1257):** Design, create, and modify Web sites. Analyze user needs to implement Web site content, graphics, performance, and capacity. May integrate Web sites with other computer applications. May convert written, graphic, audio, and video components to compatible Web formats by using software designed to facilitate the creation of Web and multimedia content. Excludes "Multimedia Artists and Animators" (27-1014).
  Entry-Level Educational Requirement: Associate's degree
  Training Requirement: None
  Percentage of Community College Award Holders or Some Postsecondary Coursework: 25%
- **Software Developers, Applications / Software Developers and Software Quality Assurance Analysts and Testers (15-1132 / 15-1256):** Develop, create, and modify general computer applications software or specialized utility programs. Analyze user needs and develop software solutions. Design software or customize software for client use with the aim of optimizing operational efficiency. May analyze and design databases within an application area, working individually or coordinating database development as part of a team. May supervise computer programmers.
  Entry-Level Educational Requirement: Bachelor's degree
  Training Requirement: None
  Percentage of Community College Award Holders or Some Postsecondary Coursework: 13%
- **Graphic Designers (27-1024):** Design or create graphics to meet specific commercial or promotional needs, such as packaging, displays, or logos. May use a variety of mediums to achieve artistic or decorative effects.
  Entry-Level Educational Requirement: Bachelor's degree
  Training Requirement: None
  Percentage of Community College Award Holders or Some Postsecondary Coursework: 29%

## Occupational Demand

**Table 1. Employment Outlook for Web Applications Occupations in Bay Region**

| Occupation | 2019 Jobs | 2024 Jobs | 5-Yr Change | 5-Yr % Change | 5-Yr Open-ings | Average Annual Open-ings | 25% Hourly Wage | Median Hourly Wage |
|---|---|---|---|---|---|---|---|---|
| Web Developers / Web Developers and Digital Interface Designers | 11,305 | 13,309 | 2,004 | 18% | 6,679 | 1,336 | $29.02 | $45.01 |
| Software Developers, Applications / Software Developers and Software Quality Assurance Analysts and Testers | 148,314 | 173,592 | 25,278 | 17% | 87,746 | 17,549 | $52.78 | $67.71 |
| Graphic Designers | 11,352 | 11,849 | 497 | 4% | 6,330 | 1,266 | $22.35 | $31.39 |
| **TOTAL** | **170,971** | **198,750** | **27,779** | **16%** | **100,755** | **20,151** | **$49.19** | **$63.79** |

*Source: EMSI 2020.3*
**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 Web Applications Occupations in Silicon Valley Sub-Region**

| Occupation | 2019 Jobs | 2024 Jobs | 5-Yr Change | 5-Yr % Change | 5-Yr Open-ings | Average Annual Open-ings | 25% Hourly Wage | Median Hourly Wage |
|---|---|---|---|---|---|---|---|---|
| Web Developers / Web Developers and Digital Interface Designers | 3,128 | 3,851 | 723 | 23% | 2,049 | 410 | $29.40 | $42.61 |
| Software Developers, Applications / Software Developers and Software Quality Assurance Analysts and Testers | 80,524 | 92,468 | 11,944 | 15% | 45,550 | 9,110 | $52.77 | $68.00 |
| Graphic Designers | 2,427 | 2,588 | 162 | 7% | 1,418 | 284 | $21.50 | $31.08 |
| **TOTAL** | **86,079** | **98,907** | **12,828** | **15%** | **49,017** | **9,803** | **$51.03** | **$66.04** |

*Source: EMSI 2020.3*
**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 (October 2019 - September 2020)**

| Occupation | Bay Region | **Silicon** Valley Sub-Region |
|---|---|---|
| Software Developers, Applications | 109,280 | 49,950 |
| Web Developers | 24,265 | 9,310 |
| Graphic Designers | 3,179 | 922 |
| **TOTAL** | **136,724** | **60,182** |

*Source: Burning Glass*

**Table 4a. Top Job Titles for Web Applications Occupations for latest 12 months (October 2019 - September 2020) Bay Region**

| Common Title | Bay | Common Title | Bay |
|---|---|---|---|
| Software Engineer | 4,696 | Full Stack Developer | 753 |
| Senior Software Engineer | 3,652 | Python Developer | 675 |
| Devops Engineer | 2,271 | Software Developer | 673 |
| Java Developer | 2,245 | UX Designer | 615 |
| Full-Stack Software Engineer | 1,202 | Front End Developer | 594 |
| Front End Engineer | 1,024 | Java Full Stack Developer | 586 |

| | | | |
|---|---|---|---|
| Senior Front End Engineer | 994 | UI Developer | 553 |
| Senior Backend Engineer | 967 | Graphic Designer | 547 |
| Backend Engineer | 942 | Full Stack Engineer | 491 |
| Senior Devops Engineer | 916 | Principal Software Engineer | 451 |
| Salesforce Developer | 836 | .Net Developer | 445 |
| Ios Developer | 831 | Staff Software Engineer | 439 |
| Senior Java Developer | 805 | Web Developer | 436 |
| Android Developer | 777 | Java Backend Developer | 414 |

**Table 4b. Top Job Titles for Web Applications Occupations for latest 12 months (October 2019 - September 2020) Silicon Valley Sub-Region**

| Common Title | **Silicon** Valley | Common Title | **Silicon** Valley |
|---|---|---|---|
| Software Engineer | 1,581 | Senior Devops Engineer | 312 |
| Java Developer | 1,287 | Front End Developer | 300 |
| Senior Software Engineer | 1,109 | UX Designer | 298 |
| Devops Engineer | 1,002 | Hadoop Developer | 278 |
| Python Developer | 438 | Backend Engineer | 243 |
| Ios Developer | 412 | Principal Software Engineer | 207 |
| Android Developer | 405 | Staff Software Engineer | 206 |
| Senior Java Developer | 400 | Senior Salesforce Developer | 187 |
| Java Full Stack Developer | 386 | Web Developer | 179 |
| Full Stack Developer | 352 | Developer | 173 |
| Salesforce Developer | 345 | Front End Engineer | 172 |
| Software Developer | 319 | Tableau Developer | 165 |
| UI Developer | 316 | Software Development Engineer | 164 |
| Java Backend Developer | 315 | Embedded Software Engineer | 160 |

*Source: Burning Glass*

## Industry Concentration

**Table 5. Industries hiring Web Applications 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) |
|---|---|---|---|---|
| Custom Computer Programming Services | 32,978 | 39,329 | 19% | 19% |
| Software Publishers | 21,734 | 27,842 | 28% | 13% |
| Computer Systems Design Services | 19,624 | 22,315 | 14% | 11% |
| Internet Publishing and Broadcasting and Web Search Portals | 17,132 | 21,749 | 27% | 10% |
| Electronic Computer Manufacturing | 15,353 | 16,605 | 8% | 9% |
| Data Processing, Hosting, and Related Services | 6,212 | 7,973 | 28% | 4% |
| Other Computer Related Services | 4,317 | 5,378 | 25% | 3% |
| Corporate, Subsidiary, and Regional Managing Offices | 3,687 | 3,643 | -1% | 2% |
| Research and Development in the Physical, Engineering, and Life Sciences (except Nanotechnology and Biotechnology) | 2,705 | 3,004 | 11% | 2% |
| Semiconductor and Related Device Manufacturing | 1,912 | 1,743 | -9% | 1% |
| Engineering Services | 1,845 | 1,968 | 7% | 1% |

*Source: EMSI 2020.3*

**Table 6. Top Employers Posting Web Applications Occupations in Bay Region and Silicon Valley Sub-Region (October 2019 - September 2020)**

| Employer | Bay | Employer | Bay | Employer | Silicon Valley |
|---|---|---|---|---|---|
| Amazon | 1,854 | NTT Data | 321 | Apple Inc. | 1,725 |
| Apple Inc. | 1,776 | Intuit | 314 | Vmware Inc | 734 |
| Vmware Incorporated | 777 | Microsoft Corporation | 307 | Amazon | 687 |
| Cisco Systems Incorporated | 714 | eBay | 304 | Nvidia Corporation | 573 |
| Facebook | 657 | Accenture | 304 | Cisco Systems Inc | 526 |
| Nvidia Corporation | 595 | Deloitte | 302 | Paypal | 408 |
| Infobahn Softworld Inc | 517 | Bayone Solutions | 288 | Nsys Design Systems | 400 |
| Oracle | 505 | Intelliswift Software | 285 | IBM | 361 |
| IBM | 460 | Palo Alto Networks | 274 | Infobahn Softworld Inc | 314 |
| Paypal | 454 | Osi Engineering | 266 | Xoriant Incorporated | 313 |
| Wells Fargo | 449 | SAP | 252 | Google Inc. | 311 |
| Google Inc. | 433 | Samsung America, Inc. | 251 | Palo Alto Networks | 273 |
| Xoriant Incorporated | 429 | Tranzeal, Inc | 250 | Intuit | 271 |
| Splunk | 420 | Wipro | 234 | eBay | 255 |
| Salesforce | 414 | Ascent Technology Services | 228 | Splunk | 243 |
| Nsys Design Systems | 404 | Netskope | 226 | Samsung America, Inc. | 238 |
| Workday, Inc | 342 | Jefferson Frank | 211 | Osi Engineering | 214 |

*Source: Burning Glass*

## Educational Supply

There are nine (9) Community colleges in the Bay Region issuing 39 awards on average annually (last 3 years ending 2018-19) on TOP 0614.30-Website Design and Development. There are three (3) colleges in the Silicon Valley Sub-Region issuing seven (7) awards on average annually (last 3 years) on this TOP code.

There are three (3) Other Educational Institutions in the Bay Region issuing 51 awards on average annually (last 3 years ending 2016-17) on TOP 0614.30-Website Design and Development. There are three (3) Other Educational Institutions in the Silicon Valley Sub-Region issuing two (2) awards on average annually (last 3 years) on this TOP code.

There are 11 educational institutions in the Bay Region issuing 585 Bachelor's Degrees on average annually (last 3 years ending 2016-17) on TOP 0614.30. There are three (3) educational institutions in the Silicon Valley Sub-Region issuing 87 Bachelor's Degrees on average annually (last 3 years ending 2016-17) on this TOP code.

**Table 7a. Community College Awards on TOP 0614.30-Website Design and Development in Bay Region**

| College | Sub-Region | Associates | Certificate Low Unit | Total |
|---|---|---|---|---|
| Berkeley City | East Bay | 2 | 3 | 5 |
| Cabrillo | SC - Monterey | 6 | 14 | 20 |
| Canada | Mid-Peninsula | | 4 | 4 |
| Mission | Silicon Valley | | 5 | 5 |
| Ohlone | East Bay | | 1 | 1 |
| San Francisco | Mid-Peninsula | | 1 | 1 |
| San Jose City | Silicon Valley | 1 | | 1 |
| Skyline | Mid-Peninsula | 1 | | 1 |
| West Valley | Silicon Valley | | 1 | 1 |
| **Total Bay Region** | | **10** | **29** | **39** |
| **Total Silicon Valley Sub-Region** | | **1** | **6** | **7** |

Source: Data Mart

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

**Table 7b. Other Educational Institutions Awards on TOP 0614.30-Website Design and Development in Bay Region**

| College | Sub-Region | Associates | Certificate Low Unit | Total |
|---|---|---|---|---|
| Academy of Art University | Mid-Peninsula | 44 | | 44 |
| Argosy University-The Art Institute of California-San Francisco | Mid-Peninsula | 3 | 2 | 5 |
| Argosy University-The Art Institute of California-Silicon Valley | Silicon Valley | 1 | 1 | 2 |
| **Total Bay Region** | | **48** | **3** | **51** |
| **Total Silicon Valley Sub-Region** | | **1** | **1** | **2** |

Source: Data Mart

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

**Table 7c. Bachelor's Degree Awards on TOP 0614.30-Website Design and Development in Bay Region**

| College | Sub-Region | Bachelor's Degree |
|---|---|---|
| Academy of Art University | Mid-Peninsula | 312 |
| Argosy University-The Art Institute of California-San Francisco | Mid-Peninsula | 65 |
| Argosy University-The Art Institute of California-Silicon Valley | Silicon Valley | 34 |
| California College of the Arts | Mid-Peninsula | 49 |
| Cogswell College | Silicon Valley | 43 |
| Holy Names University | East Bay | 4 |
| Mills College | East Bay | 3 |
| SAE Expression College | East Bay | 62 |
| San Francisco Art Institute | Mid-Peninsula | 1 |
| Santa Clara University | Silicon Valley | 10 |
| University of California-Santa Cruz | SC - Monterey | 2 |
| **Total Bay Region** | | **585** |
| **Total Silicon Valley Sub-Region** | | **87** |

Source: Data Mart

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

## Gap Analysis

Based on the data included in this report, there is a large labor market gap in the Bay region with 20,151 annual openings for the Web Applications occupational cluster and 675 annual (3-year average) awards from community colleges and Other Educational Institutions for an annual undersupply of 19,476 students. In the Silicon Valley Sub-Region, there is also a gap with 9,803 annual openings and 96 annual (3-year average) awards from community colleges and Other Educational Institutions for an annual undersupply of 9,707 students.

## Student Outcomes

**Table 8. Four Employment Outcomes Metrics for Students Who Took Courses on TOP 0614.30-Website Design and Development**

| 2017-18 | **Bay** All CTE Programs | **Foothill College** All CTE Programs | **State** 0614.30 | **Bay** 0614.30 | **Silicon Valley** 0614.30 | **Foothill College** 0614.30 |
|---|---|---|---|---|---|---|
| % Employed Four Quarters After Exit | 67% | 71% | 57% | 55% | 61% | n/a |
| Median Quarterly Earnings Two Quarters After Exit | $11,466 | $16,942 | $8,555 | $9,988 | $8,179 | n/a |
| Median % Change in Earnings | 31% | 46% | 18% | 24% | 41% | n/a |
| % of Students Earning a Living Wage | 53% | 72% | 51% | 45% | 43% | n/a |

*Source: Launchboard Pipeline (version available on (10/30/20)*

## Skills, Certifications and Education

**Table 9. Top Skills for Web Applications Occupations in Bay Region (October 2019 - September 2020)**

| Skill | Postings | Skill | Postings | Skill | Postings |
|---|---|---|---|---|---|
| Java | 53,102 | Ruby | 12,632 | Swift (Programming Language) | 8,906 |
| Software Engineering | 49,933 | Web Development | 12,370 | Ruby on Rails | 8,830 |
| JavaScript | 36,871 | Object-Oriented Analysis and Design (OOAD) | 11,951 | Apache Kafka | 8,524 |
| Python | 34,229 | Unit Testing | 11,864 | Continuous Integration (CI) | 8,498 |
| Software Development | 32,886 | Kubernetes | 11,524 | HTML5 | 8,329 |
| SQL | 31,612 | Web Application Development | 11,328 | Quality Assurance and Control | 8,208 |
| Git | 21,159 | Node.js | 11,286 | UNIX | 8,018 |
| Linux | 18,695 | Oracle | 10,752 | Software Architecture | 7,854 |
| C++ | 16,995 | Version Control | 10,384 | JavaScript Object Notation (JSON) | 7,782 |
| NoSQL | 13,435 | Data Structures | 10,035 | PostgreSQL | 7,661 |
| Debugging | 13,386 | Scalability Design | 9,941 | Project Management | 7,482 |
| DevOps | 13,240 | Scrum | 9,867 | .NET | 7,268 |
| AngularJS | 13,048 | MySQL | 9,831 | Front-end Development | 7,249 |
| Docker Software | 12,943 | Microsoft C# | 9,223 | Machine Learning | 6,852 |
| React Javascript | 12,830 | Agile Development | 9,039 | Extensible Markup Language (XML) | 6,841 |

*Source: Burning Glass*

**Table 10. Certifications for Web Applications Occupations in Bay Region (October 2019 - September 2020)**

Note: 96% 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.

| Certification | Postings | Certification | Postings |
|---|---|---|---|
| Security Clearance | 685 | Certified Salesforce Platform Developer II | 111 |
| Certified Salesforce Platform Developer | 580 | Certified Scrum Trainer (CST) | 104 |
| IT Infrastructure Library (ITIL) Certification | 545 | Certified Scrum Professional (CSP) | 97 |
| Driver's License | 353 | Cisco Certified Internetwork Expert (CCIE) | 96 |
| Certified Information Systems Security Professional (CISSP) | 258 | CompTIA Security+ | 82 |
| Project Management Certification | 217 | Certified Senior System Architect | 80 |
| Certified Salesforce Administrator | 205 | Microsoft Certified Professional (MCP) | 77 |
| Cisco Certified Network Associate (CCNA) | 150 | Certified Novell Administrator | 77 |
| Mbe Certified | 139 | Certified Salesforce Technical Architect | 76 |

| | | | |
|---|---|---|---|
| SANS/GIAC Certification | 135 | Certified Information Systems Auditor (CISA) | 74 |
| Certified ScrumMaster (CSM) | 118 | American Board for Engineering and Technology (ABET) Accredited | 73 |
| Cisco Certified Network Professional (CCNP) | 115 | Certified Salesforce Platform Developer I | 72 |

*Source: Burning Glass*

**Table 11. Education Requirements for Web Applications Occupations in Bay Region**

Note: 49% 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 | 1,042 | 2% |
| Associate Degree | 414 | 1% |
| Bachelor's Degree or Higher | 62,603 | 97% |

*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 CCCCO Data Mart.

## Sources

O*Net Online
Labor Insight/Jobs (Burning Glass)
Economic Modeling Specialists International (EMSI)
CTE LaunchBoard www.calpassplus.org/Launchboard/
Statewide CTE Outcomes Survey
Employment Development Department Unemployment Insurance Dataset
Living Insight Center for Community Economic Development
Chancellor's Office MIS system

## Contacts

For more information, please contact:


- 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

# D A F067. : RADIATION SAFETY COURSE

**Effective Term**
Summer 2022

**Subject**
Dental Assisting (D A)
**Course Number**
F067.

**Department**
Dental Assisting (D A)

**Division**
Biological and Health Sciences (1BH)

**Units**
2.5

**Course Title**
RADIATION SAFETY COURSE

**Former ID**

**Cross Listed**

**Related Courses**

**Maximum Units**
2.5

**Does this course meet on a weekly basis?**
Yes

**Weekly Lecture Hours**
2

**Weekly Lab Hours**
2

**Weekly Out of Class Hours**
4

**Special Hourly Notation**

**Total Contact Hours**
48

**Total Student Learning Hours**
96

**Repeatability Statement**
Not Repeatable

**Credit Status**
Credit

**Degree Status**
Applicable

**Is Basic Skills applicable to this course?**
No

**Grading**
Letter Grade Only

**Will credit by exam be allowed for this course?**
No

**Honors**
No

**Distance Learning**
No

**Degree or Certificate Requirement**
None of the above (Stand Alone course)

## Stand Alone

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

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

**• Temporary means the course will be incorporated into a new degree or certificate that is not yet State approved.**
**• Permanent means there are no plans to add the course to a State approved degree or certificate, nor to the Foothill GE pattern.**

**Please select**
Permanent

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

**Criteria A. Appropriateness to Mission**

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

**Please indicate how your course supports the Foothill College Mission:**
Workforce/CTE

**Criteria B. Need**

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

**Evidence**

Mandatory course for California state dental assistant licensure.

**Attach evidence**

**Need/Justification**
This course is a mandatory course for California state dental assistant licensure.

**Course Description**
This course covers the principles of dental radiology. Topics include theory and techniques, operation of the x-ray machine, biological effects, safety practices, and the practical application of utilizing appropriate infection control while exposing, processing, mounting, and evaluating intraoral dental images.

**Course Prerequisites**

**Course Corequisites**

**Course Advisories**

**Course Objectives**

The student will be able to:

1. understand radiation physics and biology.
2. describe the production of dental x-rays, the components of dental radiology equipment, film and processing.
3. identify the potential risks or harm of radiation exposure.
4. demonstrate acceptable practices of health and safety, including infection control, in relation to exposing and processing radiographs.
5. identify anatomical landmarks and visible dental materials radiographically.
6. summarize radiographic exposure and processing techniques using manual and automatic methods.
7. demonstrate mounting/sequencing techniques.
8. explain intraoral techniques, armamentaria and receptor holders.
9. differentiate and demonstrate bitewing radiographs, including principles of exposure methods of retention and evaluation.
10. interpret dental images.
11. identify and correct faulty radiographs.
12. summarize supplemental techniques, including the use of computerized digital radiography.
13. employ appropriate infection control in dental radiographic procedures.
14. demonstrate radiographic record management.

**Course Content**

1. Understand radiation physics and biology
    1. Structures of an atom and the process of ionization
    2. Differentiation between radiation and radioactivity
    3. Types of ionizing radiation
    4. Characteristics of electromagnetic radiation
    5. Properties of x-radiation
2. Describe the production of dental x-rays, the components of dental radiology equipment, film and processing
    1. Component parts of the x-ray machine
    2. Parts of the dental x-ray tube head and the dental x-ray tube
    3. The production of dental x-rays
    4. Possible interactions of x-rays with matter
    5. Effects of kilovoltage on the quality of the x-ray beam
    6. Kilovoltage effect on density and contrast of the image
    7. Influence of milliamperage on the quality of the x-ray beam

8. Effects of milliamperage on the density of the image and how exposure time and milliamperage are related
9. Influence of kilovoltage, milliamperage, exposure time, and source-to-receptor distance on intensity of the x-ray beam
10. Calculation of the inverse square law

3. Identify the potential risks or harm of radiation exposure
    1. Mechanisms and theories of radiation injury
    2. Dose-response curve and radiation injury
    3. Sequence and determining factors for radiation injury
    4. Sort and long-term effects as well as somatic and genetic effects of radiation exposure
    5. Effects of radiation exposure on cells, tissues, and organs and identification of the relative sensitivity of a given tissue to x-radiation
    6. Units of measurement used in radiation exposure
    7. Common sources of radiation exposure
    8. Risk and risk estimates for radiation exposure
    9. Dental radiation and exposure risks
    10. Risk versus benefit of dental images
4. Demonstrate acceptable practices of health and safety, including infection control, in relation to exposing and processing radiographs
    1. Basics of patient protection before x-ray exposure
    2. Types and recommendations of filtration for dental x-ray machines
    3. Collimation of dental x-ray machines and recommendation for proximity to patient's skin during exposure
    4. Six ways to protect the patient from excessive radiation during x-ray exposure
    5. The importance of receptor handling and processing after patient exposure to x-radiation
    6. Operator protection
        1. Adequate distance
        2. Shielding
        3. Avoidance of the useful beam
    7. Personnel and equipment monitoring devices used to detect radiation
    8. Radiation exposure guidelines including radiation safety legislation, maximum permissible dose (MPD), and the ALARA concept
    9. Discussion with dental x-ray patient regarding the protection steps used before, during, and after exposure to x-radiation
5. Identify anatomical landmarks and visible dental materials radiographically
    1. Differentiation between cortical and cancellous bone
    2. Terms such as prominences, spaces, and depressions in bone
    3. Identification and description of the normal anatomic landmarks of the maxilla and mandible on a human skull and as viewed on dental images
    4. Identification of normal landmarks of the maxilla and mandible as either radiolucent or radiopaque as viewed on dental images

5. Identification and description of the appearance of normal tooth anatomy and supporting structures as viewed on dental images
6. Identification of normal tooth structures as radiolucent or radiopaque as viewed on dental images
7. Identification of the primary teeth and eruption patterns of the permanent teeth as viewed on dental images
8. Identification and description of the bony landmarks of the maxilla and mandible and surrounding structures as viewed on a panoramic image
9. Identification of air spaces as viewed on a panoramic images
10. Identification of soft tissues as viewed on a panoramic image

6. Summarize radiographic exposure and processing techniques using manual and automatic methods
    1. Film composition and latent image formation
    2. Different types of x-ray film used in dentistry
    3. Types and sizes of intraoral film
    4. Film speed
    5. Extraoral film and extraoral film packaging
    6. Differentiation between screen and non-screen films
    7. Use of intensifying screens and cassettes
    8. Duplicating film and processing techniques and equipment
    9. Film storage and protection
    10. Process of turning a latent image into a visible image
    11. Component parts, procedural steps and advantages of automatic film processing
    12. Care and maintenance of automatic film processors and solutions
    13. Five steps of manual film processing
    14. Basic ingredients of the fixer and developer
    15. Equipment and steps for manual film processing
    16. Room lighting and safe lighting during processing
    17. Waste management of processing chemicals
    18. Film processing problems as a result of time/temperature, chemical contamination, film handling, and lighting errors
7. Demonstrate mounting/sequencing techniques
    1. Principles of mounting film and digital images
    2. Key landmarks to identify in mounting dental images
    3. Identification dot on film used to determine film orientation
    4. Step-by-step procedures for film mounting
    5. Equipment necessary for viewing x-ray images
    6. Importance of viewing images in optimal viewing conditions
8. Explain intraoral techniques, armamentaria and receptor holders
    1. Types of radiation equipment for intra and extraoral dental images
    2. Portable x-ray units and limiting operator exposure during use
    3. Federal, state, and local regulations of dental x-ray machines

4. Use and types of receptor holders, beam alignment devices, and collimating devices
5. Principles of the bisecting technique and location of the receptor, tooth, imaginary bisector, dental ray, and PID
6. Basic rules of bisecting technique
7. Beam alignment devices and receptor holders used with the bisecting technique
8. Correct and incorrect horizontal and vertical angulation
9. Receptor placement for all 14 periapical images using bisecting technique
10. Advantages and disadvantages of bisecting technique
11. Principles of the paralleling technique and location of the receptor, tooth, imaginary bisector, central ray, and PID
12. Basic rules of paralleling technique
13. Object-receptor distance affects the image
14. Target-receptor distance used to compensate for object-receptor distance
15. Utilizing beam alignment devices
16. Receptor placement for all 14 periapical images using paralleling technique
17. Modifications required for patients with a shallow palate, bony growths, or sensitive gag reflex
18. Advantages and disadvantages of the paralleling technique

9. Differentiate and demonstrate bitewing radiographs, including principles of exposure methods of retention and evaluation
    1. Purpose and use of the bite-wing image
    2. Appearance of opened and overlapped contact areas
    3. Basic principles of the bite-wing technique
    4. Receptor sizes commonly used for bite-wing exposure
    5. Correct and incorrect horizontal angulation
    6. Differentiation between positive and negative vertical angulation
    7. Recommend vertical angulation for bite-wing exposures using bite-wing tabs
    8. Basic rules for bite-wing technique
    9. Patient and equipment preparation before using bite-wing techniques
    10. Receptor placement for premolar and molar bite-wing exposures
    11. Purpose and use of vertical bite-wing images
    12. Modifications in the bite-wing technique for patients who have edentulous spaces or bony growths
    13. Evaluation of diagnostic bite-wing exposures
10. Interpret dental images
    1. Importance of the evaluation of images
    2. Identification of dentist and auxiliary roles in image interpretation, evaluation, and diagnosis
    3. Differentiation between interpretation and diagnosis
    4. Documentation of interpreted dental images
    5. Patient education utilizing dental images
    6. Retention of dental images

11. Identify and correct faulty radiographs
    1. Identification, description, and correction of the following errors:
        1. Unexposed receptor
        2. Exposure to light
        3. Overexposed receptor
        4. Underexposed receptor
        5. Receptor placement errors
        6. Absence of apical structures
        7. Dropped receptor corner
        8. Incorrect horizontal angulation
            1. Overlapping
        9. Incorrect vertical angulation
            1. Elongation
            2. Foreshortening
        10. Incorrect beam alignment
            1. Cone cutting
        11. Bending and creasing film
        12. Double image
        13. Blurred image
        14. Receptor reversal
12. Summarize supplemental techniques, including the use of computerized digital radiography
    1. Principles and uses for occlusal examination
    2. Purpose and principles of localization techniques
    3. Buccal object rule
    4. Receptor placements for the buccal object rule
    5. Purpose and use of digital imaging
    6. Fundamentals of digital imaging
    7. Radiation exposure in digital imaging
    8. Equipment used in digital imaging
    9. Types of digital images
    10. Patient and equipment preparation required for digital images
    11. Advantages and disadvantages of digital images
    12. Purpose and fundamentals of panoramic imaging
    13. Equipment and patient preparation/positioning for panoramic projections
    14. Common errors with panoramic imaging
    15. Advantages and disadvantages of panoramic imaging
    16. Purpose, head position, receptor placement, and beam alignment for each of the following extraoral projections:
        1. Lateral jaw projection
        2. Lateral cephalometric projection
        3. Posterior-anterior projection
        4. Waters projection
        5. Submentovertex projection

6. Reverse towne projection
7. Transcranial projection

13. Employ appropriate infection control in dental radiographic procedures
    1. Rationale for infection control
    2. Routes of disease transmission
    3. PPE, hand hygiene, sterilization, and disinfection of instruments (especially those used in dental radiography)
    4. Cleaning and disinfection of the dental unit and environmental surfaces
    5. Infection control procedures necessary before, during, and after x-ray exposure
    6. Infection control procedures necessary for digital imaging and for film processing
    7. Film handling in the darkroom or daylight loader
14. Demonstrate radiographic record management
    1. Handling of dental images
    2. Storage of dental images
    3. Confidentiality associated with dental images
    4. Risk management and informed consent
    5. Malpractice issues including negligence and standard of care

**Lab Content**

1. Preparation of the x-ray treatment room prior to taking x-rays
2. Decontamination of the x-ray treatment room after taking x-rays
3. Exposing, processing, and mounting of dental radiographs
    1. Peripical images
    2. Bitewing images
    3. Panoramic images
    4. Occlusal films
    5. Distal films
4. Instrument processing and sterilization

**Special Facilities and/or Equipment**

Radiology x-ray facility with the following equipment:

1. Individual treatment rooms
2. X-ray tube head and control panel
3. Lead shield
4. Foot operated patient chair
5. X-ray mannequins
6. Sink and soap/hand sanitizer
7. Viewboxes
8. Phorphor plate processing equipment
9. Cord sensors and laptops
10. Phosphor plate processor

11. Computers for film mounting
12. Film placement devices
13. Ultrasonic cleaner
14. Steam autoclave

When taught via Foothill Global Access, on-going access to computer with email software and hardware; email address.

**Methods of Evaluation**

| Methods of Evaluation |
|---|
| Quizzes |
| Midterm/final exam |
| Mannequins evaluations |
| Live-patient evaluations |

**Method(s) of Instruction**

| Method(s) of Instruction |
|---|
| Lab sessions: on-campus, synchronous |
| Lecture: online, asynchronous |

**Representative Text(s)**

| Author(s) | Title | Publication Date |
|---|---|---|
| Iannucci, Howerton | Dental Radiography, 5th ed. | 2016 |

**Please provide justification for any texts that are older than 5 years**
This is the most recent edition of the Iannucci text. An updated edition will be released in the near future.

**Other Required Materials**

**Types and/or Examples of Required Reading, Writing, and Outside of Class Assignments**

1. Chapter readings from required textbook
2. Essay answers to ethical scenarios

**Authorized Discipline(s):**
Dental Technology

**Faculty Service Area (FSA Code)**
HEALTH CARE SERVICES

**Taxonomy of Program Code (TOP Code)**
*1240.10 - Dental Assistant

**Attach Historical Forms/Documents (if applicable)**

## Articulation Office Only

**C-ID Notation**

**IGETC Notation**

**CSU GE Notation**

**Transferability**
CSU

**Validation Date**
5/13/2021

## Division Dean Only

**Seat Count**
30

**Load**
.076

**FOAP Codes:**

**Fund Code**
114000 - General Operating- Unrestricted

**Org Code**
141041 - Dental Assisting

**Account Code**
1320

**Program Code**
124010 - Dental Assistant

# NCBS F449. : FOUNDATIONS OF COMPUTER PROGRAMMING

**Effective Term**
Summer 2022

**Subject**
Non-Credit: Basic Skills (NCBS)
**Course Number**
F449.

**Department**
Computer Science (C S)

**Division**
Physical Sciences, Mathematics & Engineering (1PS)

**Units**
0

**Course Title**
FOUNDATIONS OF COMPUTER PROGRAMMING

**Former ID**

**Cross Listed**

**Related Courses**
C S F049. - FOUNDATIONS OF COMPUTER PROGRAMMING

**Maximum Units**
0

**Does this course meet on a weekly basis?**
Yes

**Weekly Lecture Hours**
4

**Weekly Lab Hours**
2

**Weekly Out of Class Hours**
0

**Special Hourly Notation**

**Total Contact Hours**
72

**Total Student Learning Hours**
72

**Repeatability Statement**
Unlimited Repeatability

**Repeatability Criteria**
Students who need additional practice, deeper understanding, or multiple methods of approaching these computer science concepts may benefit from repeating this course.

**Credit Status**
Non-Credit

**Degree Status**
Non-Applicable

**Is Basic Skills applicable to this course?**
No

**Grading**
Non-Credit Course (Receives no Grade)

**Will credit by exam be allowed for this course?**
No

**Honors**
No

**Distance Learning**
No

**Degree or Certificate Requirement**
None of the above (Stand Alone course)

## Stand Alone

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

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

**• Temporary means the course will be incorporated into a new degree or certificate that is not yet State approved.**
**• Permanent means there are no plans to add the course to a State approved degree or certificate, nor to the Foothill GE pattern.**

**Please select**
Permanent

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

**Criteria A. Appropriateness to Mission**

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

**Please indicate how your course supports the Foothill College Mission:**
Transfer
Workforce/CTE

**Criteria B. Need**

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

**Evidence**

This non-credit class can be used by cohort programs, such as STEM Core, Umoja and Puente, that are focused on African American and Latinx students. The course provides a no-cost introduction to computer science for those who have not had exposure in high school, an issue of disproportionate funding that is more likely to affect communities of color. Our course success rate for African American and Latinx students in beginning computer science courses (1A, 2A, 3A) is 53% and 58%, respectively, vs 76% overall. Moreover, only 12% of students in beginning computer science courses identify as Latinx, vs 24% of Foothill's total student population.

**Attach evidence**

CS A-level course success.xlsx
LMI_Foothill_Programming Languages_March 2019.docx

**Need/Justification**
This course and its credit counterpart, C S 49, are designed to align with C-ID 112. The courses provide an introduction to computer science for students who have not had previous exposure to programming. The courses address an access divide among students that is particularly marked by age and high school location.

**Course Description**
Introduction to basic computer programming concepts using an object-oriented language. Topics include the software life-cycle, procedural vs. object-oriented programming, IDE and debugging, documentation, and coding conventions. Using an object-oriented computer language, students will explore data types, basic data structures and algorithms, control structure, console and file I/O, functions, error handling and testing.

**Course Prerequisites**

**Course Corequisites**

**Course Advisories**
Advisory: MATH 105 or equivalent; concurrent enrollment in ESLL 125 or ENGL 209.

**Course Objectives**

The student will be able to:

1. Demonstrate an understanding of the software life-cycle, including design, development, styles, documentation, testing and maintenance
2. Effectively use program design tools and programming environments
3. Compare and contrast procedural versus objected-oriented programming
4. Use data types, variables, and expressions appropriately
5. Use control structures effectively
6. Write algorithms, including simple sorting and searching
7. Incorporate console and file input/output
8. Handle run-time errors appropriately
9. Make use of predefined Application Programming Interfaces
10. Write programmer-defined functions
11. Demonstrate comfort with applications used throughout the course

**Course Content**

1. Software life-cycle, including design, development, styles, documentation, testing and maintenance
    1. Coding conventions

        1. Naming
        2. Indentation
    2. Documentation
    3. Test-driven and iterative development methods
    4. Principles of testing and designing test data
2. Program design tools and programming environments
    1. Navigation through the operating system file structure through well-organized storage and retrieval of files
    2. Storage and retrieval of files to/from a server or repository
    3. Writing vs. running a program
    4. Use of editor, compiler and debugger
3. Procedural versus objected-oriented programming
    1. Survey of current languages
4. Data types, variables, expressions
    1. Primitive data
    2. Numeric data
    3. Character and string data
    4. Boolean data
    5. Constants
    6. Lists and arrays, including multi-dimensional arrays
    7. Creating and evaluating numeric, character, and boolean expressions
    8. Type conversions and casting
5. Control structure
    1. Selective structures: if and switch
    2. Repetitive structures: loops
    3. Code blocks
6. Algorithms, including simple sorting and searching
7. Console and file input/output
    1. Unformatted output
    2. Formatted output
    3. User input
    4. File and Stream I/O
8. Error handling
    1. Syntax errors
    2. Run-time errors
    3. Logic errors
9. Predefined Application Programming Interface
    1. Parameters
    2. Return values
10. Programmer-defined functions
    1. Parameters
    2. Local variables
    3. Return values
    4. Passing parameters by value and by reference

11. Applications used throughout course in selected areas
    1. Math
    2. Physics
    3. Chemistry
    4. Biology
    5. Astronomy
    6. Business and Finance
    7. Internet
    8. Internet of Things

**Lab Content**

1. Using an IDE to write source code for a project and run it
    1. Distinguish source code from a recording of the run of a program
    2. Include both the source code and a recording of the run in an electronic file(s) for submission
    3. Identify a program's errors as originating in the compiler, the program logic, the user's runtime behavior, or the organization of the project in the IDE
2. Using iterative development to progressively refine a project's features to fit a specification
    1. Write and test a program that implements just one of a project's required features
    2. Add the implementation of a second required feature to the project and test thoroughly
    3. Complete the project by implementing and testing the remaining features one by one
    4. Perform regression testing after the implementation of each new feature
3. Using test-driven development to speed up debugging
    1. Write test code first that does not run
    2. Implement the code required to make the test code run successfully
4. Developing programs that are well designed and easy to modify
    1. Outline a project first in English in an abstract way, and make this outline the project's documentation
    2. Separate data and computation in a program
    3. Use named constants to keep numbers out of a program
    4. Choose an appropriate data type for a program's storage
    5. Use a consistent and standard indentation style in the source code
5. Writing expressions to be evaluated by the computer
    1. Correctly translate an English description of a numeric calculation into an expression that the computer can evaluate
    2. Get data from the user in whole numbers and convert so that the calculation takes place with floating point operations and results
    3. Write a complex boolean expression
    4. Use string manipulations to achieve a specified result

6. Writing a program that interacts with the user
    1. Accept character data at runtime from the user to fill a program's variables with values
    2. Accept numerical data from the user at runtime to use in calculations
7. Controlling the order in which program statements are executed
    1. Use branches
    2. Use loops
    3. Use function or method calls and returns
    4. Enclose groups of statements into blocks to achieve a desired execution sequence
8. Using functions or methods to write code without repetition
    1. Write a function or method with no parameters and no returned value
    2. Write a function or method with both parameters and a returned value
    3. Use the scope of variables to keep data as local as possible
    4. Read an API to find the information needed to effectively call a function or method documented there
9. Read from and write to a file system

**Special Facilities and/or Equipment**

1. Access to a computer laboratory with the appropriate IDE software.
2. Students must have ongoing access to computers with internet capabilities.

**Methods of Evaluation**

| Methods of Evaluation |
| --- |
| Exams |
| Quizzes |
| Programming projects |
| Discussions |
| Class presentations |

**Method(s) of Instruction**

| Method(s) of Instruction |
| --- |
| Lectures which include motivation for syntax and use of the object-oriented language, APIs, functional programming, example programs, and analysis of these programs |
| Online labs (for all sections, including those meeting face-to-face/on-campus), consisting of:<br>1. A programming assignment webpage located on a college-hosted course management system or other department-approved internet environment. Here, the students will review the specification of each programming assignment and submit their completed lab work<br>2. A discussion webpage located on a college-hosted course management system or other department-approved internet environment. Here, students can request assistance from the instructor and interact publicly with other class members |
| Detailed review of programming assignments, which includes model solutions and specific comments on the student submissions |

| Method(s) of Instruction |
|---|
| In-person or online discussion which engages students and instructor in an ongoing dialog pertaining to all aspects of designing, implementing and analyzing programs<br>When course is taught fully online:<br>1. Instructor-authored lecture materials, handouts, syllabus, assignments, tests, and other relevant course material will be delivered through a college-hosted course management system or other department-approved internet environment<br>2. Additional instructional guidelines for this course are listed in the attached addendum of CS department online practices |

**Representative Text(s)**

| Author(s) | Title | Publication Date |
|---|---|---|
| Downey and Mayfield | Think Java: How to Think Like a Computer Scientist, 2nd ed. | 2019 |
| Horstmann and Necaise | Python for Everyone, 3rd ed. | 2019 |
| Sebesta, Robert | Concepts of Programming Languages, 11th ed. | 2019 |

**Please provide justification for any texts that are older than 5 years**

**Other Required Materials**

**Types and/or Examples of Required Reading, Writing, and Outside of Class Assignments**

1. Reading Assignments:
    1. Textbook assigned reading averaging 20 pages per week
    2. Reading the supplied handouts and modules averaging 10 pages per week
    3. Reading online resources as directed by instructor though links pertinent to programming
    4. Reading library and reference material directed by instructor through course handouts
2. Writing Assignments:
    1. Writing technical prose documentation that supports and describes the programs that are submitted for grades

**Authorized Discipline(s):**
Computer Science

**Faculty Service Area (FSA Code)**
COMPUTER SCIENCE

**Taxonomy of Program Code (TOP Code)**
*0707.00 - Computer Software Development

**Attach Historical Forms/Documents (if applicable)**

## Articulation Office Only

**C-ID Notation**

**IGETC Notation**

**CSU GE Notation**

**Transferability**
None

**Validation Date**

## Division Dean Only

**Seat Count**
40

**Load**
.091

**FOAP Codes:**

**Fund Code**
114000 - General Operating- Unrestricted

**Org Code**
125111 - FH-Computer Sciences (C S)

**Account Code**
1320

**Program Code**
070600 - Computer Science (transfer)

# Programming Language Occupations
# Labor Market Information Report
# Foothill College

Prepared by the San Francisco Bay Center of Excellence
for Labor Market Research
March 2019

## Recommendation

Based on all available data, there appears to be a significant undersupply of Programming Language 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 20,665 students in the Bay region and 2,294 students in the Silicon Valley Sub-Region.

This report also provides student outcomes data on employment and earnings for programs on TOP 0707.00 - Computer Software Development 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 Programming Language Occupations in the 12 county Bay region and in the Silicon Valley sub-region for the revision to an existing program at Foothill College.

- **Software Developers, Applications (SOC 15-1132):** Develop, create, and modify general computer applications software or specialized utility programs. Analyze user needs and develop software solutions. Design software or customize software for client use with the aim of optimizing operational efficiency. May analyze and design databases within an application area, working individually or coordinating database development as part of a team. May supervise computer programmers.
  Entry-Level Educational Requirement: Bachelor's degree
  Training Requirement: None
  Percentage of Community College Award Holders or Some Postsecondary Coursework: 13%
- **Computer User Support Specialists (SOC 15-1151):** Provide technical assistance to computer users. Answer questions or resolve computer problems for clients in person, or via telephone or electronically. May provide assistance concerning the use of computer hardware and software, including printing, installation, word processing, electronic mail, and operating systems. Excludes "Network and Computer Systems Administrators" (15-1142).
  Entry-Level Educational Requirement: Some college, *no degree*
  Training Requirement: None
  Percentage of Community College Award Holders or Some Postsecondary Coursework: 41%
- **Software Developers, Systems Software (SOC 15-1133**): Research, design, develop, and test operating systems-level software, compilers, and network distribution software for medical, industrial, military, communications, aerospace, business, scientific, and general computing applications. Set operational specifications and formulate and analyze software requirements. May design embedded systems software. Apply principles and techniques of computer science, engineering, and mathematical analysis.
  Entry-Level Educational Requirement: Bachelor's degree
  Training Requirement: None
  Percentage of Community College Award Holders or Some Postsecondary Coursework: 13%

- **Web Developers (SOC 15-1134):** Design, create, and modify Web sites. Analyze user needs to implement Web site content, graphics, performance, and capacity. May integrate Web sites with other computer applications. May convert written, graphic, audio, and video components to compatible Web formats by using software designed to facilitate the creation of Web and multimedia content. Excludes "Multimedia Artists and Animators" (27-1014).

  Entry-Level Educational Requirement: Associate's degree

  Training Requirement: None

  Percentage of Community College Award Holders or Some Postsecondary Coursework: 25%

- **Computer and Information Systems Managers (SOC 11-3021):** Plan, direct, or coordinate activities in such fields as electronic data processing, information systems, systems analysis, and computer programming. Excludes "Computer Occupations" (15-1111 through 15-1199).

  Entry-Level Educational Requirement: Bachelor's *degree*

  Training Requirement: None

  Percentage of Community College Award Holders or Some Postsecondary Coursework: 21%

## Occupational Demand

**Table 1. Employment Outlook for Programming Language Occupations in Bay Region**

| Occupation | 2017 Jobs | 2022 Jobs | 5-Yr Change | 5-Yr % Change | 5-Yr Open-ings | Average Annual Open-ings | 10% Hourly Wage | Median Hourly Wage |
|---|---|---|---|---|---|---|---|---|
| Software Developers, Applications | 89,372 | 109,872 | 20,499 | 23% | 51,391 | 10,278 | $38.68 | $62.13 |
| Computer User Support Specialists | 29,393 | 34,005 | 4,612 | 16% | 15,944 | 3,189 | $20.02 | $32.70 |
| Software Developers, Systems Software | 40,748 | 44,919 | 4,171 | 10% | 17,637 | 3,527 | $40.21 | $65.42 |
| Web Developers | 10,306 | 12,242 | 1,937 | 19% | 5,802 | 1,160 | $20.83 | $38.90 |
| Computer and Information Systems Managers | 25,897 | 29,357 | 3,461 | 13% | 13,343 | 2,669 | $55.65 | $86.30 |
| **Total** | **195,716** | **230,396** | **34,680** | **18%** | **104,118** | **20,823** | **$37.50** | **$60.37** |

*Source: EMSI 2019.1*

**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 Programming Language Occupations in Silicon Valley Sub-Region**

| Occupation | 2017 Jobs | 2022 Jobs | 5-Yr Change | 5-Yr % Change | 5-Yr Open-ings | Average Annual Open-ings | 10% Hourly Wage | Median Hourly Wage |
|---|---|---|---|---|---|---|---|---|
| Software Developers, Applications | 10,106 | 11,375 | 1,269 | 13% | 4,634 | 927 | $32.77 | $57.83 |
| Computer User Support Specialists | 5,092 | 5,490 | 398 | 8% | 2,313 | 463 | $19.30 | $29.05 |
| Software Developers, Systems Software | 4,717 | 4,966 | 249 | 5% | 1,807 | 361 | $33.94 | $61.17 |
| Web Developers | 2,177 | 2,327 | 150 | 7% | 951 | 190 | $19.56 | $28.48 |
| Computer and Information Systems Managers | 4,172 | 4,385 | 213 | 5% | 1,773 | 355 | $43.76 | $75.74 |
| **TOTAL** | **26,263** | **28,543** | **2,279** | **9%** | **11,477** | **2,296** | **$31.02** | **$53.26** |

*Source: EMSI 2019.1*

**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 (Feb 2018 - Jan 2018)**

| Occupation | Bay Region | Silicon Valley |
|---|---|---|
| Software Developers, Applications (15-1132.00) | 105,796 | 50,257 |
| Web Developers (15-1134.00) | 25,242 | 10,258 |
| Computer User Support Specialists (15-1151.00) | 14,324 | 5,226 |
| Computer and Information Systems Managers (11-3021.00) | 1,956 | 656 |
| Software Developers, Systems Software (15-1133.00) | 1,325 | 665 |
| **Total** | **148,643** | **67,062** |

*Source: Burning Glass*

**Table 4. Top Job Titles for Programming Language Occupations for latest 12 months (Feb 2018 - Jan 2018)**

| Common Title | Bay | Silicon Valley | Common Title | Bay | Silicon Valley |
|---|---|---|---|---|---|
| Software Development Engineer | 32,635 | 15,008 | Applications Developer | 1,488 | 546 |
| Java Developer | 7,475 | 4,346 | Android Developer | 1,445 | 752 |
| Devops Engineer | 3,819 | 1,774 | Principal Software Engineer | 1,259 | 554 |
| Applications Engineer | 3,021 | 1,818 | User Interface (UX)/User Experience (UX) Designer | 1,199 | 370 |
| User Experience (UX) Designer | 2,789 | 1,172 | Senior Engineer | 1,144 | 401 |
| Software Developer | 2,768 | 1,354 | PHP Developer | 1,078 | 203 |
| Java Engineer | 2,580 | 1,415 | iOS Developer | 1,048 | 527 |
| Python Developer | 1,902 | 1,215 | Senior Devops Engineer | 1,031 | 427 |
| Front End Developer | 1,857 | 893 | Desktop Support | 1,014 | 337 |
| Developer | 1,693 | 708 | .Net Developer | 945 | 207 |
| Senior Developer | 1,648 | 668 | Software Engineering Manager | 885 | 376 |
| User Interface (UI) Developer | 1,631 | 947 | Technical Support Engineer | 763 | 430 |
| Web Developer | 1,613 | 613 | Software Architect | 709 | 356 |
| Engineer | 1,538 | 840 | Full Stack Developer | 641 | 287 |

*Source: Burning Glass*

## Industry Concentration

**Table 5. Industries hiring Programming Language Workers in Bay Region**

| Industry – 6 Digit NAICS (No. American Industry Classification) Codes | Jobs in Industry (2017) | Jobs in Industry (2022) | % Change (2017-22) | % in Industry (2017) |
|---|---|---|---|---|
| Custom Computer Programming Services (541511) | 34,646 | 35,722 | 20% | 20.0% |
| Computer Systems Design Services (541512) | 21,607 | 22,034 | 17% | 12.4% |
| Internet Publishing and Broadcasting and Web Search Portals (519130) | 18,979 | 20,125 | 42% | 11.3% |
| Software Publishers (511210) | 17,817 | 18,859 | 27% | 10.6% |
| Electronic Computer Manufacturing (334111) | 15,341 | 15,856 | 10% | 8.9% |
| Data Processing, Hosting, and Related Services (518210) | 6,219 | 6,758 | 41% | 3.8% |
| Other Computer Related Services (541519) | 4,720 | 4,841 | 24% | 2.7% |
| Corporate, Subsidiary, and Regional Managing Offices (551114) | 3,685 | 3,925 | 15% | 2.2% |
| Research and Development in the Physical, Engineering, and Life Sciences (except Nanotechnology and Biotechnology) (541715) | 3,019 | 3,165 | (1%) | 1.8% |

| | | | | |
|---|---|---|---|---|
| Semiconductor and Related Device Manufacturing (334413) | 2,077 | 2,076 | (5%) | 1.2% |
| Research and Development in Biotechnology (except Nanobiotechnology) (541714) | 1,641 | 1,738 | 44% | 1.0% |
| Colleges, Universities, and Professional Schools (State Government) (902612) | 1,667 | 1,730 | 11% | 1.0% |
| Temporary Help Services (561320) | 1,703 | 1,707 | 7% | 1.0% |

*Source: EMSI 2019.1*

**Table 6. Top Employers Posting Programming Language Occupations in Bay Region and Silicon Valley Sub-Region (Feb 2018 - Jan 2018)**

| Employer | Bay | Employer | Bay | Employer | Silicon Valley |
|---|---|---|---|---|---|
| Capital Markets Placement | 2,245 | Redolent, Inc | 340 | Apple Inc. | 2,175 |
| Apple Inc. | 2,233 | Techfetch Com | 334 | Cisco Systems Inc | 1,170 |
| Amazon | 1,504 | eBay | 330 | Amazon | 916 |
| Cisco Systems Incorporated | 1,325 | Splunk | 317 | Google Inc. | 886 |
| Google Inc. | 1,139 | Adobe Systems | 311 | Vmware Incorporated | 452 |
| Scoop Technologies | 1,053 | Amazon Lab126 | 310 | Paypal | 390 |
| Facebook | 784 | Best Buy | 289 | Intel Corporation | 370 |
| IBM | 639 | Bayone Solutions | 277 | IBM | 342 |
| Oracle | 621 | Twitter | 274 | Walmart / Sam's | 301 |
| Workday, Inc | 554 | Etouch Systems Corp | 270 | Redolent, Inc | 273 |
| Microsoft Corporation | 526 | Linkedin Limited | 257 | eBay | 253 |
| Vmware Incorporated | 475 | Wipro | 257 | SAP | 247 |
| Salesforce | 459 | Xoriant Incorporated | 250 | Amazon Lab126 | 245 |
| Paypal | 428 | Palo Alto Networks | 244 | Palo Alto Networks | 243 |
| SAP | 427 | Revature | 243 | Nvidia Corporation | 238 |
| Walmart / Sam's | 425 | Infoobjects Inc | 241 | Dell | 217 |
| Intel Corporation | 372 | Accenture | 238 | Fortinet Incorporated | 215 |
| Redolent, Inc | 340 | Nvidia Corporation | 238 | Linkedin Limited | 212 |
| Techfetch Com | 334 | Uber | 234 | Techfetch Com | 205 |
| Capital Markets Placement | 2,245 | Sony Electronics Inc | 228 | Splunk | 191 |
| Apple Inc. | 2,233 | Deloitte | 227 | Xilinx Incorporated | 189 |

*Source: Burning Glass*

## Educational Supply

There are 10 community colleges in the Bay Region issuing 158 awards on average annually (last 3 years) on TOP 0707.00 - Computer Software Development and TOP 0708.00 - Computer Infrastructure and Support. Foothill College is the only college in the Silicon Valley Sub-Region issuing awards on these TOP codes, issuing 2 awards on average annually (last 3 years) on Computer Software Development.

**Table 7. Awards on TOP 0707.00 - Computer Software Development and TOP 0708.00 - Computer Infrastructure and Support in the Bay Region**

| College | Sub-Region | TOP | Headcount | Associates | Certificates | Total |
|---|---|---|---|---|---|---|
| **Cabrillo** | Santa Cruz & Monterey | 70800 | 335 | | | |
| **Contra Costa** | East Bay | 70800 | n/a | | 1 | 1 |
| **DeAnza** | Silicon Valley | 70800 | 312 | | | |
| **Diablo Valley** | East Bay | 70800 | 125 | | | |
| **Foothill** | Silicon Valley | 70800 | 304 | | | |
| **Gavilan** | Santa Cruz & Monterey | 70800 | 95 | 1 | | 1 |
| **Las Positas** | East Bay | 70800 | 184 | | | |
| **Los Medanos** | East Bay | 70800 | n/a | 4 | 4 | 8 |

| | | | | | | |
|---|---|---|---|---|---|---|
| **Mission** | Silicon Valley | 70800 | 43 | | | |
| **Ohlone** | East Bay | 70800 | 64 | | 1 | 1 |
| **San Francisco** | Mid-Peninsula | 70800 | 345 | 39 | 9 | 48 |
| **San Mateo** | Mid-Peninsula | 70800 | n/a | 1 | 2 | 3 |
| **Santa Rosa** | North Bay | 70800 | 205 | | | |
| **Slyline** | Mid-Peninsula | 70800 | 112 | | | |
| **Foothill** | Silicon Valley | 70700 | 2,518 | | 2 | 2 |
| **San Francisco** | Mid-Peninsula | 70700 | n/a | | 2 | 2 |
| **San Mateo** | Mid-Peninsula | 70700 | n/a | 6 | 85 | 91 |
| **Solano** | North Bay | 70700 | 1,401 | | 2 | 2 |
| **Total Bay Region** | | | **6,043** | **51** | **107** | **158** |
| **Total Silicon Valley Sub-Region** | | | **3,177** | **0** | **2** | **2** |

*Source: IPEDS, Data Mart and Launchboard*

NOTE: Headcount of students who took one or more courses is for 2016-17. The annual average for awards is 2014-17 unless there are only awards in 2016-17. The annual average for other postsecondary is for 2013-16.

## Gap Analysis

Based on the data included in this report, there is a large labor market gap in the Bay region with 20,823 annual openings for Programming Language Occupations and 158 annual (3-year average) awards for an annual undersupply of 20,665 students. In the Silicon Valley Sub-Region, there is also a large gap with 2,296 annual openings and 2 annual (3-year average) awards for an annual undersupply of 2,294 students.

## Student Outcomes

**Table 8. Four Employment Outcomes Metrics for Students Who Took Courses on TOP 0707.00 - Computer Software Development**

| 2015-16 | Bay (All CTE Programs) | Foothill College (All CTE Programs) | State (0707.00) | Bay (0707.00) | Silicon Valley (0707.00) | Foothill College (0707.00) |
|---|---|---|---|---|---|---|
| % Employed Four Quarters After Exit | 74% | 77% | 62% | 59% | n/a | n/a |
| Median Quarterly Earnings Two Quarters After Exit | $10,550 | $15,310 | $12,500 | $14,169 | n/a | n/a |
| Median % Change in Earnings | 46% | 82% | 54% | 37% | n/a | n/a |
| % of Students Earning a Living Wage | 63% | 76% | 67% | 68% | n/a | n/a |

*Source: Launchboard Pipeline (version available on 3/6/19)*

## Skills, Certifications and Education

**Table 9. Top Skills for Programming Language Occupations in Bay Region (Feb 2018 - Jan 2018)**

| Skill | Postings | Skill | Postings | Skill | Postings |
|---|---|---|---|---|---|
| Java | 50,519 | AngularJS | 11,311 | Ruby | 8,481 |
| Software Engineering | 47,854 | UNIX | 11,180 | Microsoft C# | 8,293 |
| Python | 34,810 | React Javascript | 10,163 | JavaScript Object Notation (JSON) | 8,059 |
| JavaScript | 34,741 | Continuous Integration (CI) | 10,026 | Docker Software | 7,894 |
| Software Development | 34,128 | HTML5 | 10,023 | Kubernetes | 7,826 |
| SQL | 24,742 | MySQL | 10,000 | Product Management | 7,811 |
| Linux | 23,148 | NoSQL | 9,851 | Software Architecture | 7,768 |

| | | | | | |
|---|---|---|---|---|---|
| C++ | 19,882 | Technical Support | 9,835 | Extensible Markup Language (XML) | 7,728 |
| Git | 16,159 | Scrum | 9,731 | Node.js | 7,625 |
| Web Application Development | 14,319 | Quality Assurance and Control | 9,690 | Web Development | 7,594 |
| Object-Oriented Analysis and Design (OOAD) | 13,976 | Data Structures | 9,400 | Machine Learning | 7,580 |
| Debugging | 13,331 | Agile Development | 9,396 | Project Management | 7,578 |
| DevOps | 13,111 | Customer Service | 9,038 | Big Data | 7,556 |
| Oracle | 12,280 | jQuery | 8,884 | Apache Hadoop | 7,495 |
| Unit Testing | 12,233 | Scalability Design | 8,860 | Hypertext Preprocessor (PHP) | 7,442 |

*Source: Burning Glass*

**Table 10. Certifications for Programming Language Occupations in the Bay Region (Feb 2018 - Jan 2018)**

Note: 95% 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.

| Certification | Postings | Certification | Postings |
|---|---|---|---|
| Driver's License | 1,245 | Certified Scrum Trainer (CST) | 195 |
| IT Infrastructure Library (ITIL) Certification | 1,188 | Certified Salesforce Administrator | 177 |
| Certified A+ Technician | 1,065 | Apple Certified Macintosh Technician | 146 |
| Security Clearance | 850 | Project Management Professional (PMP) | 144 |
| Cisco Certified Network Associate (CCNA) | 452 | SANS/GIAC Certification | 140 |
| Microsoft Certified Professional (MCP) | 432 | Certified Information Systems Auditor (CISA) | 126 |
| Project Management Certification | 397 | ITIL Foundation | 118 |
| ITIL Certification | 379 | Certified ScrumMaster (CSM) | 109 |
| CompTIA Network+ | 373 | Certified Information Security Manager (CISM) | 106 |
| Certified Information Systems Security Professional (CISSP) | 322 | Capability Model Maturity Integration (CMMI) Certification | 103 |
| Cisco Certified Internetwork Expert (CCIE) | 277 | Computer Science Certification | 94 |
| Cisco Certified Network Professional (CCNP) | 253 | Certified Salesforce Platform Developer II | 89 |
| Salesforce Developer | 229 | Certified Scrum Professional (CSP) | 86 |
| Microsoft Certified Solutions Associate (MCSA) | 220 | Java Certification | 83 |
| Certified Salesforce Platform Developer | 214 | Microsoft Certified Desktop Support Technician (Legacy) | 82 |
| Microsoft Certified Solutions Expert (MCSE) | 213 | Certified Novell Administrator | 78 |
| CompTIA Security+ | 206 | Microsoft Certified Technology Specialist (MCTS) | 78 |

*Source: Burning Glass*

**Table 11. Education Requirements for Programming Language Occupations in Bay Region**

Note: 49% 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 |
|---|---|
| High school or vocational training | 1,789 (2%) |
| Associate Degree | 1,350 (2%) |
| Bachelor's Degree or Higher | 72,094 (96%) |

*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 CCCCO Data Mart.

## Sources

O*Net Online
Labor Insight/Jobs (Burning Glass)
Economic Modeling Specialists International (EMSI)
CTE LaunchBoard www.calpassplus.org/Launchboard/
Statewide CTE Outcomes Survey
Employment Development Department Unemployment Insurance Dataset
Living Insight Center for Community Economic Development
Chancellor's Office MIS system

## Contacts

For more information, please contact:


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| Term | Division | Department | Course | Student Characteristic | Enrollment Count | Success Count | Non Success Count | Withdrawal Count | Retention Count | Success Rate | Non Success Rate | Withdrawal Rate | Retention Rate |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2019 Summer Foothill | 1PS Physical Scienc, Math & Engin | C S Computer Science-FH | F001A OBJ-ORIENTED PROG METHOD JAVA | African American | 2 | 2 | 0 | 0 | 2 | 100% | 0% | 0% | 100% |
| 2019 Summer Foothill | 1PS Physical Scienc, Math & Engin | C S Computer Science-FH | F001A OBJ-ORIENTED PROG METHOD JAVA | Asian | 124 | 100 | 12 | 12 | 112 | 80.60% | 9.70% | 9.70% | 90.30% |
| 2019 Summer Foothill | 1PS Physical Scienc, Math & Engin | C S Computer Science-FH | F001A OBJ-ORIENTED PROG METHOD JAVA | Decline to State | 12 | 10 | 2 | 0 | 12 | 83.30% | 16.70% | 0% | 100% |
| 2019 Summer Foothill | 1PS Physical Scienc, Math & Engin | C S Computer Science-FH | F001A OBJ-ORIENTED PROG METHOD JAVA | Filipinx | 6 | 3 | 2 | 1 | 5 | 50% | 33.30% | 16.70% | 83.30% |
| 2019 Summer Foothill | 1PS Physical Scienc, Math & Engin | C S Computer Science-FH | F001A OBJ-ORIENTED PROG METHOD JAVA | Latinx | 17 | 13 | 1 | 3 | 14 | 76.50% | 5.90% | 17.60% | 82.40% |
| 2019 Summer Foothill | 1PS Physical Scienc, Math & Engin | C S Computer Science-FH | F001A OBJ-ORIENTED PROG METHOD JAVA | Pacific Islander | 1 | 1 | 0 | 0 | 1 | 100% | 0% | 0% | 100% |
| 2019 Summer Foothill | 1PS Physical Scienc, Math & Engin | C S Computer Science-FH | F001A OBJ-ORIENTED PROG METHOD JAVA | White | 42 | 37 | 1 | 4 | 38 | 88.10% | 2.40% | 9.50% | 90.50% |
| 2019 Summer Foothill | 1PS Physical Scienc, Math & Engin | C S Computer Science-FH | F001A OBJ-ORIENTED PROG METHOD JAVA | Total | 204 | 166 | 18 | 20 | 184 | 81.40% | 8.80% | 9.80% | 90.20% |
| 2019 Summer Foothill | 1PS Physical Scienc, Math & Engin | C S Computer Science-FH | F002A OBJ-ORIENT PROG METHOD IN C++ | African American | 2 | 0 | 2 | 0 | 2 | 0% | 100% | 0% | 100% |
| 2019 Summer Foothill | 1PS Physical Scienc, Math & Engin | C S Computer Science-FH | F002A OBJ-ORIENT PROG METHOD IN C++ | Asian | 51 | 40 | 5 | 6 | 45 | 78.40% | 9.80% | 11.80% | 88.20% |
| 2019 Summer Foothill | 1PS Physical Scienc, Math & Engin | C S Computer Science-FH | F002A OBJ-ORIENT PROG METHOD IN C++ | Decline to State | 3 | 3 | 0 | 0 | 3 | 100% | 0% | 0% | 100% |
| 2019 Summer Foothill | 1PS Physical Scienc, Math & Engin | C S Computer Science-FH | F002A OBJ-ORIENT PROG METHOD IN C++ | Filipinx | 2 | 2 | 0 | 0 | 2 | 100% | 0% | 0% | 100% |
| 2019 Summer Foothill | 1PS Physical Scienc, Math & Engin | C S Computer Science-FH | F002A OBJ-ORIENT PROG METHOD IN C++ | Latinx | 6 | 5 | 0 | 1 | 5 | 83.30% | 0% | 16.70% | 83.30% |
| 2019 Summer Foothill | 1PS Physical Scienc, Math & Engin | C S Computer Science-FH | F002A OBJ-ORIENT PROG METHOD IN C++ | Native American | 1 | 1 | 0 | 0 | 1 | 100% | 0% | 0% | 100% |
| 2019 Summer Foothill | 1PS Physical Scienc, Math & Engin | C S Computer Science-FH | F002A OBJ-ORIENT PROG METHOD IN C++ | White | 21 | 16 | 4 | 1 | 20 | 76.20% | 19% | 4.80% | 95.20% |
| 2019 Summer Foothill | 1PS Physical Scienc, Math & Engin | C S Computer Science-FH | F002A OBJ-ORIENT PROG METHOD IN C++ | Total | 86 | 67 | 11 | 8 | 78 | 77.90% | 12.80% | 9.30% | 90.70% |
| 2019 Summer Foothill | 1PS Physical Scienc, Math & Engin | C S Computer Science-FH | F003A OBJECT ORIEN PRGM METH PYTHON | African American | 6 | 4 | 0 | 2 | 4 | 66.70% | 0% | 33.30% | 66.70% |
| 2019 Summer Foothill | 1PS Physical Scienc, Math & Engin | C S Computer Science-FH | F003A OBJECT ORIEN PRGM METH PYTHON | Asian | 132 | 119 | 2 | 11 | 121 | 90.20% | 1.50% | 8.30% | 91.70% |
| 2019 Summer Foothill | 1PS Physical Scienc, Math & Engin | C S Computer Science-FH | F003A OBJECT ORIEN PRGM METH PYTHON | Decline to State | 5 | 5 | 0 | 0 | 5 | 100% | 0% | 0% | 100% |
| 2019 Summer Foothill | 1PS Physical Scienc, Math & Engin | C S Computer Science-FH | F003A OBJECT ORIEN PRGM METH PYTHON | Filipinx | 9 | 9 | 0 | 0 | 9 | 100% | 0% | 0% | 100% |
| 2019 Summer Foothill | 1PS Physical Scienc, Math & Engin | C S Computer Science-FH | F003A OBJECT ORIEN PRGM METH PYTHON | Latinx | 13 | 9 | 2 | 2 | 11 | 69.20% | 15.40% | 15.40% | 84.60% |
| 2019 Summer Foothill | 1PS Physical Scienc, Math & Engin | C S Computer Science-FH | F003A OBJECT ORIEN PRGM METH PYTHON | White | 42 | 32 | 2 | 8 | 34 | 76.20% | 4.80% | 19% | 81% |
| 2019 Summer Foothill | 1PS Physical Scienc, Math & Engin | C S Computer Science-FH | F003A OBJECT ORIEN PRGM METH PYTHON | Total | 207 | 178 | 6 | 23 | 184 | 86% | 2.90% | 11.10% | 88.90% |
| 2019 Fall Foothill | 1PS Physical Scienc, Math & Engin | C S Computer Science-FH | F001A OBJ-ORIENTED PROG METHOD JAVA | African American | 3 | 2 | 1 | 0 | 3 | 66.70% | 33.30% | 0% | 100% |
| 2019 Fall Foothill | 1PS Physical Scienc, Math & Engin | C S Computer Science-FH | F001A OBJ-ORIENTED PROG METHOD JAVA | Asian | 103 | 80 | 11 | 12 | 91 | 77.70% | 10.70% | 11.70% | 88.30% |
| 2019 Fall Foothill | 1PS Physical Scienc, Math & Engin | C S Computer Science-FH | F001A OBJ-ORIENTED PROG METHOD JAVA | Decline to State | 9 | 8 | 1 | 0 | 9 | 88.90% | 11.10% | 0% | 100% |
| 2019 Fall Foothill | 1PS Physical Scienc, Math & Engin | C S Computer Science-FH | F001A OBJ-ORIENTED PROG METHOD JAVA | Filipinx | 5 | 2 | 1 | 2 | 3 | 40% | 20% | 40% | 60% |
| 2019 Fall Foothill | 1PS Physical Scienc, Math & Engin | C S Computer Science-FH | F001A OBJ-ORIENTED PROG METHOD JAVA | Latinx | 36 | 19 | 7 | 10 | 26 | 52.80% | 19.40% | 27.80% | 72.20% |
| 2019 Fall Foothill | 1PS Physical Scienc, Math & Engin | C S Computer Science-FH | F001A OBJ-ORIENTED PROG METHOD JAVA | Pacific Islander | 1 | 1 | 0 | 0 | 1 | 100% | 0% | 0% | 100% |
| 2019 Fall Foothill | 1PS Physical Scienc, Math & Engin | C S Computer Science-FH | F001A OBJ-ORIENTED PROG METHOD JAVA | White | 46 | 33 | 5 | 8 | 38 | 71.70% | 10.90% | 17.40% | 82.60% |
| 2019 Fall Foothill | 1PS Physical Scienc, Math & Engin | C S Computer Science-FH | F001A OBJ-ORIENTED PROG METHOD JAVA | Total | 203 | 145 | 26 | 32 | 171 | 71.40% | 12.80% | 15.80% | 84.20% |
| 2019 Fall Foothill | 1PS Physical Scienc, Math & Engin | C S Computer Science-FH | F002A OBJ-ORIENT PROG METHOD IN C++ | African American | 7 | 3 | 1 | 3 | 4 | 42.90% | 14.30% | 42.90% | 57.10% |
| 2019 Fall Foothill | 1PS Physical Scienc, Math & Engin | C S Computer Science-FH | F002A OBJ-ORIENT PROG METHOD IN C++ | Asian | 89 | 76 | 8 | 5 | 84 | 85.40% | 9% | 5.60% | 94.40% |
| 2019 Fall Foothill | 1PS Physical Scienc, Math & Engin | C S Computer Science-FH | F002A OBJ-ORIENT PROG METHOD IN C++ | Decline to State | 6 | 5 | 1 | 0 | 6 | 83.30% | 16.70% | 0% | 100% |
| 2019 Fall Foothill | 1PS Physical Scienc, Math & Engin | C S Computer Science-FH | F002A OBJ-ORIENT PROG METHOD IN C++ | Filipinx | 5 | 3 | 0 | 2 | 3 | 60% | 0% | 40% | 60% |
| 2019 Fall Foothill | 1PS Physical Scienc, Math & Engin | C S Computer Science-FH | F002A OBJ-ORIENT PROG METHOD IN C++ | Latinx | 30 | 13 | 4 | 13 | 17 | 43.30% | 13.30% | 43.30% | 56.70% |
| 2019 Fall Foothill | 1PS Physical Scienc, Math & Engin | C S Computer Science-FH | F002A OBJ-ORIENT PROG METHOD IN C++ | Native American | 1 | 1 | 0 | 0 | 1 | 100% | 0% | 0% | 100% |
| 2019 Fall Foothill | 1PS Physical Scienc, Math & Engin | C S Computer Science-FH | F002A OBJ-ORIENT PROG METHOD IN C++ | White | 42 | 28 | 8 | 6 | 36 | 66.70% | 19% | 14.30% | 85.70% |
| 2019 Fall Foothill | 1PS Physical Scienc, Math & Engin | C S Computer Science-FH | F002A OBJ-ORIENT PROG METHOD IN C++ | Total | 180 | 129 | 22 | 29 | 151 | 71.70% | 12.20% | 16.10% | 83.90% |
| 2019 Fall Foothill | 1PS Physical Scienc, Math & Engin | C S Computer Science-FH | F003A OBJECT ORIEN PRGM METH PYTHON | African American | 2 | 2 | 0 | 0 | 2 | 100% | 0% | 0% | 100% |
| 2019 Fall Foothill | 1PS Physical Scienc, Math & Engin | C S Computer Science-FH | F003A OBJECT ORIEN PRGM METH PYTHON | Asian | 68 | 53 | 8 | 7 | 61 | 77.90% | 11.80% | 10.30% | 89.70% |
| 2019 Fall Foothill | 1PS Physical Scienc, Math & Engin | C S Computer Science-FH | F003A OBJECT ORIEN PRGM METH PYTHON | Decline to State | 8 | 6 | 2 | 0 | 8 | 75% | 25% | 0% | 100% |
| 2019 Fall Foothill | 1PS Physical Scienc, Math & Engin | C S Computer Science-FH | F003A OBJECT ORIEN PRGM METH PYTHON | Filipinx | 3 | 2 | 0 | 1 | 2 | 66.70% | 0% | 33.30% | 66.70% |
| 2019 Fall Foothill | 1PS Physical Scienc, Math & Engin | C S Computer Science-FH | F003A OBJECT ORIEN PRGM METH PYTHON | Latinx | 15 | 11 | 3 | 1 | 14 | 73.30% | 20% | 6.70% | 93.30% |
| 2019 Fall Foothill | 1PS Physical Scienc, Math & Engin | C S Computer Science-FH | F003A OBJECT ORIEN PRGM METH PYTHON | White | 37 | 26 | 6 | 5 | 32 | 70.30% | 16.20% | 13.50% | 86.50% |
| 2019 Fall Foothill | 1PS Physical Scienc, Math & Engin | C S Computer Science-FH | F003A OBJECT ORIEN PRGM METH PYTHON | Total | 133 | 100 | 19 | 14 | 119 | 75.20% | 14.30% | 10.50% | 89.50% |
| 2020 Winter Foothill | 1PS Physical Scienc, Math & Engin | C S Computer Science-FH | F001A OBJ-ORIENTED PROG METHOD JAVA | African American | 4 | 2 | 2 | 0 | 4 | 50% | 50% | 0% | 100% |
| 2020 Winter Foothill | 1PS Physical Scienc, Math & Engin | C S Computer Science-FH | F001A OBJ-ORIENTED PROG METHOD JAVA | Asian | 72 | 54 | 8 | 10 | 62 | 75% | 11.10% | 13.90% | 86.10% |
| 2020 Winter Foothill | 1PS Physical Scienc, Math & Engin | C S Computer Science-FH | F001A OBJ-ORIENTED PROG METHOD JAVA | Decline to State | 8 | 5 | 1 | 2 | 6 | 62.50% | 12.50% | 25% | 75% |
| 2020 Winter Foothill | 1PS Physical Scienc, Math & Engin | C S Computer Science-FH | F001A OBJ-ORIENTED PROG METHOD JAVA | Filipinx | 7 | 3 | 3 | 1 | 6 | 42.90% | 42.90% | 14.30% | 85.70% |
| 2020 Winter Foothill | 1PS Physical Scienc, Math & Engin | C S Computer Science-FH | F001A OBJ-ORIENTED PROG METHOD JAVA | Latinx | 19 | 12 | 1 | 6 | 13 | 63.20% | 5.30% | 31.60% | 68.40% |
| 2020 Winter Foothill | 1PS Physical Scienc, Math & Engin | C S Computer Science-FH | F001A OBJ-ORIENTED PROG METHOD JAVA | Pacific Islander | 1 | 0 | 0 | 1 | 0 | 0% | 0% | 100% | 0% |
| 2020 Winter Foothill | 1PS Physical Scienc, Math & Engin | C S Computer Science-FH | F001A OBJ-ORIENTED PROG METHOD JAVA | White | 21 | 18 | 1 | 2 | 19 | 85.70% | 4.80% | 9.50% | 90.50% |
| 2020 Winter Foothill | 1PS Physical Scienc, Math & Engin | C S Computer Science-FH | F001A OBJ-ORIENTED PROG METHOD JAVA | Total | 132 | 94 | 16 | 22 | 110 | 71.20% | 12.10% | 16.70% | 83.30% |
| 2020 Winter Foothill | 1PS Physical Scienc, Math & Engin | C S Computer Science-FH | F002A OBJ-ORIENT PROG METHOD IN C++ | African American | 2 | 0 | 2 | 0 | 2 | 0% | 100% | 0% | 100% |
| 2020 Winter Foothill | 1PS Physical Scienc, Math & Engin | C S Computer Science-FH | F002A OBJ-ORIENT PROG METHOD IN C++ | Asian | 19 | 15 | 3 | 1 | 18 | 78.90% | 15.80% | 5.30% | 94.70% |
| 2020 Winter Foothill | 1PS Physical Scienc, Math & Engin | C S Computer Science-FH | F002A OBJ-ORIENT PROG METHOD IN C++ | Latinx | 3 | 2 | 1 | 0 | 3 | 66.70% | 33.30% | 0% | 100% |
| 2020 Winter Foothill | 1PS Physical Scienc, Math & Engin | C S Computer Science-FH | F002A OBJ-ORIENT PROG METHOD IN C++ | Pacific Islander | 1 | 1 | 0 | 0 | 1 | 100% | 0% | 0% | 100% |
| 2020 Winter Foothill | 1PS Physical Scienc, Math & Engin | C S Computer Science-FH | F002A OBJ-ORIENT PROG METHOD IN C++ | White | 5 | 4 | 0 | 1 | 4 | 80% | 0% | 20% | 80% |
| 2020 Winter Foothill | 1PS Physical Scienc, Math & Engin | C S Computer Science-FH | F002A OBJ-ORIENT PROG METHOD IN C++ | Total | 30 | 22 | 6 | 2 | 28 | 73.30% | 20% | 6.70% | 93.30% |
| 2020 Winter Foothill | 1PS Physical Scienc, Math & Engin | C S Computer Science-FH | F003A OBJECT ORIEN PRGM METH PYTHON | African American | 2 | 0 | 1 | 1 | 1 | 0% | 50% | 50% | 50% |
| 2020 Winter Foothill | 1PS Physical Scienc, Math & Engin | C S Computer Science-FH | F003A OBJECT ORIEN PRGM METH PYTHON | Asian | 55 | 45 | 5 | 5 | 50 | 81.80% | 9.10% | 9.10% | 90.90% |
| 2020 Winter Foothill | 1PS Physical Scienc, Math & Engin | C S Computer Science-FH | F003A OBJECT ORIEN PRGM METH PYTHON | Decline to State | 8 | 6 | 1 | 1 | 7 | 75% | 12.50% | 12.50% | 87.50% |
| 2020 Winter Foothill | 1PS Physical Scienc, Math & Engin | C S Computer Science-FH | F003A OBJECT ORIEN PRGM METH PYTHON | Filipinx | 7 | 3 | 1 | 3 | 4 | 42.90% | 14.30% | 42.90% | 57.10% |
| 2020 Winter Foothill | 1PS Physical Scienc, Math & Engin | C S Computer Science-FH | F003A OBJECT ORIEN PRGM METH PYTHON | Latinx | 19 | 11 | 4 | 4 | 15 | 57.90% | 21.10% | 21.10% | 78.90% |

| | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2020 Winter Foothill | 1PS Physical Scienc, Math & Engin | C S Computer Science-FH | F003A OBJECT ORIEN PRGM METH PYTHON | Native American | 1 | 1 | 0 | 0 | 1 | 100% | 0% | 0% | 100% |
| 2020 Winter Foothill | 1PS Physical Scienc, Math & Engin | C S Computer Science-FH | F003A OBJECT ORIEN PRGM METH PYTHON | White | 29 | 16 | 6 | 7 | 22 | 55.20% | 20.70% | 24.10% | 75.90% |
| 2020 Winter Foothill | 1PS Physical Scienc, Math & Engin | C S Computer Science-FH | F003A OBJECT ORIEN PRGM METH PYTHON | Total | 121 | 82 | 18 | 21 | 100 | 67.80% | 14.90% | 17.40% | 82.60% |
| 2020 Spring Foothill | 1PS Physical Scienc, Math & Engin | C S Computer Science-FH | F001A OBJ-ORIENTED PROG METHOD JAVA | African American | 6 | 3 | 0 | 3 | 3 | 50% | 0% | 50% | 50% |
| 2020 Spring Foothill | 1PS Physical Scienc, Math & Engin | C S Computer Science-FH | F001A OBJ-ORIENTED PROG METHOD JAVA | Asian | 80 | 69 | 5 | 6 | 74 | 86.30% | 6.30% | 7.50% | 92.50% |
| 2020 Spring Foothill | 1PS Physical Scienc, Math & Engin | C S Computer Science-FH | F001A OBJ-ORIENTED PROG METHOD JAVA | Decline to State | 6 | 6 | 0 | 0 | 6 | 100% | 0% | 0% | 100% |
| 2020 Spring Foothill | 1PS Physical Scienc, Math & Engin | C S Computer Science-FH | F001A OBJ-ORIENTED PROG METHOD JAVA | Filipinx | 3 | 2 | 1 | 0 | 3 | 66.70% | 33.30% | 0% | 100% |
| 2020 Spring Foothill | 1PS Physical Scienc, Math & Engin | C S Computer Science-FH | F001A OBJ-ORIENTED PROG METHOD JAVA | Latinx | 14 | 6 | 4 | 4 | 10 | 42.90% | 28.60% | 28.60% | 71.40% |
| 2020 Spring Foothill | 1PS Physical Scienc, Math & Engin | C S Computer Science-FH | F001A OBJ-ORIENTED PROG METHOD JAVA | White | 36 | 29 | 4 | 3 | 33 | 80.60% | 11.10% | 8.30% | 91.70% |
| 2020 Spring Foothill | 1PS Physical Scienc, Math & Engin | C S Computer Science-FH | F001A OBJ-ORIENTED PROG METHOD JAVA | Total | 145 | 115 | 14 | 16 | 129 | 79.30% | 9.70% | 11% | 89% |
| 2020 Spring Foothill | 1PS Physical Scienc, Math & Engin | C S Computer Science-FH | F002A OBJ-ORIENT PROG METHOD IN C++ | African American | 3 | 2 | 0 | 1 | 2 | 66.70% | 0% | 33.30% | 66.70% |
| 2020 Spring Foothill | 1PS Physical Scienc, Math & Engin | C S Computer Science-FH | F002A OBJ-ORIENT PROG METHOD IN C++ | Asian | 79 | 71 | 2 | 6 | 73 | 89.90% | 2.50% | 7.60% | 92.40% |
| 2020 Spring Foothill | 1PS Physical Scienc, Math & Engin | C S Computer Science-FH | F002A OBJ-ORIENT PROG METHOD IN C++ | Decline to State | 7 | 5 | 0 | 2 | 5 | 71.40% | 0% | 28.60% | 71.40% |
| 2020 Spring Foothill | 1PS Physical Scienc, Math & Engin | C S Computer Science-FH | F002A OBJ-ORIENT PROG METHOD IN C++ | Filipinx | 5 | 4 | 1 | 0 | 5 | 80% | 20% | 0% | 100% |
| 2020 Spring Foothill | 1PS Physical Scienc, Math & Engin | C S Computer Science-FH | F002A OBJ-ORIENT PROG METHOD IN C++ | Latinx | 11 | 5 | 0 | 6 | 5 | 45.50% | 0% | 54.50% | 45.50% |
| 2020 Spring Foothill | 1PS Physical Scienc, Math & Engin | C S Computer Science-FH | F002A OBJ-ORIENT PROG METHOD IN C++ | Pacific Islander | 1 | 1 | 0 | 0 | 1 | 100% | 0% | 0% | 100% |
| 2020 Spring Foothill | 1PS Physical Scienc, Math & Engin | C S Computer Science-FH | F002A OBJ-ORIENT PROG METHOD IN C++ | White | 19 | 13 | 1 | 5 | 14 | 68.40% | 5.30% | 26.30% | 73.70% |
| 2020 Spring Foothill | 1PS Physical Scienc, Math & Engin | C S Computer Science-FH | F002A OBJ-ORIENT PROG METHOD IN C++ | Total | 125 | 101 | 4 | 20 | 105 | 80.80% | 3.20% | 16% | 84% |
| 2020 Spring Foothill | 1PS Physical Scienc, Math & Engin | C S Computer Science-FH | F003A OBJECT ORIEN PRGM METH PYTHON | African American | 6 | 4 | 2 | 0 | 6 | 66.70% | 33.30% | 0% | 100% |
| 2020 Spring Foothill | 1PS Physical Scienc, Math & Engin | C S Computer Science-FH | F003A OBJECT ORIEN PRGM METH PYTHON | Asian | 107 | 90 | 5 | 12 | 95 | 84.10% | 4.70% | 11.20% | 88.80% |
| 2020 Spring Foothill | 1PS Physical Scienc, Math & Engin | C S Computer Science-FH | F003A OBJECT ORIEN PRGM METH PYTHON | Decline to State | 9 | 8 | 1 | 0 | 9 | 88.90% | 11.10% | 0% | 100% |
| 2020 Spring Foothill | 1PS Physical Scienc, Math & Engin | C S Computer Science-FH | F003A OBJECT ORIEN PRGM METH PYTHON | Filipinx | 7 | 3 | 0 | 4 | 3 | 42.90% | 0% | 57.10% | 42.90% |
| 2020 Spring Foothill | 1PS Physical Scienc, Math & Engin | C S Computer Science-FH | F003A OBJECT ORIEN PRGM METH PYTHON | Latinx | 23 | 13 | 3 | 7 | 16 | 56.50% | 13% | 30.40% | 69.60% |
| 2020 Spring Foothill | 1PS Physical Scienc, Math & Engin | C S Computer Science-FH | F003A OBJECT ORIEN PRGM METH PYTHON | Native American | 2 | 0 | 1 | 1 | 1 | 0% | 50% | 50% | 50% |
| 2020 Spring Foothill | 1PS Physical Scienc, Math & Engin | C S Computer Science-FH | F003A OBJECT ORIEN PRGM METH PYTHON | Pacific Islander | 1 | 1 | 0 | 0 | 1 | 100% | 0% | 0% | 100% |
| 2020 Spring Foothill | 1PS Physical Scienc, Math & Engin | C S Computer Science-FH | F003A OBJECT ORIEN PRGM METH PYTHON | White | 56 | 39 | 6 | 11 | 45 | 69.60% | 10.70% | 19.60% | 80.40% |
| 2020 Spring Foothill | 1PS Physical Scienc, Math & Engin | C S Computer Science-FH | F003A OBJECT ORIEN PRGM METH PYTHON | Total | 211 | 158 | 18 | 35 | 176 | 74.90% | 8.50% | 16.60% | 83.40% |
| Total | | | | | 1777 | 1357 | 178 | 242 | 1535 | 76.40% | 10.00% | 13.60% | 86.40% |

| | CS 1A % to total | CS 1A Success | CS 2A % to total | CS 2A Success | CS 3A % to total | CS 3A Success | Total % ttl | Total Success | CS 1A % to total | CS 1A Success | CS 2A % to total | CS 2A Success | CS 3A % to total | CS 3A Success | A-level % ttl | A-level success |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| African American | 15 | 9 | 14 | 5 | 16 | 10 | 45 | 24 | 2% | 60% | 3% | 36% | 2% | 63% | 3% | 53% |
| Latinx | 86 | 50 | 50 | 25 | 70 | 44 | 206 | 119 | 13% | 58% | 12% | 50% | 10% | 63% | 12% | 58% |
| Total | 684 | 520 | 421 | 319 | 672 | 518 | 1777 | 1357 | 100% | 76% | 100% | 76% | 100% | 77% | 100% | 76% |

# NCEL F401B : ESL FOR CHILD DEVELOPMENT & PARENTING II

**Effective Term**
Summer 2022

**Subject**
Non-Credit: English as a Second Language (NCEL)

**Course Number**
F401B

**Department**
English for Second-Language Learners (ESLL)

**Division**
Language Arts (1LA)

**Units**
0

**Course Title**
ESL FOR CHILD DEVELOPMENT & PARENTING II

**Former ID**

**Cross Listed**

**Related Courses**

**Maximum Units**
0

**Does this course meet on a weekly basis?**
No

**Total Lecture Hours per quarter**
24

**Total Lab Hours per quarter**
0

**Total Out of Class Hours per quarter**
0

**Special Hourly Notation**

**Total Contact Hours**

24

**Total Student Learning Hours**
24

**Repeatability Statement**
Unlimited Repeatability

**Repeatability Criteria**
Repeating the course will give students an expanded educational experience because the course will depend, in part, on a student's context. The student's situation will often be different each time a student takes the course.

**Credit Status**
Non-Credit

**Degree Status**
Non-Applicable

**Is Basic Skills applicable to this course?**
Yes

**Basic Skills Level**
5 Levels Below Transfer

**Grading**
Non-Credit Course (Receives no Grade)

**Will credit by exam be allowed for this course?**
No

**Honors**
No

**Distance Learning**
No

**Degree or Certificate Requirement**
None of the above (Stand Alone course)

## Stand Alone

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

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

**• Temporary means the course will be incorporated into a new degree or certificate that is not yet State approved.**
**• Permanent means there are no plans to add the course to a State approved degree or certificate, nor to the Foothill GE pattern.**

**Please select**
Permanent

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

**Criteria A. Appropriateness to Mission**

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

**Please indicate how your course supports the Foothill College Mission:**
Basic Skills
Workforce/CTE

**Criteria B. Need**

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

**Evidence**

"Childcare workers need good speaking skills to provide direction or information effectively and good listening skills to understand parents' instructions." Bureau of Labor Statistics, U.S. Department of Labor, Occupational Outlook Handbook, Childcare Workers, at https://www.bls.gov/ooh/personal-care-and-service/childcare-workers.htm (visited *May 12, 2021*).

**Attach evidence**

**Need/Justification**
This course is part of a sequence of courses that provides students with English language skills in preparation for work in the child care industry or study in child development and early childhood education.

**Course Description**
This advanced-beginning course focuses on English communication skills within the context of daycare centers, pre-k to elementary schools, and parenting. Students develop skills in reading, writing, listening and speaking while practicing English grammar and vocabulary for communicating with and about children on topics including health and safety.

**Course Prerequisites**

**Course Corequisites**

**Course Advisories**

**Course Objectives**

The student will be able to:

1. Apply vocabulary and grammar related to topics of health and safety in conversations with parents and children.
2. Demonstrate the ability to comprehend appropriate basic-level reading materials and related vocabulary.
3. Produce simple oral and written messages about health and safety in the context of child care with increased control of specific grammatical structures.

**Course Content**

1. Apply vocabulary and grammar related to topics of health and safety in conversations with parents and children
    1. Understand English used in the child care centers as spoken by clients, parents, caretakers, co-workers, and children and respond appropriately
        1. Identify items and themes common in the context of child care
    2. Use language functions helpful for communicating with and about children about health and safety
    3. Describing and asking about children's injuries or health
2. Comprehend appropriate basic-level reading materials and related vocabulary
    1. Understand level-appropriate readings related to children's health and safety topics
        1. Written messages about incidents of health and safety in child care

        2. Children's literature in English
    2. Recognize, understand and use vocabulary from the child care context
3. Produce simple oral and written messages to communicate about children's health and safety with increased control of specific grammatical structures
    1. Simple present
        1. There is and There are + singular and plural noun
    2. Present progressive
        1. Yes/no questions and short answers
    3. Imperative commands to give directions
    4. Simple past
        1. Past of Be
        2. Regular past verbs
        3. Irregular past verbs
        4. Yes/no questions
            1. Be
            2. All other verbs
    5. Past progressive
    6. Should/shouldn't to give advice

**Lab Content**

Not applicable.

**Special Facilities and/or Equipment**

1. When taught on campus, no special facility or equipment needed
2. When taught virtually, ongoing access to computer, internet, and email

**Methods of Evaluation**

| Methods of Evaluation |
| --- |
| Role-plays |
| Presentations |
| Vocabulary and grammar quizzes |
| Homework |
| Class participation |

**Method(s) of Instruction**

| Method(s) of Instruction |
| --- |
| Lecture |

**Representative Text(s)**

| Author(s) | Title | Publication Date |
|---|---|---|
| Brems, Chan, and Rosner | English for Child Care: Language Skills for Parents and Providers, chapters 3-5 | 2010 |

**Please provide justification for any texts that are older than 5 years**
Although this text is older than the recommended "5 years or newer" standard, it continues to be a seminal text in the field.

**Other Required Materials**

**Types and/or Examples of Required Reading, Writing, and Outside of Class Assignments**

1. Reading: Child development articles, parenting articles, children's literature (storybooks and picture books)
2. Writing: book reports

**Authorized Discipline(s):**
English as a Second Language (ESL): Noncredit

**Faculty Service Area (FSA Code)**
ESL

**Taxonomy of Program Code (TOP Code)**
*4931.00 - Vocational ESL

**Attach Historical Forms/Documents (if applicable)**

Articulation Office Only

**C-ID Notation**

**IGETC Notation**

**CSU GE Notation**

**Transferability**
None

**Validation Date**
N/A

Division Dean Only

**Seat Count**
40

**Load**
.031

**FOAP Codes:**

**Fund Code**
114000 - General Operating- Unrestricted

**Org Code**
123041 - English as a 2nd Language

**Account Code**
1320

**Program Code**
493100 - Vocational ESL

# NCEL F401C : ESL FOR CHILD DEVELOPMENT & PARENTING III

**Effective Term**
Summer 2022

**Subject**
Non-Credit: English as a Second Language (NCEL)
**Course Number**
F401C

**Department**
English for Second-Language Learners (ESLL)

**Division**
Language Arts (1LA)

**Units**
0

**Course Title**
ESL FOR CHILD DEVELOPMENT & PARENTING III

**Former ID**

**Cross Listed**

**Related Courses**

**Maximum Units**
0

**Does this course meet on a weekly basis?**
No

**Total Lecture Hours per quarter**
36

**Total Lab Hours per quarter**
0

**Total Out of Class Hours per quarter**
0

**Special Hourly Notation**

**Total Contact Hours**

36

**Total Student Learning Hours**
36

**Repeatability Statement**
Unlimited Repeatability

**Repeatability Criteria**
Repeating the course will give students an expanded educational experience because the course will depend, in part, on a student's context. The student's situation will often be different each time a student takes the course.

**Credit Status**
Non-Credit

**Degree Status**
Non-Applicable

**Is Basic Skills applicable to this course?**
Yes

**Basic Skills Level**
4 Levels Below Transfer

**Grading**
Non-Credit Course (Receives no Grade)

**Will credit by exam be allowed for this course?**
No

**Honors**
No

**Distance Learning**
No

**Degree or Certificate Requirement**
None of the above (Stand Alone course)

## Stand Alone

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

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

**• Temporary means the course will be incorporated into a new degree or certificate that is not yet State approved.**
**• Permanent means there are no plans to add the course to a State approved degree or certificate, nor to the Foothill GE pattern.**

**Please select**
Permanent

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

**Criteria A. Appropriateness to Mission**

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

**Please indicate how your course supports the Foothill College Mission:**
Basic Skills
Workforce/CTE

**Criteria B. Need**

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

**Evidence**

"Childcare workers need good speaking skills to provide direction or information effectively and good listening skills to understand parents' instructions." Bureau of Labor Statistics, U.S. Department of Labor, Occupational Outlook Handbook, Childcare Workers, at https://www.bls.gov/ooh/personal-care-and-service/childcare-workers.htm (visited *May 12, 2021*).

**Attach evidence**

**Need/Justification**
This course is part of a sequence of courses that provides students with English language skills in preparation for work in the child care industry or study in child development and early childhood education.

**Course Description**
This low-intermediate course focuses on English communication skills within the context of child care and parenting. Students develop skills in reading, writing, listening and speaking while practicing English grammar and vocabulary for communicating with and about children on topics including young children at different stages of development. This course is part of a sequence of courses designed to prepare students for child development coursework and/or jobs in the child care field.

**Course Prerequisites**

**Course Corequisites**

**Course Advisories**

**Course Objectives**

The student will be able to:

1. Respond appropriately to verbal instructions, requests, and questions from children, parents, supervisors, or co-workers.
2. Demonstrate understanding of and utilize language functions which are useful for children at various developmental stages.
3. Apply appropriate vocabulary and grammar related to daily tasks and topics in social and occupational situations to initiate and maintain conversations with peers, co-workers, parents, and children.
4. Demonstrate the ability to comprehend children's literature, as well as college-level texts on child development or parenting topics and related vocabulary.
5. Produce oral and written messages about children and to children with increased control of specific grammatical structures.

**Course Content**

1. Respond appropriately to verbal instructions, requests, and questions from children, parents, supervisors, or co-workers
    1. Responding to and making requests
    2. Follow directions of supervisors and co-workers
    3. Responding to questions from parents

2. Demonstrate understanding of and utilize language functions which are useful for children at various developmental stages
    1. Making guesses about an infant's needs
    2. Using choice questions for toddlers
    3. Providing descriptive praise
3. Apply appropriate vocabulary and grammar related to daily tasks and topics in social and occupational situations to initiate and maintain conversations with peers, co-workers, parents, and children
    1. Listening to and describing a child's schedule
    2. Listening to and discussing short passages and conversations about children
4. Demonstrate the ability to comprehend children's literature, as well as college-level texts on child development or parenting topics and related vocabulary
    1. Understanding and responding to short passages related to child care and parenting
    2. Gaining familiarity with children's literature in English
    3. Navigating complex grammar, syntax, vocabulary in college-level texts on child development
5. Produce oral and written messages about children and to children with increased control of specific grammatical structures
    1. Understanding and completing written messages related to young children at various stages of development
    2. Apply appropriate grammatical structures
        1. Basic tenses
            1. Simple present
            2. Simple past
            3. Simple future
            4. Present progressive
        2. Present perfect
        3. Modal verbs to express ability, requests, permission, advice, future possibility
        4. Tag questions

**Lab Content**

Not applicable.

**Special Facilities and/or Equipment**

1. When taught on campus, no special facility or equipment needed
2. When taught virtually, ongoing access to computer, internet, and email

**Methods of Evaluation**

| Methods of Evaluation |
| --- |
| Vocabulary and comprehension quizzes |

| Methods of Evaluation |
|---|
| Role plays and dialogues |
| Written messages to parents, co-workers, supervisors, and children |
| Book reports |
| Presentations |

**Method(s) of Instruction**

| Method(s) of Instruction |
|---|
| Lecture |
| Class discussions |

**Representative Text(s)**

| Author(s) | Title | Publication Date |
|---|---|---|
| Brems, Chan, and Rosner | English for Child Care: Language Skills for Parents and Providers, chapters 6-9 | 2010 |

**Please provide justification for any texts that are older than 5 years**
This text is a seminal work in the field.

**Other Required Materials**

**Supplemental textbooks used in the CHLD courses, such as:**

1. Berger, Kathleen Stassen. The Developing Person through the Lifespan. 2017.

2. Feeney, Stephanie, et al. Who Am I in the Lives of Children?: an Introduction to Early Childhood Education. 2019.

3. Gonzalez-Mena, Janet. The Young Child in the Family and the Community. 2006.

**Textbooks used for ESL instruction:**

1. Lynn, Sarah, et al. Future, 2nd ed. 2018. (level 2 or 3)

2. Schoenberg, Irene. Focus on Grammar, 5th ed. 2016. (level 2 or 3)

**Types and/or Examples of Required Reading, Writing, and Outside of Class Assignments**

1. Reading: Child development articles, parenting articles
2. Writing: book reports

**Authorized Discipline(s):**
English as a Second Language (ESL): Noncredit

**Faculty Service Area (FSA Code)**
ESL

**Taxonomy of Program Code (TOP Code)**
*4931.00 - Vocational ESL

**Attach Historical Forms/Documents (if applicable)**

## Articulation Office Only

**C-ID Notation**

**IGETC Notation**

**CSU GE Notation**

**Transferability**
None

**Validation Date**
N/A

## Division Dean Only

**Seat Count**
40

**Load**
.047

**FOAP Codes:**

**Fund Code**
114000 - General Operating- Unrestricted

**Org Code**
152013 - FH Non-Credit ESL (NCEL)

**Account Code**
1320

**Program Code**
493100 - Vocational ESL

# SPAN F051. : SPANISH FOR HEALTH CARE WORKERS

**Effective Term**
Summer 2022

**Subject**
Spanish (SPAN)
**Course Number**
F051.

**Department**
Spanish (SPAN)

**Division**
Language Arts (1LA)

**Units**
3

**Course Title**
SPANISH FOR HEALTH CARE WORKERS

**Former ID**

**Cross Listed**

**Related Courses**

**Maximum Units**
3

**Does this course meet on a weekly basis?**
Yes

**Weekly Lecture Hours**
3

**Weekly Lab Hours**
0

**Weekly Out of Class Hours**
6

**Special Hourly Notation**

**Total Contact Hours**

36

**Total Student Learning Hours**
108

**Repeatability Statement**
Not Repeatable

**Credit Status**
Credit

**Degree Status**
Applicable

**Is Basic Skills applicable to this course?**
No

**Grading**
Letter Grade (Request for Pass/No Pass)

**Will credit by exam be allowed for this course?**
No

**Honors**
No

**Distance Learning**
Yes

**Degree or Certificate Requirement**
None of the above (Stand Alone course)

## Stand Alone

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

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

**• Temporary means the course will be incorporated into a new degree or certificate that is not yet State approved.**
**• Permanent means there are no plans to add the course to a State approved degree or certificate, nor to the Foothill GE pattern.**

**Please select**
Permanent

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

**Criteria A. Appropriateness to Mission**

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

**Please indicate how your course supports the Foothill College Mission:**
Workforce/CTE

**Criteria B. Need**

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

**Evidence**

This is a specialized course targeting medical personal and health care workers at large that aims to provide language skills to talk with native speakers seeking health care.

**Attach evidence**
SPAN 51 EVIDENCE.docx

**Need/Justification**
This course addresses an occupational need for medical Spanish for students in bio-health and related careers.

**Course Description**
An introduction to basic medical terminology in Spanish, including parts of the body, common ailments, taking a patient's medical history and understanding cultural differences related to health. Students gain basic conversational skills useful in a medical setting.

**Course Prerequisites**

**Course Corequisites**

**Course Advisories**

**Course Objectives**

The student will be able to:

1. Develop basic conversational skills using culturally appropriate formulas of courtesy and address.
2. Acquire grammatical competence to obtain information about a patient's medical history and symptoms, as well as provide information about diagnosis, treatment and follow-up appointments.
3. Gain command of common medical terminology, and vocabulary related to a patient's medical history.
4. Understand cultural differences as they relate to health, and increase student's cultural sensitivity in working with patients from the Latino community.

**Course Content**

1. Develop basic conversational skills using culturally appropriate formulas of courtesy and address
    1. Basic greetings and leave-takings
    2. Taking a patient's vitals and medical history
    3. Asking questions about a recent condition
    4. Giving instructions for treatment and follow-up appointments
    5. Describe common illnesses and medical procedures
    6. Avoid common pronunciation errors
2. Acquire grammatical competence to obtain information about a patient's medical history and symptoms, as well as provide information about diagnosis, treatment and follow-up appointments
    1. Telling time, days of the week, months of the year
    2. Asking questions in a medical setting
    3. Spanish present tense conjugation of verbs common in a medical setting, such as "doler," "molestar" and "sentirse"
    4. Understand the different between the verbs "estar" and "tener" to express physical and emotional states
    5. The periphrastic future
    6. Constructions with "hace + time" to explain how long ago a symptom started and for how long something has lasted
    7. Imperfect tense for habitual actions in the past, and describing symptoms in the past
    8. Preterite tense for recent, completed actions

9. Simple recommendations and softened commands, using the present subjunctive and constructions such as "tener que"

3. Gain command of common medical terminology, and vocabulary related to a patient's personal information
    1. Familiar vs. formal modes of address
    2. Parts of the body and internal organs
    3. Parts of the male and female reproductive organs
    4. Common conditions and their symptoms, including prevalent health problems in the Latino community
    5. Pregnancy, and childhood illnesses
    6. Family relationships
4. Understand cultural differences as they relate to health, and increase student's cultural sensitivity in working with patients from the Latino community
    1. Common ailments in the Latino community, such as diabetes, asthma, hypertension
    2. Traditional gender roles and their influence on health-related issues
    3. Traditional health beliefs, practices and remedies

**Lab Content**

Not applicable.

**Special Facilities and/or Equipment**

1. When taught on campus: no special facilities or equipment needed.
2. When taught virtually, ongoing access to computer, internet, and email.

**Methods of Evaluation**

| Methods of Evaluation |
| --- |
| Written exams and quizzes |
| Role-play oral exams |
| Small group work |
| Research presentations |

**Method(s) of Instruction**

| Method(s) of Instruction |
| --- |
| Students will role-play situations that are common in a medical setting using the grammatical structures discussed in class |
| As part of the instruction, students will be allowed to propose topics of discussion and/or study, related to their experience and needs in the health care professions |

**Representative Text(s)**

| Author(s) | Title | Publication Date |
|---|---|---|
| Rios, Joana | Complete Medical Spanish | 2017 |
| Ortega, Pilar | Spanish and the Medical Interview: A Textbook for Clinically Relevant Medical Spanish | 2006 |

**Please provide justification for any texts that are older than 5 years**
Although the Ortega text is older than the suggested "5 years or newer" standard, it remains seminal in this area of study.

**Other Required Materials**

**Types and/or Examples of Required Reading, Writing, and Outside of Class Assignments**

1. For further research, students will read, summarize and present articles pertaining to health issues in the Latino community, such as:
    1. The pages of the CDC in Spanish
    2. The California Department of Public Health: https://www.cdph.ca.gov/
    3. View the PBS documentary, "Unnatural Causes: Is Inequality Making Us Sick?": https://unnaturalcauses.org/
2. Students working or volunteering in a health care setting will use their daily experience for journal entries and opportunities for in-class discussion.

**Authorized Discipline(s):**
Foreign Languages

**Faculty Service Area (FSA Code)**
SPANISH

**Taxonomy of Program Code (TOP Code)**
1105.00 - Spanish

**Attach Historical Forms/Documents (if applicable)**

Articulation Office Only

**C-ID Notation**

**IGETC Notation**

**CSU GE Notation**

**Transferability**
CSU

**Validation Date**
10/13; 11/13; 6/15; 6/17; 3/24/2021; 6/8/2021

## Division Dean Only

**Seat Count**
35

**Load**
.067

**FOAP Codes:**

**Fund Code**
114000 - General Operating- Unrestricted

**Org Code**
123059 - FH-Spanish (SPAN)

**Account Code**
1320

**Program Code**
110500 - Spanish

California has the second highest concentration of Spanish speakers in the United States. Over half of all working-age adults in Silicon Valley speak a language other than English. Among the most common is Spanish: it is the primary language spoken by 162,813 people aged 18-64 in Silicon Valley (i.e. Santa Clara and San Mateo Counties). Out of non-native speakers, 58% are fluent in English. The remaining 42% (373,097 people) comprise the region's adult English language learners (ELLs). (Source: Silicon Valley Allies Research Brief: Demographic and Socioeconomic Characteristics of English Language Learner Adults in Silicon Valley. April 10, 2015, https://www.allies4innovation.org/wp-content/uploads/2017/03/SVALLIES_CommunityDemographics_brief-2.pdf)

As of Dec. 2021, a quick search on ZipRecruiter for "Spanish Speakers + Healthcare" in the Bay Area shows 18000 jobs where Spanish speaking is required or preferred, ranging from Certified Medical Assistant, Nurse Practitioner, Pharmacy Technician, to Case Manager.

The following research articles support the need for healthcare practitioners versed in other languages, particularly in Spanish:

Andreae, Michael H et al. "The Effect of Initiatives to Overcome Language Barriers and Improve Attendance: A Cross-Sectional Analysis of Adherence in an Inner City Chronic Pain Clinic." *Pain medicine (Malden, Mass.)* 18.2 (2017): 265–274. Web. https://caccl-fc.primo.exlibrisgroup.com/permalink/01CACCL_FC/vcuhg6/cdi_pubmedcentral_primary_oai_pubmedcentral_nih_gov_6376453

Betancur, Stephanie, et al. "Cultural Awareness: Ensuring High-Quality Care for Limited English Proficient Patients." Clinical Journal of Oncology Nursing, vol. 24, no. 5, Oct. 2020, pp. 530–537. https://caccl-fc.primo.exlibrisgroup.com/permalink/01CACCL_FC/vcuhg6/cdi_proquest_miscellaneous_2444377263

Flower, Kori B. et al. "Satisfaction With Communication in Primary Care for Spanish-Speaking and English-Speaking Parents." *Academic pediatrics* 17.4 (2017): 416–423. Web. https://caccl-fc.primo.exlibrisgroup.com/permalink/01CACCL_FC/vcuhg6/cdi_pubmedcentral_primary_oai_pubmedcentral_nih_gov_5524514

Ortega, Pilar et al. "Teaching Medical Spanish to Improve Population Health: Evidence for Incorporating Language Education and Assessment in U.S. Medical Schools." *Health equity* 3.1 (2019): 557–566. Web. https://cacclfc.primo.exlibrisgroup.com/permalink/01CACCL_FC/vcuhg6/cdi_doaj_primary_oai_doaj_org_article_8698fee3ce4f46b1b7e956b8f8c3a990

Ortega, Pilar, and Josh Prada. "Words Matter: Translanguaging in Medical Communication Skills Training." Perspectives on medical education 9.4 (2020): 251–255. Web. https://caccl-fc.primo.exlibrisgroup.com/permalink/01CACCL_FC/vcuhg6/cdi_pubmedcentral_primary_oai_pubmedcentral_nih_gov_7458954

California Community Colleges

**MEMORANDUM**
November 18, 2021

ESS 21-300-015 | Via Email

**TO:** Chief Executive Officers
Chief Instructional Officers
Chief Student Services Officers
Chief Business Officers
Academic Senate Presidents
Articulation Officers
Curriculum Chairs
Admissions and Registrars
Institutional Research Planning and Effectiveness Professionals

**FROM:** Dr. Aisha Lowe
Vice Chancellor, Educational Services & Support Division

**RE:** Equitable Placement and Completion: English and Math Validation of Practices and Improvement Plans

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As we continue to work toward fulfillment of the *Vision for Success* and the diversity, equity and inclusion at the heart of the *Call to Action*, effective implementation of Assembly Bill 705 (AB 705) is essential and remains a primary priority for the Board of Governors and all California Community Colleges. The California Community College system has reached an important milestone in our implementation and evaluation of AB 705, which is detailed in this memo.

**This guidance memorandum addresses**:

- Background and context on AB 705 implementation to date
- Results of the Validation of Practices data submitted by colleges and the implications for AB 705 implementation and evaluation
- Guidance for effective implementation of AB 705 for English and math
- Required submission of Equitable Placement and Completion Improvement Plans to ensure full implementation of AB 705
- Status and next steps for English as a Second Language (ESL) implementation

**Summary Overview: The following applies throughout this guidance memorandum (but will not be repeated throughout)**

- Colleges are being directed to shift to transfer-level math and English courses for the vast majority of students (where math and English course requirements exist).
- Under specific sets of conditions, for students who seek a goal other than transfer, and who are in certificate or degree programs with specific requirements that are not met with transfer-level coursework, college-level mathematics may be appropriate if such courses maximize the probability that a student will enter and complete the required college-level coursework or higher within one year of initial enrollment in the discipline.
- Pre-transfer level courses have not been disallowed. However, colleges are required to demonstrate the effectiveness of those pre-transfer level courses per the standard set by

AB 705 which is successful entrance into and completion of the relevant gateway courses within one year of initial enrollment in the discipline (i.e., placement, enrollment & completion).

- Colleges are being provided with promising practices they are encouraged (but not required) to implement to improve AB 705 outcomes.
- Colleges will ultimately be held accountable for the results of advising, placement, course offering, and concurrent support practices – by student enrollment and success outcomes.
- This applies to students with a goal of transfer to a four-year institution, earning a certificate, or a local associate degree (as per AB 705 and title 5).

This guidance memorandum resets California Community Colleges work to fully implement AB 705 and supersedes previous guidance.

## Background

After AB 705 was signed into law in 2017, colleges had two years to prepare for English and math implementation, and an additional two-year period to experiment and innovate to establish local communication, advising, course availability and placement practices that fulfill the mandates of AB 705. That two-year experimentation window concluded in spring 2021, at which time colleges submitted Validation of Practices data for fall 2019 to the Chancellor's Office to assess whether or not the evidentiary proof of effective AB 705 implementation was met – proof that the successful completion of a transfer-level course within one year of initial enrollment in the discipline (i.e., throughput) for students starting in pre-transfer level courses was equal to or greater that for students starting in transfer-level courses.

In March 2019, title 5 regulations were approved creating section 55522 *English and Mathematics Placement and Assessment*, which established high school performance data as the primary means for placement in English and mathematics (or quantitative reasoning), including self-reported high school performance data. In these regulations, colleges were provided with three options for English and math placement methods:

1. Any Chancellor's Office placement method (i.e., the high-school GPA default placement rules established in 2018)
2. A district placement method based upon local research using high school performance data, supported by data and research showing throughput rates at or above those achieved by direct placement into a transfer-level course (or college-level courses where appropriate)
3. A guided placement process, including self-placement, **if** a student's high school performance data was not available (or usable with reasonable effort)

Under title 5, §55522(c)(2), placement methods must be designed to maximize the probability that students with a goal of transfer to a four-year institution, earning a certificate, or a local associate degree will enter and complete transfer-level (or the required college-level) coursework in English and mathematics (quantitative reasoning) within one year of initial enrollment in the discipline. Placement methods must not place students in a remedial sequence or pre-transfer coursework in English or math unless (A) the student is highly unlikely to succeed in the transfer-level course; and (B) enrollment in pre-transfer level (or the required college-level) coursework will improve the student's likelihood of completing transfer-level courses in one year.

As per title 5, §55522(c)(1)(C): A district placement method may be based upon guided placement, including self-placement, **only if** a student's high school performance data is not available or usable with reasonable effort. District placement methods based upon guided placement or self-placement, **shall not**:

(i) incorporate sample problems or assignments, assessment instruments, or tests, including those designed for skill assessment, unless approved by the Chancellor; or
(ii) request students to solve problems, answer curricular questions, present demonstrations/examples of course work designed to show knowledge or mastery of prerequisite skills, or demonstrate skills through tests or surveys.

If the adopted methodology incorporates sample problems or assignments, assessment instruments, or tests, including those designed for skill assessment, it requires Chancellor's Office approval. The Chancellor's Office previously provided provisional approval for districts to employ a guided placement or self-placement method which requires Chancellor approval as detailed in guidance memorandum AA 19-19 released April 15, 2019. To validate those practices, "district[s] must collect data to demonstrate that students benefit from the guided and self-placement models implemented. Data reported shall include throughput and successful pass rates, and the college's placement results (e.g., the number of students assessed, the number of students placed into the colleges curricular offerings in English and mathematics/quantitative reasoning, and whether concurrent support was recommended, disaggregated by race and ethnicity)."

To support that data collection and submission process, the Chancellor's Office prepared the Equitable Placement Validation of Practices data template in November 2020, for which colleges submitted data January 2021. Those results are summarized below.

## Equitable Placement Validation of Practices Results

Validating equitable placement practices is required per title 5, §55522 under which district placement methods:

- Must place students with a goal of transfer to a four-year institution, earning a certificate, or a local associate degree in transfer-level (or the required college-level) coursework in English and mathematics (quantitative reasoning), unless (A) the student is highly unlikely to succeed in the transfer-level course; and (B) enrollment in pre-transfer level coursework will improve the student's likelihood of completing transfer-level courses within one year of initial enrollment in the discipline
- Shall be designed to maximize the probability that students will enter and complete transfer-level coursework in English and mathematics (or quantitative reasoning) within one year of initial enrollment in the discipline
- Must use all available high school performance data as the primary means for placement in English and mathematics (or quantitative reasoning), including self-reported high school data
- May utilize multiple measures to increase a student's placement recommendation, but may not lower it
- Must be based on localized evaluation supported by data and research showing throughput rates at or above those achieved by direct placement into a transfer-level course

Per title 5, §55522(c)(3): Within two years of the adoption of a district placement method, the district shall report to the Chancellor on its placement method's efficacy. **The Chancellor may order the district to relinquish the district placement method and adopt a placement method published by the Chancellor's Office under any of the following circumstances:**
**(A) the district's failure to report within two years of adoption;**
**(B) the district's failure to demonstrate that the local placement method meets or exceeds the throughput rate of a placement method published by the Chancellor's Office**.

To support that validation process, the Chancellor's Office prepared a data template to streamline data submission and collect evidence in a uniform and expedited fashion. In that data template, colleges reported fall 2019 first-time English and math enrollments for students in the lowest high school GPA band. Data collection focused on students within the lowest high school GPA band to align with one of the key AB 705 stipulations – that students can only be placed below transfer-level if they are "highly unlikely to succeed" in the transfer-level course. Given the research that has accompanied this reform, both in the California Community Colleges and nationally, students in the lowest high school GPA band are the only students for whom one could reasonably consider the possibility of them being highly unlikely to succeed. Colleges reported pre-transfer enrollment data on each applicable tab in the template for specific groups of students based on high school GPA, education goal, and pathway in English, Statistics/Liberal Arts Mathematics (SLAM) and Business, Science, Technology, Engineering, Mathematics (B-STEM). The template auto-populated throughput rates for colleges and provided a local throughput comparison and a statewide throughput comparison rate.

In July 2021 the CCCCO presented results from the Equitable Placement Validation reports to the Board of Governors. Of the 115 colleges that submitted an Equitable Placement Validation report, seven colleges (6.1%) were found to be effectively implementing AB 705, with little to no pre-transfer level enrollments, while 108 colleges (93.9%) reported pre-transfer level enrollments that did not maximize throughput for any group of students or maximized throughput for only one small subgroup of students (5 colleges) or submitted incomplete data or had sample sizes too small for evaluation.

Colleges' placement and enrollment results were cross-referenced against additional data sources (i.e., colleges' published placement rules, schedule of classes for fall 2019 and the Basic Skills Progress Tracker) and found to be consistent with the CCCCO's Transfer-level Gateway Completion Dashboard, which provides throughput rates across GPA levels for English and math for students whose first enrollment was in either pre-transfer level or transfer level courses.

***Evidence from all of these sources supports one key finding: when local placement practices require, encourage or allow students to enroll in pre-transfer level coursework, throughput is not being maximized. Students are more likely to complete transfer requirements in math and English when they are placed and enroll in transfer-level coursework***.

Colleges can review their individual college results in the Validation of Practices Excel file their college submitted to the Chancellor's Office in January 2021, most likely submitted by your Research Office. When a college entered their local data, a local throughput rate was auto-populated as well as a statewide throughput rate for comparison purposes. Disproportionate impacts by race/ethnicity were also auto-populated. As you navigate the tabs in the Excel, you will see your college's throughput rates, how those compare to the state throughput rate, and

color-coded results will show you if your college maximized throughput, where green indicates throughput was maximized and red indicates it was not. For the disproportionate impact analysis, red indicates there is disproportionate impact and action is needed (when there are no disproportionate impacts for a particular group the cell will be blank). Additional details are available within each tab.

## Effectively Implementing AB 705

Research shows that since AB 705 was implemented more students are taking and completing transfer-level math and English courses, no matter their high school performance and across all subgroups. Research evidence has consistently demonstrated that when students are placed directly into transfer-level English and math courses aligned with their path of study, completion is expedited, and persistent opportunity gaps are diminished.

Unfortunately, implementation is uneven and equity gaps persist. While rates have increased across all subgroups, gaps remain for disproportionately impacted students. Colleges with large African American and Latinx populations are more likely to enroll students in pre-transfer level courses, and some colleges increased pre-transfer level course offerings in fall 2020.

As we continue to implement and evaluate the implementation of this transformational reform, focus must shift from compliance to full implementation, and not only to the letter of the law, but the spirit of the law. The spirit and intent of this reform was not simply that students have the option to enroll in these essential gateway courses, but that districts and colleges ensure students' entrance into, support in, and successful completion of these courses is maximized.

The work of implementing AB 705 with fidelity requires that colleges create the largest opportunities possible for access to transfer-level courses, ensure the greatest enrollment possible into those courses, and provide students the support they need to perform well and be successful in completing those courses. Offering corequisite support aligned with transfer-level coursework has been shown to increase success for students who need additional assistance compared to providing remedial coursework and is strongly encouraged to be made available to students, where needed, for all courses used to satisfy written communication and quantitative reasoning requirements to transfer, regardless of the department in which they are offered.

Since the implementation of the law, research has been conducted to address outstanding questions or misperceptions. The following practices should be included in colleges' equitable placement and completion implementation:

***Place and ensure enrollment of all students with high school data available into transfer-level courses, including students who may have been out of high school ten or more years***. Research has found that high school grades remain valid ten years after high school completion, and perhaps beyond (data access is limited to ten years). Placement practices should treat such students the same & assure them the same rights to access. Review the research brief here.

***Place and ensure enrollment of all student groups, regardless of their background or special population status, using the Chancellor's Office high school GPA default placement rules. This includes, but is not limited to, DSPS, EOPS, Foster Youth, Veteran, Umoja, Puente, MESA and economically disadvantaged students***. Research has found that for all student groups (identifiable in MIS) direct placement into transfer-level courses maximizes one-year completion

rates (i.e., throughput) when compared to being placed in pre-transfer level courses. For more details on each population see the research brief here.

***Place and ensure enrollment of English Language Learners who graduated from a U.S. high school (or the equivalent) directly into transfer-level English or an ESL-equivalent transferable course***. Research has found that ELL students who completed high school in the United States maximize throughput (i.e., have higher one-year course completion rates) when placed directly in transfer-level English composition or a transfer-level ESL course equivalent to English composition, with corequisite support as needed. Review the research report here.

***Place students who have completed higher level math in high school into higher level mathematics courses based on their high school performance.*** Research has found that repetition of successfully completed courses is not associated with improved performance of the subsequent course and adds time to completion (e.g., Sonnert & Sadler. 2014). Based on such findings, it is recommended that colleges develop placement methods that encourage students who have successfully completed courses in high school (e.g., pre-calculus) to progress and start in the next appropriate course (e.g., Calculus I) at the college (and with support as needed). Review Table 2 of the report here for one conservative method for doing so.

***Strongly consider placing students on BSTEM pathways who have not completed Algebra II in high school using the Chancellor's Office high school GPA default placement rules***. Research has explored this question in detail and found that enrollment directly in transfer-level coursework maximizes students' throughput when compared to enrolling first in pre-transfer level courses, even for students who have not successfully completed Algebra II in high school. Based on these findings, it is recommended that students without these courses in high school be placed directly in transfer-level coursework appropriate for their educational goal and major, with appropriate concurrent support where necessary, in order to maximize their likelihood of successfully completing that course. Possible concerns about articulation can be meaningfully addressed through the provision of intermediate algebra content needed to succeed via corequisite or other concurrent support. Review the research report here.

***Carefully consider placing and ensuring enrollment of students who may not have completed high school but have completed at least the 10$^{th}$ grade using the Chancellor's Office high school GPA default placement rules.*** Based on research specifically conducted to explore this issue, prior Chancellor's Office guidance advised that "since the default placement rules were developed based on 11$^{th}$ grade GPA, students that have completed the 11$^{th}$ grade would fall under the default placement rules or the colleges adopted placement model for transfer level courses. Based on the results of the MMAP study, the default placement rules may be applied to students seeking enrollment in transfer-level courses; students who have completed 9$^{th}$ and 10$^{th}$ grade can be placed using the default placement rules and their cumulative GPA for the high school grade they have completed." Research has found that the performance of high school students in transfer-level courses was very similar to that of post-secondary students when disaggregated by the high school GPA bands in the default placement rules. The findings suggest that if colleges choose to extend the use of the default placement rules to students who are currently in the 10$^{th}$ and 11$^{th}$ grade, their performance and success rates should be at or above expected levels, particularly for students in the highest GPA band. Review the research brief here.

## Required Action

By fall 2022, the California Community College system must complete full implementation of the law and associated regulations by ending all local placement practices explicitly prohibited by legislation and regulation, and by ensuring that all U.S. high school graduate students are placed into and enroll in coursework that maximizes the probability that they complete transfer-level math and English within a year of their start in the discipline.

With some limited exceptions (see summary overview above), this means that by fall 2022 all U.S. high school graduate students, both new and continuing, in certificate, degree or transfer programs, will be placed into and enroll in transfer-level English and math/quantitative reasoning courses (whether with or without support) where English and math requirements exist. Colleges are not being required to create new English and/or math requirements.

**Every college** will submit an *Equitable Placement and Completion Improvement Plan* to document changes in placement practices and curricular structures the college will implement to reach this goal. For colleges that have already reached this goal, reporting requirements are minimal. For colleges in transition to realizing this goal, plans will highlight a broader suite of strategies involving course options and availability, support structures, and professional development to consider. For colleges planning to maintain limited pre-transfer enrollments, plans will also include additional strategies designed to ensure AB 705 rights and protections for students. In the Improvement Plan, colleges will respond to a set of prompts based on how colleges intend to shift local communication, advising, course availability, placement, and support practices to fully implement Equitable Placement and Completion (AB 705). The plan also provides a set of promising practices to help inform local planning work for colleges to consider and indicate which will be implemented. Colleges are also strongly encouraged to invest in concurrent supports to ensure student success in gateway courses.

The Improvement Plan does not require the submission of data for colleges that will, by fall 2022, both **ensure transfer level placement** in math/quantitative reasoning and English for **all U.S. high school graduate students** *and* permit **no pre-transfer level enrollments**, including multi-term transfer-level courses, for students in certificate, degree or transfer programs.

For colleges that plan to continue placements and/or enrollments into pre-transfer level courses or multi-term transfer-level courses in fall 2022, the Improvement Plan requires completion of a Data Addendum to validate that such practices meet AB 705 standards. In the Data Addendum colleges will submit local data in an attempt to show completion is maximized for a specific program or student group that enrolls, by requirement or by choice, into pre-transfer level courses or multi-term transfer-level courses.

All California Community Colleges are to complete the enclosed Equitable Placement and Completion Improvement Plan **by March 11, 2022** using this link: Link to Equitable Placement and Completion Improvement Plan Form. A pdf of this online form and an Excel data template are enclosed and will be reviewed during a webinar on Monday, November 29, 2021, 3:30-5:00pm on Zoom (see details below). Please review the form and template in advance of the webinar and come prepared to engage with Chancellor's Office leadership and MMAP/RP Group researchers on how to complete the form and template.

## English as a Second Language (ESL) implementation

By July 1, 2021, **all** California Community Colleges were to submit an AB 705 adoption plan for English as a Second Language (ESL) implementation detailing how ESL students are advised, assessed and placed (*including where all ESL instruction is noncredit*). Under title 5, §55522.5 *English as a Second Language Placement and Assessment*, ESL students with a goal of transfer to a four-year institution or an associate degree should enter and complete a transfer-level English composition course or an ESL course equivalent to transfer-level English composition within a three-year timeframe of declaring a transfer- or degree-seeking goal. Adoption plans were designed for colleges to explain the placement method, the evidence to be collected, and why the college/district believes it will be effective. Per title 5, §55522.5 (b)(2), students who have acquired a United States high school diploma or the equivalent should be placed according to §55522. Therefore, colleges'/districts' adoption planning and implementation should primarily focus on ESL students without a U.S. high school diploma or U.S. high school data (e.g., international students, adult immigrants, refugees, and F1 Visa students).

Implementation of AB 705 for ESL students began this fall, commencing the two-year experimentation and innovation window. During this innovation window, all currently approved ESL assessments remain approved for use, and are being re-evaluated by the Assessment Committee this academic year. Colleges should collect and review evidence on the effectiveness of their ESL placement including student completion of degree or transfer requirements in English (or equivalent ESL courses) via their campus research offices and make the data available to ESL departments for the purpose of determining the best placement options for credit ESL to fulfill the requirements of AB 705. Similar to what has been done for English and math, colleges' implementation of AB 705 for ESL students will be validated in spring 2023 by assessing progress to date and establishing the data needed to evaluate three-year course completion rates in alignment with the law. It is essential that colleges establish the resources and infrastructure necessary to support this important work which includes, but is not limited to, data and research support from local institutional effectiveness offices, and investment in assessment, the revision of curricular sequences for ESL students, and faculty professional development.

## Next Steps

It is essential that colleges maintain Equitable Placement and Completion (AB 705 and AB 1805) implementation as a top priority on campus. Implementation leaders and teams should be sustained and intentional focus given to this important work. There are a number of funding sources colleges can use to support this work including, but not limited to Guided Pathways funds, SEA funds, federal minority serving institutions grants, foundation support, and general funds.

Colleges can expect additional guidance upon the completion of an analysis of the ESL Adoption Plans and the AB 1805 forms and data submitted July 9, 2021. In addition to the November webinar to discuss the Improvement Plans, the Chancellor's Office will continue a series of webinars as part of an Equitable Placement and Completion Learning Series to support colleges as the CCC system continues to implement this historic reform and transform options and outcomes for our students.

**Equitable Placement and Completion 2021-2022 Learning Series**

- July 12, 2021: Board of Governor's Spotlight
- August 4, 2021: System Webinar - *Leading Courageous Conversations about Equitable Placement* (recording in the VRC under the CCC | Webinars, Conferences, and Events community)
- September 8, 2021: Transfer Level Gateway Completion Dashboard (recording in the VRC under the Equitable Placement and Completion community)
- October 29, 2021 (2:00-3:00pm): RP Group/MMAP webinar - *Emerging Practices and Resources to Support ESL Placement and Throughput: Guided Self-Placement* (click here to watch)
- November 5, 2021 (2:00-3:00pm): RP Group/MMAP webinar - *Emerging Practices and Resources to Support ESL Placement and Throughput: Innovations and Practices* (click here to watch)
- November 29, 2021 (3:30-5:00pm): AB 705 Implementation Improvement Plans (see Zoom details below)
- Forthcoming: Curricular Reforms; Student Communication & Counseling; ESL Adoption Plans & Promising Practices

If you have questions about this guidance, please email AB705@cccco.edu.

You are invited to a Zoom webinar.
When: November 29, 2021, 3:30-5:00 PM Pacific Time
Topic: Equitable Placement and Completion Improvement Plans

Please click the link below to join the webinar:
https://cccconfer.zoom.us/j/98052147255
Or One tap mobile :
US: +16699006833,,98052147255# or +13462487799,,98052147255#
Or Telephone:
Dial(for higher quality, dial a number based on your current location):
US: +1 669 900 6833 or +1 346 248 7799 or +1 253 215 8782 or +1 301 715 8592 or +1 312 626 6799 or +1 646 876 9923
Webinar ID: 980 5214 7255

cc:

Dr. Daisy Gonzales, Acting Chancellor
Marty Alvarado, Executive Vice Chancellor, ESS
Rebecca Ruan-O'Shaughnessy, Vice Chancellor, ESS
CCCCO Staff

Attachments:

- Equitable Placement and Completion Improvement Plan Form (for reference only; submit electronically)
- Improvement Plan Data Addendum Template