



1900 Pico Boulevard Santa Monica, CA 90405
310.434.4611

Curriculum Committee Agenda

Wednesday, November 20, 2024, 3:00 p.m.
Drescher Hall, Loft (3rd Floor, Room 300-E)

Guests and members of the public may attend via Zoom:

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Members:

- | | | | |
|---------------------------------|------------------|------------------|-------------------------|
| Redelia Shaw, <i>Chair</i> | Susan Caggiano | Walker Griffy | Scott Silverman |
| Dione Hodges, <i>Vice Chair</i> | Javier Cambron | Aileen Huang | Bobby Simmons |
| Lourdes Arévalo | Evelyn Chantani | Sharlene Joachim | Briana Simmons |
| Jason Beardsley | Rachel Demski | Jesus Lopez | Lydia Strong |
| Mary Bober | Susan Fila | Jacqueline Monge | Audra Wells |
| Fariba Bolandhemat | Christina Gabler | Estela Narrie | Associated Students Rep |
| Walter Butler | Keith Graziadei | Kevin Roberts | Associated Students Rep |

Interested Parties:

- | | | | |
|-------------------|---------------------|----------------|-------------------|
| Stephanie Amerian | Sheila Cordova | Maral Hyeler | Steven Sedky |
| Clare Battista | Nathaniel Donahue | Matt Larcin | Esau Tovar |
| Maria Bonin | David Duncan (A.S.) | Maria Munoz | Guadalupe Salgado |
| Department Chairs | Kiersten Elliott | Stacy Neal | Olivia Vallejo |
| Nick Chambers | Tracie Hunter | Patricia Ramos | Tammara Whitaker |

Ex-Officio Members:

- Jamar London

(Information items are listed numerically; action items are listed alphabetically)

- I. Call to Order and Approval of Agenda
- II. Public Comments *(Two minutes is allotted to any member of the public who wishes to address the Committee.)*
- III. Announcements
- IV. Approval of Minutes.....4
- V. Chair's Report

VI. Information Items

1. Addition of new prefix/discipline in the Philosophy and Social Sciences Department:
Social Work and Human Services (SWHS)

VII. Action Items

(Courses: New)

a. ARC 45 Designing Spaces: Enhancing the Human Experience.....	11
b. CHEM 51 Careers in the Natural Sciences (Advisory: BIOL 21 or CHEM 10 or PHYSICS 20 or PHYSICS 21).....	15
c. CHEM 55 Introduction to Chemical Instrumentation (Prerequisite: CHEM 12)	24
d. CIS 2 Computer Skills for Virtual Assistants	29
e. CS 4 Copiloting with Artificial Intelligence Tools.....	33
f. CS 82D Generative Artificial Intelligence Fundamentals (Prerequisite: CS 4 and CS 82B).....	36
g. CS 315 Cloud Compliance	42
h. CS 335 Cloud Infrastructure As Code	45
i. EDUC 950 Teaching in the Age of AI: Strategies for Educators (<i>noncredit mirror of EDUC 50</i>).....	48
j. ETH ST 9 Introduction to Native American Studies.....	53
k. IXD 320 History and Practice of Interaction Design.....	59
l. IXD 420 Design for Social Innovation	63
m. IXD 440 Interaction Design Studio 3.....	67

(Courses: Distance Education)

n. ARC 45 Designing Spaces: Enhancing the Human Experience.....	13
o. BUS 12 Success Skills for First-Time Manager.....	72
p. CIS 2 Computer Skills for Virtual Assistants	31
q. CS 4 Copiloting with Artificial Intelligence Tools.....	34
r. CS 82D Generative Artificial Intelligence Fundamentals (Prerequisite: CS 4 and CS 82B).....	37
s. CS 315 Cloud Compliance	43
t. CS 335 Cloud Infrastructure As Code	46
u. EDUC 950 Teaching in the Age of AI: Strategies for Educators (<i>noncredit mirror of EDUC 50</i>).....	50
v. ETH ST 9 Introduction to Native American Studies.....	56
w. IXD 320 History and Practice of Interaction Design.....	60
x. IXD 420 Design for Social Innovation	65
y. IXD 440 Interaction Design Studio 3.....	69

(Courses: Global Citizenship)

z. ETH ST 9 Introduction to Native American Studies.....	56
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(Courses: Substantial Changes)

aa. CS 87B Advanced Python Programming (changed: Advisory: CS 87A to Prerequisite: 87A).....	75
bb. ETH ST 6 Introduction to Chicana/o/x and Latina/o/x Studies (Changed: course description, SLOs, course content)	78
cc. ETH ST 7 Introduction to African American and Black Studies (Changed: course description, SLOs, course objectives, course content, textbooks, sample assignments).....	82
dd. ETH ST 8 Introduction to Asian American Studies (changed: course description, SLOs).....	85
ee. IXD 310 Interaction Design Studio 1 (changed: course description, SLOs, course objectives, arranged hours objectives, course content, arranged hour activities, methods of evaluation, methods of presentation, textbooks, sample assignments).....	89
ff. IXD 330 Interaction Design Studio 2 (changed: course description, SLOs, course objectives, course content, methods of evaluation, methods of presentation, textbooks, sample assignments).....	92
gg. IXD 360 Product Design (changed: course description, SLOs, course objectives, course content, methods of evaluation, textbooks, sample assignments)	94

hh. IXD 410 Project Management for Design (changed: course description, hours//units (1 lecture/2 lab/2 arranged/2 units to 2 lecture/1 lab/2 arranged/3 units), SLOs, course objectives, course content, methods of presentation, methods of evaluation, textbooks, sample assignments).....	96
ii. IXD 460 Programming Design Systems (changed: course name (was “Tangible Interaction”), course description, SLOs, course objectives, arranged hour objectives, course content, methods of evaluation, textbooks, sample assignments)	99
jj. IXD 470 Interaction Design Senior Studio (changed: course description, hours/units (2 lecture/1` lab/2 arranged/3 units to 3 lecture/1 lab/2 arranged/4 units), SLOs, course objectives, arranged hour objectives, course content., methods of evaluation, textbooks, sample assignments).....	101

(Programs: New)

kk. Artificial Intelligence Department Certificate	104
ll. Applied Artificial Intelligence Certificate of Achievement	106
mm. Cloud Computing Bachelor of Science.....	125
nn. Yoga Teacher Training - 200 Hour Department Certificate.....	152

(Programs: Revisions)

oo. Changes to degrees, certificates, and program maps as a result of courses considered on this agenda	
pp. Interaction Design Bachelor of Science	167

(Programs: SLO/PLO Mapping)

qq. Political Science AA-T.....	193
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VIII. New Business

- Local GE Pattern Discussion

IX. Old Business

X. Adjournment

Please notify Redelia Shaw, Dione Hodges, and Rachel Demski by email if you are unable to attend this meeting.

The next Curriculum Committee meeting is December 4, 2024.



1900 Pico Boulevard Santa Monica, CA 90405
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Curriculum Committee Minutes

Wednesday, October 30, 2024, 3:00 p.m.
Drescher Hall, Loft (3rd Floor, Room 300-E)
Zoom (guests/members of the public)

Members Present:

Redelia Shaw, <i>Chair</i>	Javier Cambron	Jason Hwang (AS)	Thaddeus Phillips**
Dione Hodges, <i>Vice Chair</i>	Evelyn Chantani	Aileen Huang	Kevin Roberts
Lourdes Arévalo	Christina Gabler	Sharlene Joachim	Steven Sedky**
Mary Bober	Keith Graziadei	Jesus Lopez	Bobby Simmons
Fariba Bolandhemat	Walker Griffy	Jacqueline Monge	Briana Simmons
Walter Butler	Michael Helfand (AS)	Estela Narrie	Audra Wells
Susan Caggiano			

***Thaddeus Phillips sitting in for Susan Fila*
***Steven Sedky sitting in for Jason Beardsley*

Members Absent:

Jason Beardsley	Susan Fila	Scott Silverman	Lydia Strong
Rachel Demski			

Others Present:

Lorrie Ivas	Elisa Meyer	Bridgette Robinson
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(Information items are listed numerically; action items are listed alphabetically)

I. Call to Order and Approval of Agenda

The meeting was called to order at 3:06 p.m. Motion to approve the agenda with no revisions.
Motion made by: Walter Butler; **Seconded by:** Audra Wells
The motion passed unanimously.

II. Public Comments

None

III. Announcements

Dione Hodges shared that Rachel Demski is doing well and returning on November 5, 2024. Redelia Shaw announced the Presidential Election will be broadcast in Cayton Center on November 5, 2024. Javier Cambron congratulated the Architecture Club for placing first in the final round!

Associated Students representatives Michael Helfand and Jason Hwang thanked the committee for being welcoming, and reminded the committee that mental and physical well-being are important.

IV. Approval of Minutes (October 2, 2024)

Motion to approve the minutes of the October 2, 2024, meeting with no revisions.
Motion made by: Christina Gabler; **Seconded by:** Susan Caggiano
The motion passed unanimously.

V. Chair's Report

The committee joined Redelia Shaw in a moment of silence for the loss of SMC family members, Felicia Hudson and Davon Dean.

VI. Information Items

1. CSLO/PLO Update
Redelia Shaw confirmed departments should focus on mapping PLOs. SLOs and ILOs will come later with guidelines from the Academic Senate Task Force.
2. Common Course Numbering
On behalf of Jason Beardsley, Dione Hodges expressed gratitude to department faculty who completed Phase 1 of the CCN implementation. Dione announced that Phase 2 will occur in Fall 2026 followed by Phase 3 in Fall 2027. Estela Narrie recommended that the committee's internal deadlines be in April to meet the May deadline.
3. Cal-GETC/SMC Local GE Pattern
Estela Narrie confirmed courses from IGETC will migrate automatically to the Cal-GETC. Faculty will do not need to resubmit courses for IGETC except for Area 1C courses; and if substantial changes are made to any other area courses.

Estela provided an overview of Local GE requirements for 2023-2024 and the requirements for Fall 2025. Redelia Shaw and Dione Hodges reminded the committee that a discussion on Global Citizenship will need to occur in the near future to align with the CCCCO's Vision 2030 (supporting students in transferring with the least number of units). Currently, the requirement is 24 units with Ethnic Studies and Global Citizenship. The committee needs to vote by December 4, 2024, given that changes must be reflected in the catalog.

VII. Action Items

(Courses: New)

- a. BUS 12 Success Skills for First-Time Manager
Motion to approve BUS 12 with revisions to SLOs #1: change "generate" to "employ"; #2: change "execute" to "demonstrate"; #3: change "understand" to "evaluate."
Motion made by: Walker Griffy; **Seconded by:** Sharlene Joachim
The motion passed unanimously.

(Courses: Distance Education)

- b. BUS 12 Success Skills for First-Time Manager (Fully Online/Hybrid)
Tabled for a future meeting to allow additional changes re: DE interactions.

(Courses: Common Course Numbering)

- c. COMM C1000 Introduction to Public Speaking (*formerly COM ST 11*)
Motion to approve changes to COMM C1000 with no additional revisions.
Motion made by: Susan Caggiano; **Seconded by:** Walker Griffy
The motion passed unanimously.
- d. ENGL C1000 Academic Reading and Writing (*formerly ENGL 1*)
Motion to approve changes to ENGL C1000 with no additional revisions.
Motion made by: Dione Hodges; **Seconded by:** Kevin Roberts
The motion passed unanimously.
- e. ENGL C1001 Critical Thinking and Writing (*formerly ENGL 2*)
Motion to approve changes to ENGL C1001 with no additional revisions.
Motion made by: Christina Gabler; **Seconded by:** Kevin Roberts
The motion passed unanimously.

- f. POLS C1000 American Government and Politics (*formerly POL SC 1*)
Motion to approve changes to POLS C1000 with additional revision to add asterisks to textbooks 4-11.
Motion made by: Christina Gabler; **Seconded by:** Jesus Lopez
The motion passed unanimously.
- g. PSYC C1000 General Psychology (*formerly PSYCH 1*)
Motion to approve changes to PSYC C1000 with no additional revisions.
Motion made by: Sharlene Joachim; **Seconded by:** Estela Narrie
The motion passed unanimously.
- h. STAT C1000 Introduction to Statistics (*formerly MATH 54*)
Motion to approve changes to STAT C1000 with minor additional revisions to be made by Redelia Shaw.
Motion made by: Estela Narrie; **Seconded by:** Aileen Huang
The motion passed unanimously.

Common Course Numbering requires identical language in the following fields, from the [Common Course Numbering Phase I templates](#): prefix, course number, course title, course description, units, course content, and course objectives. Optional additional language is indicated by an asterisk where applicable. Fields that are not included in the template (such as Methods of Presentation, Sample Assignments, etc.) do not currently have advisement and are at the discretion of the department.

(Programs: CSLO/PLO Mapping)

- i. Accounting AS
Motion to approve changes to Accounting AS with no additional revisions.
Motion made by: Dione Hodges; **Seconded by:** Kevin Roberts
The motion passed unanimously.
- j. Administration of Justice AS-T
Motion to approve changes to Administration of Justice AS-T with no additional revisions.
Motion made by: Dione Hodges; **Seconded by:** Walker Griffy
The motion passed unanimously.
- k. Business Administration 2.0 AS-T
Motion to approve changes to Business Administration 2.0 AS-T with no additional revisions.
Motion made by: Sharlene Joachim; **Seconded by:** Susan Caggiano
The motion passed unanimously.
- l. CPA Track Certificate of Achievement
Motion to approve changes to CPA Track Certificate of Achievement with no additional revisions.
Motion made by: Walter Butler; **Seconded by:** Dione Hodges
The motion passed unanimously.
- m. Logistics and Supply Chain Management AS/Certificate of Achievement
Motion to approve changes to Logistics and Supply Chain Management AS/Certificate of Achievement with no additional revisions.
Motion made by: Walter Butler; **Seconded by:** Jesus Lopez
The motion passed unanimously.
- n. Staff Accountant Certificate of Achievement
Motion to approve changes to Staff Accountant Certificate of Achievement with no additional revisions.
Motion made by: Walter Butler; **Seconded by:** Susan Caggiano
The motion passed unanimously.

(Programs: Revisions)

- o. Changes to degrees, certificates, and program maps as a result of courses considered on this agenda
Motion to approve to changes to degrees, certificates, and program maps as a result of courses considered on this agenda:
 - All degrees, certificates, and program maps which contain courses impacted by Common Course Numbering will be updated to the CCN effective Fall 2025.

Motion made by: Dione Hodges; **Seconded by:** Audra Wells
The motion passed unanimously.

VIII. New Business

None

IX. Old Business

None

X. Adjournment

Motion to adjourn the meeting at 5:02 p.m.

Motion made by: Jesus Lopez; **Seconded by:** Christina Gabler
The motion passed unanimously.



1900 Pico Boulevard Santa Monica, CA 90405
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Curriculum Committee Minutes

Wednesday, November 6, 2024, 3:00 p.m.
Drescher Hall, Loft (3rd Floor, Room 300-E)
Zoom (guests/members of the public)

Members Present:

Redelia Shaw, <i>Chair</i>	Evelyn Chantani	Michael Hwang (AS)	Scott Silverman
Jason Beardsley	Rachel Demski	Aileen Huang	Bobby Simmons
Walter Butler	Christina Gabler	Sharlene Joachim	Briana Simmons
Susan Caggiano	Walker Griffy	Estela Narrie	Audra Wells

Members Absent:

Lourdes Arévalo	Javier Cambron	Dione Hodges*	Jacqueline Monge*
Mary Bober	Susan Fila	Jesus Lopez	Lydia Strong*
Fariba Bolandhemat	Keith Graziadei		

**Attended via Zoom – voting members of the committee unable to attend in-person may join as a guest on zoom but cannot move or vote on action items.*

Others Present:

Johanna Bennett	Elaine Roque	Rostom Sarkissian	Olivia Vallejo
Karen Huner			

(Information items are listed numerically; action items are listed alphabetically)

I. Call to Order and Approval of Agenda

The meeting was called to order at 3:12 pm. Motion to approve the agenda with no revisions.

Motion made by: Scott Silverman; **Seconded by:** Christina Gabler

The motion passed unanimously.

II. Public Comments

None

III. Announcements

None

IV. Approval of Minutes

Approval of the 10/30/24 minutes will be on the 11/20/24 agenda)

V. Chair’s Report

VI. Information Items

1. CSLO/PLO Update
No updates for CSLO/PLO mapping this week.
2. Common Course Numbering
We’ve finished Phase 1; the Phase 1 courses will be uploaded to the Chancellor’s Office in late

November/early December. We should be getting additional news on the Phase 2 courses soon.

3. SMC Local GE Pattern

If we approve the local GE pattern, it can always be modified (within the legal requirements) at a later date. We'll need to get started on the courses that should apply to oral communication and ethnic studies areas. Are there guidelines for courses in those sections? Yes in title 5.

VII. Action Items

(Courses: New)

a. PRO CR 70 Yoga Teacher Training Essentials

Motion to approve PRO CR 70 with revisions to SLOs (replace SLOs with "1. Analyze various health obstacles, physical limitations, and how modifications can be used and how yoga postures and pranayama can be beneficial.", "2. Identify and analyze foundational yoga poses (asana) to ensure proper alignment, stability, mobility, and safety."; change the proposed start date to Spring 2026; and add "this course..." language to the start of the course description.

Motion made by: Susan Caggiano; **Seconded by:** Scott Silverman

The motion passed unanimously.

b. PRO CR 71 Yoga Teacher Training Progressive Methodologies

Motion to approve PRO CR 71 with revisions to SLOs (replace SLOs with "1. Create and teach a portion of a well sequenced yoga class with teaching methodology and effective communication, proper demonstration, effective cueing, and the ability to analyze proper body alignment and administer appropriate physical adjustments to enhance safety.", "2. Discuss the benefits and contraindications of various asana and identify appropriate progressions and regressions for each pose.", "3. Identify effective business strategies for yoga teachers through employee versus independent contractor, building your personal brand, identifying one's niche, and leveraging social media."; add an additional course objective "Demonstrate appropriate teaching methodologies and effective communication skills while leading a varied group of yoga participants."; change the proposed start date to Spring 2026; and add "this course..." language to the start of the course description.

Motion made by: Scott Silverman; **Seconded by:** Walker Griffy

The motion passed unanimously.

c. PRO CR 72 Yoga Teaching Practicum

Motion to approve PRO CR 72 with revision to change the proposed start date to Spring 2026.

Motion made by: Estela Narrie; **Seconded by:** Christina Gabler

The motion passed unanimously.

d. PRO CR 73 Anatomy & Physiology for Yoga Teachers

Motion to approve PRO CR 73 with revision to change the proposed start date to Spring 2026.

Motion made by: Kevin Roberts; **Seconded by:** Bobby Simmons

The motion passed unanimously.

e. PRO CR 90 Pilates Teaching Methodology and Principals

Motion to approve PRO CR 90 with revisions to course name (change "Principals" to "Principles") change the proposed start date to Spring 2026.

Motion made by: Susan Caggiano; **Seconded by:** Walker Griffy

The motion passed unanimously.

f. PRO CR 91 Pilates Mat Instructor Training

g. PRO CR 92 Pilates Reformer Instructor Training

h. PRO CR 93 Pilates Apparatus Instructor Training

i. PRO CR 94 Pilates Reformer Teaching Practicum

j. PRO CR 95 Introduction to Applied Kinesiology and Anatomy

k. PRO CR 96 Pilates Apparatus Teaching Practicum

l. PRO CR 97 Pilates Mat Teaching Practicum

PRO CR 91, PRO CR 92, PRO CR 93, PRO CR 94, PRO CR 95, PRO CR 96, and PRO CR 97 tabled for prerequisites and additional language revisions.

(Programs: Revisions)

m. Changes to degrees, certificates, and program maps as a result of courses considered on this agenda
Motion to approve to changes to degrees, certificates, and program maps as a result of courses considered on this agenda

Motion made by: Walter; **Seconded by:** Aileen Huang

The motion passed unanimously.

VIII. New Business

None

IX. Old Business

None

X. Adjournment

Motion to adjourn the meeting at 4:03 pm.

Motion made by: Christina Gabler; **Seconded by:** Bobby Simmons

The motion passed unanimously.

New Course: ARCHITECTURE 45, Designing Spaces: Enhancing the Human Experience

Units:	3.00
Total Instructional Hours (usually 18 per unit):	90.00
Hours per week (full semester equivalent) in Lecture:	2.00
In-Class Lab:	2.00
Arranged:	1.00
Outside-of-Class Hours:	72.00
Date Submitted:	April 2024
Transferability:	Transfers to CSU
Degree Applicability:	Credit - Degree Applicable
Proposed Start:	Fall 2025
TOP/SAM Code:	020100 - Architecture and Architectural Technology / D - Possibly Occupational
Grading:	Letter Grade or P/NP
Repeatability:	Yes
Library:	Library has adequate materials to support course
Minimum Qualification:	Architecture; Interior Design; Other: Interaction/UX Design
Program Impact:	Existing degree or certificate: Interaction Design BS

Rationale

This course is proposed as a part of the curriculum for the Bachelor's Degree in Interaction Design at Santa Monica College.

I. Catalog Description

In this course, we will explore how architecture and design research intersect with immersive and augmented reality, enriching the design process. Students will delve into fundamental principles of spatial design and strategies for creating spaces augmented with interactive and storytelling elements. Using real world projects, students will develop the competencies needed to create multi-modal, user-centric spatial experiences.

II. Examples of Appropriate Text or Other Required Reading:

(include all publication dates; for transferable courses at least one text should have been published within the last 7 years)

1. Virtual and Augmented Reality for Architecture and Design, 1st Edition, Elisângela Vilar (Editor), Ernesto Filgueiras (Editor), Francisco Rebelo (Editor) , CRC Press © 2022, ISBN: 978-0367508104

III. Course Objectives

Upon completion of this course, the student will be able to:

1. Identify, understand, and utilize the basics of spatial design and its impact on human experience.
2. Explore how wayfinding and navigation shape physical and virtual spaces. Incorporate techniques for designing interactive smart spaces that adapt to user input.
3. Incorporate techniques for designing interactive smart spaces that adapt to user input.
4. Investigate augmented public spaces and their potential influence on urban environments.
5. Develop proficiency in user-friendly software tools for crafting immersive architectural experiences.
6. Evaluate designs in mixed reality to ensure they meet diverse human needs and preferences.
7. Analyze a design brief and select the most appropriate method of responding to it.
8. Contribute to design critiques and discussions.
9. Create and deliver presentations that communicate their intent and accomplishments within the scope of a design project.

IIIb. Arranged Hours Objectives:

Upon completion of this course, the student will be able to:

1. Model architectural and spatial objects in 3D modeling software

IV. Methods of Presentation:

Lecture and Discussion, Lab, Observation and Demonstration, Discussion, Critique, Projects, Field Trips, Group Work

- IVb. **Arranged Hours Instructional Activities:**
 Observation and Demonstration, Experiments, Group Work

V. **Course Content**

<u>% of Course</u>	<u>Topic</u>
20.000%	Integrating VR and AR into the Design Process
20.000%	Augmented Public Spaces
20.000%	Interactive Smart Spaces
20.000%	Wayfinding in Physical and Virtual Spaces
20.000%	Spatial Design Principles
100.000%	Total

Vb. **Lab Content**

<u>% of Course</u>	<u>Topic</u>
35.00%	Unity for Architectural Design
35.00%	Unity for VR Development
30.00%	Lens Studio for AR Development
100.00%	Total

VI. **Methods of Evaluation**

<u>% of Course</u>	<u>Topic</u>
15%	Class Participation: Participation in discussions and workshops
25%	Homework
30%	Group Projects
30%	Final Project
100%	Total

VII. **Sample Assignments:**

Sample Project 1: Wayfinding Design for a Basic Built Environment: Project Title: NavigEase: Enhancing Wayfinding in a Community Center Project Description: In this project, students will design an intuitive wayfinding system for a community center. The goal is to improve navigation for visitors by providing clear visual cues and interactive elements. Students will consider the layout of the community center, user demographics, and common destinations within the space to create an effective wayfinding solution. Project Tasks: Research and Analysis: Conduct user surveys and observations to understand navigation challenges faced by visitors. Analyze the layout of the community center, identifying key areas and potential navigation bottlenecks. Design Concept Development: Develop a wayfinding concept that incorporates visual signage, digital displays, and interactive elements. Create a visual hierarchy to guide users seamlessly through the space. Implementation of Digital Wayfinding Tools: Design digital maps and interactive kiosks to provide real-time navigation assistance. Integrate directional audio cues and visual indicators to aid users with visual or auditory impairments. Testing and Iteration: Conduct usability tests with a diverse group of users to gather feedback on the effectiveness of the wayfinding system. Iterate on the design based on user feedback and observations. Presentation and Documentation: Present the final wayfinding design to stakeholders, highlighting its features and benefits. Prepare comprehensive documentation outlining the design process, rationale, and implementation details. Deliverables: Wayfinding system prototype (digital maps, interactive kiosks, signage) Presentation slides Design documentation

Sample Project 2: Designing an Interactive Public Digital Space: Project Title: Digital Oasis: Transforming an Urban Plaza into an Interactive Hub Project Description: In this project, students will reimagine an urban plaza as an interactive digital space, enhancing community engagement and social interaction. The goal is to integrate digital technologies such as augmented reality (AR) displays, interactive art installations, and community-driven content to create a dynamic and immersive environment. Project Tasks: Site Analysis and Concept Development: Conduct a site analysis of the urban plaza, identifying existing features and potential areas for digital

enhancement. Brainstorm ideas for interactive digital installations that align with the plaza's aesthetic and functional requirements. Interactive Installation Design: Design interactive AR displays that provide information about local landmarks, events, and community initiatives. Create interactive art installations that respond to user gestures or environmental cues. Community Engagement and Content Creation: Collaborate with local artists, community groups, and stakeholders to generate content for the digital space. Develop a platform for user-generated content and community storytelling. Technology Integration and Testing: Implement AR technology, interactive displays, and sensor-driven installations within the plaza. Conduct extensive testing to ensure the functionality and usability of the digital space. Launch Event and Activation: Organize a launch event to unveil the transformed urban plaza to the community. Curate interactive experiences and programming to encourage community participation and engagement. Deliverables: Interactive digital space design proposal AR display prototypes and interactive installations Community engagement plan Launch event documentation and evaluation report

VIII. Student Learning Outcomes:

1. Critically evaluate the ethical considerations and societal impacts of design in mixed reality, demonstrating an understanding of the potential challenges and opportunities in creating augmented environments.
2. Design and prototype interactive smart spaces and augmented public areas, demonstrating appropriate design strategies, and accounting for accessibility and inclusion in the designs.
3. Demonstrate and apply fundamental principles, methods and concerns of spatial design, and their impact on user experience.

ARC 45 Distance Education Application

- Fully Online
- Online/Classroom Hybrid (not a delivery option when campus is closed)

1a. Instructor - Student Interaction:

The course will begin with a detailed welcome letter which includes pertinent details regarding the course and how the instructor will be in contact with the students. Each week the instructor will post announcements, reminders, or notes regarding assignments. Additionally, content pages will begin each module and will include key information and suggestions for how to approach content. Regular discussion boards will be posted, and the instructor will provide comments, input, and feedback just as in a traditional classroom setting. Additionally, constructive feedback will be provided on the homework in a time-frame adequate for students to adjust for the next assignment. The instructor will promptly respond to communication from students via email, the "General Questions" discussion board, and any other communication media used.

1b. Student - Student Interaction:

Students will engage in weekly discussion board groups where they will be required to reply to at least two students in the class. In the first module, for example, students are asked to introduce themselves and reply to at least two other students in class. From the beginning, a sense of belonging and community is established in the online classroom. Throughout the course of the semester, students can help each other out by posting replies and engage in a discussion in the "General Questions" discussion board. Students will post and discuss projects and research in the discussion boards. Presentations will be recorded and posted on the discussion boards with feedback from students and the instructor for developmental feedback and final presentation feedback. The presentations will be within a specific time limit and are given parameters for what should be seen in the video. The instructor will use the online course system to record and transcribe for posting. Students will be required to give qualitative responses to a minimum of 4 other students (when a student already has 4 responses the student will look for another project to comment on, so every student gets feedback). This is for the presentation and collaborative portion of class.

1c. Student - Content Interaction:

The classroom is organized into weekly course modules. Each weekly module consists of: learning objectives for each module, lectures (handouts or transcribed recordings), weekly discussion boards which reinforce the weekly concepts, and a reminder on what is due or what progress should be made during the week on the student work or projects.

1d. Distance Ed Interactions:

Online class activities that promote class interaction and engagement	Brief Description	% of Online Course Hours
Project Presentation	Students are required to present all projects for grading. This will be done with video presentations which are provided to the class for review, questions, and feedback.	20.00%

	Students will be required to provide qualitative feedback or questions and the presenter is required to respond as part of the presentation grade.	
Videos	Videos will demonstrate the critical processes and interactions which require illustration in a time-based medium.	10.00%
Online Lecture	Lecture Topics will be done in either (or both) written files which are compliant for accessibility or video presentations which are captioned or a combination of both.	30.00%
Discussion Boards	This is a critical component and will comprise discussions on topics and student projects. Discussion boards will be where projects are posted for feedback, a board for general questions for class communication, and instructor feedback.	40.00%

2. Organization of Content:

The instructor will lecture, demonstrate and give inspirational images or videos for students to use for project development. Rubrics are used to clarify instructor requirements for assignments. The online course system is sufficient in providing for these. Content is organized according to major content headings in the syllabus. Each module clearly states what the objectives are, and the assignments are consistent with the topic for that week. Due dates are given at the beginning of class to allow time for scheduling to complete the project. Assignments are given spaced through the semester. Materials needed for all projects are given at the beginning of the semester, so students have ample time to purchase what is needed and to be transparent on the cost. Low cost alternative solutions are given or considered.

3. Assessments:

% of grade	Activity	Assessment Method
40.00%	Projects	Students shall submit midterm and final projects in the medium specified in the rubric for each project. The submission is digital and ready for inclusion in a digital portfolio at the end of class.
20.00%	Class exercises	Students will work together or individually on small skill building exercises such as ideation, storyboarding, user testing. These exercises directly relate to the class topics and project. Deliverables are submitted by each student. Instructor shall review and grade the submissions within a week.
20.00%	Discussion boards	Weekly discussions will be posted. Students are required to post and reply to a specified number of student posts. Posts are due by one date and responses are due a few days later. Instructors are to grade and post this category each week.
20.00%	Presentations	Using a rubric to establish project parameters, students present projects by the due date. Instructor and class feedback is done within a week. Students grades shall be posted within a week of presentations.

4. Instructor's Technical Qualifications:

The instructor should be familiar with the college's learning management system. This includes all the required technology for online delivery such as building the course and communication tools such as discussion boards. They should also be aware of the technical support available for faculty and the knowledge to ensure the material and course content is accessible.

5. Student Support Services:

Links to the following should be provided: online tutoring, tutorials for online classes, and technical support.

6. Accessibility Requirements:

All content will be reviewed to ensure compliance is met. Videos shall be close captioned, files and slideshows shall be reviewed for accessibility through the software and through a compliance review.

7. Representative Online Lesson or Activity:

Course objective: Develop proficiency in user-friendly software tools for crafting immersive architectural experiences.

Sample assignment: Design interactive AR displays that provide information about local landmarks, events, and community initiatives.

Online Process: Students will read or listen to lectures, reading assignments and demonstrations which are posted in the online course - the handouts shall be accessible, and the videos shall have transcripts. Students will use their computers to complete the homework and the class projects utilizing the techniques demonstrated and discussed in lectures. Using an online platform students will organize in groups and create the project deliverables. This is accomplished through discussion boards or conferencing tools. The resulting documents will be submitted via an online learning platform. Instructors will give feedback within a week and grades will be posted shortly thereafter.

New Course: CHEMISTRY 51, Careers in the Natural Sciences

Units:	1.00
Total Instructional Hours (usually 18 per unit):	36.00
Hours per week (full semester equivalent) in Lecture:	0.50
In-Class Lab:	1.50
Arranged:	0.00
Outside-of-Class Hours:	18.00
Transferability:	Transfers to CSU
Degree Applicability:	Credit - Degree Applicable
Advisory(s):	CHEM 10 or PHYSCS 20 or PHYSCS 21 or AQUA 2 or BIOL 30
Proposed Start:	Fall 2025
TOP/SAM Code:	095400 - Chemical Technology / D - Possibly Occupational
Grading:	Letter Grade or P/NP
Repeatability:	No
Library:	Library has adequate materials to support course
Minimum Qualification:	Biological Sciences or Chemistry or Physics/Astronomy
Program Impact:	Forthcoming degree or certificate: Chemical Technology

Rationale

This course will be one of two courses used to develop a Chemical Technology program. The program would serve students who aim to pursue career technical education and find full-time work without completing a bachelor's degree. Considering the labor market in the Los Angeles area, we are planning the first of a series of stackable Certificates of Achievement that would prepare students for entry-level work in quality assurance/compliance, environmental monitoring, and general chemical technician work. The LARC labor market analysis completed in October 2024 identified a need for these roles and supports establishing this program. The Careers in the Natural Sciences course would provide a starting point for students to explore local career opportunities in science and meet industry professionals through job talk seminars and networking. The students would learn to craft relevant applications materials based on their research and interactions with industry professionals.

I. Catalog Description

This course will introduce career options available to students pursuing education in the Natural Sciences with a focus on Life and Physical Sciences. While learning more about career options in science, students will craft their own science-focused application materials including a cover letter, curriculum vitae, resume, and a professional social media profile. In this class, students will have opportunities to network with science professionals and practice interview skills.

II. Examples of Appropriate Text or Other Required Reading:

(include all publication dates; for transferable courses at least one text should have been published within the last 7 years)

1. The Perfect Science Career: A practical guide to getting a job you will love, Chung and Ofori, Independently Published © 2021, ISBN: 979-8751553333
2. What Every Science Student Should Know, Bauer, Kim, Zureick, and Lee, University of Chicago Press © 2016, ISBN: 978-0226198880
3. Instructor created class packet to be provided by the instructor

III. Course Objectives

Upon completion of this course, the student will be able to:

1. Interact with science professionals to build a professional network and interview for future careers with confidence.
2. Research prospective careers in science to learn more about the day-to-day responsibilities and the skills necessary to be successful.
3. Craft a cover letter, curriculum vitae, and resume tailored to a job they are interested in applying for.
4. Create and maintain an industry relevant professional social media profile.

IV. Methods of Presentation:

Lecture and Discussion, Lab, Projects, Visiting Lecturers, Group Work

V. **Course Content**

<u>% of Course</u>	<u>Topic</u>
64.000%	Exploring careers in science
6.000%	Job search methods for technical positions
6.000%	Interview skills for technical positions
6.000%	Science career survey and individual development plan
12.000%	Writing a cover letter, curriculum vitae, and resume
6.000%	Creating a professionally focused social media profile
100.000%	Total

VI. **Methods of Evaluation**

<u>% of Course</u>	<u>Topic</u>
8%	Class Participation: In class activities
30%	Class Work: Written reflections
12%	Homework: CV/resume and cover letter
8%	Homework: Professional social media profile
12%	Homework: Informational interview
30%	Final Project: Application materials for a job bulletin and an in-class presentation
100%	Total

VII. **Sample Assignments:**

Informational Interview: Using the suggested question list provided, conduct an informational interview with a science professional working in the career area you are interested in exploring. Identify 3 – 5 people on LinkedIn, contact them, and inquire if they are willing to participate in an informational interview. Meet with one of the professionals, record their responses to your questions, and write a 1 – 2 page report documenting what you learned.

Curriculum Vitae & Resume: Use the template provided to record all the relevant information required in a CV. Using the list of information, create your own curriculum vitae. Upon completion of your CV, convert your CV into a resume. Recall that the goal of the resume is to convey your professional identity, whereas a CV is used to convey your scholarly identity. Finally, identify a job that you would consider applying for, determine if you would apply using a CV or resume, and tailor your CV/resume to highlight important details about yourself that speak to the job description.

VIII. **Student Learning Outcomes:**

1. Demonstrate networking and interview skills needed to confidently apply for future job opportunities.
2. Identify prospective careers in science and relevant skill sets for those careers.
3. Create science-focused application materials including a tailored cover letter, resume/CV, and supplemental materials.

ADVISORY Checklist and Worksheet

Chem 51

Proposed Advisory: Aqua 2 or Biol 30 or Chem 10 or Physcs 20 or Physcs 21

SECTION 1 - CONTENT REVIEW:

Criterion	N/A	Yes	No
1. Faculty with appropriate expertise have been involved in the determination of the advisory.		X	
2. The department in which the course is (will be) taught has considered course objectives in accordance with accreditation standards.		X	
3. Selection of this advisory is based on tests, the type and number of examinations, and grading criteria.	X		
4. Selection of this advisory is based on a detailed course syllabus and outline of record, related instructional materials and course format.		X	
5. The body of knowledge and/or skills which are recommended for success before enrollment have been specified in writing (see below).		X	
6. The course materials presented in this advisory have been reviewed and determined to teach knowledge or skills recommended for success in the course requiring this advisory.		X	
7. The body of knowledge and/or skills recommended for success in this course have been matched with the knowledge and skills developed by the advisory course.		X	
8. The body of knowledge and/or skills taught in the advisor are not an instructional unit of this course.		X	
9. Written documentation that steps 1 to 8 above have been taken is readily available in departmental files.		X	

Advisory Worksheet

ENTRANCE SKILLS RECOMMENDED FOR SUCCESS IN: **Chem 51**

(It is recommended that the student to be able to do or understand the following BEFORE entering the course)

A)	Ability to practice experimental techniques in chemistry, biology, and/or physics including safe competent handling of materials and equipment.
B)	Ability to apply the scientific method to investigate a question by formulating a hypothesis, testing the hypothesis, and summarizing findings and conclusions.
C)	
D)	
E)	
F)	

EXIT SKILLS (objectives) FROM: **Aqua 2**

(What the student has the demonstrated ability to do or understand AFTER successful completion of this course)

1.	Laboratory experience safely culturing algae and aquatic plants, spawning and rearing shell- and finfish.
2.	Designing and engineering aquaculture systems including electrical systems, plumbing, water filtration and water delivery.
3.	
4.	
5.	
6.	
7.	

		ENTRANCE SKILLS FOR: Chem 51							
		A	B	C	D	E	F	G	H
EXIT SKILLS From: Aqua 2	1	x							
	2		x						
	3								
	4								
	5								
	6								
	7								
	8								

Advisory Worksheet

ENTRANCE SKILLS RECOMMENDED FOR SUCCESS IN: **Chem 51**

(It is recommended that the student to be able to do or understand the following BEFORE entering the course)

A)	Ability to practice experimental techniques in chemistry, biology, and/or physics including safe competent handling of materials and equipment.
B)	Ability to apply the scientific method to investigate a question by formulating a hypothesis, testing the hypothesis, and summarizing findings and conclusions.
C)	
D)	
E)	
F)	

EXIT SKILLS (objectives) FROM: **Biol 30**

(What the student has the demonstrated ability to do or understand AFTER successful completion of this course)

1.	Laboratory experience safely carrying out techniques including spectroscopy, DNA gel electrophoresis, bacterial transformations, and microscopy.
2.	Identify and understand the key characteristics of the scientific method. Think critically about scientific data and ethical practices in biotechnology as well as utilize metacognitive processes and executive function strategies to improve the retention of foundational concepts and transferable skills used in the workplace.
3.	
4.	
5.	
6.	
7.	

		ENTRANCE SKILLS FOR: Chem 51							
		A	B	C	D	E	F	G	H
EXIT SKILLS From: Biol 30	1	x							
	2		x						
	3								
	4								
	5								
	6								
	7								
	8								

Advisory Worksheet

ENTRANCE SKILLS RECOMMENDED FOR SUCCESS IN: **Chem 51**

(It is recommended that the student to be able to do or understand the following BEFORE entering the course)

A)	Ability to practice experimental techniques in chemistry, biology, and/or physics including safe competent handling of materials and equipment.
B)	Ability to apply the scientific method to investigate a question by formulating a hypothesis, testing the hypothesis, and summarizing findings and conclusions.
C)	
D)	
E)	
F)	

EXIT SKILLS (objectives) FROM: **Chem 10**

(What the student has the demonstrated ability to do or understand AFTER successful completion of this course)

1.	Laboratory experience safely carrying out experiments dealing with measuring the density of liquids and solids, determining percent composition and mole ratios, and performing titrations.
2.	Identify and understand the key characteristics of the scientific method which includes, experiments, observations, hypotheses, theories and laws.
3.	
4.	
5.	
6.	
7.	

		ENTRANCE SKILLS FOR: Chem 51							
		A	B	C	D	E	F	G	H
EXIT SKILLS From: Chem 10	1	x							
	2		x						
	3								
	4								
	5								
	6								
	7								
	8								

Advisory Worksheet

ENTRANCE SKILLS RECOMMENDED FOR SUCCESS IN: **Chem 51**

(It is recommended that the student to be able to do or understand the following BEFORE entering the course)

A)	Ability to practice experimental techniques in chemistry, biology, and/or physics including safe competent handling of materials and equipment.
B)	Ability to apply the scientific method to investigate a question by formulating a hypothesis, testing the hypothesis, and summarizing findings and conclusions.
C)	
D)	
E)	
F)	

EXIT SKILLS (objectives) FROM: **Physcs 20**

(What the student has the demonstrated ability to do or understand AFTER successful completion of this course)

1.	Laboratory experience safely carrying out experiments dealing with characterizing projectile motion, force vectors, Newton's laws, conservation of momentum and conservation of energy.
2.	Apply the basics of the scientific method to conducting laboratory experiments and writing lab reports, by stating a clear and testable hypothesis, taking careful measurements, assembling data, estimating uncertainties, and drawing appropriate conclusions based on gathered data and on sound scientific principles.
3.	
4.	
5.	
6.	
7.	

		ENTRANCE SKILLS FOR: Chem 51							
		A	B	C	D	E	F	G	H
EXIT SKILLS From: Physcs 20	1	x							
	2		x						
	3								
	4								
	5								
	6								
	7								
	8								

Advisory Worksheet

ENTRANCE SKILLS RECOMMENDED FOR SUCCESS IN: **Chem 51**

(It is recommended that the student to be able to do or understand the following BEFORE entering the course)

A)	Ability to practice experimental techniques in chemistry, biology, and/or physics including safe competent handling of materials and equipment.
B)	Ability to apply the scientific method to investigate a question by formulating a hypothesis, testing the hypothesis, and summarizing findings and conclusions.
C)	
D)	
E)	
F)	

EXIT SKILLS (objectives) FROM: **Physcs 21**

(What the student has the demonstrated ability to do or understand AFTER successful completion of this course)

1.	Laboratory experience safely carrying out experiments dealing with characterizing projectile motion, circular motion, Newton's laws, conservation of momentum and conservation of energy..
2.	When conducting a laboratory experiment and writing a lab report, the student will demonstrate understanding of the basics of the scientific method by being able to state a clear and testable hypothesis, taking careful measurements, estimating uncertainties, and drawing appropriate conclusions based on gathered data and on sound scientific principles.
3.	
4.	
5.	
6.	
7.	

		ENTRANCE SKILLS FOR: Chem 51							
		A	B	C	D	E	F	G	H
EXIT SKILLS From: Physcs 21	1	x							
	2		x						
	3								
	4								
	5								
	6								
	7								
	8								

If the advisory proposed is a **NON-COURSE ADVISORY** (i.e., ability to do x), please explain the reasoning/rationale for this advisory, as well as, the non-course opportunities available for students to acquire the recommended skills:

New Course: CHEMISTRY 55, Introduction to Chemical Instrumentation

Units:	2.00
Total Instructional Hours (usually 18 per unit):	72.00
Hours per week (full semester equivalent) in Lecture:	1.00
In-Class Lab:	3.00
Arranged:	0.00
Outside-of-Class Hours:	36.00
Transferability:	Transfers to CSU
Degree Applicability:	Credit - Degree Applicable
Prerequisite(s):	CHEM 12
Proposed Start:	Fall 2025
TOP/SAM Code:	095400 - Chemical Technology / C - Clearly Occupational
Grading:	Letter Grade or P/NP
Repeatability:	No
Library:	Library has adequate materials to support course
Minimum Qualification:	Chemistry
Program Impact:	Forthcoming degree or certificate: Chemical Technology

Rationale

Our proposed Chemical Technology program would serve students who aim to pursue career technical education and find full time work without completing a bachelor's degree. Considering the labor market in the Los Angeles area, we propose creating stackable Certificates of Achievement that would prepare students for entry-level work in quality assurance/compliance, environmental monitoring, and general chemical technician work. The LARC labor market analysis completed in October 2024 identified a need for these roles and supports establishing this program. Introduction to Chemical Instrumentation would be the cornerstone of the first certificate.

I. Catalog Description

This laboratory course will introduce students to instrumentation commonly used in chemistry research in preparation for careers in chemical analysis, manufacturing, and quality assurance. The course explores the basic principles for qualitative and quantitative analysis, the basic principles of chromatographic and spectroscopic techniques, and the strengths and limitations of analytical methods and instrumentation. The lectures will discuss the theory and techniques that relate to the experiments that are performed, including High-Performance Liquid Chromatography (HPLC), Gas Chromatography–Mass Spectrometry (GC-MS), Infrared Spectroscopy (IR), Ultraviolet–Visible Spectroscopy (UV-vis), and various methods of analysis and separation of mixtures. Emphasis will be placed upon understanding the fundamental principles of analytical instrumentation, data acquisition and analysis, and scientific communication.

II. Examples of Appropriate Text or Other Required Reading:

(include all publication dates; for transferable courses at least one text should have been published within the last 7 years)

1. Principles and Practice of Modern Chromatographic Methods, 2, Robards and Ryan, Elsevier © 2021, ISBN: 9780128220962
2. Lab Experiments written by SMC faculty and available online.

III. Course Objectives

Upon completion of this course, the student will be able to:

1. Explain the fundamental principles of spectroscopic, chromatographic, and mass spectrometry techniques used in chemical analysis. Differentiate between the instruments and methods used to perform these techniques, including their advantages and limitations. Determine the most suitable instrument/technique to achieve a specific analytical objective.
2. Demonstrate the use of various instruments and analytical techniques, including IR, UV-Vis GC-MS and HPLC.
3. Perform qualitative and quantitative analysis on chemical compounds by utilizing a combination of chromatography and spectroscopy methods.
4. Maintain accurate records in a laboratory notebook, summarize important lab data succinctly, and work independently in the laboratory.

IV. Methods of Presentation:

Lab, Lecture and Discussion, Discussion, Group Work, Projects, Experiments

V. Course Content

% of Course	Topic
5.000%	Safety and Lab Orientation
10.000%	Organic functional groups, structure and bonding, conjugation, intermolecular forces
10.000%	Fundamentals of Analytical Chemistry, including precision and accuracy, errors in chemical analysis, and statistical data treatment and evaluation
5.000%	Principles of chromatography
10.000%	Principles of spectroscopy
10.000%	Infrared (IR) spectroscopy – theory, data collection and analysis, problem solving
10.000%	UV-vis spectroscopy – theory, data collection and analysis, problem solving
20.000%	High-performance liquid chromatography (HPLC) – theory, data collection and analysis, problem solving
20.000%	Gas chromatography–mass spectrometry (GC-MS) – theory, data collection and analysis, problem solving
100.000%	Total

VI. Methods of Evaluation

% of Course	Topic
50%	Lab Reports: Lab Reports - 5-7 lab reports comprised of notebook pages, calculations, spectral analysis, and typed analysis and data summary.
20%	Exams/Tests: Exams – 2 lab tests.
10%	Homework: 5-7 problem sets based on reading or in-class discussion.
20%	Group Projects: Group project that will be evaluated as a Final Presentation
100%	Total

VII. Sample Assignments:

Lab Experiment: Prepare coffee, tea, and soft drink HPLC samples. Prepare caffeine standard HPLC samples via serial dilution. Run a reverse-phase HPLC isocratic method to separate the beverage ingredients, using retention time as a qualitative measure and peak area or peak height as a quantitative measure of caffeine in a sample. Identify which peak is caffeine and note the peak area for each sample.

Lab Analysis and Report: Use the caffeine peak area data to generate a calibration curve, then determine the concentration of caffeine for each beverage in mg/mL. Discuss the potential sources of error in this experiment and what measures can be taken to minimize experimental error. Discuss how retention times depend on the methanol concentration and the pH of the mobile phase. Indicate which factors contribute to the choice of stationary phase and mobile phase composition.

VIII. Student Learning Outcomes:

1. Describe the fundamental chemical and physical principles that underlie instrumental analysis techniques.
2. Demonstrate proper use of instrumental methods for obtaining data and evaluate the quality of data, including identifying and explaining sources of error and noise in instrumental analyses.
3. Evaluate the advantages and limitations of instrumental techniques and apply this knowledge to select the appropriate method(s) to solve analytical problems.

Prerequisite / Corequisite Checklist and Worksheet

Chemistry 255 – Introduction to Chemical Instrumentation

Prerequisite: Chemistry 12 ; General Chemistry II

Other prerequisites, corequisites, and advisories also required for this course:
(Please note that a separate sheet is required for each prerequisite, corequisite, or advisory)

(If applicable, enter Discipline and Course # here) ; (Enter Course Title here)

(If applicable, enter Discipline and Course # here) ; (Enter Course Title here)

SECTION 1 - CONTENT REVIEW: If any criterion is not met, the prerequisite will be disallowed.

Criterion	Met	Not Met
1. Faculty with appropriate expertise have been involved in the determination of the prerequisite, corequisite or advisory.	X	
2. The department in which the course is (will be) taught has considered course objectives in accordance with accreditation standards.	X	
3. Selection of this prerequisite, corequisite or advisory is based on tests, the type and number of examinations, and grading criteria.	X	
4. Selection of this prerequisite, corequisite or advisory is based on a detailed course syllabus and outline of record, related instructional materials and course format.	X	
5. The body of knowledge and/or skills which are necessary for success before and/or concurrent with enrollment have been specified in writing.	X	
6. The course materials presented in this prerequisite or corequisite have been reviewed and determined to teach knowledge or skills needed for success in the course requiring this prerequisite.	X	
7. The body of knowledge and/or skills necessary for success in the course have been matched with the knowledge and skills developed by the prerequisite, corequisite or advisory.	X	
8. The body of knowledge and/or skills taught in the prerequisite are not an instructional unit of the course requiring the prerequisite.	X	
9. Written documentation that steps 1 to 8 above have been taken is readily available in departmental files.	X	

SECTION II - ADDITIONAL LEVEL OF SCRUTINY:

In addition to the affirmation of content review listed in section I, an additional level of scrutiny is also required. The level of scrutiny depends on which type of prerequisite is involved. There are six types and each is listed below. Please identify which one is being used to justify the proposed prerequisite. The additional level of scrutiny corresponding to each type of prerequisite is identified below.

Type 1: Standard Prerequisite (required prerequisite at UC or CSU)

Identify three UC or CSU campuses that offer the equivalent course with the equivalent prerequisite.

List schools here:

Complete the Prerequisite Worksheet

Type 2: Sequential within and across disciplines (e.g., Physics 7, 8, 9, ...)

Complete the Prerequisite Worksheet

modified 09/26/2012

Type 3: Course in communication or computational skills as prerequisite for course other than another skills course (e.g., English 1 prerequisite for Anatomy 1)

Complete the Prerequisite Worksheet

Complete Data Analysis

Type 4: Program prerequisites

Prerequisite must be required for at least one of the courses in the program. Explain:

Type 5: Health and Safety

Students who lack the prerequisite might endanger themselves, other students or staff. Explain:

Type 6: Recency and other measures of readiness (miscellaneous)

Data must be collected according to sound research principles in order to justify such prerequisites.

Complete the Prerequisite Worksheet

Prerequisites using Content Review

In order to properly justify/substantiate any prerequisite, we need to first determine what skills are necessary for students to be successful (skills without which they will likely not succeed (i.e., pass the course)).

- Keep in mind that “success” in the course means “passing” the course. “Success” does not mean “more likely to get a B or higher”.

Once we’ve identified what are the “entrance skills” necessary for success, we then need to look at the “exit skills” (objectives) of our existing courses to determine which of our courses sufficiently prepares students (based on the entrance skills) to be successful in the course in question.

- It is highly unlikely that there will be a “1-to-1 relationship” between the entrance skills and exits skills.
 - Course A, for example, may have 10 objectives, but perhaps only 5 (or even just 1) are essential for success in Course B. Only the relevant exit skills should be used to justify/substantiate a prerequisite.

Completing the prerequisite worksheet:

The entrance skills must be worded as SKILLS. “What skills do students need to have BEFORE the course begins in order to be successful?”

For example:

- “Learn how to read college level textbooks” is NOT an entrance skill.
- “Ability to read college level textbooks” IS an entrance skill.

Once the entrance skills are determined, we can then figure out which course(s) are necessary as prerequisites (based on matching up the exit skills (objectives) of that course(s) with the entrance skills of the course in question).

Prerequisite Worksheet

ENTRANCE SKILLS FOR (the course in question)

(What the student needs to be able to do or understand BEFORE entering the course in order to be successful)

A)	Perform experiments involving qualitative analysis of aqueous and organic solutions
B)	Demonstrate a working knowledge of laboratory safety
C)	Demonstrate knowledge of the importance of proper waste disposal
D)	Demonstrate laboratory note taking skills
E)	Demonstrate good observational skills.
F)	Demonstrate proper usage of the laboratory balance.
G)	Ability to predict the solubility of a substance based on polarity
H)	

EXIT SKILLS (objectives) FOR (the prerequisite course)

(What the student has the demonstrated ability to do or understand AFTER successful completion of this course)

1.	Perform experiments involving qualitative analysis of aqueous solutions containing inorganic ions
2.	Demonstrate a working knowledge of laboratory safety
3.	Demonstrate knowledge of the importance of proper waste disposal
4.	Demonstrate laboratory note taking skills
5.	Demonstrate good observational skills.
6.	Demonstrate proper usage of the laboratory balance.
7.	Describe the concept of solubility product constant and solve related problems.
8.	Describe the energetics of solution formation and factors affecting solubility.

		ENTRANCE SKILLS FOR (Chem 255)							
		A	B	C	D	E	F	G	H
EXIT SKILLS FOR (Chem 12)	1	X							
	2		X						
	3			X					
	4				X				
	5					X			
	6						X		
	7							X	
	8							X	

New Course: COMPUTER APPLICATIONS 2, Computer Skills for Virtual Assistants

Units:	3.00
Total Instructional Hours (usually 18 per unit):	54.00
Hours per week (full semester equivalent) in Lecture:	3.00
In-Class Lab:	0.00
Arranged:	0.00
Outside-of-Class Hours:	108.00
Transferability:	Transfers to UC
Degree Applicability:	Credit - Degree Applicable
Proposed Start:	Fall 2025
TOP/SAM Code:	051400 - Office Technology/Office Computer Applications / C - Clearly Occupational
Grading:	Letter Grade or P/NP
Repeatability:	No
Library:	Library has adequate materials to support course
Minimum Qualification:	Office Technologies
Program Impact:	Existing degree or certificate: Business Information Worker 1 Certificate of Achievement, Clerical/Data Entry Department Certificate, Computer Business Applications AS/Certificate of Achievement, Digital Publishing Certificate of Achievement, Enterprise Service Clerk Certificate of Achievement, Medical Billing/Coding Department Certificate, Medical Coding and Billing Specialist AS/Certificate of Achievement

Rationale

We are creating this course at Santa Monica College in collaboration with the Pasadena City College Virtual Assistant grant program and LARC.

I. Catalog Description

This course will offer a comprehensive overview of administrative responsibilities within virtual and hybrid professional settings. Students will acquire knowledge of project management, applicable technology and automation tools, ethics, and data and equipment security. Through a combination of information and virtual work experiences, students will gain theoretical and practical skills.

II. Examples of Appropriate Text or Other Required Reading:

(include all publication dates; for transferable courses at least one text should have been published within the last 7 years)

1. Workplace software and skills, OER, OER © 2021
2. Computer Applications for Managers, OER, OER © 2021
3. Information Literacy, OER, OER © 2022
4. Microsoft Office 365. Microsoft, 365 ed.
5. Google Apps. Google, Current ed.
6. Various Software Apps. Various, Current ed.
7. We will use OER material for Microsoft Office 365 topics and Google Apps. We will be using different handouts for the third-party apps.

III. Course Objectives

Upon completion of this course, the student will be able to:

1. Design business letters, spreadsheet reports, digital presentations, and the basic use of an Outlook email account to set up meetings, digital calendars, and OneDrive using basic Microsoft Office software.
2. Design business letters, spreadsheet reports, digital presentations, and the basic use of a Gmail account to set up meetings, use the calendar, and use Google Drive using Google apps software.
3. Compare effective electronic office systems.
4. Organize agendas and set up appointments using free software applications.
5. Compare and select Internet sites and transfer reservation data to other software applications.
6. Weigh the use of Artificial Intelligence and other Internet tools to search for data and learn how to use it properly and ethically.
7. Select various virtual communication tools to communicate with clients (ZOOM, Teams, Skype, etc.)
8. Demonstrate the use of project management software applications to plan projects and utilize time productively.
9. Implement ethical steps to keep the computer software up to date, follow computer security protocols, and create a system that will keep customers' physical or digital data secure.

10. Design ethical business strategies, critical thinking, and business integrity to solve business problems.
11. Use the Internet to research a Business Industry's job outlook to determine the current requirements of a virtual assistant, career options, and potential employers within the Industry.

IV. Methods of Presentation:

Distance Education, Lecture and Discussion, Discussion, Projects, Online instructor-provided resources

V. Course Content

<u>% of Course</u>	<u>Topic</u>
2.000%	Explain the requirements of a Virtual Assistant
20.000%	Microsoft Office software and OneDrive.
20.000%	Google Apps and Google Drive.
5.000%	Coordination of electronic office systems (Example: computer, hardware, software, internet connections, telephone, office settings, technical support, etc.)
5.000%	Use of various software applications for setting appointments, making reservations, and working with team members
10.000%	Virtual communication using computer software, digital apps, and other tools
10.000%	Computer and customer data security
5.000%	Ethical business strategies, critical thinking, and business integrity
5.000%	Internet Research and the proper use of Artificial Intelligence
10.000%	Project Management and Time Management
8.000%	New emerging technologies
100.000%	Total

VI. Methods of Evaluation

<u>% of Course</u>	<u>Topic</u>
50%	Homework: Various Assignments and Class Projects. There will be 5 to 10 assignments and 3 to 5 class projects.
25%	Exams/Tests: Various Theory quizzes and Exams
10%	Class Participation: Various Board Assignments / Class Discussions
15%	Oral Presentation: Virtual Presentations
100%	Total

VII. Sample Assignments:

Google Slides Project: Class Project #6b Google Slides Project For this project, you will be using the articles and images that you found under the Internet Research assignment. You are welcome to look for more articles. However, make sure that you save the link. You will be asked to paste that link on the Reference slide. You need to have 8 slides minimum. If you submit fewer slides, you will get penalties. You need to select a nice slide theme. The first slide is reserved for the title, and the last slide is reserved for the References. Follow this structure: First Slide: In the center, enter the name of your Presentation and your full name at the bottom. Add one of your images to this slide. Resize the image so that it does not cover the text. For the following slides, you will be using information from the articles you had from your Internet Research assignments. You are welcome to use other articles. However, make sure that you save the links since you will be asked to paste all the articles that you are using to the Reference slide. Second Slide: Title: What Is Artificial Intelligence? In the body, you will answer this question. You need to summarize it in your own words. You are not allowed to copy and paste information from the web or articles that you found. Also, I expect to see five sentences at minimum. Third: Title: Advantages of Using Artificial Intelligence. (You need to list five sentences minimum on the body.) Fourth: Disadvantages of Using Artificial Intelligence. (You need to list five sentences minimum on the body.) Five: How is artificial intelligence being used? (You need to list five sentences minimum on the body.) Sixth: How Is Artificial Intelligence Changing Jobs? (You need to list five sentences minimum on the body.) Seventh: What I Like or Do Not Like About Artificial Intelligence? (You need to list five sentences minimum.) Eight Slide: References (You need to copy and paste only the links from

the articles you read to get this research.) You need to follow these steps once you have completed your slides. Add slide transitions to all the slides. You need to add the two remaining images in two slides. Make sure that you resize the images and that they are not overlapping with text. Add animation to all the images. Save the file again as YourLastName-GoogleSlides. **SUBMIT ASSIGNMENT: SAVE YOUR GOOGLE SLIDES FILE AS A MICROSOFT POWERPOINT FILE TO UPLOAD:** Name the file YourLastNameGoogleSlides. In Google Slides, go to File - Download - PowerPoint to save the .pptx file to your computer's Downloads folder (or possibly to your computer's Desktop). Click the FILE UPLOAD tab ("Choose File"/select YourLastNameGoogleSlides file from your Downloads folder/"Open") and click SUBMIT ASSIGNMENT.

Internet Search: After reviewing the tutorials in each unit, complete the following for your Browser Project: Create a folder on your Desktop using the following name: YourLastName-Browser To complete this assignment, go to Fast Company. FastCompany is one of the premiere and cutting-edge online resources for current technology news. Scroll through the site and check out the different headings in the top menu item, such as Tech, Work Life, Creativity, etc. Locate and review FOUR different articles from one of the following topics: AI technology Cybersecurity. Using Google Docs, you will be required to copy the Internet address and paste each of the four links on your Google Docs. The links will be related to the articles you selected. You will be using these articles to create short Google Slides in a future assignment. **SAVE** the Google Docs document file as a MICROSOFT WORD FILE ** and name the file YourLastName-Websites. Now, go back to the website. Click on a new page and find three images related to the topic that you selected using Google Chrome images. Therefore, if you selected to find information based on AI (Artificial Intelligence), then the images should be related to this topic. When you find your image, right-click on the image and select SAVE IMAGE AS. You can select JPE, JPEG, PNG, or GIF. Save each of the images inside the folder. Zip the folder. (Note: You must have the three images and one Microsoft Word document inside the ZIP folder.) Submit the ZIP folder on this class project assignment page.

VIII. Student Learning Outcomes:

1. Operate virtual and hybrid teams and be adaptable to changing tools and work environments.
2. Solve strategic problems and demonstrate strategies for time and self-management in a virtual or hybrid work environment.

CIS 2 Distance Education Application

Fully Online

1a. Instructor - Student Interaction:

Students will receive an email at least two weeks before classes start, welcoming them and providing the book and software information they will need for this course. There will be a second email sent to students one week before class starts with a reminder about when the class will start. In addition, the email will contain information on the structure of the course in the Learning Management System (LMS). The email will also have a link explaining how to use all the Learning Management System (LMS) tools in the event that the online student is a first-time user of the Learning Management System. The email will also remind students of the importance of applying for an exam extension if the student needs special accommodation for the class. On the day of the class, students will receive an informative welcome email. The email will provide information on what students are expected to do within the first two days of classes and the importance of being active during the week. The instructor will promptly respond to students' questions via the Learning Management System (LMS), the "Q&A Board" space, and SMC email. The instructor will continue frequent communication with students through the Learning Management System (LMS) Inbox and the Q&A board space. Constructive feedback will be provided on the discussion board, homework assignments, and exams in a timely manner. Instructors will use the announcement tool to post important messages to students and for special activities that may be of interest to students. There will be weekly video conference office meetings at a specific time when students can stop by and ask the instructor questions. The instructor will use the tools from the Grade tab to remind those students who may be close to missing assignments or exams.

1b. Student - Student Interaction:

Students will participate in discussion boards where students will be required to have active online learning communication with their classmates. During the first week of classes, students will introduce themselves to the class. They will be required to ask at least two of their classmates questions on board. They will also be required to reply to the postings of other classmates post to them throughout the week. Throughout the semester, we will have other board discussions where we will cover different concepts relevant to the class topics. In addition, there is a Q&A Forum (board) where students can post questions related to the class lecture or class discussion. Students will be able to ask general questions about the course content the same way that they would in a classroom. Other students will have the opportunity to reply to their classmates' questions, too.

1c. Student - Content Interaction:

Students will have access to PowerPoint slides, videos, and all other content in LMS.

1d. Distance Ed Interactions:

Online class activities that promote class interaction and engagement	Brief Description	% of Online Course Hours
Discussion Boards	There will be multiple discussion boards throughout the semester, where students will be required to engage with other classmates throughout the week. Also, students will have the opportunity to use the Q&A Forum to ask questions and communicate with other students.	15.00%
Other (describe)	Various Class Projects using various apps. Students will be testing these apps with other students.	20.00%
Project Presentation	There will be various short virtual presentations.	15.00%

2. Organization of Content:

Content will be organized using weekly modules in the campus learning management system (LMS). The order of the weeks will match the course content included in the syllabus. The weekly modules are generally listed in the following order: 1) Weekly Lecture: Content, PowerPoint presentation, lecture videos. 2) Q& A Forum 3) Graded Activities: Discussion Board, Class Projects, and Quizzes During the middle of the semester, students will have a midterm exam added to the graded activities. During the final week, students will have a final exam and a final project added to the final week.

3. Assessments:

% of grade	Activity	Assessment Method
50.00%	Homework	Students will be evaluated on their performance. This class will have various assignments (5 to 10 assignments) and class projects (3 to 5 projects). Points will be assigned for each activity completed as instructed.
25.00%	Exams/Tests	Students will be tested on the theory concepts covered in the class. There will be various theory quizzes and exams.
10.00%	Discussion Board Participation	Various topics will be presented. Students will have the opportunity to discuss them during the week with other classmates or in group settings.
15.00%	Oral Presentations (Virtual)	Students will complete virtual presentations. During their presentations, points will be assigned based on the required task that they completed.

4. Instructor's Technical Qualifications:

Instructors should be familiar with the learning management system in place. Instructors should get the proper training and learn how to use the current learning management system. They should also get a certification, and their skills should be kept up to date since the learning management system also gets updates. Instructors should be knowledgeable of all the programs, apps, and software that will be presented in the class and how to help students obtain technical support for them.

5. Student Support Services:

There will be links made available to students that will include support in online tutoring and technical support. There will also be links for counseling, financial aid, bookstore, library, and other student support services that students need to have.

6. Accessibility Requirements:

The course content must meet the accessibility requirements. Therefore, the course will be designed to consider students with disabilities. This includes content pages, files, and multimedia, as well as accommodation for those receiving DSPS services. Content pages will include appropriate headings, formatting, and color contrast. Multimedia will be captioned and provide accurate transcripts. Reading order is correctly set so that content is presented in the proper sequence for screen readers and other assistive technologies.

7. Representative Online Lesson or Activity:

Artificial intelligence and its ethical uses will be one of the discussion board topics covered in this class. We will ask students to visit one of our cutting-edge online publication sites and provide them with links to the topics that they can use for the assignment. Students will post answers to specific questions to start the discussion. Once they post the answers, students will review the posting from two other students and ask questions related to the topic those students selected to start the conversation.

New Course: COMPUTER SCIENCE 4, Copiloting with Artificial Intelligence Tools

Units:	3.00
Total Instructional Hours (usually 18 per unit):	54.00
Hours per week (full semester equivalent) in Lecture:	3.00
In-Class Lab:	0.00
Arranged:	0.00
Outside-of-Class Hours:	108.00
Transferability:	Transfers to CSU
Degree Applicability:	Credit - Degree Applicable
Proposed Start:	Fall 2025
TOP/SAM Code:	070100 - Information Technology, General / C - Clearly Occupational
Grading:	Letter Grade or P/NP
Repeatability:	No
Library:	Library has adequate materials to support course
Minimum Qualification:	Computer Science
Program Impact:	Forthcoming degree or certificate: In conjunction with this class, we are also bringing forward a new Department Certificate and a Certificate of Achievement. These programs delve deeper into the practical applications of AI.

Rationale

As AI rapidly reshapes our world, this course offers students insight into this transformative field. Students will gain foundational knowledge of artificial intelligence concepts and techniques. Students will learn how to implement AI to increase productivity. The course explores the ethical and societal considerations of artificial intelligence, preparing students to be productive artificial intelligence users.

I. Catalog Description

This course is designed for non-technical students interested in gaining a comprehensive understanding of generative artificial intelligence and its impact on society. It covers the history of artificial intelligence, ethical considerations, prompt engineering, productivity applications, and everyday use cases. Students will explore how artificial intelligence technologies influence various aspects of daily life and the workplace, including privacy, security, decision-making, and creativity.

II. Examples of Appropriate Text or Other Required Reading:

(include all publication dates; for transferable courses at least one text should have been published within the last 7 years)

1. Introduction to Artificial Intelligence, 1st, Eric Frick, Independent Publisher © 2024, ISBN: 979-8877744950
2. Artificial Intelligence Basics: A Non-Technical Introduction, 1st, Tom Taulli, Apress Publishing © 2019, ISBN: 978-1484250273
3. Introduction to Generative AI, 1st, Numa Dhamani, Maggie Engler, Manning Publishing © 2024, ISBN: 978-1633437197

III. Course Objectives

Upon completion of this course, the student will be able to:

1. Analyze the ethical considerations and societal impacts and responsibilities of AI technologies.
2. Explore AI applications for enhancing productivity in personal and professional settings.
3. Examine everyday use cases of AI, highlighting its benefits and challenges.

IV. Methods of Presentation:

Lecture and Discussion, Lab, Projects, Discussion, Online instructor-provided resources

V. Course Content

% of Course	Topic
10.000%	Understanding Generative AI Models
10.000%	Prompt Engineering for Generative AI
10.000%	AI for Productivity Enhancement
10.000%	Everyday Use Cases of Generative AI

10.000%	The Ethics of Generative AI
10.000%	Privacy and Security Implications of AI
10.000%	Privacy and Security Implications of AI
10.000%	AI and Decision-Making
10.000%	Future of Generative AI & Societal Impact
10.000%	Introduction to Artificial Intelligence (AI) & Generative AI
100.000%	Total

VI. Methods of Evaluation

% of Course	Topic
25%	Homework
20%	Exams/Tests: Midterm exam and other forms of assessment throughout the class
20%	Final exam
15%	Final Project
20%	Projects
100%	Total

VII. Sample Assignments:

AI Impact Report: To develop a critical understanding of the implications of AI technologies in a specific sector, fostering awareness of ethical considerations, societal impacts, and the role of AI in decision-making processes. Description: Students will choose a sector (e.g., healthcare, finance, entertainment, or education) and write a detailed report on how AI technologies are currently applied in that sector. The report should include an analysis of specific AI applications and their functionalities, what are the benefits these applications and potential risks.

AI in Daily Life: To explore firsthand the use of generative AI in enhancing personal productivity and creativity, enabling students to apply prompt engineering techniques and evaluate the effectiveness of AI tools. Each student will select a generative AI tool relevant to either personal productivity or professional use. Over a period of a week, students will regularly interact with the AI tool. Apply prompt engineering techniques to tailor the tool's outputs to their specific needs. Keep a detailed log of their interactions, noting successes, failures, and unexpected outcomes.

VIII. Student Learning Outcomes:

1. Analyze and explain the fundamentals of artificial intelligence and generative AI
2. Identify diverse applications and use cases where AI can be leveraged
3. Apply effective prompt engineering techniques to improve the performance and control the behavior of generative AI models
4. Recognize the ethical challenges of generative AI models

CS 4 Distance Education Application

- Fully Online
- Online/Classroom Hybrid (not a delivery option when campus is closed)

1a. Instructor - Student Interaction:

Announcements will be posted on a weekly basis to remind students of pending work. These announcements will appear on the class website. In addition, students will be able to get a notification of these messages if they chose to get these announcements via email or text. The instructor will be using the Inbox feature from the learning management system to send email messages to students at any given time. There will be threaded discussions where instructors will participate and post comments and feedback to students. In the learning management system, there is a feature where you can create a rubric, and it is attached to the gradebook. Students will be able to see the breakdown of their scores. Faculty will also be able to post comments that will help students improve their performance, as well as comments to motivate students to continue with their outstanding performance.

1b. Student - Student Interaction:

There will be a virtual board available to students so that they can post weekly questions about the course and the instructor and/or other students can post responses. The Inbox feature from the learning management system can be used by students to interact with the instructor at any given time. There will be a discussion board at the beginning of the

semester where students will be encouraged to participate and to introduce themselves to the class. There will be discussion board exercises related to course material and students will be required to post the required information as well as participate in a discussion with other students.

1c. Student - Content Interaction:

There will be instructional material posted on the class website including videos and articles that will be used for the completing of their assignments. Students will be submitting project assignments, thread discussions, quizzes and exams.

1d. Distance Ed Interactions:

Online class activities that promote class interaction and engagement	Brief Description	% of Online Course Hours
Discussion Boards	A weekly discussion board facilitates question/answering as well as providing feedback or commenting on postings. Each week students must address a main discussion topic.	20.00%
Online Lecture	PowerPoint slides with animation and annotations to explain the topics covered. Videos will be presented for special topics.	25.00%
Exams	Midterm and Final Exam (2 Exams)	15.00%
Written assignments	Students submit written programming assignments, and get individual feedback as well as sample solutions and general comments from the whole class.	15.00%

2. Organization of Content:

There will be weekly modules with instructional material that will include PowerPoint presentations with animation and annotation. Discussion board messages help further clarify topics, videos for special topics, and weekly assignments. During midterm and final exam, the module will include exams. Individualized feedback on each assignment, exams or projects will be provided. Also, overall comments for the whole class will help students avoid pitfalls and adopt good data science practices and techniques.

3. Assessments:

% of grade	Activity	Assessment Method
20.00%	Midterm exam	Feedback on where the student can improve and what topics to study more in addition to answer keys are provided.
30.00%	Assignments	Students submit written programming assignments and get individual feedback as well as sample solutions and general comments from the whole class.
20.00%	Quizzes	Weekly quizzes provided feedback to the students on where they stand.
10.00%	Discussion Question and comments	Each week the students are given a question or scenario in the Discussion board and they must address it uniquely.
20.00%	Final Project	Students start working on their final project early on, and edit it as they get feedback from the instructor.

4. Instructor's Technical Qualifications:

Instructors must be well versed in the use of computers, the web, and course management systems (CMS) to interact with students through the CMS messaging boards, email, and online video and chat meetings.

5. Student Support Services:

Students are referred to counseling, and tutoring services via announcements and the course syllabus - both posted in the online side. In addition, we encourage students to take a learning management system tutorial for online courses. There is also the learning management system support available 24/7 for students.

6. Accessibility Requirements:

All materials will be 508 compliant: content will be available via reader application. All sound files, if any, will be captioned.

7. Representative Online Lesson or Activity:

Students will complete the reading of the class textbooks on Data Preprocessing. Once the reading has been completed, students will use that knowledge to perform data collecting, cleaning, and munging with a written report on data that will be used to create the model. Students will submit this assignment into the LMS for grading and individual comments.

New Course: COMPUTER SCIENCE 82D, Generative Artificial Intelligence Fundamentals

Units:	3.00
Total Instructional Hours (usually 18 per unit):	54.00
Hours per week (full semester equivalent) in Lecture:	3.00
In-Class Lab:	0.00
Arranged:	0.00
Outside-of-Class Hours:	108.00
Transferability:	Transfers to CSU
Degree Applicability:	Credit - Degree Applicable
Prerequisite(s):	CS 4 and CS 82B
Proposed Start:	Fall 2025
TOP/SAM Code:	070700 - Computer Software Development / C - Clearly Occupational
Grading:	Letter Grade or P/NP
Repeatability:	No
Library:	Library has adequate materials to support course
Minimum Qualification:	Computer Science
Program Impact:	Forthcoming degree or certificate: Applied AI Development Certificate

Rationale

The field of Artificial Intelligence (AI) is rapidly growing, and Generative Artificial Intelligence (Gen AI) is a crucial part of the field with important real-world applications. This course would provide students with the skills to develop AI systems that can understand and process human language, text, images and code.

I. Catalog Description

Generative Artificial Intelligence (Gen AI) is a branch of artificial intelligence (AI) that focuses on creating new content, such as text, images, and code. It uses machine learning models to analyze massive datasets of existing content and learn the underlying patterns and relationships. In this course, students will gain a thorough understanding of the fundamental concepts of generative AI, including neural networks, large language models (LLMs), and various generative models such as transformer-based models. Students will also evaluate the performance of these models.

II. Examples of Appropriate Text or Other Required Reading:

(include all publication dates; for transferable courses at least one text should have been published within the last 7 years)

1. Introduction to Generative AI, 1st, Numa Dhamani, Maggie Engler, Manning Publishing © 2024, ISBN: 978-1633437197
2. Introduction to Artificial Intelligence, 1st, Joe McGuire, Britt Collens, DTS Publishing © 2023, ISBN: 979-8988657200
3. Natural Language Processing: A Quick Introduction to NLP with Python, 1st, Samuel Burns, Independent Publisher © 2019, ISBN: 978-1699028452

III. Course Objectives

Upon completion of this course, the student will be able to:

1. Demonstrate proficiency in the fundamental concepts of Gen AI including neural networks and large language models.
2. Create simple generative AI models.
3. Evaluate generative AI models and their performance and effectiveness.
4. Apply Gen AI to various real-world use cases used in business and industry today.

IV. Methods of Presentation:

Lab, Lecture and Discussion, Observation and Demonstration, Projects, Online instructor-provided resources

V. Course Content

% of Course	Topic
15.000%	Introduction to Generative Artificial Intelligence and its applications

20.000%	Working with machine learning models to analyze massive datasets
25.000%	Identify underlying patterns and relationships generated through machine learning approaches
10.000%	Build chatbots with neural networks and large language models
10.000%	Work with variational autoencoders to generate new content, detect anomalies, and remove noise
15.000%	Work with generalized advantage estimation estimators to reduce variance in data models
5.000%	Apply Generative Artificial Intelligence to generate content and augment data analysis
100.000%	Total

VI. **Methods of Evaluation**

<u>% of Course</u>	<u>Topic</u>
10%	Class Work
20%	Exams/Tests
20%	Final Project
30%	Homework
20%	Quizzes
100%	Total

VII. **Sample Assignments:**

Sentiment Analysis: Students will be provided with a dataset containing product reviews. They are required to design and implement a sentiment analysis model that can classify each review as positive, negative, or neutral. The project will involve several steps: 1. Preprocessing the text data 2. Feature extraction using techniques 3. Training a model using a pre-trained transformer-based model fine-tuned for sentiment analysis. 4. Evaluating the model's performance using appropriate metrics

Building a Chatbot: Gain hands-on experience with building a chatbot using a pre-trained transformer model. First select a framework to develop your chatbot and define its functionalities. This includes specifying the user goals (intents) and the specific information (entities) it can handle. Then, you'll design the conversation flow, ensuring the chatbot can greet users, understand requests, and provide informative responses. To make responses more engaging, you'll integrate a pre-trained transformer model and potentially fine-tune it for your chosen domain. Finally, you'll test your creation with various user interactions and evaluate its performance based on factors like clarity, informativeness, and how well it keeps the conversation flowing.

VIII. **Student Learning Outcomes:**

1. Evaluate the performance of Artificial Intelligence systems with metrics that measure and assess the accuracy of the system.
2. Develop proficiency in creating Generative AI models and their application, such as chatbots which incorporate generative AI functionalities and sentiment analysis.
3. Evaluate the performance of Generative AI systems with metrics that measure and assess the accuracy of the system.

CS 82D Distance Education Application

- Fully Online
- Online/Classroom Hybrid (not a delivery option when campus is closed)

1a. Instructor - Student Interaction:

Announcements will be posted on a weekly basis to remind students of pending work. These announcements will appear on the class website. In addition, students will be able to get a notification of these messages if they choose to get these announcements via email or text. The instructor will be using the Inbox feature from the learning management system to send email messages to students at any given time. There will be threaded discussions where instructors will participate and post comments and feedback to students. In the learning management system, there is a feature where you can create a rubric, and it is attached to the gradebook. Students will be able to see the breakdown of their scores. Faculty will also be able to post comments that will help students improve their performance, as well as comments to motivate students to continue with their outstanding performance.

1b. Student - Student Interaction:

There will be a virtual board available to students so that they can post weekly questions about the course and the instructor and/or other students can post responses. The Inbox feature from the learning management system can be used by students to interact with the instructor at any given time. There will be a discussion board at the beginning of the semester where students will be encouraged to participate and to introduce themselves to the class. There will be discussion board exercises related to course materials and students will be required to post the required information as well as participate in a discussion with other students.

1c. Student - Content Interaction:

There will be instructional material posted on the class website including videos and articles that will be used for the completing of their assignments. Students will be submitting project assignments, thread discussions, quizzes and exams.

1d. Distance Ed Interactions:

Online class activities that promote class interaction and engagement	Brief Description	% of Online Course Hours
Discussion Boards	Students post weekly answers to questions. Instructor will provide a feedback and a grade based on posting.	9.00%
Online Lecture	PowerPoint slides with animation and annotations to explain the topics covered. Videos will be presented for special topics.	20.00%
Project Presentation	Students complete a final project utilizing data science concepts. The instructor will be providing individual feedback for each project	25.00%
Exams	Midterm and Final Exam (2 Exams)	18.00%
Written assignments	Students submit written programming assignments or concepts reports. They will get individual feedback as well as sample solutions and general comments from the whole class.	25.00%

2. Organization of Content:

There will be weekly modules with instructional material that will include PowerPoint presentations with animation and annotation. Discussion board messages help further clarify topics, videos for special topics, and weekly assignments. During midterm and final exam, the module will include exams. Individualized feedback on each assignment, exams or projects will be provided. Also, overall comments for the whole class will help students avoid pitfalls and adopt good data science practices and techniques.

3. Assessments:

% of grade	Activity	Assessment Method
20.00%	Exams/Tests	Exams will help to summarize the extent of student learning.
30.00%	Homework Assignments	Students will be given instructional material and exercises related to the topic that is being covered. A sample solution with overall comments will be provided to all students.
20.00%	Quizzes	Students will be taking quizzes. These quizzes will help students to keep up with the class material. Students will receive answer keys for each quiz and they will be allowed to post questions on the discussion board if there is a need for clarification.
20.00%	Final Project	Students will get feedback on a real-life business project of their own choosing using data science concepts.
10.00%	Threaded Discussion	Students will discussion specific topics, sharing their experiences, mistakes, and providing solutions to the issues. Students will be learning from each other mistakes.

4. Instructor's Technical Qualifications:

Instructors must be well versed in the use of computers, the web, and course management systems (CMS) to interact with students through the CMS messaging boards, email, and online video and chat meetings.

5. Student Support Services:

Students are referred to counseling, and tutoring services via announcements and the course syllabus - both posted in the online side. In addition, we encourage students to take a learning management system tutorial for online courses. There is also the learning management system support available 24/7 for students.

6. Accessibility Requirements:

All materials will be 508 compliant: content will be available via reader application. All sound files, if any, will be captioned.

7. Representative Online Lesson or Activity:

Students will complete the reading of the class textbooks on Data Preprocessing. Once the reading has been completed, students will use that knowledge to perform data collecting, cleaning, and munging with a written report on data that will be used to create the model. Students will submit this assignment into the LMS for grading and individual comments.

Prerequisite Checklist and Worksheet: CS 82D
Prerequisite: CS 4

SECTION 1 - CONTENT REVIEW: If any criterion is not met, the prerequisite will be disallowed.

Criterion	Met	Not Met
1. Faculty with appropriate expertise have been involved in the determination of the prerequisite, corequisite or advisory.	X	
2. The department in which the course is (will be) taught has considered course objectives in accordance with accreditation standards.	X	
3. Selection of this prerequisite, corequisite or advisory is based on tests, the type and number of examinations, and grading criteria.	X	
4. Selection of this prerequisite, corequisite or advisory is based on a detailed course syllabus and outline of record, related instructional materials and course format.	X	
5. The body of knowledge and/or skills which are necessary for success before and/or concurrent with enrollment have been specified in writing.	X	
6. The course materials presented in this prerequisite or corequisite have been reviewed and determined to teach knowledge or skills needed for success in the course requiring this prerequisite.	X	
7. The body of knowledge and/or skills necessary for success in the course have been matched with the knowledge and skills developed by the prerequisite, corequisite or advisory.	X	
8. The body of knowledge and/or skills taught in the prerequisite are not an instructional unit of the course requiring the prerequisite.	X	
9. Written documentation that steps 1 to 8 above have been taken is readily available in departmental files.	X	

SECTION II - ADDITIONAL LEVEL OF SCRUTINY:

X Type 2: Sequential within and across disciplines (e.g., Physics 7, 8, 9, ...)
Complete the Prerequisite Worksheet

ENTRANCE SKILLS FOR CS 82D – Natural Language Processing

(What the student needs to be able to do or understand BEFORE entering the course in order to be successful)

A)	Explore Artificial Intelligence applications for enhancing productivity in personal and professional settings
B)	Examine everyday use cases of Artificial Intelligence, highlighting its benefits and challenges
C)	Build a data pipeline to collect, clean and munge large data sets
D)	Create dashboards and data visualizations from large data sets
E)	Use cloud services to store data and scale up data analysis

EXIT SKILLS (objectives) FOR CS 4 – Introduction to Artificial Intelligence

(What the student has the demonstrated ability to do or understand AFTER successful completion of this course)

1.	Explore Artificial Intelligence applications for enhancing productivity in personal and professional settings
2.	Examine everyday use cases of Artificial Intelligence, highlighting its benefits and challenges

		ENTRANCE SKILLS FOR CS 82D – Natural Language Processing							
		A	B	C	D	E	F	G	H
EXIT SKILLS FOR CS 4	1	X							
	2		X						
	3								
	4								
	5								
	6								
	7								
	8								

Prerequisite Checklist and Worksheet: CS 82D
Prerequisite: CS 82B

SECTION 1 - CONTENT REVIEW: If any criterion is not met, the prerequisite will be disallowed.

Criterion	Met	Not Met
1. Faculty with appropriate expertise have been involved in the determination of the prerequisite, corequisite or advisory.	X	
2. The department in which the course is (will be) taught has considered course objectives in accordance with accreditation standards.	X	
3. Selection of this prerequisite, corequisite or advisory is based on tests, the type and number of examinations, and grading criteria.	X	
4. Selection of this prerequisite, corequisite or advisory is based on a detailed course syllabus and outline of record, related instructional materials and course format.	X	
5. The body of knowledge and/or skills which are necessary for success before and/or concurrent with enrollment have been specified in writing.	X	
6. The course materials presented in this prerequisite or corequisite have been reviewed and determined to teach knowledge or skills needed for success in the course requiring this prerequisite.	X	
7. The body of knowledge and/or skills necessary for success in the course have been matched with the knowledge and skills developed by the prerequisite, corequisite or advisory.	X	
8. The body of knowledge and/or skills taught in the prerequisite are not an instructional unit of the course requiring the prerequisite.	X	
9. Written documentation that steps 1 to 8 above have been taken is readily available in departmental files.	X	

SECTION II - ADDITIONAL LEVEL OF SCRUTINY:

Type 2: Sequential within and across disciplines (e.g., Physics 7, 8, 9, ...)
 Complete the Prerequisite Worksheet

ENTRANCE SKILLS FOR CS 82D – Natural Language Processing

(What the student needs to be able to do or understand BEFORE entering the course in order to be successful)

A)	Explore Artificial Intelligence applications for enhancing productivity in personal and professional settings
B)	Examine everyday use cases of Artificial Intelligence, highlighting its benefits and challenges
C)	Build a data pipeline to collect, clean and munge large data sets
D)	Create dashboards and data visualizations from large data sets
E)	Use cloud services to store data and scale up data analysis

EXIT SKILLS (objectives) FOR CS 82B – Principles of Data Science

(What the student has the demonstrated ability to do or understand AFTER successful completion of this course)

1.	Build a data pipeline to collect, clean and munge large data sets
2.	Create dashboards and data visualizations from large data sets
3.	Use cloud services to store data and scale up data analysis

		ENTRANCE SKILLS FOR CS 82D – Natural Language Processing							
		A	B	C	D	E	F	G	H
EXIT SKILLS FOR CS 82B	1	X							
	2		X						
	3			X					
	4								
	5								
	6								
	7								
	8								

New Course: COMPUTER SCIENCE 315, Cloud Compliance

Units:	3.00
Total Instructional Hours (usually 18 per unit):	54.00
Hours per week (full semester equivalent) in Lecture:	3.00
In-Class Lab:	0.00
Arranged:	0.00
Outside-of-Class Hours:	108.00
Transferability:	None
Degree Applicability:	Credit - Degree Applicable
Proposed Start:	Fall 2025
TOP/SAM Code:	070700 - Computer Software Development / B - Advanced Occupational
Grading:	Letter Grade Only (upper division)
Repeatability:	No
Library:	Library has adequate materials to support course
Minimum Qualification:	Computer Science
Program Impact:	Forthcoming degree or certificate: Cloud Computing BS Degree

Rationale

As part of the BS Approval Process, CSU campuses were provided the opportunity to object about course duplications. This new course replaces another course in the original BS degree that was the cause of many duplication concerns.

I. Catalog Description

Cloud compliance is the practice of ensuring that cloud-hosted data and services conform to applicable laws, regulations, standards, and guidelines that dictate security and privacy in cloud computing. Compliance includes understanding and effective implementation of the frameworks and controls that dictate the protection and management of data in the cloud. This course provides a comprehensive understanding of the necessary frameworks and practices to maintain compliance. Students will explore regulatory requirements across different sectors and learn how to implement effective controls through regulations, contracts, standards, and audit tools.

II. Examples of Appropriate Text or Other Required Reading:

(include all publication dates; for transferable courses at least one text should have been published within the last 7 years)

1. Cloud Security & Compliance For Dummies, 1st, Lawrence C. Miller , Packt Publishers © 2018, ISBN: 978-1119545491
2. Complete Cloud Compliance, 1st, Travis Good and Kris Gosser , Blurb Publishing © 2021, ISBN: 978-1364016456
3. AWS Cloud Security and Compliance, 1st, Robert Garritano , Packt Publishers © 2023, ISBN: 979-8390042007
4. Architects of Assurance: Cloud Compliance for the C-Suite, 1st, Bhargav Kumar , Packt Publishers © 2024, ISBN: 979-8218368319

III. Course Objectives

Upon completion of this course, the student will be able to:

1. Describe the Shared Responsibility Model and its role in promoting effective cloud governance.
2. recognize the laws, standards and regulations that apply to different business sectors when moving applications, data and operations to a cloud environment.
3. monitor risk and ensure compliance with pertinent legal requirements.
4. complete audits and self-assessments to document compliance as required by law.
5. plan for incidents response strategies along with business continuity and contingency plans.

IV. Methods of Presentation:

Distance Education, Lecture and Discussion, Observation and Demonstration, Discussion, Projects

V. Course Content

% of Course	Topic
10.000%	Shared Responsibility Model

10.000%	Laws, Standards and Regulations
10.000%	Governance, Risk and Compliance
10.000%	Health Insurance Portability and Accountability Act (HIPAA) Requirements and Compliance
10.000%	Payment Card Industry Data Security Standard (PCI DSS) Requirements and Compliance
10.000%	Gramm-Leach-Bliley Act (BLBA) Requirements and Compliance
10.000%	Incident Response
10.000%	General Data Protection Regulation (GDPR) Requirements and Compliance
10.000%	Audits and Self-Assessment
10.000%	Business Continuity and Contingency Planning
100.000%	Total

VI. Methods of Evaluation

<u>% of Course</u>	<u>Topic</u>
20%	Exams/Tests
20%	Final exam
20%	Group Projects
20%	Homework
20%	Quizzes
100%	Total

VII. Sample Assignments:

Assignment 1: This exercise requires students to conduct a risk assessment for a hypothetical cloud deployment. You will create a scenario that includes the type of data handled, cloud services utilized, and operation. Identify potential security and compliance risks, assess the likelihood and impact of these risks, then prioritize risks accordingly. Based on your assessment, develop a risk management plan that includes specific mitigation strategies and compliance measures to address the risks. Write a comprehensive report, utilizing risk assessment matrices or similar analytical tools to illustrate your analysis.

Assignment 2: In this assignment, you will simulate a compliance audit for a fictitious company utilizing cloud services. Select one of the compliance frameworks covered in the course, such as HIPAA, GDPR, or PCI DSS. You will draft an audit plan that includes the scope, objectives, and methodologies of the audit. Identify gaps in compliance and document these hypothetical findings. Propose corrective actions for any compliance issues identified and prepare a detailed presentation of your audit findings and recommended actions.

VIII. Student Learning Outcomes:

1. Students will analyze and develop actionable plans to address governance issues or compliance concerns, and demonstrate their ability to respond effectively through appropriate strategies or solutions
2. Students ensure compliance with appropriate laws, standards and regulations which apply to their business domain

CS 315 Distance Education Application

- Fully Online
- Online/Classroom Hybrid (not a delivery option when campus is closed)

1a. Instructor - Student Interaction:

Students get feedback on their assignments, which are assigned every other week, including how to improve and follow best practices. In the quizzes, which are assigned every other week, students get feedback on their errors and get suggestions on how to better study. In the midterm and the final exam, students get feedback on their errors and how to improve. In the weekly threaded discussions, students must post answers to given questions/prompts and they must provide unique answers. They get feedback on their answers, how complete they are, and what they can improve on. For group projects, they get feedback from peers and the instructor.

1b. Student - Student Interaction:

Every week, students must post responses on to a threaded discussion board based on a stated prompt. They must comment on each other. Students are placed in groups to enable them to contribute as well as read all posted messages.

1c. Student - Content Interaction:

Each week, students get a lecture in the form of video and PDF files. They may also get additional videos to explain certain concepts. Additionally, there may be supporting files and documents added to each week's content.

1d. Distance Ed Interactions:

Online class activities that promote class interaction and engagement	Brief Description	% of Online Course Hours
Written assignments	Students submit written assignments and get individual feedback as well as sample solutions and general comments from the whole class.	25.00%
Project Presentation	Students complete a final project utilizing cloud services. The instructor will be providing individual feedback for each project.	25.00%
Exams	Midterm and Final Exam	20.00%
Threaded Discussions	Students post weekly answers to questions. Instructor will provide feedback and a grade based on posting.	10.00%
Online Lecture	PowerPoint slides with animation and annotations to explain the topics covered. Videos will be presented for special topics	20.00%

2. Organization of Content:

Using an online course management system, each week there will be a module instructions page which will lead students to other documents, and files in addition to the assigned work of a discussion message and an assignment/project or a quiz.

3. Assessments:

% of grade	Activity	Assessment Method
10.00%	Quizzes	Students will be taking quizzes. These quizzes will help students to keep up with the class material. Students will receive answer keys for each quiz and they will be allowed to post questions on the discussion board if there is a need for clarification.
15.00%	Homework Assignments	Students will be given instructional material and exercises related to the topic that is being covered. A sample solution with overall comments will be provided to all students.
25.00%	Final Project	Students will get feedback on an organized final project.
25.00%	Final Exam	Final reflects the student's knowledge of the different aspects of the content covered
15.00%	Midterm	Midterm reflects the student's knowledge of the different aspects of the content covered
10.00%	Threaded Discussions	The Discussion board will facilitate questions and answers. Students may ask questions as well as answer them. Each week questions are posted in the Discussion board and each student is required to post a unique answer. Such answers are graded.

4. Instructor's Technical Qualifications:

Instructors must be well versed in the use of computers, the web, and course management systems (CMS) to interact with students through the CMS messaging boards, email, and online video and chat meetings. As per ACCJC requirements, upper-division classes must be taught by faculty who hold at least a master's degree in Computer Science.

5. Student Support Services:

Through the syllabus, faculty will place links to library, bookstore, financial aid, disabled students center and counseling resources for students to access as needed.

6. Accessibility Requirements:

The course management system, must be Section 508 complaint as well as any videos, images, tables must be properly captioned. All PDF's and other added files and documents must be Section 508 compliant.

7. Representative Online Lesson or Activity:

Respond to the threaded discussion prompt to outline a risk assessment for the application presented. Critique and evaluate the solutions suggested by your classmates for efficiency and optimization purposes.

New Course: COMPUTER SCIENCE 335, Cloud Infrastructure As Code

Units:	3.00
Total Instructional Hours (usually 18 per unit):	54.00
Hours per week (full semester equivalent) in Lecture:	3.00
In-Class Lab:	0.00
Arranged:	0.00
Outside-of-Class Hours:	108.00
Transferability:	None
Degree Applicability:	Credit - Degree Applicable
Proposed Start:	Fall 2025
TOP/SAM Code:	070700 - Computer Software Development / C - Clearly Occupational
Grading:	Letter Grade Only (upper division)
Repeatability:	No
Library:	Library has adequate materials to support course
Minimum Qualification:	Computer Science
Program Impact:	Forthcoming degree or certificate: Cloud Computing BS Degree

Rationale

As part of the BS Approval Process, CSU campuses were provided the opportunity to object to course duplication. This new course replaces another course in the original BS degree that was the cause of many duplication concerns.

I. Catalog Description

Infrastructure as Code (IaC) is the practice of using coding and automation tools to manage, provision, and deploy infrastructure resources within a cloud environment. This approach enhances the efficiency and reliability of managing cloud servers, networking components, and storage. In this course, students will learn how to provision and manage cloud infrastructure using the AWS Cloud Development Kit (CDK) and the AWS Software Development Kit (SDK). Both Python and shell scripting will be used to automate cloud tasks and enforce cloud resource policies and standards. Students will learn how to enforce policies and standards for cloud resources and implement rollback procedures to recover from service failures using version-controlled infrastructure code.

II. Examples of Appropriate Text or Other Required Reading:

(include all publication dates; for transferable courses at least one text should have been published within the last 7 years)

1. Infrastructure as Code: Dynamic Systems for the Cloud Age, 2nd, Kief Morris, O'Reilly Media © 2021, ISBN: 978-1098114671
2. AWS Cloud Automation: In-depth guide to automation, 1st, Oluyemi Odeyinka, BPB Publications © 2024, ISBN: 978-9355516534
3. Infrastructure as Code for Beginners, 1st, Russ McKendrick, Packt Publishers © 2023, ISBN: 978-1837631636
4. Seeding the Cloud: The Genesis of Infrastructure as Code, 1st, Subhan Mohammed, Packt Publishers © 2024, ISBN: 979-8218368333

III. Course Objectives

Upon completion of this course, the student will be able to:

1. define, manage, and deploy cloud infrastructure using code, incorporating automation tools and version control systems.
2. deploy applications via code based infrastructure methodologies.
3. test and verify infrastructure deployments.

IV. Methods of Presentation:

Distance Education, Lecture and Discussion, Discussion, Projects

V. Course Content

% of Course	Topic
15.000%	understand the purpose and benefits of Infrastructure As Code
15.000%	install and configure the AWS Cloud Developer Kit and various construct library packages

10.000%	understand the features and use cases of the AWS Cloud Developer Kit
10.000%	Utilize the AWS Software Development Kit to manipulate and manage AWS services programmatically.
10.000%	script automation tasks that complete cloud setups and configurations
10.000%	track infrastructure code with a version control system
15.000%	create and deploy applications with the Cloud Developer Kit
15.000%	Test and validate resource and output infrastructure creation
100.000%	Total

VI. Methods of Evaluation

<u>% of Course</u>	<u>Topic</u>
20%	Exams/Tests
20%	Final exam
20%	Group Projects
20%	Homework
20%	Quizzes
100%	Total

VII. Sample Assignments:

Assignment 1: In this assignment, students are tasked with defining and managing the cloud infrastructure necessary for a basic three-tier web application using the AWS Cloud Development Kit. The architecture should include web, application, and database servers. Students will script the provisioning of AWS resources such as EC2 instances for the servers, an RDS instance for the database, and VPC configurations for secure network isolation. All scripts must be version-controlled using Git, with a repository link provided. The submission should include detailed commit messages that document the evolution of the infrastructure code.

Assignment 2: In this assignment, students will employ shell script to actively monitor and report on the status of various AWS cloud resources. Using the AWS CLI, the script should periodically gather data on the utilization of resources such as EC2 instances, RDS databases, and S3 buckets, focusing on metrics like CPU usage, memory usage, storage capacity, and network activity. All script activities should be logged. This assignment aims to develop proficiency in using shell scripting for real-time monitoring and operational management of AWS resources.

VIII. Student Learning Outcomes:

1. Students will create comprehensive cloud resource policies and standards, and implement enforcement mechanisms inline with the best practices for security, cost, and performance.
2. Students will design, implement, and deploy automated cloud tasks using scripting languages or cloud-native tools, demonstrating their ability to automate routine cloud operations or workflows.
3. Students will be able to automate and orchestrate applications using an infrastructure as code approach to cloud deployments.

CS 335 Distance Education Application

- Fully Online
- Online/Classroom Hybrid (not a delivery option when campus is closed)

1a. Instructor - Student Interaction:

Students get feedback on their assignments, which are assigned every other week, including how to improve and follow best practices. In the quizzes, which are assigned every other week, students get feedback on their errors and get suggestions on how to better study. In the midterm and the final exam, students get feedback on their errors and how to improve. In the weekly threaded discussions, students must post answers to given questions/prompts and they must provide unique answers. They get feedback on their answers, how complete they are, and what they can improve on. For group projects, they get feedback from peers and the instructor.

1b. Student - Student Interaction:

Every week, students must post responses on to a threaded discussion board based on a stated prompt. They must comment on each other. Students are placed in groups to enable them to contribute as well as read all posted messages.

1c. Student - Content Interaction:

Each week, students get a lecture in the form of video and PDF files. They may also get additional videos to explain certain concepts. Additionally, there may be supporting files and documents added to each week's content.

1d. Distance Ed Interactions:

Online class activities that promote class interaction and engagement	Brief Description	% of Online Course Hours
Written assignments	Students submit written assignments and get individual feedback as well as sample solutions and general comments from the whole class.	25.00%
Project Presentation	Students complete a final project utilizing cloud services. The instructor will be providing individual feedback for each project.	25.00%
Exams	Midterm and Final Exam	20.00%
Threaded Discussions	Students post weekly answers to questions. Instructor will provide feedback and a grade based on posting.	10.00%
Online Lecture	PowerPoint slides with animation and annotations to explain the topics covered. Videos will be presented for special topics	20.00%

2. Organization of Content:

Using an online course management system, each week there will be a module instructions page which will lead students to other documents, and files in addition to the assigned work of a discussion message and an assignment/project or a quiz.

3. Assessments:

% of grade	Activity	Assessment Method
10.00%	Quizzes	Students will be taking quizzes. These quizzes will help students to keep up with the class material. Students will receive answer keys for each quiz and they will be allowed to post questions on the discussion board if there is a need for clarification.
20.00%	Homework Assignments	Students will be given instructional material and exercises related to the topic that is being covered. A sample solution with overall comments will be provided to all students.
20.00%	Final Project	Students will get feedback on an organized final project.
25.00%	Final Exam	Final reflects the student's knowledge of the different aspects of the content covered
15.00%	Midterm	Midterm reflects the student's knowledge of the different aspects of the content covered
10.00%	Threaded Discussion	The Discussion board will facilitate questions and answers. Students may ask questions as well as answer them. Each week questions are posted in the Discussion board and each student is required to post a unique answer. Such answers are graded.

4. Instructor's Technical Qualifications:

Instructors must be well versed in the use of computers, the web, and course management systems (CMS) to interact with students through the CMS messaging boards, email, and online video and chat meetings. As per ACCJC requirements, upper-division classes must be taught by faculty who hold at least a master's degree in Computer Science.

5. Student Support Services:

Through the syllabus, faculty will place links to library, bookstore, financial aid, disabled students center and counseling resources for students to access as needed.

6. Accessibility Requirements:

The course management system, must be Section 508 complaint as well as any videos, images, tables must be properly captioned. All PDF's and other added files and documents must be Section 508 compliant.

7. Representative Online Lesson or Activity:

Respond to the threaded discussion prompt to outline how the infrastructure as code approach for deploying the presented application. Critique and evaluate the solutions suggested by your classmates for efficiency and optimization purposes.

New Course: EDUCATION - NONCREDIT 950, Teaching in the Age of AI: Strategies for Educators

Units:	0.00
Total Instructional Hours (usually 18 per unit):	54.00
Hours per week (full semester equivalent) in Lecture:	3.00
In-Class Lab:	0.00
Arranged:	0.00
Outside-of-Class Hours:	108.00
Degree Applicability:	Noncredit
Proposed Start:	Spring 2025
TOP/SAM Code:	086000 - Educational Technology / C - Clearly Occupational
Grading:	Noncredit (Progress Indicators Used)
Repeatability:	Yes
Library:	Library has adequate materials to support course
Minimum Qualification:	Other: Master's degree in any relevant discipline and requisite experience with the use of AI in secondary or postsecondary education
Program Impact:	Forthcoming degree or certificate: The Education discipline within the Education/Early Childhood Department is exploring the possibility of a noncredit certificate of completion in Educational Technology to be used for secondary and postsecondary professional development.

Rationale

This course should be added to the college curriculum to address the growing need for educators (secondary and postsecondary) to understand contemporary artificial intelligence tools and navigate their ethical implications in educational settings. With the increasing integration of AI technologies in teaching and learning, students and educators face complex ethical dilemmas related to privacy, bias, and academic integrity that require thoughtful consideration and informed decision-making. AI can be a powerful tool for teaching and learning, but instructors must establish clear policies and guidelines for its appropriate use. The course will provide educators with the necessary knowledge, skills, and strategies to begin to navigate these challenges and promote responsible AI use.

I. Catalog Description

Designed for secondary and post-secondary instructors, this course introduces educators to the basic knowledge, skills, and practices needed to begin integrating artificial intelligence (AI) into their teaching. Participants will explore the fundamentals of using natural language models and image generators, examine the challenges, limitations, and ethical considerations of AI in Education, develop classroom AI policies and learn to effectively utilize AI tools to enhance course content and collaboration. Special emphasis is placed on guiding students on the appropriate and ethical use of AI tools in multiple contexts.

II. Examples of Appropriate Text or Other Required Reading:

(include all publication dates; for transferable courses at least one text should have been published within the last 7 years)

1. Robot-Proof: Higher Education in the Age of Artificial Intelligence, Joseph Aoun, MIT Press © 2018, ISBN: 9780262535977

III. Course Objectives

Upon completion of this course, the student will be able to:

1. Define key AI concepts, such as natural language processing and image generation, and explain their relevance in educational settings.
2. Evaluate the ethical implications of AI integration in education, considering issues such as privacy, bias, and academic integrity.
3. Analyze classroom AI policies that outline guidelines for ethical AI usage.
4. Select appropriate AI tools to enhance teaching and learning and create innovative AI-driven instructional materials.
5. Assess the effectiveness and appropriateness of AI tools for specific educational contexts, considering factors such as accessibility, usability, and alignment with learning objectives.
6. Develop a learning assessment that is resistant to AI replication.
7. Evaluate and apply strategies to educate learners about responsible AI usage, including proper citation practices, ethical decision-making, and awareness of AI limitations and biases.

IV. Methods of Presentation:

Distance Education, Lecture and Discussion, Discussion, Online instructor-provided resources

V. Course Content

% of Course	Topic
10.000%	<p>Fundamentals of AI Technologies</p> <ul style="list-style-type: none"> • Natural language processing (e.g., ChatGPT, Gemini, Copilot, Perplexity, etc.) • Image generation and recognition (e.g., DALL-E, Firefly, Getty Images, etc.) • Artificial intelligence vs deep learning vs machine learning
10.000%	<p>Ethical Consideration in AI</p> <ul style="list-style-type: none"> • Privacy and data security • Anonymization and de-identification of data • Data security and retention measures • Using 3rd party tools • Bias and fairness in AI-generated content • Sources, types, and examples of bias • Ensuring diverse representation • Academic integrity and AI-generated content
10.000%	<p>Developing Classroom AI Policies</p> <ul style="list-style-type: none"> • Guidelines for ethical AI use • Creating AI integration strategies • Student-centered language • Creating materials to support student learning with AI • Communicating with stakeholders (e.g., students, parents, administrators, etc., as applicable)
25.000%	<p>Effective AI Use in Teaching</p> <ul style="list-style-type: none"> • Integrating AI into teaching practices (e.g., activities, assignments, materials, etc.) • Using AI as a teacher's assistant or brainstorming partner (e.g., improving syllabi and other course materials) • Enhancing student engagement and learning outcomes with AI
10.000%	<p>Assessing Student Learning</p> <ul style="list-style-type: none"> • Designing authentic assignments and assessments that emphasize higher order thinking skills • Using diverse assessment methods • Monitoring for plagiarism and AI use • Importance of timely, personalized feedback
10.000%	<p>Identifying AI Generated Content</p> <ul style="list-style-type: none"> • Detection tools • Accuracy and reliability • Techniques for recognizing AI-generated language and images • Language patterns • Repetitive generic phrases • Unusual vocabulary and phrasing • Contextual inconsistencies • Evaluation of content • Addressing academic integrity concepts in AI assisted assignments
20.000%	<p>Supporting Student Learning with AI</p> <ul style="list-style-type: none"> • Facilitating student centered communication about AI usage • Designing learning opportunities that integrate AI usage • Providing guidance and feedback on AI-driven assignments • Promoting responsible AI usage
5.000%	<p>Future Directions in AI and Education</p> <ul style="list-style-type: none"> • Emerging trends and innovations in AI technologies

	<ul style="list-style-type: none"> • Opportunities, challenges, and implication of AI advancement for teaching and learning
100.000%	Total

VI. Methods of Evaluation

% of Course	Topic
10%	In Class Writing
30%	Written assignments
15%	Quizzes
30%	Projects
15%	Final Project
100%	Total

VII. Sample Assignments:

Developing an AI Policy: In this assignment, students will work individually or in small groups to develop a comprehensive AI policy for an educational institution or classroom setting. The policy should outline guidelines for the ethical and responsible use of AI tools, addressing issues such as academic integrity, data privacy, and bias mitigation. Students will research existing AI policies in education, analyze ethical considerations, and synthesize their findings into a clear and practical policy document. Additionally, students will propose strategies for communicating the AI policy to stakeholders and educating learners about responsible AI usage. The assignment will culminate in a written policy document accompanied by a brief presentation outlining key policy provisions and implementation strategies.

Identifying AI-Generated Language and Role Play: In this assignment, participants will practice identifying AI-generated language in assignment submissions and engage in supportive conversations with students to learn more about their use of AI tools. Part 1: Participants will be provided with a set of anonymized writing samples, some of which are generated by AI language models, while others are written by human authors. Working individually, participants will analyze the writing samples using criteria such as coherence, style consistency, and complexity to identify instances of AI-generated language. They will document their observations and reasoning for each sample, noting any patterns or characteristics that suggest AI involvement. Part 2: Participants will engage in role-playing scenarios where they assume the role of an instructor having conversations with students suspected of using AI tools to write their assignments. Participants will practice asking open-ended questions, expressing curiosity rather than accusation, and providing supportive guidance to students as they navigate the ethical considerations of AI usage. They will role-play various scenarios, including instances where students may be unaware of AI involvement, knowingly using AI tools, or facing academic integrity challenges. Part 3: Participants will reflect on their experiences in the role-playing exercises, identifying effective communication strategies, challenges encountered, and areas for further development. They will consider how to foster trust and transparency in conversations about AI usage, support students in ethical decision-making, and promote responsible AI integration in educational settings. The assignment aims to equip participants with practical skills for identifying AI-generated language and engaging in supportive conversations with students about their use of AI tools.

VIII. Student Learning Outcomes:

1. Demonstrate effective and appropriate use of artificial intelligence tools, including natural language models and image generators.
2. Create a student-centered classroom policy guiding the use of artificial intelligence tools in multiple learning contexts (e.g., researching concepts, brainstorming, writing support, etc.).
3. Design instructional materials and activities that promote awareness of ethical considerations related to AI usage and guide students to make ethical decisions when engaging with AI.

EDUC NC 950 Distance Education Application

- Fully Online
- Online/Classroom Hybrid (not a delivery option when campus is closed)

1a. Instructor - Student Interaction:

The instructor will send out a pre-course "welcome letter" 1–2 weeks before the course begins with information about the course and how the instructor will communicate with students. The instructor will provide ongoing feedback, comments,

and suggestions to assist and improve individual student performance. The instructor will also provide instructions and support as needed for course navigation. The instructor will send reminders of assignment due dates. The instructor will offer weekly check-ins and provide physical and/or virtual office hours along with a telephone option as needed.

1b. Student - Student Interaction:

Using asynchronous discussion activities, students will communicate with their classmates throughout the course about course content and everyday life. Small group activities/discussions will take place 3-4 times during the course. Asynchronous threaded discussions will occur 1-2 times weekly. A Student Lounge Discussion Board will be available for discussion of non-course-related topics.

1c. Student - Content Interaction:

Using asynchronous discussion activities, students will communicate with their classmates throughout the course about course content and everyday life. Small group activities/discussions will take place 3-4 times during the course. Asynchronous threaded discussions will occur 1-2 times weekly. A Student Lounge Discussion Board will be available for discussion of non-course-related topics.

1d. Distance Ed Interactions:

Online class activities that promote class interaction and engagement	Brief Description	% of Online Course Hours
Threaded Discussions	Weekly discussion topics/prompts will be posted to promote student-teacher and student-student interaction on a variety of topics related to the course content from online lectures, videos, and readings. Students are required to respond to peer's comments/posts. Smaller group discussions will also be offered periodically throughout the course.	30.00%
Written assignments	Students will complete 1-2 written assignments per week. Written assignments will require students to use course content presented in online lectures, videos, and reading assignments to engage in analysis, evaluation, application, and reflection activities.	30.00%
Online Lecture	Brief video lectures will reinforce and present new course content that will be used to facilitate discussions and written assignments.	20.00%
Videos	Students will view and reflect on videos related to course material.	10.00%
Peer Feedback	Students will review classmate's written assignments or projects and provide supportive and constructive feedback based on a provided rubric. Peer feedback activities will occur 2-3 times throughout the course.	5.00%
Project Presentation	Students will create a final project that can be presented in a variety of ways, including video presentations, narrated slide decks, etc. Classmates will view presentations and asynchronously provide feedback and additional information as prompted.	5.00%

2. Organization of Content:

The course will be divided into weekly modules, including an assignment and objective page outlining weekly activities. Modules will include activities, readings, mini-recorded lectures, videos, threaded discussions, writing assignments, and additional resources for further investigation of the course material. In addition, students will access free online tools (related to image generation and natural language models) to complete certain assignments.

3. Assessments:

% of grade	Activity	Assessment Method
30.00%	Threaded Discussions	Students will participate in 1-2 threaded discussions per week. They will be required to post an initial response to a given prompt and will engage 2 or more classmates in asynchronous conversation using provided additional prompts and/or guidelines. These discussions offer opportunities to assess and support a student's formative learning of the course material. Individualized instructor feedback will be provided to support learning.
60.00%	Written Assignments/Small Projects	Students will independently complete 1-2 written assignments per week and 2-3 small written projects during the course. Assignment topics will vary, but will support students with opportunities to reflect, analyze, interpret, evaluate, apply, etc. course content presented in lectures, videos, and readings. Individualized instructor feedback will be provided to support learning.

10.00%	Final Project	Students will create a multimedia portfolio presentation to document and share elements of previously completed written assignments along with a reflection on how they will integrate course content and new learning into their teaching practice.
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4. Instructor's Technical Qualifications:

Instructors should be familiar with the college's learning management system (LMS). The instructor should be knowledgeable about accessibility resources on and off-campus, familiar with LMS tools and available supports, and willing to stay current in essential technologies related to online teaching.

5. Student Support Services:

Links that may be integrated into the online course include: Direct Connect Student Support, Library Resources, SMC Code of Ethics, Center for Wellness and Wellbeing, Title IX statement, Office for Students with Disabilities, Camous Police, etc.

6. Accessibility Requirements:

Course design will adhere to California Community College Distance Education Guidelines, CA Code 11135 and Section 508 of the Rehabilitation Act. This includes close captioning of all videos and video lectures, following principles for universal design when formatting LMS pages, PDFs, and other web-based documents, using descriptive alt text for images and graphics, and ensuring links to external websites are descriptive and provide accurate information about the linked content. Consultation with accessibility experts from the Office of Students with Disabilities and or Distant Education Team will occur when additional accommodations are needed or questions arise.

7. Representative Online Lesson or Activity:

Threaded Discussion: Exploring Ethical Dilemmas in AI Integration in Education

Initial response due Thursday

After reviewing this week's mini-lecture on the ethical implications for AI in education, please respond to the following prompt:

In recent years, the integration of artificial intelligence (AI) technologies in education has raised numerous ethical considerations, including concerns about privacy, bias, and academic integrity. For your initial post, please reflect on one specific ethical dilemma related to AI integration in education that you find particularly compelling or concerning. Consider how this dilemma impacts various stakeholders, such as students, educators, administrators, and/or society. Share your perspectives on the ethical implications of the dilemma and discuss potential strategies for addressing or mitigating these ethical concerns.

Response to classmates due Sunday

Respond to at least two classmates' initial posts with thoughtful and respectful comments.

1. Consider their perspectives on the ethical dilemma they have presented and offer constructive feedback or additional insights.
2. Offer feedback on their strategies for addressing the ethical dilemma. Consider the feasibility, effectiveness, and potential implications of these strategies, and suggest any additional considerations or alternative approaches that may enhance their analysis.

New Course: ETHNIC STUDIES 9, Introduction to Native American Studies

Units:	3.00
Total Instructional Hours (usually 18 per unit):	54.00
Hours per week (full semester equivalent) in Lecture:	3.00
In-Class Lab:	0.00
Arranged:	0.00
Outside-of-Class Hours:	108.00
Transferability:	Transfers to UC (pending), CSU
Cal-GETC Area:	4: Social and Behavioral Sciences (pending review) 6: Ethnic Studies (pending review)
SMC GE Area:	Area II-B: Social Science (Group B)
Degree Applicability:	Credit - Degree Applicable
Proposed Start:	Fall 2024
TOP/SAM Code:	220300 - Ethnic Studies / E - Non-Occupational
Grading:	Letter Grade or P/NP
Repeatability:	No
Library:	List of suggested materials has been given to Librarian
Minimum Qualification:	Ethnic Studies; Other: Native American Studies (Masters Required)
Program Impact:	Forthcoming degree or certificate: Ethnic Studies ADT

Rationale

This course is proposed to round out the core offerings for SMC's emergent Ethnic Studies (hereafter "ES") program. Like its cognates ES 6, ES 7 and ES 8, ES 9 offers an introductory course to one of the four subfields of ES, Native American Studies. It is structured according to the theories, epistemologies, and discipline at large of ES and Native American Studies in particular. It will become one of the very few courses at SMC that speaks to the experience of Indigenous students. As with other ES courses, it is constructed in a way that it will be accessible to all in the wider community.

I. Catalog Description

This course introduces students to the interdisciplinary field of Native American Studies and to the experiences and expressions of Indigenous communities primarily in the United States of America. The course explores historical and contemporary topics important to Native American tribal nations, including their cultures, philosophies, creative expressions, and lived experiences, emphasizing Native American voices and perspectives. The course will cover subjects that may include the racialization of Native Americans, the acknowledgement of treaty rights and sovereignty, traditional ecological knowledge, the role Native Americans have played in U.S. history, and contemporary challenges.

II. Examples of Appropriate Text or Other Required Reading:

(include all publication dates; for transferable courses at least one text should have been published within the last 7 years)

1. Being Indigenous: Perspectives on Activism, Culture, Language, and Identity, Greymorning, Nexooyet, Routledge © 2018, ISBN: 978-1138314900
2. An Indigenous Peoples' History of the United States, Dunbar-Ortiz, Roxanne, Beacon Press © 2015, ISBN: 978-0807057834
3. Decolonizing Methodologies: Research and Indigenous Peoples, Smith, Linda Tuhiwai, Bloomsbury Academic © 2023, ISBN: 978-1350346086
4. Re-creating the Circle: The Renewal of American Indian Self-Determination, Sachs, Stephen M., and Barbara Morris, University of New Mexico Press © 2011, ISBN: 978-0826350572
5. The Complexities of American Indian Identity in the Twenty-First Century, Sean M. Daley and Christine Makosky Daley, Rowman & Littlefield © 2023

III. Course Objectives

Upon completion of this course, the student will be able to:

1. Analyze and articulate concepts such as race and racism, racialization, ethnicity, equity, ethno-centrism, Eurocentrism, white supremacy, self-determination, liberation, decolonization, sovereignty, imperialism, settler colonialism, and anti-racism as they apply to Native American peoples.

2. Apply theory and knowledge produced by Native American communities to describe the critical events, histories, cultures, cultural production, intellectual traditions, contributions, identities, lived experiences and social struggles of those groups with a particular emphasis on agency and self-affirmation.
3. Critically analyze the intersection of race and racism as they relate to class, gender, sexuality, religion, spirituality, national origin, immigration status, ability, language, and/or age in Native American communities.
4. Explain and assess how struggle, resistance, racial and social justice, solidarity, and liberation, as experienced, enacted, and studied by Native Americans, are relevant to current and structural issues such as communal, national, international, and transnational politics as, for example, in immigration, settler colonialism, multiculturalism, and language policies.

IV. Methods of Presentation:

Distance Education, Lecture and Discussion, Discussion, Projects, Field Trips, Visiting Lecturers, Group Work

V. Course Content

% of Course	Topic
20.000%	<p>Introduction to Native American Studies Foundations</p> <ol style="list-style-type: none"> 1. History of Settler Colonialism and Impacts 2. Diversity of Histories, Cultures, and Tribal Nations 3. Mapping Indigenous Tribal Lands (Stewardship) 4. Race and Racialization and Perceptions and Misperceptions of Native Americans 5. Historical & Modern Resistance Movements for Self-Determination & Agency <p>Whose Land Are You On? Diversity of Native American histories and cultures Perceptions and Misperceptions of Native Americans Historical & Modern Resistance Movements for Self-Determination & Agency</p>
20.000%	<p>Treaties, Sovereignty, and Legal Challenges</p> <ol style="list-style-type: none"> 1. History and Impacts of Treaties: Nation-to-Nation Relations, State and Federal Recognition 2. Native Identity: Blood Quantum, Tribal Citizenship, and Ethnicity 3. "Cloak of Invisibility": Missing and Murdered Indigenous Women, Indian Child Welfare Act, Indian Boarding Schools <p>What Are Treaties? What Are Nation-to-Nation Relations? What Is Federal Recognition? What is Blood Quantum? What Is the Difference between Tribal Citizenship and Ethnicity? Missing and Murdered Indigenous Women Indian Child Welfare Act</p>
15.000%	<p>Traditional Ecological Knowledge and Native Ways of Being in the World</p> <ol style="list-style-type: none"> 1. Native American Resource Management (Seven Generations concept) 2. Kinship Epistemology (relationships between human people and non-human people) 3. "Legal personhood" of the land and water, an extension of sovereignty and treaty rights.
15.000%	<p>Historical Native Feminisms and Contemporary Environmental Justice (???)</p> <p>Women as Leaders in Native American communities (historical and contemporary? more historical? need clarity) Women as leaders of environmental justice efforts (Dakota Access Pipeline, oil extraction)</p>
15.000%	<p>Revitalizing and Reclaiming Culture (Can this be expanded to include dress, food, ceremony, etc. ?)</p> <ol style="list-style-type: none"> 1. Language, Epistemology and Revitalization Programs 2. Powwows 3. Foodways 4. Other??
15.000%	<p>Native American Aesthetics and Visual Sovereignty</p> <ol style="list-style-type: none"> 1. Visual Expressions: From Ledger Art to Native Pop 2. Indigenous Futurism: Fiction, Graphic Novels, and Pop Art 3. Natives on the Screen: From <i>Molly of Denali</i> to <i>Reservation Dogs</i>
100.000%	Total

VI. Methods of Evaluation

<u>% of Course</u>	<u>Topic</u>
25%	Written assignments: Short written assignments, Responses, and Reflexive Papers
20%	Exams/Tests
15%	Group Projects
15%	Other: Journals/Reflections
10%	Class Work: Discussion Group Participation, Peer Reviews, Interactive Assignments
15%	Research Projects
100%	Total

VII. Sample Assignments:

Group Research Project: Groups will be assigned a tribe for a research project and presentation. The tribes will be selected by the instructor to reflect the geographic, cultural, and historical diversity of Native American communities. Students will answer a set of questions about their assigned tribe, and they will make a presentation to the class using PowerPoint and other multi-media as they choose. The questions are designed to have the students explore topics that include: their tribe's most important treaty with the U.S federal government; historical and contemporary images related to the tribe (with an explanation of why they were selected and how their sources were vetted); contemporary problems faced by the tribe and what the tribal government is doing to address it (and whether federal or state governments are helping or obstructing their efforts); the tribe's location at the time of contact with Europeans and its location today (with an explanation of why that location may have changed); the status of the tribe's language (with the requirement that a video of the language being spoken is shared); and any aspect of their research the group's members found personally interesting.

Group Discussion Exercise: After viewing a Native American hip-hop video (such as "Boujee Natives" by Snotty Nose Rez Kids), students in small groups will compare their observations and reactions. Students will discuss how the music, lyrics, and images compare to music they are familiar with. Students will discuss how the music, lyrics, and images confirm or challenge their assumptions about contemporary Native American people. Students will make a list of lyrics, images, gestures, etc., that they do not understand; they will research these and report back to class in the next meeting. For instance, do the lyrics feature words in an Indigenous language? Can they find the meaning of these words online? Groups will share their reactions and research with class.

Writing Assignment: Students will read about various Native American women involved in the Dakota Access Pipeline protests or other environmental or social justice movements. They will explain how selected participants demonstrated principles (which they will define) of Indigenous Feminism or Indigenous Female Leadership Models introduced in assigned reading.

Writing Assignment: You will research the outreach process to a tribe local to Santa Monica College (the Tongva and the Chumash) or a local Native American organization (such as Indigenous Pride LA, United American Indian Involvement, Kuruvugna Springs Cultural Center and Museum, etc.). Once you have found the process to contact one of these groups, you will reach out to arrange an email, phone, or in-person interview. Utilizing the principles and practices we have discussed in class, you will engage with the community representative and then write a reflective personal essay about both the process and the knowledge gained, including a transcript of the interview itself.

VIII. Student Learning Outcomes:

1. Apply theories to describe critical events in the histories, cultures, and intellectual traditions, with a focus on the lived experiences and social struggles of Native American communities that emphasizes agency and self-affirmation.
2. Analyze the impact of the intersection of race and ethnicity with other forms of difference affected by hierarchy and oppression, such as class, gender, sexuality, religion, spirituality, tribal citizenship, ability, and/or age.
3. Analyze diverse resistance, social justice, environmental justice, decolonization, and sovereignty as experienced by Native American communities and their ongoing relevance to contemporary issues (communal, national, and international).
4. Examine and evaluate the historical forces and issues that led to the creation of Native American and Indigenous Studies.
5. Demonstrate active engagement with issues of race and ethnicity to build diverse, just, and equitable communities beyond the classroom

Global Citizenship Application

Global Citizenship Category: Global Studies

Course meets all of the following three criteria: (Please Check)

- Course content is explored primarily through a global perspective and a comparative and/or analytical framework is used. At least two societies or cultures outside the United States and their global impact are explored.
- Course material has contemporary significance. For example, a course would not only examine a period of history but the ways in which that period of history impacts the way we live in the world today.
- Course content addresses at least two interconnected systems (such as cultural, ecological, economic, political, social and technological systems).

Outcomes that pertain to this Global Citizenship Category

- Analyze the impact of the intersection of race and ethnicity with other forms of difference affected by hierarchy and oppression, such as class, gender, sexuality, religion, spirituality, tribal citizenship, ability, and/or age.
- Analyze diverse resistance, social justice, environmental justice, decolonization, and sovereignty as experienced by Native American communities and their ongoing relevance to contemporary issues (communal, national, and international).
- Demonstrate active engagement with issues of race and ethnicity to build diverse, just, and equitable communities beyond the classroom

Narrative: The experiences of Native American peoples explored in the course content and SLOs are intertwined with the historical and contemporary processes related to the impact of settler colonialism (e.g. Jamestown to the California mission system to military bases in the Pacific), disease, and Indigenous resistance (Second Wounded Knee, Alcatraz, Trail of Broken Treaties, Polynesian Panthers). These and many similar developments are situated in a global context with comparisons made to Indigenous communities in other regions of the Americas, the Pacific, and beyond.

Departmental Vote: Yes 6; No 0; Abstain 0; Not Voting 0

ETH ST 9 Distance Education Application

- Fully Online
- Online/Classroom Hybrid (not a delivery option when campus is closed)

1a. Instructor - Student Interaction:

Providing online or telephone office hours; Regular announcements; videoconferencing software (ex: zoom) Sessions; Feedback on written assignments, group projects, and class discussion boards; Participation in regular threaded discussion boards; Mentoring individual learners; Working with small groups of students assigned to help teach portions of the course or to prepare their presentations; Utilizing electronic/online software or other appropriate mediums for communication and group work

1b. Student - Student Interaction:

Asynchronous discussion activities where students will communicate with their classmates throughout the course regarding course content and everyday life; Online discussions with feedback comments to 2 classmates; Small group activities/discussions - 3-4 times during the course; Asynchronous Threaded Discussion - 1-2 weekly; Student Lounge discussion board to discuss non-course topics; Utilizing electronic/online software or other appropriate mediums for communication and group work; Preparing virtual group presentations utilizing appropriate software (electronic/online software)

1c. Student - Content Interaction:

Content is organized into visibly distinct learning units or modules based on weeks/major themes, etc.; Page content is chunked in manageable segments using headings that facilitate online reading; Course makes use of multiple Course Management System (CMS) tools for weekly content delivery; Pages, discussions, chat, collaboration, virtual conference tools, groups, etc.; Course design includes instructions for learners to work with content in meaningful and reflexive ways; Individualized learning opportunities, such as self-check quizzes, resource pages, supplemental materials, reflective writing, etc.; Reading/video discussions or reflections

1d. Distance Ed Interactions:

Online class activities that promote class interaction and engagement	Brief Description	% of Online Course Hours
Discussion Boards	Sample Threaded Discussion #1 In a discussion post, briefly explain a core concept such as racialization, equity, or white supremacy. Then provide two examples to illustrate its usage. Where possible, indicate its link to other core concepts. Once this has been completed, reply to two students and either affirm or argue against their analysis, and cite evidence as you do so.	25.00%
Threaded Discussions	Sample Threaded Discussion #2 In a discussion post, write a brief analytical essay that identifies and discusses relevant political, economic, social, cultural, and/or external causes of a major event and its outcome. Your essay should draw on secondary sources (the text and lectures) and a minimum of six primary sources. Once this has been completed, reply to two students and either affirm or argue against their analysis of their primary sources, and cite evidence as you do so.	25.00%

2. Organization of Content:

The course will be divided into weekly modules, including an assignment and objective page sharing with the students the weekly required activities. Activities such as observations, readings, mini video lectures, reflective writing, journaling, videos, and web searches.

3. Assessments:

% of grade	Activity	Assessment Method
30.00%	Online Lecture	Online interactions will constitute a variety of techniques that include but are not limited to: weekly announcements with feedback, message boards, Zoom lectures, group projects, and threaded discussions of multimodal media. Usage of these techniques will vary by instructor. Each one is designed to promote student-teacher and student-to-student interaction about a variety of historical topics.
25.00%	Threaded Discussions	Threaded discussion, peer feedback, chat room, discussion, or group presentation, collaborative learning activities
20.00%	Exams/Tests	Midterm and final exams consisting variously of multiple-choice, key term identification, short answer, and essay components. No single exam will exceed 30% of the class grade.
25.00%	Written Assignments	These will use a combination of assignments based on objective questions, short answers/identifications, and brief essays. Various assignments, including book reviews, short research papers, critical analyses of documents, chapter study questions, etc. may also be given.

4. Instructor's Technical Qualifications:

Instructors should be familiar with the college's learning management system (LMS). The instructor should be knowledgeable about accessibility resources on and off-campus, familiar with LMS tools and available supports, and willing to stay current as technology changes every day.

5. Student Support Services:

Department website, Center for Wellness, Campus Police, Students with disabilities, Title IX, Learning Environment Statement, DACA statement, Veteran's statement, Teacher Resource Room, Child Development Training Consortium, Library, Scholarships, Career Service Center, SMC Code of Ethics, NAEYC Code of Ethics, SMC Reading Lab, SMC Writing Lab, Child Care

6. Accessibility Requirements:

Instructors will consult with the Disabled Student Serviced High-Tech Training Center. Testing accommodations will be provided to students who qualify. Videos will be properly captioned. Audio-only files will provide transcripts. Images will have alt text. Pages will use Rich Text Editor and best practices for accessibility for page design. When possible, PDFs will be converted to Canvas Pages. PDFs will otherwise be made accessible to screen-readers, in consultation with DSPS.

7. Representative Online Lesson or Activity:

Sample Threaded Discussion #1

In a discussion post, briefly summarize and analyze two primary sources, identifying their perspectives, purposes, the contexts in which they were produced, and their historical significance. Once you have analyzed each document, discuss how they relate to one another. For example, do they reveal different perspectives or change over time? Once

this has been completed, reply to two students and either affirm or argue against their analysis of their primary sources, and cite evidence as you do so.

Sample Threaded Discussion #2

In a discussion post, write a brief analytical essay that identifies and discusses relevant political, economic, social, cultural, and/or external causes of a major event and its outcome. Your essay should draw on secondary sources (the text and lectures) and a minimum of six primary sources. Once this has been completed, reply to two students and either affirm or argue against their analysis of their primary sources, and cite evidence as you do so.

New Course: INTERACTION DESIGN 320, History and Practice of Interaction Design

Units:	3.00
Total Instructional Hours (usually 18 per unit):	54.00
Hours per week (full semester equivalent) in Lecture:	3.00
In-Class Lab:	0.00
Arranged:	0.00
Outside-of-Class Hours:	108.00
Transferability:	None
Degree Applicability:	Credit - Degree Applicable
Proposed Start:	Fall 2025
TOP/SAM Code:	109900 - Other Fine and Applied Arts / B - Advanced Occupational
Grading:	Letter Grade Only (upper div major)
Repeatability:	No
Library:	Library has adequate materials to support course
Minimum Qualification:	Other: A Master's degree in Interaction Design, Graphic Design, New Media, Design, or related design or media field.
Program Impact:	Existing degree or certificate: Interaction Design BS

Rationale

The course is proposed as a part of the program-wide update of the curriculum for the Bachelor's Degree in Interaction Design at Santa Monica College.

I. Catalog Description

This course serves as an overview of historical methods, approaches and practices of interaction design, including mechanical, electrical, and analog and digital electronic systems. The students will follow the development of modern tendencies in interaction design and formulate opinions about their causes and possible paths for future developments. The students will also examine the current applications of interaction design across industries and disciplines.

II. Examples of Appropriate Text or Other Required Reading:

(include all publication dates; for transferable courses at least one text should have been published within the last 7 years)

1. Coding Art, Yu Zhang, Apress © 2021, ISBN: 978-1484262634
2. International Journal of Design, ISSN: 1994-036X (online) Volume Multiple volumes
3. Online open-source book "The Encyclopedia of Human-Computer Interaction, 2nd Ed." by the Interaction Design Foundation, available at <https://www.interaction-design.org/literature/book/the-encyclopedia-of-human-computer-interaction-2nd-ed> Accessed on Apr 09, 2024 at 4:02pm

III. Course Objectives

Upon completion of this course, the student will be able to:

1. Analyze historical developments in interaction design
2. Define stages of historical development of interactive systems and evaluate their significance
3. Evaluate the influence of cognitive and cybernetic theories on the development of approaches to interaction design
4. Examine common contemporary industrial and scientific applications of interaction design
5. Examine common contemporary consumer-facing applications of interaction design
6. Compare historical trends in interaction design and formulate opinions about their future development
7. Contribute to critiques and discussions
8. Create and deliver presentations that communicate their intent and accomplishments within the scope of a design project

IV. Methods of Presentation:

Lecture and Discussion, Observation and Demonstration, Discussion, Critique, Visiting Lecturers

V. Course Content

<u>% of Course</u>	<u>Topic</u>
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20.000%	Trends in the development of interaction design
15.000%	Contemporary consumer-facing applications of interaction design
15.000%	Contemporary industrial applications of interaction design
10.000%	Influence of philosophy and psychology on the development of interaction design
20.000%	Early electronic and digital systems and their models of interaction
10.000%	Electrical systems and their interfaces
10.000%	Early developments in interaction design, mechanical systems
100.000%	Total

VI. Methods of Evaluation

<u>% of Course</u>	<u>Topic</u>
20%	Class Participation: Participation in discussions, workshops, and in-class activities.
30%	Homework 6-8 assignments total
15%	Oral Presentation
20%	Exams/Tests
15%	Papers
100%	Total

VII. Sample Assignments:

Assignment 1: Select a person from the list of influential people in interaction design and create a 10-minute presentation about their work and contributions to the discipline. Describe how their work was influenced by their predecessors, how it affected their contemporaries and how their contribution moved the discipline forward. Cite key examples of their work and establish a general trend in their approach to their practice. You will deliver the presentation in class, respond to your peers questions, and submit a PDF with the speaker's notes.

Assignment 2: Write an essay analyzing one of the applications of interaction design in science or industry: its historical roots, its development over time, how it reflected general trends in development of interaction design, how it contributed to the discipline, examples of its contemporary applications and possible paths for future developments. The essay should be no less than 500 and no more than 1000 words and include appropriate citations.

VIII. Student Learning Outcomes:

1. Examine a variety of contemporary applications of interaction design to develop and formulate their own set of professional preferences.
2. Evaluate historic developments in interaction design and propose opinions about future developments.
3. Demonstrate a professional written and oral communication skills as a substantive individual or collaborative presentation of research projects.

IXD 320 Distance Education Application

- Fully Online
- Online/Classroom Hybrid (not a delivery option when campus is closed)

1a. Instructor - Student Interaction:

The course will begin with a detailed welcome letter which includes pertinent details regarding the course and how the instructor will be in contact with the students. Each week the instructor will post announcements, reminders, or notes regarding assignments. Additionally, content pages will begin each module and will include key information and suggestions for how to approach content. Regular discussion boards will be posted, and the instructor will provide comments, input, and feedback just as in a traditional classroom setting. Additionally, constructive feedback will be provided on the homework in a time-frame adequate for students to adjust for the next assignment. The instructor will promptly respond to communication from students via email, the "General Questions" discussion board, and any other communication media used.

1b. Student - Student Interaction:

Students will engage in weekly discussion board groups where they will be required to reply to at least two students in the class. In the first module, for example, students are asked to introduce themselves and reply to at least two other students in class. From the beginning, a sense of belonging and community is established in the online classroom. Throughout the course of the semester, students can help each other out by posting replies and engage in a discussion in the "General Questions" discussion board. Students will post and discuss projects and research in the discussion boards. Presentations will be recorded and posted on the discussion boards with feedback from students and the instructor for developmental feedback and final presentation feedback. The presentations will be within a specific time limit and are given parameters for what should be seen in the video. The instructor will use the online course system to record and transcribe for posting. Students will be required to give qualitative responses to a minimum of 4 other students (when a student already has 4 responses the student will look for another project to comment on, so every student gets feedback). This is for the presentation and collaborative portion of class.

1c. Student - Content Interaction:

The classroom is organized into weekly course modules. Each weekly module consists of: learning objectives for each module, lectures (handouts or transcribed recordings), weekly discussion boards which reinforce the weekly concepts, and a reminder on what is due or what progress should be made during the week on the student work or projects.

1d. Distance Ed Interactions:

Online class activities that promote class interaction and engagement	Brief Description	% of Online Course Hours
Peer Feedback	Students are required to review papers submitted by their peers and submit feedback according to specified requirements.	10.00%
Written assignments	Students are required to submit written papers to demonstrate their knowledge of the material. They will receive feedback from the instructor both on the content and the style of the submitted papers	10.00%
Videos	Videos will demonstrate the critical processes and interactions which require illustration in a time-based medium.	10.00%
Online Lecture	Lecture Topics will be done in either (or both) written files which are compliant for accessibility or video presentations which are captioned or a combination of both.	40.00%
Discussion Boards	This is a critical component and will comprise discussions on topics and student projects. Discussion boards will be where projects are posted for feedback, a board for general questions for class communication, and instructor feedback.	30.00%

2. Organization of Content:

The instructor will lecture, demonstrate and give inspirational images or videos for students to use for project development. Rubrics are used to clarify instructor requirements for assignments. The online course system is sufficient in providing for these. Content is organized according to major content headings in the syllabus. Each module clearly states what the objectives are, and the assignments are consistent with the topic for that week. Due dates are given at the beginning of class to allow time for scheduling to complete the project. Assignments are given spaced through the semester. Materials needed for all projects are given at the beginning of the semester, so students have ample time to purchase what is needed and to be transparent on the cost. Low cost alternative solutions are given or considered.

3. Assessments:

% of grade	Activity	Assessment Method
15.00%	Peer reviews	Students will be randomly assigned work by their peers to review and comment on. The assessments of the work will have to adhere to specified parameters. Instructors will evaluate the quality of the review and provide feedback to other reviewers.
20.00%	Papers	Students will submit papers on assigned topics. Students' grades shall be posted within a week of submission.
30.00%	Discussion boards	Weekly discussions will be posted. Students are required to post and reply to a specified number of student posts. Posts are due by one date and responses are due a few days later. Instructors are to grade and post this category each week.
20.00%	Exams/tests	Students will submit exams/tests online. Students' grades shall be posted within a week of submission.

15.00%	Oral presentation	Using a rubric to establish project parameters, students present projects by the due date. Instructor and class feedback is done within a week. Students' grades shall be posted within a week of presentations.
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4. Instructor's Technical Qualifications:

The instructor should be familiar with the college's learning management system. This includes all the required technology for online delivery such as building the course and communication tools such as discussion boards. They should also be aware of the technical support available for faculty and the knowledge to ensure the material and course content is accessible.

5. Student Support Services:

Links to the following should be provided: online tutoring, tutorials for online classes, and technical support.

6. Accessibility Requirements:

All content will be reviewed to ensure compliance is met. Videos shall be close captioned, files and slideshows shall be reviewed for accessibility through the software and through a compliance review.

7. Representative Online Lesson or Activity:

Course Objective:

Examine common contemporary industrial and scientific applications of interaction design

Sample Assignment:

Write an essay analyzing one of the applications of interaction design in science or industry: its historical roots, its development over time, how it reflected general trends in the development of interaction design, how it contributed to the discipline, examples of its contemporary applications and possible paths for future developments.

Online Process:

Students will read or listen to lectures, reading assignments and demonstrations which are posted in the online course - the handouts shall be accessible, and the videos shall have transcripts. Students will use their computers to complete homework. The resulting documents will be submitted via an online learning platform. Students will be randomly assigned to review and comment on the work of their peers after the submission. Instructors will give feedback within a week and grades will be posted shortly thereafter.

New Course: INTERACTION DESIGN 420, Design for Social Innovation

Units:	3.00
Total Instructional Hours (usually 18 per unit):	90.00
Hours per week (full semester equivalent) in Lecture:	2.00
In-Class Lab:	1.00
Arranged:	2.00
Outside-of-Class Hours:	72.00
Transferability:	None
Degree Applicability:	Credit - Degree Applicable
Proposed Start:	Fall 2025
TOP/SAM Code:	109900 - Other Fine and Applied Arts / B - Advanced Occupational
Grading:	Letter Grade Only (upper div major)
Repeatability:	No
Library:	Library has adequate materials to support course
Minimum Qualification:	Other: A Master's degree in Interaction Design, Graphic Design, New Media, Design, or related design or media field.
Program Impact:	Existing degree or certificate: Interaction Design BS

Rationale

The course is proposed as a part of the program-wide update of the curriculum for the Bachelor's Degree in Interaction Design at Santa Monica College.

I. Catalog Description

In this course students explore a comprehensive toolkit for how to approach complex social issues with creative problem solving. Through this course students will recognize and demonstrate the principles, methods, and practices of designing impactful solutions that focus on positive social change. Using a blend of theoretical learning, practical application, and project work, students will apply the skills and mindset needed to address social challenges creatively and ethically.

II. Examples of Appropriate Text or Other Required Reading:

(include all publication dates; for transferable courses at least one text should have been published within the last 7 years)

1. Design for a Better World: Meaningful, Sustainable, Humanity Centered, Norman, Donald A., The MIT Press © 2024, ISBN: 978-0262548304
2. Change By Design: How Design Thinking Transforms Organizations and Inspires Innovation, Brown, Tim, Harper Business © 2019, ISBN: 978-0061766084
3. Design Justice: Community-Led Practices to Build the Worlds We Need, Constanza-Chock, Sasha, MIT Press © 2020, ISBN: 978-0262043458

III. Course Objectives

Upon completion of this course, the student will be able to:

1. Interact with stakeholders to identify needs and outcomes.
2. Identify the challenges at hand, brainstorm, and quickly prototype solutions.
3. Summarize insights from research to formulate an analysis and develop solutions and creative concepts based on the analysis
4. Apply appropriate methods and principles to concept development and to communicate possible solutions
5. Conduct user-testing sessions to develop further iterations of a project.
6. Recognize the challenges around implementation and deliver comprehensive prototypes with clear implementation plans.

IIIb. Arranged Hours Objectives:

Upon completion of this course, the student will be able to:

1. Produce a professional design presentation responding to the design brief.

IV. Methods of Presentation:

Lecture and Discussion, Field Experience, Observation and Demonstration, Discussion, Critique, Projects, Service Learning, Group Work, Field Trips

IVb. Arranged Hours Instructional Activities:

Online instructor-provided resources, Observation and Demonstration, Projects

V. Course Content

<u>% of Course</u>	<u>Topic</u>
20.000%	Analysis and documentation of the design process, development of case studies
20.000%	Develop socially impactful design solutions
20.000%	Design research methods and principles
20.000%	Presentations and critiques of assignments and projects
20.000%	Create multiple paper and digital prototypes for system flow analysis.
100.000%	Total

Vb. Lab Content

<u>% of Course</u>	<u>Topic</u>
50.00%	Critiques
50.00%	Team Exercises
100.00%	Total

VI. Methods of Evaluation

<u>% of Course</u>	<u>Topic</u>
20%	Class Participation: Participation in discussions, workshops, and in-class activities.
30%	Class Work
20%	Projects
30%	Final Project
100%	Total

VII. Sample Assignments:

Assignment 1: Identify a possible problem area or site that includes a series of tasks. Develop a series of open-ended, "why" questions (do not lead to a yes or no reply) about the task and the context surrounding it. Explore and observe the task first hand. Participate and complete the task yourself. Talk to at least 3 people. Take notes and photographs. Consolidate notes from observations, interviews, and photographs. In a group, create an affinity diagram, grouping similar observations or notes together. Create a framework that summarizes potential problem areas/areas of opportunity using key photographs, quotes, and observations.

Assignment 2: Create end-to-end user experience and detailed task and interaction flows that communicate possible outcomes for the project based on the team's research work, analysis, and collaborative design. The assignment is asking you to design a complete user journey for a project, from the initial interaction to the final outcome. This involves: User Experience (UX): Considering the user's feelings, thoughts, and behaviors throughout the process. Task Flows: Outlining the steps a user takes to achieve a goal. Interaction Flows: Visualizing the interactions between the user and the product or service. Outcomes: Predicting the potential results based on research, analysis, and design. Key Considerations: User Research: Personas: Create fictional users who represent your target audience. User Interviews: Gather insights directly from potential users. Surveys and Questionnaires: Collect quantitative data. Analytics: Analyze existing user data (if applicable). User Goals and Needs: User Stories: Define what users want to achieve and why. Pain Points: Identify challenges or frustrations users face. Task Flow Diagrams: High-Level Flow: Outline the main steps involved. Detailed Flow: Show specific interactions and decision points. Interaction Design: Wireframes: Create low-fidelity representations of the interface. Prototypes: Build interactive models for testing. Usability Testing: Evaluate how users interact with the design. Outcome Prediction: Scenario Planning: Consider different potential outcomes. Metrics: Define key performance indicators (KPIs) to measure success. Risks and Mitigation: Identify potential challenges and solutions. Additional Tips: Empathy: Put yourself in the user's shoes to understand their perspective. Iteration: Be

prepared to revise your design based on feedback and testing. Consistency: Ensure a consistent user experience throughout the journey. Accessibility: Design for users with disabilities to make your product inclusive. Example Outcomes: Increased user satisfaction: Users report a positive experience and are more likely to return. Improved task completion: Users can achieve their goals efficiently. Higher conversion rates: Users are more likely to take desired actions (e.g., purchases, sign-ups). Enhanced brand loyalty: Users develop a positive association with your product or service. By following these guidelines and incorporating your team's research, analysis, and collaborative design, you can create a compelling end-to-end user experience that meets the needs of your target audience and achieves your project's objectives.

VIII. Student Learning Outcomes:

1. Communicate their design brief response to relevant stakeholders through presentations and written documentation, based on clarity, persuasiveness, and audience engagement.
2. Demonstrate designed end-to-end user experiences, detailed interaction flows, and user-testing to develop comprehensive prototypes, and deliver clear plans that support recognition of the challenges around the project.
3. Summarize the project outcomes in terms relevant to stakeholders to communicate and demonstrate the value of the proposed design solutions.

IXD 420 Distance Education Application

- Fully Online
- Online/Classroom Hybrid (not a delivery option when campus is closed)

1a. Instructor - Student Interaction:

The course will begin with a detailed welcome letter which includes pertinent details regarding the course and how the instructor will be in contact with the students. Each week the instructor will post announcements, reminders, or notes regarding assignments. Additionally, content pages will begin each module and will include key information and suggestions for how to approach content. Regular discussion boards will be posted, and the instructor will provide comments, input, and feedback just as in a traditional classroom setting. Additionally, constructive feedback will be provided on the homework in a time-frame adequate for students to adjust for the next assignment. The instructor will promptly respond to communication from students via email, the "General Questions" discussion board, and any other communication media used.

1b. Student - Student Interaction:

Students will engage in weekly discussion board groups where they will be required to reply to at least two students in the class. In the first module, for example, students are asked to introduce themselves and reply to at least two other students in class. From the beginning, a sense of belonging and community is established in the online classroom. Throughout the course of the semester, students can help each other out by posting replies and engage in a discussion in the "General Questions" discussion board. Students will post and discuss projects and research in the discussion boards. Presentations will be recorded and posted on the discussion boards with feedback from students and the instructor for developmental feedback and final presentation feedback. The presentations will be within a specific time limit and are given parameters for what should be seen in the video. The instructor will use the online course system to record and transcribe for posting. Students will be required to give qualitative responses to a minimum of 4 other students (when a student already has 4 responses the student will look for another project to comment on, so every student gets feedback). This is for the presentation and collaborative portion of class.

1c. Student - Content Interaction:

The classroom is organized into weekly course modules. Each weekly module consists of: learning objectives for each module, lectures (handouts or transcribed recordings), weekly discussion boards which reinforce the weekly concepts, and a reminder on what is due or what progress should be made during the week on the student work or projects.

1d. Distance Ed Interactions:

Online class activities that promote class interaction and engagement	Brief Description	% of Online Course Hours
Project Presentation	Students are required to present all projects for grading. This will be done with video presentations which are provided to the class for review, questions, and feedback. Students will be required to provide qualitative feedback or questions and the presenter is required to respond as part of the presentation grade.	20.00%
Videos	Videos will demonstrate the critical processes and interactions which require illustration in a time-based medium.	10.00%

Online Lecture	Lecture Topics will be done in either (or both) written files which are compliant for accessibility or video presentations which are captioned or a combination of both.	30.00%
Discussion Boards	This is a critical component and will comprise discussions on topics and student projects. Discussion boards will be where projects are posted for feedback, a board for general questions for class communication, and instructor feedback.	40.00%

2. Organization of Content:

The instructor will lecture, demonstrate and give inspirational images or videos for students to use for project development. Rubrics are used to clarify instructor requirements for assignments. The online course system is sufficient in providing for these. Content is organized according to major content headings in the syllabus. Each module clearly states what the objectives are, and the assignments are consistent with the topic for that week. Due dates are given at the beginning of class to allow time for scheduling to complete the project. Assignments are given spaced through the semester. Materials needed for all projects are given at the beginning of the semester, so students have ample time to purchase what is needed and to be transparent on the cost. Low cost alternative solutions are given or considered.

3. Assessments:

% of grade	Activity	Assessment Method
20.00%	Presentations	Using a rubric to establish project parameters, students present projects by the due date. Instructor and class feedback is done within a week. Students grades shall be posted within a week of presentations.
20.00%	Discussion Boards	Weekly discussions will be posted. Students are required to post and reply to a specified number of student posts. Posts are due by one date and responses are due a few days later. Instructors are to grade and post this category each week.
20.00%	Class Exercises	Students will work together or individually on small skill-building exercises such as ideation, storyboarding, user testing. These exercises directly relate to the class topics and project. Deliverables are submitted by each student. The instructor shall review and grade the submissions within a week.
40.00%	Projects	Students shall submit midterm and final projects in the medium specified in the rubric for each project. The submission is digital and ready for inclusion in a digital portfolio at the end of class.

4. Instructor's Technical Qualifications:

The instructor should be familiar with the college's learning management system. This includes all the required technology for online delivery such as building the course and communication tools such as discussion boards. They should also be aware of the technical support available for faculty and the knowledge to ensure the material and course content is accessible.

5. Student Support Services:

Links to the following should be provided: online tutoring, tutorials for online classes, and technical support.

6. Accessibility Requirements:

All content will be reviewed to ensure compliance is met. Videos shall be close captioned, files and slideshows shall be reviewed for accessibility through the software and through a compliance review.

7. Representative Online Lesson or Activity:

Course Objective: Conduct user-testing sessions to develop further iterations of a project.

Sample Assignment: Heuristic evaluation: Using templates and other resources provided students will conduct heuristic evaluations of the prototypes created by their peers. They will produce a detailed analysis of the user interface and user experience following the existing industry-standard guidelines.

Online Process: Students will read or listen to lectures, reading assignments and demonstrations which are posted in the online course - the handouts shall be accessible, and the videos shall have transcripts. Students will use their computers to complete the homework and the class projects utilizing the techniques demonstrated and discussed in lectures. Using an online platform students will organize in groups and create the project deliverables. This is accomplished through discussion boards or conferencing tools. The resulting documents will be submitted via an online learning platform. Instructors will give feedback within a week and grades will be posted shortly thereafter.

New Course: INTERACTION DESIGN 440, Interaction Design Studio 3

Units:	3.00
Total Instructional Hours (usually 18 per unit):	90.00
Hours per week (full semester equivalent) in Lecture:	2.00
In-Class Lab:	1.00
Arranged:	2.00
Outside-of-Class Hours:	72.00
Transferability:	None
Degree Applicability:	Credit - Degree Applicable
Proposed Start:	Fall 2025
TOP/SAM Code:	109900 - Other Fine and Applied Arts / B - Advanced Occupational
Grading:	Letter Grade Only (upper div major)
Repeatability:	No
Library:	Library has adequate materials to support course
Minimum Qualification:	Other: A Master's degree in Interaction Design, Graphic Design, New Media, Design, or related design or media field.
Program Impact:	Existing degree or certificate: Interaction Design BS

Rationale

The course is proposed as a part of the program-wide update of the curriculum for the Bachelor's Degree in Interaction Design at Santa Monica College.

I. Catalog Description

In this course, students work on a client-based project with the intent of creating a project that creates social impact. Students will research, analyze, conceptualize, design, and prototype work to serve this community need. Special attention will be paid to elements of service design, accessibility, and human factors.

II. Examples of Appropriate Text or Other Required Reading:

(include all publication dates; for transferable courses at least one text should have been published within the last 7 years)

1. Get Together: How to Build a Community With Your People, Bailey Richardson (Author), Kevin Huynh (Author), Kai Elmer Sotto (Author), Stripe Press © 2019, ISBN: 978-1732265196
2. New Power: Why outsiders are winning, institutions are failing, and how the rest of us can keep up in the age of mass participation, Jeremy Heimans (Author), Henry Timms (Author), Macmillan © 2018
3. Rebel Talent: Why It Pays to Break the Rules at Work and in Life, Francesca Gino (Author), Dey Street Books © 2018, ISBN: 978-0062694638
4. Smart Brevity: The Power of Saying More with Less, Jim VandeHei (Author), Mike Allen (Author), Roy Schwartz (Author), Workman Publishing Company © 2022, ISBN: 978-1399809641

III. Course Objectives

Upon completion of this course, the student will be able to:

1. Collaborate with stakeholders to identify needs and outcomes.
2. Prepare field research to formalize an analysis and develop solutions through creative concepts.
3. Appraise current interaction design topics such as service design, accessibility, and human factors.
4. Identify and analyze the challenges at hand, brainstorm, and quickly prototype solutions.
5. Gather and analyze user research into actionable design insights using photography video or other media
6. Integrate storytelling in concept development and to communicate possible solutions.
7. Create a narrow scope to allow team to develop depth in specific areas where the project can create the most impact.
8. Design end-to-end user experiences and detailed interaction flows.
9. Create user-testing sessions to develop further iterations of a project.
10. Recognize the challenges around implementation and deliver comprehensive prototypes with clear implementation plans.
11. Develop a design that propels concepts forward and create an ecosystem to ensure implementation.
12. Define and utilize stakeholder language while communicating a clear understanding of the work.

IIIb. Arranged Hours Objectives:

Upon completion of this course, the student will be able to:

1. Organize and conduct field research for established design criteria.

IV. **Methods of Presentation:**

Lecture and Discussion, Lab, Observation and Demonstration, Discussion, Critique, Projects, Group Work

IVb. **Arranged Hours Instructional Activities:**

Observation and Demonstration, Projects, Online instructor-provided resources

V. **Course Content**

<u>% of Course</u>	<u>Topic</u>
20.000%	Final Presentation
12.000%	Case Study SMC site
12.000%	Case Study Personal site
20.000%	Homework
20.000%	In-class Assignments
10.000%	Discussion
6.000%	Reflection
100.000%	Total

Vb. **Lab Content**

<u>% of Course</u>	<u>Topic</u>
50.00%	Critiques
50.00%	Team exercises
100.00%	Total

VI. **Methods of Evaluation**

<u>% of Course</u>	<u>Topic</u>
20%	Class Work
20%	Homework
20%	Final Performance
24%	Final Project
16%	Class Participation: Participation in discussions, workshops, and in-class activities.
100%	Total

VII. **Sample Assignments:**

Assignment 1: Conduct field research: Working in teams, conduct exploratory research to form strategies, concepts, experience maps, and user narratives to facilitate the identification, clarification, and analysis of a proposed problem or issue. Working with the stakeholder, lead a discussion on the team's research findings and analysis.

Assignment 2: Create a detailed task flow analysis: Analyze the detailed task flow of a specific product or service. Your analysis should include: Product/Service Selection: Choose a product or service that you are familiar with or have a strong interest in. User Persona: Create a detailed user persona representing your target audience. Task Identification: Identify a specific task or goal that a user would typically want to accomplish using the product or service. Task Flow Mapping: Create a step-by-step visual representation of the task flow, including: Each interaction point (e.g., clicks, swipes, inputs) Decision points (e.g., conditional branches) Error messages or feedback Heuristic Evaluation: Assess the task flow using Nielsen's heuristics: Visibility of system status: Is the user informed of the system's status? Match between system and the real world: Does the system speak the user's language? User control and freedom: Can the user easily undo actions or exit the task? Consistency and

standards: Are there consistent conventions throughout the interface? Error prevention: Does the system prevent errors from happening? Recognition rather than recall: Does the system minimize the user's memory load? Flexibility and efficiency of use: Can the system be customized to suit the user's needs? Aesthetic and minimalist design: Is the interface visually appealing and uncluttered? Help and documentation: Is there clear and helpful documentation available? Analysis and Recommendations: Identify strengths and weaknesses of the task flow based on your heuristic evaluation. Provide specific recommendations for improvement, including: Changes to the interface Additional features or functionalities Improved user guidance or feedback

VIII. Student Learning Outcomes:

1. Communicate their design brief response to relevant stakeholders through presentations and written documentation, based on clarity, persuasiveness, and audience engagement.
2. Design end-to-end user experiences, detailed interaction flows, and user-testing to develop comprehensive prototypes, and deliver clear plans that support recognition of the challenges around the project.
3. Exhibit knowledge of current interaction design topics such as service design, accessibility, and human factors.

IXD 440 Distance Education Application

- Fully Online
- Online/Classroom Hybrid (not a delivery option when campus is closed)

1a. Instructor - Student Interaction:

The course will begin with a detailed welcome letter which includes pertinent details regarding the course and how the instructor will be in contact with the students. Each week the instructor will post announcements, reminders, or notes regarding assignments. Additionally, content pages will begin each module and will include key information and suggestions for how to approach content. Regular discussion boards will be posted, and the instructor will provide comments, input, and feedback just as in a traditional classroom setting. Additionally, constructive feedback will be provided on the homework in a time-frame adequate for students to adjust for the next assignment. The instructor will promptly respond to communication from students via email, the "General Questions" discussion board, and any other communication media used.

1b. Student - Student Interaction:

Students will engage in weekly discussion board groups where they will be required to reply to at least two students in the class. In the first module, for example, students are asked to introduce themselves and reply to at least two other students in class. From the beginning, a sense of belonging and community is established in the online classroom. Throughout the course of the semester, students can help each other out by posting replies and engaging in a discussion in the "General Questions" discussion board. Students will post and discuss projects and research in the discussion boards. Presentations will be recorded and posted on the discussion boards with feedback from students and the instructor for developmental feedback and final presentation feedback. The presentations will be within a specific time limit and are given parameters for what should be seen in the video. The instructor will use the online course system to record and transcribe for posting. Students will be required to give qualitative responses to a minimum of 4 other students (when a student already has 4 responses the student will look for another project to comment on, so every student gets feedback). This is for the presentation and collaborative portion of class.

1c. Student - Content Interaction:

The classroom is organized into weekly course modules. Each weekly module consists of: learning objectives for each module, lectures (handouts or transcribed recordings), weekly discussion boards which reinforce the weekly concepts, and a reminder on what is due or what progress should be made during the week on the student work or projects.

1d. Distance Ed Interactions:

Online class activities that promote class interaction and engagement	Brief Description	% of Online Course Hours
Project Presentation	Students are required to present all projects for grading. This will be done with video presentations which are provided to the class for review, questions, and feedback. Students will be required to provide qualitative feedback or questions and the presenter is required to respond as part of the presentation grade.	%
Videos	Videos will demonstrate the critical processes and interactions which require illustration in a time-based medium.	%

Online Lecture	Lecture Topics will be done in either (or both) written files which are compliant for accessibility or video presentations which are captioned or a combination of both.	%
Discussion Boards	This is a critical component and will comprise discussions on topics and student projects. Discussion boards will be where projects are posted for feedback, a board for general questions for class communication, and instructor feedback.	2.00%

2. Organization of Content:

The instructor will lecture, demonstrate and give inspirational images or videos for students to use for project development. Rubrics are used to clarify instructor requirements for assignments. The online course system is sufficient in providing for these. Content is organized according to major content headings in the syllabus. Each module clearly states what the objectives are, and the assignments are consistent with the topic for that week. Due dates are given at the beginning of class to allow time for scheduling to complete the project. Assignments are given spaced through the semester. Materials needed for all projects are given at the beginning of the semester, so students have ample time to purchase what is needed and to be transparent on the cost. Low cost alternative solutions are given or considered.

3. Assessments:

% of grade	Activity	Assessment Method
60.00%	Projects	Students shall submit final portfolio pages for each project. The submission is digital and ready for inclusion in a digital portfolio at the end of class.
20.00%	Discussion Boards	Weekly discussions will be posted. Students are required to post and reply to a specified number of student posts. Posts are due by one date and responses are due a few days later. Instructors are to grade and post this category each week.
20.00%	Presentations	Using a rubric to establish project parameters, students will also present final projects as part of the project grade (see below). Instructors will aim to provide feedback within a week and/or provide peer feedback with that time period. Grades will be posted shortly thereafter.

4. Instructor's Technical Qualifications:

The instructor should be familiar with the college's learning management system. This includes all the required technology for online delivery such as building the course and communication tools such as discussion boards. They should also be aware of the technical support available for faculty and the knowledge to ensure the material and course content is accessible.

5. Student Support Services:

Links to the following should be provided: online tutoring, tutorials for online classes, and technical support.

6. Accessibility Requirements: Describe how the design of the course will ensure access for students with disabilities including compliance with the regulations of Section 508 of the Rehabilitation Act:

All content will be reviewed to ensure compliance is met. Videos shall be close captioned, files and slideshows shall be reviewed for accessibility through the software and through a compliance review.

7. Representative Online Lesson or Activity:

Online Process:

Students will read or listen to lectures, reading assignments and demonstrations which are posted in the online course - the handouts shall be accessible, and the videos shall have transcripts. Students will use their computer and mobile phones to complete the homework and the class projects utilizing the techniques demonstrated and discussed in lectures. Pin ups or discussions with the instructor and other students will be done periodically to assure understanding and mastery of the skill. This is accomplished through discussion boards or conferencing tools. In addition, the final project is to be documented by uploading it to a video streaming service and submitting to the online course. Instructors will give feedback within a week and grades will be posted shortly thereafter.

New Course: BUSINESS 12, Success Skills for First-Time Manager

Units:	3.00
Total Instructional Hours (usually 18 per unit):	54.00
Hours per week (full semester equivalent) in Lecture:	3.00
In-Class Lab:	0.00
Arranged:	0.00
Outside-of-Class Hours:	108.00
Transferability:	Transfers to CSU
Degree Applicability:	Credit – Degree Applicable
Proposed Start:	Fall 2025

I. Catalog Description

This course is a survey of entry-level, first-time management concepts, theories, and principles with a focus on a manager's job responsibilities and the role that managers play in planning, organizing, leading and motivating teams, and controlling organizations. Career and educational pathways include organizational development as applied to retail management across a variety of industries.

II. Examples of Appropriate Text or Other Required Reading:

(include all publication dates; for transferable courses at least one text should have been published within the last 7 years)

1. The First Time Manager, 7th Ed, Jim McCormick, Loren Belker, Gary S. topchik, HsrperCollins © 2021, ISBN: 978-1400233588
2. First Time Managers, 1st ed, Antony Felix, Amazon Digital LLC © 2021, ISBN: 979-8593945327

III. Course Objectives

Upon completion of this course, the student will be able to:

1. Manage facility resources and safety standards.
2. Implement and maintain budgets.
3. Manage the customer experience.
4. Oversee employee hiring and performance assessment.
5. Execute employee training.
6. Generate professional development opportunities.
7. Interpret and maintain proficiency of future trends in technology, work culture, demographics, and environmental policies.

IV. Methods of Presentation:

Distance Education, Lecture and Discussion, Discussion, Critique, Projects, Online instructor-provided resources, Observation and Demonstration, Group Work, Work Experience (internship)

V. Course Content

<u>% of Course</u>	<u>Topic</u>
15.000%	Oversee Business Operations
10.000%	Future Trends
15.000%	Professional Development
15.000%	Employee Training
15.000%	Manage Customer Experience
10.000%	Employee Hiring and Performance Assessment
10.000%	Budget Management
10.000%	Management of Facility and Maintain Safety Standards
100.000%	Total

VI. Methods of Evaluation

<u>% of Course</u>	<u>Topic</u>
25%	Exams/Tests: Midterm Evaluation based on course engagement activities and weekly deliverables
20%	Class Work: Interview Industry Manager/Leader Project
30%	Final Performance: Management Challenge Oral Presentation Final
25%	Class Work: Case Study Analysis of Manager Responsibilities, Challenges and Interpersonal Skill Assessments
100%	Total

VII. Sample Assignments:

Industry Management Professional Interview: Students will prepare questions to interview professional manager in self-selected area of business, set up in-person or zoom meeting, and document responses.

Management /Employee Perspectives in Communication : Students will analyze a situation in employer/employee communications and formulate solutions from a sales associate perspective as well as from a management perspective.

Management Challenge and Solutions Oral Presentation: Oral presentation, using presentation software and/or audio-video multimedia, on a topic regarding a management challenge, such as communication and training discrepancies, and present workable solutions

VIII. Student Learning Outcomes:

1. Employ interpersonal skills that have the ability to adapt leadership style.
2. Demonstrate the skill set needed as an entry-level, first-time manager
3. Evaluate the various roles a first time manager plays on a day-to-day basis

BUS 12 Distance Education Application

- Fully Online
- Online/Classroom Hybrid (not a delivery option when campus is closed)
- Approved for Online Delivery in Emergency Contexts Only ("AODECO")

1a. Instructor - Student Interaction:

Weekly follow-up on coursework through a learning management system (LMS) using announcements, comments on student submissions, and discussion feedback. The SMC campus student progress tracking system is used three times a semester for student feedback and on-ground and virtual office hours.

1b. Student - Student Interaction:

Weekly activities such as group assignments, class discussions, and managerial role playing. Weekly follow-up discussions on LMS that expand from the topic learned in the module that week. LMS and video conferencing discussions will be broken into groups of 4 and randomly selected. Students will have the opportunity to share their assignments, as well as a final project presentation that will be open for feedback and discussion.

1c. Student - Content Interaction:

Students will have access to PowerPoint slides and all other content in LMS. Additional content, such as supplemental learning materials, fliers for field visits/special events, and video content will be available. Students will have the ability to take quizzes/tests two times, keeping the highest score. Weekly discussions will include content that promotes advanced and independent thinking in relation to the weekly topic. Use of assessment tests that help students to learn more about their own character as it relates to management/leadership responsibilities will be in the curriculum. Content will include; audio, visual, reading, writing, role playing, with a focus on interpersonal skill development.

1d. Distance Ed Interactions:

Online class activities that promote class interaction and engagement	Brief Description	% of Online Course Hours
Written assignments	Students will submit written assignments online	7.00%
Videos	Students will watch relatable videos followed by interpretive analysis.	15.00%
Project Presentation	Students will present a final project	10.00%
Other (describe)	Students will submit a midterm and final project	23.00%
Threaded Discussions	Through LMS, in small groups, students will discuss experiences that relate to the weekly module.	24.00%

2. Organization of Content:

All content will be organized through LMS. Modules, Pages, Discussions, Quizzes, Files, Syllabus, Assignments will be the most commonly used features. There will be a total of 16 modules for the 16-week course. Each module will include content from the weekly lecture and classroom activities. Students will have access to the modules as the weeks unfold. There will be a schedule included with the syllabus so that students can organize their calendars and plan for due dates. Projects and assignments will have clearly defined goals and directions that reinforce the curriculum while encouraging creativity.

3. Assessments:

% of grade	Activity	Assessment Method
10.00%	Weekly Assignments	LMS submissions complete/incomplete comments
10.00%	Mid Term Project	The grade rubric designed for this course is available through LMS and the student progress tracking system.
40.00%	Quizzes	Multiple choice quizzes that reflect the weekly modules
20.00%	Participation	Hours spent on the course content Participation in activities Participation in on-line discussion
20.00%	Final Project	LMS grade rubric designed for the first time manager

4. Instructor's Technical Qualifications:

Instructors may receive training on the learning management system in place. They will also be aware of the technical support that is available for faculty. Knowledge of how to ensure that material is accessible is also vital.

5. Student Support Services:

The student will need access to a computer, Wi-Fi network and camera. Links to the following services will be provided including online tutoring and tutorials for online classes. Students will be informed of the technical support phone number and other related student support services, including Santa Monica College library, the bookstore, basic needs, mental health, emergency procedures, and other support services.

6. Accessibility Requirements:

The design of the course will meet accessibility standards for students with disabilities. All video content will include captioning. Modules will be organized in a similar format each week. The instructor will communicate willingness and availability to adjust or change content that is seemingly difficult to process. Instructor will assure accessibility of content and materials.

7. Representative Online Lesson or Activity:

Customer Engagement - This objective includes learning skills the first time manager needs to ensure customer engagement.

For discussion using LMS.

Review - This week's content covering customer loyalty programs

Watch - 5-10 minute video (provided)

Read - Brief news article (provided)

Consider - As a customer, your own participation in loyalty programs

Discuss - Your interaction with a loyalty program. How do you think the loyalty program increases value for customers and for management?

Remember - This is a discussion. Respond, comment, and/or expand on what others have posted. You may or may not have your own experience to share or be comfortable sharing your own experience. The goal is to learn from each other

using critical thinking.

For example - A grocery store loyalty program coordinates points for a discount at the gas station. This increases value for the customer, while subtly reminding the customer at the gas station where the discount is coming from. As a manager, I could use the loyalty program to track customer behavior. This allows for more accurate inventory and service planning.

Substantial Change: COMPUTER SCIENCE 87B, Advanced Python Programming

Units:	3.00
Total Instructional Hours (usually 18 per unit):	54.00
Hours per week (full semester equivalent) in Lecture:	3.00
In-Class Lab:	0.00
Arranged:	0.00
Outside-of-Class Hours:	108.00
Transferability:	Transfers to UC, CSU
SMC GE Area:	Area IV-B: Language and Rationality (Group B) Option 2
Degree Applicability:	Credit - Degree Applicable
Prerequisite(s):	CS 87A
Proposed Start:	Fall 2025

Rationale

With this request, we have determined the following: • When students sign up for a course, then later drop close to the start of the semester or after the start of the semester, they end up with less units than they need and may end up signing up for classes they don't need or don't intend to complete. This may lead to low rates of retention and or success. • The above also causes delays in the students' graduation plans and may force students to find classes at other colleges. • Computer Science courses, close early on during the enrollment periods, forcing late comers to sign up for ANY open section they find. • This may cause students to end up signing up for advanced courses for which they are not qualified to take or not fully prepared to pass. • When students drop after the first or second week, we end up with under-utilization of our WTH allocation. We thrive to optimize our WTH and offer courses that end the semester with high retention and success rates. • Our faculty do email students in advanced courses not requiring a prerequisite and only showing an advisory, warning them that not having those advisory skills may be detrimental to their success in such advanced courses. Students either don't read such emails, or read them too late, when other options may not be available for those students to sign up for. • Based on data going back to Fall 2022 (1277 students enrolled in CS 87A, 187 students enrolled in CS 87B), the data shows: o A student taking CS 87A before CS 87B passes CS 87B at a rate 35% higher than students who do not take CS 87B first o Conversely, a student not taking CS 87A before CS 87B drops CS 87B without earning a grade or earns a W at a rate 28% higher than students who do take CS 87A first o A student not taking CS 87A before CS 87B drops (with or without earning a W) at a rate 23% higher than students who do take CS 87A first • Given that many students take courses from multiple community college campuses, a prerequisite waiver can be offered to any student as needed.

I. Catalog Description

This course builds on a first level course in Python exposing students to more advanced topics and applications to industry. Topics cover object-oriented programming, creating classes and using objects, web applications, and some common libraries and their functions used for data manipulation. Students may use either a PC (Windows) or a Mac (Linux) to complete their programming assignments.

II. Examples of Appropriate Text or Other Required Reading:

(include all publication dates; for transferable courses at least one text should have been published within the last 7 years)

1. Python for Data Analysis, 2nd, Wes McKinney, O'rielly © 2018, ISBN: 978-1491957660
2. Python Programming: 2 Books in 1: Python For Beginners & Machine Learning, Kevin Cooper, Kindle © 2020

III. Course Objectives

Upon completion of this course, the student will be able to:

1. Use the different Python data structures to construct data manipulation applications.
2. Import libraries and use their various functions to handle large sets of data as an application to different industries.
3. Model different interaction mediums that integrate Python applications to deliver results on web and desktops.

IV. Methods of Presentation:

Lecture and Discussion, Lab, Critique, Projects

V. Course Content

<u>% of Course</u>	<u>Topic</u>
20.000%	Review lists, tuples and dictionaries.
25.000%	Basics of Object-Oriented Programming
10.000%	Creating classes and using objects
10.000%	Using different structures to hold and manipulate data
25.000%	Using different libraries and their functions, and applying them to different applications.
10.000%	Applications of data manipulation techniques
100.000%	Total

VI. Methods of Evaluation

<u>% of Course</u>	<u>Topic</u>
5%	Class Participation
25%	Exams/Tests
25%	Final exam
25%	Other: Programming assignments and projects
20%	Quizzes
100%	Total

VII. Sample Assignments:

Assignment 4: Design and write code to implement the tic-tac-toe by creating the board, players and the rules using classes and objects.

Assignment 8: Write code to implement a password hashing technique then show its use when logging into a website.

VIII. Student Learning Outcomes:

1. Using the different data structures of Python, students will build applications to test and analyze data.
2. Using the different functions, and libraries of Python, students will manipulate large sets of data in applications to different industries.

Prerequisite Checklist and Worksheet: CS 87B
Prerequisite: CS 87A

SECTION 1 - CONTENT REVIEW: If any criterion is not met, the prerequisite will be disallowed.

Criterion	Met	Not Met
1. Faculty with appropriate expertise have been involved in the determination of the prerequisite, corequisite or advisory.	X	
2. The department in which the course is (will be) taught has considered course objectives in accordance with accreditation standards.	X	
3. Selection of this prerequisite, corequisite or advisory is based on tests, the type and number of examinations, and grading criteria.	X	
4. Selection of this prerequisite, corequisite or advisory is based on a detailed course syllabus and outline of record, related instructional materials and course format.	X	
5. The body of knowledge and/or skills which are necessary for success before and/or concurrent with enrollment have been specified in writing.	X	
6. The course materials presented in this prerequisite or corequisite have been reviewed and determined to teach knowledge or skills needed for success in the course requiring this prerequisite.	X	
7. The body of knowledge and/or skills necessary for success in the course have been matched with the knowledge and skills developed by the prerequisite, corequisite or advisory.	X	
8. The body of knowledge and/or skills taught in the prerequisite are not an instructional unit of the course requiring the prerequisite.	X	
9. Written documentation that steps 1 to 8 above have been taken is readily available in departmental files.	X	

SECTION II - ADDITIONAL LEVEL OF SCRUTINY:

X Type 2: Sequential within and across disciplines (e.g., Physics 7, 8, 9, ...)
Complete the Prerequisite Worksheet

ENTRANCE SKILLS FOR CS 87B

(What the student needs to be able to do or understand BEFORE entering the course in order to be successful)

A)	Apply Python syntax when writing code
B)	Create applications using Python
C)	Write code and debug programs written in Python

EXIT SKILLS (objectives) FOR CS 87A

(What the student has the demonstrated ability to do or understand AFTER successful completion of this course)

1.	Apply Python syntax when writing code
2.	Create applications using Python
3.	Write code and debug programs written in Python

	ENTRANCE SKILLS FOR (XXX)							
	A	B	C	D	E	F	G	H
1	X							
2		X						
3			X					
4								
5								
6								
7								
8								

Substantial Change: ETHNIC STUDIES 6, Introduction to Chicana/o/x and Latina/o/x Studies

Units:	3.00
Total Instructional Hours (usually 18 per unit):	54.00
Hours per week (full semester equivalent) in Lecture:	3.00
In-Class Lab:	0.00
Arranged:	0.00
Outside-of-Class Hours:	108.00
Transferability:	Transfers to UC, CSU
Cal-GETC Area:	4: Social and Behavioral Sciences 6: Ethnic Studies (pending)
IGETC Area:	4: Social and Behavioral Sciences
CSU GE Area:	D: Social, Political, and Economic Institutions and Behavior, Historical
SMC GE Area:	II-B: Social Science (Group B)
Degree Applicability:	Credit - Degree Applicable
Proposed Start:	Fall 2025

Rationale

This course will be joining the already existing general introduction the discipline of Ethnic Studies, ETH ST 1. Many students entering the discipline will likely end up in a four-year program that will be focused on one of the four core groups of Ethnic Studies. The Chicana/o/x and Latina/o/x Studies will allow these students to better prepare for that line of study at their transfer institution. For the general SMC population, students will have the option to further specify their focus if desired in the process of meeting Area F and other graduation requirements in Ethnic Studies. This course will also give students a unique framework to employ in other Chicana/o/x and Latina/o/x-focused courses in History, English, Art History, and other disciplines.

I. Catalog Description

This introductory-level course explores historical and contemporary Chicana/o/x and Latina/o/x political, social, and cultural practices and experiences in the United States. This course examines the foundations and theories of Chicana/o/x and Latina/o/x Studies and contemporary approaches to studying Chicana/o/x and Latina/o/x communities. Course topics include history, social movements, politics, community, art, spirituality, cultural production, intersectional identity formation, gender, sexuality, class, family, social justice, agency, and self-affirmation. Moreover, the course critically analyzes race and ethnicity, racialization, equity, ethnocentrism, Eurocentrism, and white supremacy.

II. Examples of Appropriate Text or Other Required Reading:

(include all publication dates; for transferable courses at least one text should have been published within the last 7 years)

1. Chicanos, Latinos AND Cultural Diversity: An Anthology, Dionne Espinoza, Lionel Maldonado, Ester Hernandez, Richard Rodriguez, Kendall Hunt Publishing © 2004, ISBN: 978-0757511288
2. Bridging Cultures: An Introduction to Chicano/Latino Studies, Mario T. Garcia, Kendall Hunt Publishing © 2000, ISBN: 978-0787270773
3. Introduction to Chicana and Chicano Studies, Msu Denver Chicana/O Studies Department , Kendall Hunt Publishing © 2018, ISBN: 978-1524984793
4. The New Latino Studies Reader: A Twenty-First Century Perspective, Ramon Gutierrez and Tomás Almaguer, Univ. of California © 2016, ISBN: 978-0520284845
5. Inventing Latinos: A New Story of American Racism, Laura E. Gómez, The New Press © 2020, ISBN: 978-1595589170
6. Major Problems in Latina/o History, Omar S. Valerio-Jimenez and Carmen Teresa Whalen, Cengage Learning © 2014, ISBN: 978-1111353773
7. Borderlands/La Frontera: The New Mestiza, 4th, Gloria Anzaldúa, Aunte Lute © 2012, ISBN: 978-1879960855
8. Harvest of Empire: A History of Latinos in America, 2nd, Juan Gonzalez, Penguin Random House © 2022, ISBN: 9780143137436
9. Voices from the Ancestors: Xicanx and Latinx Spiritual Expressions and Healing Practices, Lara Medina and Martha R. Gonzalez, Univ. of Arizona © 2019, ISBN: 978-0816539567
10. The Norton Anthology of Latino Literature (College Edition), Ilan Stavans, Edna Acosta-Belén, Harold Augenbraum, María Herrera-Sobek, Rolando Hinojosa and Gustavo Pérez Firma, W. W. Norton © 2011, ISBN: 978-0393975321

11. Intersectional Chicana Feminisms: Sitios y Lenguas, Aída Hurtado, Univ. of Arizona © 2020, ISBN: 978-0816537617;
12. Hombres Y Machos: Masculinity and Latino Culture, Alfredo Mirande, Routledge © 2019, ISBN: 978-0367316099
13. Chicana and Chicano Art: ProtestArte, Carlos Francisco Jackson, Univ. of Arizona © 2009, ISBN: 978-0816526475
14. U.S. Central Americans: Reconstructing Memories, Struggles, and Communities of Resistance, Karina Oliva Alvarado, Alicia Ivonne Estrada and Ester E. Hernández, Univ. of Arizona © 2017, ISBN: 978-0816534067
15. Latino Politics, 3rd, Lisa Garcia Bedolla and Christian Hosam, Polity © 2021, ISBN: 978-1509537747
16. Queer Brown Voices: Personal Narratives of Latina/o LGBT Activism, Uriel Quesada, Leticia Gomez, and Salvador Vidal-Ortiz, Univ. of Texas © 2015, ISBN: 978-1477307304
17. South Central Dreams: Finding Home and Building Community in South L.A., Pierrette Hondagneu-Sotelo, NYU Press © 2021, ISBN: 978-1479807970
18. We Are Not Dreamers: Undocumented Scholars Theorize Undocumented Life in the United States, Leisy J. Abrego and Genevieve Negrón-Gonzales, Duke UP © 2020, ISBN: 978-1478010838
19. The Latino Threat: Constructing Immigrants, Citizens, and the Nation, 2nd, Leo Chavez, Stanford UP © 2013, ISBN: 978-0804783521
20. City of Inmates: Conquest, Rebellion, and the Rise of Human Caging in Los Angeles, 1771-1965, Kelly Lytle Hernández, Univ. of North Carolina Press © 2020, ISBN: 978-1469659190
21. Articles, periodicals, scholarly, online publications, and OER materials, Various, Various © 2022

III. Course Objectives

Upon completion of this course, the student will be able to:

1. Analyze and articulate concepts such as race and racism, racialization, ethnicity, equity, ethno-centrism, eurocentrism, white supremacy, self-determination, liberation, decolonization, sovereignty, imperialism, settler colonialism, and anti-racism in relationship to Chicana/o/x and Latina/o/x peoples.
2. Apply theory and knowledge produced by Chicana/o/x/e and Latina/o/x communities to describe the critical events, histories, cultures, cultural production, intellectual traditions, contributions, lived -experiences and social struggles of those groups with a particular emphasis on agency and self-affirmation.
3. Critically analyze the intersection of race and racism as they relate to class, gender, sexuality, religion, spirituality, national origin, immigration status, ability, language, and/or age in Chicana/o/x and Latina/o/x communities.
4. Explain and assess how struggle, resistance, racial and social justice, solidarity, and liberation, as experienced, enacted, and studied by Chicana/o/x/s and Latina/o/x/s, are relevant to current and structural issues such as communal, national, international, and transnational politics as, for example, in immigration, settler colonialism, multiculturalism, and language policies.
5. Describe and actively engage with anti-racist and anti-colonial issues and the practices and movements in Chicana/o/x and Latina/o/x communities to build a just and equitable society.

IV. Methods of Presentation:

Distance Education, Lecture and Discussion, Discussion, Critique, Projects, Visiting Lecturers, Group Work

V. Course Content

<u>% of Course</u>	<u>Topic</u>
20.000%	<p>Introduction to Chicana/o/x and Latina/o/x Studies</p> <ol style="list-style-type: none"> 1. History of the discipline and specific terminology 2. Key framework and concepts such as <i>Latinidades</i>, Race and Racialization, Ethnicity, Intersectionality, Settler Colonialism, Hegemony, Imperialism, White Supremacy, Racial Capitalism, Assimilation/Acculturation, - Modes of Oppression and Resistance, Decolonization, Sovereignty,- 3. Heterogeneity of the Latina/o/x population in the U.S. <ol style="list-style-type: none"> i. Mexicans/Chicana/o/x/es. ii. Cubans. iii. Puerto Ricans/Boriquas. iv. Dominicans. v. Central Americans. vi. South Americans.

	4. Comparative U.S. and Latin American racial categories and hierarchies 4.
20.000%	Historical Background 1. Indigeneity and precolonial roots 2. Legacies of manifest destiny, conquest, colonization, industrialization, and imperialism. 3. U.S.-Latin American relations. 4. Migration, immigration, and nativism. 5. Diasporas and community formation 6. Labor movements, feminisms, and social justice struggles
20.000%	Chicana/o/x and Latina/o/x Ethnic, Racial, and Intersectional Identity Development 1. The “borderlands” and transnationalism. 2. Heteropatriarchy and “la familia” 3. Religiosity and spirituality. 4. Gender and sexuality 5. Intra-racial and inter-racial relations
20.000%	Chicana/o/x-and Latina/o/x Cultural Expressions and Productions (Discuss works of fiction, poetry, theater, film, memoir, painting, performance art, music, and cultural criticism by artists and thinkers of varied backgrounds and time periods with an emphasis on the twentieth and twenty-first century) 1. Expressions in literature. 2. Expressions in theater, performance, and dance. 3. Musical expressions. 4. Expressions in Visual Art (murals, paintings, sculpture) 5. Media, Film, and Popular Culture (print media, social media, television, novelas, Latina/o/x representations in small/big screens & Hollywood, commercials, advertisement, etc.)
20.000%	Contemporary, Socio-Economic Profiles and Agency 1. Immigration, Education, Language, and Other Socio-Economic Demographic Patterns. 2. Self-Determination: Identification and analysis of power structures where significant inequities exist based on prior analysis of intersectionality such as structures within housing, healthcare, education, labor, media, civil rights, criminal justice, and government. 3. Chicana/o/x-& Latina/o/x Futurism: Student-guided research aimed at possible reimaginations of more equitable futures within and without these power dynamics and structures.
100.000%	Total

VI. Methods of Evaluation

<u>% of Course</u>	<u>Topic</u>
25%	Written assignments
15%	Research Projects
15%	Other: Journals
15%	Group Projects
20%	Exams/Tests
10%	Class Work: Discussions, Peer Reviews, Interactive Assignments
100%	Total

VII. Sample Assignments:

Research/Group Project: In small groups, engage in group-led research and application of major concepts and frameworks to identify a particular area where significant racial/intersectional inequities exist in a contemporary setting (i.e. healthcare, criminal justice, education, etc.). After narrowing down the general area of focus to a specific element within it (i.e. childbirth/infant mortality, cash bail system, equity/success rates), the group will be responsible for creating a project and presentation that engages in a reimagination of the structures and power dynamics that have led to the inequities, forming an informative and solution-based plan or proposal. Along with the presentation, final products might be interactive/mixed media, digital, and/or formal essay to bring together the research and analysis.

Short Writing Exercise: Reflect on the experiences of Chicana/o/x and Latina/o/x communities and discuss how race and racism intersect class, gender, sexuality, religion, spirituality, national origin, immigration status, ability, language, and/or age. Students should also explain how these intersections influence the group's resistance efforts.

Short Writing Exercise: You will be assigned a concept from the assigned reading and they will apply the concept to the experiences of Chicana/o/x and Latina/o/x peoples. Analyze and explain the ways in which the concept does and does not apply to Chicana/o/xs and Latina/o/xs. Determine the ways the concept might both help and hinder the understanding of the Chicana/o/xs and Latina/o/xs from both inside and outside the ethnic/racial group.

Small Group and Class Discussion: You will review and practice analyzing the concept (1) race and (2) ethnicity in relation to Chicana/o/xs and Latina/o/xs with the goal of clarifying the difference between the two concepts. In a small group discussion, apply both concepts to Chicana/o/x and Latina/o/x populations to distinguish five characteristics of race and five characteristics of ethnicity. Share the characteristics for each concept with the class for additional input and analysis.

VIII. Student Learning Outcomes:

1. Describe core concepts of Chicana/o/x and Latina/o/x studies, including but not limited to race and ethnicity, racialization, intersectionality, colonialism, hegemony, imperialism, white supremacy, feminisms, modes of oppression and resistance
2. Apply theory to describe critical events in the histories, cultures, and intellectual traditions of Chicana/o and Latina/o/peoples with a particular emphasis on agency and self-affirmation
3. Examine the intersections of race and ethnicity with other forms of difference affected by hierarchy and oppression, such as class, gender, sexuality, religion, spirituality, national origin, immigration status, ability, and/or age
4. Examine and evaluate the historical forces and issues that led to the creation of Chicana/o/x and Latina/o/x American Studies
5. Analyze diverse resistance, social justice, and liberation struggles as experienced by Chicana/o/x and Latina/o/x American peoples and their ongoing relevance to current issues (communal, national, and global).
6. Demonstrate active engagement with issues of race and ethnicity to build diverse, just, and equitable communities beyond the classroom

Substantial Change: ETHNIC STUDIES 7, Introduction to African American and Black Studies

Units:	3.00
Total Instructional Hours (usually 18 per unit):	54.00
Hours per week (full semester equivalent) in Lecture:	3.00
In-Class Lab:	0.00
Arranged:	0.00
Outside-of-Class Hours:	108.00
Transferability:	Transfers to UC, CSU
Cal-GETC Area:	4: Social and Behavioral Sciences 6: Ethnic Studies (pending)
IGETC Area:	4: Social and Behavioral Sciences
CSU GE Area:	D: Social, Political, and Economic Institutions and Behavior, Historical
SMC GE Area:	II-B: Social Science (Group B)
Degree Applicability:	Credit - Degree Applicable
Proposed Start:	Fall 2025

Rationale

This course will be joining the already existing general introduction to the discipline of Ethnic Studies, ETH ST 1. Many students entering the discipline will likely end up in a four-year program focused on one of the four core Ethnic Studies groups. The Introduction to African American Studies will allow these students to better prepare for that line of study at their transfer institution. For the general SMC population, students will have the option to further specify their focus if desired in the process of meeting Area F and other graduation requirements in Ethnic Studies. This course will also give students a unique framework to employ in other African American focused courses in History, English, Art History, and other disciplines.

I. Catalog Description

This course introduces students to the field of African American and Black studies. As a survey course, it traces the historical and current social conditions and contributions of Black and African-descended people in the U.S. It provides broad and interdisciplinary perspectives, examining and exploring significant figures, ideas, issues, and methodologies central to understanding the African American experience. Course topics include history, social movements, politics, community, art, spirituality, cultural production, intersectional identity formation, gender, sexuality, class, family, social justice, agency, and self-affirmation. Moreover, the course critically analyzes race and ethnicity, racialization, equity, ethnocentrism, Eurocentrism, and white supremacy. Students will develop critical tools, frameworks, and vocabulary for further study in the field.

II. Examples of Appropriate Text or Other Required Reading:

(include all publication dates; for transferable courses at least one text should have been published within the last 7 years)

1. Introduction to Black Studies, 4th, Karenga, Maulana, University of Sankore Press © 2024
2. The Color of Law: A Forgotten History of How Our Government Segregated America, Rothstein, Richard, Liveright Press © 2017
3. Introduction to African American Studies: A Critical Reader, Gooding, Frederick, Kendall Hunt Publishing © 2016
4. White Money/Black Power: The Surprising History of African American Studies and the Crisis of Race in Higher Education, Rooks, Noliwe, Beacon Press © 2007
5. OER Texts and Materials Scholarly Articles

III. Course Objectives

Upon completion of this course, the student will be able to:

1. Examine the origins of African American Studies as an academic discipline.
2. Analyze and apply concepts, theories, and frameworks of the discipline such as Diaspora, Afrocentricity, worldview, signifyin', Black Marxism, Black Feminist Thought, Womanism, Africana Womanism, Afrosurrealism, Afropessimism, Black Liberation Theology, multiculturalism, Afrofuturism, ethnocentrism, eurocentrism, white supremacy, agency, liberation, and anti-racism.
3. Investigate the significance of African traditions, values, beliefs, and histories as they relate to members of the Diaspora living within the United States.
4. Recognize the conceptual framework of Afrocentricity as a critique of the historic Eurocentric pedagogical approaches to learning within the United States educational system.

5. Acknowledge and appreciate the social, cultural, and political significance of Black and/or African American people, living in the United States, have made on society.
6. Critically analyze the intersections of Black identities as they relate to class, gender, sexuality, religion, spirituality, national origin, immigration status, ability, sovereignty, language, and/or age in African American and Black communities.
7. Explain and assess how struggle, resistance, racial and social justice, solidarity, and liberation, as experienced, enacted, and studied by African Americans are relevant to current and structural issues such as communal, national, international, and transnational politics as, for example, in immigration, reparations, settler colonialism, multiculturalism, and language policies.
8. Describe and actively engage with anti-racist, decolonial and liberatory issues and the practices and movements in Africana communities to build a just and equitable society.

IV. Methods of Presentation:

Lecture and Discussion, Group Work, Service Learning, Distance Education, Discussion, Projects, Other (Specify), Visiting Lecturers, Online instructor-provided resources
 Other Methods: Collaborative Learning Activities; Multi-Media

V. Course Content

<u>% of Course</u>	<u>Topic</u>
15.000%	Introduction to key concepts within African American Studies: •The early movement for Black studies (Arturo Schomburg, Carter G. Woodson) •the Black studies movement 1960s-1970s •interdisciplinary aspects of Black Studies (philosophy, anthropology, literature, history etc). •prescriptive/liberatory thrust •Africana Critical Theory • Intersectionality & Black Feminist Thought • Critical Race Theory • Afrocentricity • Afrofuturism • Afropeppermism •Black Marxism •Afro-surrealism
10.000%	External and Internal Constructions of Black Identity: •Racial formations • The Social Construction of Race •African cultures • Trans-Atlantic Slave trade •Diaspora • Enslaved communities: Central and South America, Caribbean, and United States • Free Black communities • Abolition, Civil War and Jim Crow • Black Codes • Significance of African traditions, values, beliefs, and histories as it relate to members of the Diaspora living within the United States: impact of the Ma'afa on identity and cultural formations •Language and communication (call and response, African American Vernacular English) •epistemology of folklore •impact on religious and spiritual traditions (Christianity, Islam, Vodou, Hoodooz
20.000%	Navigating Space & Place & White Supremacy: •Creation of the "Black community" •Great Migration •Redlining & Housing Segregation • White Flight • Racial Wealth Gap •Social Determinants of Health •Food deserts • Persistence of School Segregation • Urban Renewal/Gentrification •Mass Incarceration & the Prison Industrial Complex
20.000%	Resistance & Black Social Movements: Abolitionist Movement • Pan Africanism and Black Nationalists • Civil Rights Movement • Black Women's Movements • Black Power • Black Studies Movement • Black is Beautiful movement • Black Lives Matter • Reparations
10.000%	African American Cultural Production: Music (e.g., enslaved working songs to jazz and rap, etc.) • Literature (e.g., Langston Hughes, James Baldwin, Ralph Ellison, Toni Morrison, Zora Neale Hurston, etc.) • Religion & Spirituality (e.g., Muslim, Hoodoo, Vodou, Baptist, Methodist, etc.) • Film and TV (e.g., LA Film Rebellion, Afrosurrealist Movements, Blacksploitation Era, etc.) •Art (e.g., Gordon Parks, Jacob Lawrence, Betye Saar, Basquiat, Kara Walker, etc.) • Sports (e.g., Jackie Robinson, Arthur Ashe, Magic Johnson, Simone Biles, Serena Williams, Colin Kaepernick, etc.) • Politicians (e.g., Robert Smalls, Shirley Chisholm, Barack Obama, etc.)
15.000%	Abolitionist Movement • Pan Africanism and Black Nationalists • Civil Rights Movement • Black Women's Club Movements • Black Power • Black Studies Movement •The Buy Black Movement •Black is Beautiful movement • Black Lives Matter • Reparations
10.000%	Contemporary Conversation in Black Studies:

	Colorism • Code-switching • Criminal justice and police brutality • Healthcare disparities • Redefining Blackness • Social Media & Black Online Spaces • Politics of Respectability • Patriarchy & Gender Roles • Black Capitalism?? • Cultural Appropriation • Stereotypes: race, class, gender
100.000%	Total

VI. **Methods of Evaluation**

<u>% of Course</u>	<u>Topic</u>
15%	Group Projects
15%	Research Projects
15%	Other: Journals
20%	Exams/Tests
10%	Class Work
25%	Written assignments
100%	Total

VII. **Sample Assignments:**

Group Discussion: Students will create discussion questions based on assigned materials that will be used during group discussions in-class.

Short Writing Exercise: Students will use theoretical frameworks such as Afrocentricity, Womanism, and Afrofuturism, to critically analyze a piece of media (e.g., a TV show, podcast episode, social media post). The goal is to assess how African American and Black people are represented in the media and to evaluate how these representations may influence societal expectations of Black and African American communities.

Research Group Project: In small groups, engage in group-led research and application of major concepts and frameworks to identify a particular area where significant racial/intersectional inequities exist in a contemporary setting (i.e. healthcare, criminal justice, education, etc.). After narrowing down the general area of focus to a specific element within it (i.e. childbirth/infant mortality, cash bail system, equity/success rates), the group will be responsible for creating a project and presentation that engages in a reimagination of the structures and power dynamics that have led to the inequities, forming an informative and solution-based plan or proposal. Along with the presentation, final products might be interactive/mixed media, digital, and/or formal essay to bring together the research and analysis.

VIII. **Student Learning Outcomes:**

1. Examine and evaluate the historical forces and issues that led to the creation of African American Studies.
2. Apply theories to describe critical events in the histories, cultures, and intellectual traditions, focusing on the lived experiences and social struggles of African American and Black communities that emphasize agency and self-affirmation.
3. Examine the intersections of social constructions like race, class, gender, and sexual orientation as it relates to the Black and/or African American experience.
4. Analyze diverse resistance, social justice, and liberation strategies across African American and Black communities in the United States and their ongoing relevance to contemporary communal, national, and global issues.
5. Demonstrate active engagement with issues of race and ethnicity to build diverse, just, and equitable communities beyond the classroom.

Substantial Change: ETHNIC STUDIES 8, Introduction to Asian American Studies

Units:	3.00
Total Instructional Hours (usually 18 per unit):	54.00
Hours per week (full semester equivalent) in Lecture:	3.00
In-Class Lab:	0.00
Arranged:	0.00
Outside-of-Class Hours:	108.00
Transferability:	Transfers to UC, CSU
Cal-GETC Area:	4: Social and Behavioral Sciences 6: Ethnic Studies (pending)
IGETC Area:	4: Social and Behavioral Sciences
CSU GE Area:	D: Social, Political, and Economic Institutions and Behavior, Historical
SMC GE Area:	II-B: Social Science (Group B
Degree Applicability:	Credit - Degree Applicable
Proposed Start:	Fall 2025

Rationale

This course is proposed to round out the core offerings for SMC's emergent Ethnic Studies (hereafter "ES") program. Like its cognates ES 6, ES 7, and eventually ES 9: Introduction to Native American Studies, ES 8 offers an introductory course to one of the four subfields of ES, Asian American Studies. It is distinct from other classes that center Asian Americans, for instance HIST 62: History of Asian Americans, in that it is structured according to the theories, epistemologies, and discipline at large of ES. Like HIST 62, it will become one of the very few courses at SMC that speaks to the experience of Asian American students, some 9% of our student population. As with other ES courses, it is constructed in a way that it will be accessible to all in the wider community.

I. Catalog Description

This course introduces students to the interdisciplinary field of Asian American Studies. It examines the foundation, theories and methodologies informing the study of APIDA (Asian Pacific Islander Desi American) communities. This course explores the historical and contemporary Asian American political, social, and cultural practices and experiences in the United States. Course topics include history, social movements, politics, community, art, spirituality, cultural production, transnational and transpacific considerations of race, ethnicity, im(migration), gender, sexuality, class, intersectional identity formation, gender, sexuality, class, family, social justice, and agency and self-affirmation. Moreover, the course critically analyzes race and ethnicity, equity, ethnocentrism, Eurocentrism, and white supremacy.

II. Examples of Appropriate Text or Other Required Reading:

(include all publication dates; for transferable courses at least one text should have been published within the last 7 years)

1. Voices of the Asian American and Pacific Islander Experience, Chi, Sang and Emily Moberg Robinson, Greenwood © 2012
2. Asian America, Dhingra, Pawan and Robyn Magalit Rodriguez, Polity © 2021
3. The Spirit Catches You and You Fall Down, Fadiman, Annie, Farrar, Straus, Grioux © 2012
4. Nisei Radicals: The Feminist Poetics and Transformative Ministry of Mitsuye Yamada and Michael Yasutake, Fujino, Diane, Univ. of Washington © 2020
5. The Good Immigrants: How the Yellow Peril Became the Model Minority, Hsu, Madeline Y. , Princeton © 2015
6. Our Voices, Our Histories: Asian American and Pacific Islander Women, Hune, Shirley and Gail Nomura, NY UP © 2020
7. The Loneliest Americans, Jay Caspian Kang, Crown © 2021
8. Major Problems in Asian American, 2nd, Kurashige, Lon, and Alice Yang Murray, Cengage © 2017
9. The Making of Asian America: A History, 2nd, Erika Lee, Simon and Schuster © 2021
10. Passing for Perfect: College Impostors and Other Model Minorities, Ninh, Erin Khue, Temple © 2021
11. Minor Feelings: An Asian American Reckoning, Park Hong, Cathy, One World © 2020
12. Black, Brown, Yellow, and Left Radical Activism in Los Angeles, Pulido, Lauren, UC Press © 2006
13. Straitjacket Sexualities: Unbinding Asian American Manhoods in the Movies, Shimizu, Celine, Stanford © 2012

III. Course Objectives

Upon completion of this course, the student will be able to:

1. Analyze and articulate concepts such as race and racism, racialization, ethnicity, equity, ethno-centrism, Eurocentrism, white supremacy, self-determination, liberation, decolonization, sovereignty, imperialism, settler colonialism, and anti-racism as they apply to Asian American peoples.
2. Apply theory and knowledge produced by Asian American communities to describe the critical events, histories, cultures, cultural production, intellectual traditions, contributions, identities, lived-experiences and social struggles of those groups with a particular emphasis on agency and self-affirmation.
3. Critically analyze the intersection of race and racism as they relate to class, gender, sexuality, religion, spirituality, national origin, immigration status, ability, language, and/or age in Asian American communities.
4. Explain and assess how struggle, resistance, racial and social justice, solidarity, and liberation, as experienced, enacted, and studied by Asian Americans, are relevant to current and structural issues such as communal, national, international, and transnational politics as, for example, in immigration, settler colonialism, multiculturalism, and language policies.
5. Describe and actively engage with anti-racist and anti-colonial issues and the practices and movements in Asian American communities to build a just and equitable society.

IV. Methods of Presentation:

Distance Education, Lecture and Discussion, Observation and Demonstration, Discussion, Critique, Projects, Field Trips, Visiting Lecturers, Individualized Instruction, Work Experience (internship), Service Learning, Group Work, Online instructor-provided resources

V. Course Content

<u>% of Course</u>	<u>Topic</u>
20.000%	Contemporary, Socio-Economic Profiles and Agency 1. Immigration, Education, Language, and Other Socio-Economic Demographic Patterns. 2. Self-Determination: Identification and analysis of power structures where significant inequities exist based on prior analysis of intersectionality such as structures within housing, healthcare, education, labor, media, civil rights, criminal justice, and government. 3. Student-guided research aimed at possible reimaginations of more equitable futures within and without these power dynamics and structures.
20.000%	Asian American Cultural Expressions and Productions (Discuss works of fiction, poetry, theater, film, memoir, painting, performance, music, and cultural criticism by artists and thinkers of varied backgrounds and time periods with an emphasis on the twentieth and twenty-first century) 1. Expressions in literature 2. Expressions in visual and performing arts a. theater, performance, and dance. b. Murals, paintings, sculpture 3. Musical expressions (traditional, popular music, globalization) 4. Media, Film, and Popular Culture (print media, social media, television, representations in small/big screens & Hollywood, commercials, advertisement, etc.)
20.000%	Asian American Ethnic, Racial, and Intersectional Identity and Social Institutions 1. Intra-racial and inter-racial relations a. "Pan-Asian" identity b. Multi-ethnic identity (Hapa, multiracial) c. Transpacific transnationalism 2. Religiosity and spirituality. 3. Gender and sexuality 4. Education & the Model Minority 5. Families & Communities (Shifting and emerging family structures – interracial, queer, international adoption)
20.000%	Historical Background 1. Orientalism 2. US Imperialism, trade, colonization and war 3. Postcolonial Studies 4. Migration, immigration, anti-immigrant 5. Community formation as part of global movement of culture/ capital/labor 6. Labor movements, feminisms, anti-racism, and social justice struggles

20.000%	<ol style="list-style-type: none"> 1. History of the discipline and specific terminology <ol style="list-style-type: none"> a. History of the Discipline b. Key framework and concepts such as Orientalism, Immigration, Race and Racialization, Ethnicity, Intersectionality, Settler Colonialism, imperialism, White Supremacy, Racial Capitalism, Assimilation/Acculturation, model minority, Modes of Oppression and Resistance, Decolonization, global politics and economics, critical refugee studies 2. Heterogeneity of the Asian American population in the U.S. <ol style="list-style-type: none"> a. Chinese. b. Japanese. c. Korean. d. South Asian e. Filipino. f. Vietnamese & SE Asian g. Pacific Islander
100.000%	Total

VI. Methods of Evaluation

<u>% of Course</u>	<u>Topic</u>
10%	Class Work: Discussions, Peer Reviews, Interactive Assignments
20%	Exams/Tests
15%	Group Projects
15%	Other: Journals
15%	Research Projects
25%	Written assignments
100%	Total

VII. Sample Assignments:

Small Group and Class Discussion: Students will review and analyze the concept (1) race and (2) ethnicity in relation to Asian American identity. In a small group discussion, students will apply both concepts to Asian American populations to distinguish five characteristics of race and five characteristics of ethnicity. They will share the characteristics for each concept with the class for additional input and analysis.

Short Writing Exercise: Students will be given a question about how a concept/analytic theme does or does not apply to APIDA peoples/communities. Students will formulate an answer by drawing evidence from assigned readings and class sessions as well as determine how the concept/theme helps them understand APIDA experience.

Short Writing Exercise: Reflect on the experiences of Asian American communities and discuss how race and racism intersect class, gender, sexuality, religion, spirituality, national origin, immigration status, ability, language, and/or age. Students should also explain how these intersections influence the group's resistance efforts.

Research/Group Project: In small groups, students will identify an issue impacting the Asian American community (i.e. education, healthcare, immigration, etc). They will then focus on a specific aspect within the issue (i.e. affirmative action, suicide rates, etc). The group will create a project that shows how structural, cultural, and economic factors created the issue. Finally, students will develop a plan, proposal or project that engages APIDA community resources to address the issue. Along with the presentation, final products might include interactive/mixed media, digital, and/or formal essay to bring together the research and analysis.

VIII. Student Learning Outcomes:

1. Describe core concepts of Asian American Studies, including but not limited to race and ethnicity, racialization, intersectionality, colonialism, hegemony, imperialism, white supremacy, feminisms, modes of oppression and resistance.
2. Apply theory to describe critical events in the histories, cultures, and intellectual traditions of Asian American peoples (APIDA) with a particular emphasis on agency and self-affirmation.

3. Examine the intersections of social constructions like race, class, gender, sexual orientation, religion, national origin, and immigration status, as it relates to the Asian American (APIA) communities.
4. Examine and evaluate the historical forces and issues that led to the creation of Asian American Studies.
5. Analyze diverse resistance, social justice, and liberation struggles as experienced by Asian American (APIA) peoples and their ongoing relevance to current issues (communal, national, and global).
6. Demonstrate active engagement with issues of race and ethnicity to build diverse, just, and equitable communities beyond the classroom.

Substantial Change: INTERACTION DESIGN 310, Interaction Design Studio 1

Units:	3.00
Total Instructional Hours (usually 18 per unit):	90.00
Hours per week (full semester equivalent) in Lecture:	2.00
In-Class Lab:	1.00
Arranged:	2.00
Outside-of-Class Hours:	72.00
Transferability:	None
Degree Applicability:	Credit - Degree Applicable
Prerequisite:	Admission to the Bachelor of Science in Interaction Design
Proposed Start:	Fall 2025

Rationale

The course is proposed as a part of the program-wide update of the curriculum for the Bachelor's Degree in Interaction Design at Santa Monica College.

I. Catalog Description

The course serves as an introduction to the methods and principles of Interaction Design. It is structured around project-based learning, emphasizing diverse approaches to tackling design challenges. The primary focus is on leveraging the iterative design process to identify human behaviors and using technology interventions to influence those behaviors. In addition to ideation and problem-solving methods, this class will also use research and rapid prototyping techniques to ensure the proposed interventions resonate with users and project stakeholders.

II. Examples of Appropriate Text or Other Required Reading:

(include all publication dates; for transferable courses at least one text should have been published within the last 7 years)

1. Universal Principles of UX: 100 Timeless Strategies to Create Positive Interactions between People and Technology, 4th, Pereyra, Irene, Rockport Publishers © 2023, ISBN: 978-0760378045
2. Interaction Design: Beyond Human-Computer Interaction, 6th, Yvonne Rogers (Author), Helen Sharp (Author), Jennifer Preece (Author), Wiley © 2023, ISBN: 978-1119901099

III. Course Objectives

Upon completion of this course, the student will be able to:

1. Explore graphic design, UX design, and human-centered design principles to design effective user experiences.
2. Assess the quality of a design using human-centered design principles.
3. Demonstrate how human-centered design principles and screen-based interaction design patterns can be designed to create a user interface in support of a user's needs, goals, and desires.
4. Contribute to class brainstorm, discussions, and critiques.
5. Demonstrate competency with deadline driven assignments in team settings.
6. Create visual techniques to effectively organize and articulate user experience (UX) processes for a range of audiences.
7. Employ user testing and iterative design methodologies to develop interface concepts that explore, compare, and contrast how to best meet a user's needs.
8. Produce and give presentations that clearly communicate to a range of audiences.

IIIb. Arranged Hours Objectives:

Upon completion of this course, the student will be able to:

1. Students will demonstrate an understanding of how to leverage the iterative design process and the power of using rapid prototyping to approach diverse design challenges.

IV. Methods of Presentation:

Group Work, Lecture and Discussion, Projects, Critique, Field Experience, Observation and Demonstration, Discussion

IVb. Arranged Hours Instructional Activities:

Online instructor-provided resources; Other Methods: Build skill set through video materials and instructor online resources.

V. **Course Content**

<u>% of Course</u>	<u>Topic</u>
30.000%	Apply human-centered design principles in project-based assignments.
30.000%	Analyze and critique interaction design based on human-centered design principles.
40.000%	Presentations, critiques, and in-class discussion of examples, assignments, and projects.
100.000%	Total

Vb. **Lab Content**

<u>% of Course</u>	<u>Topic</u>
50.00%	Critiques
50.00%	Team Exercises
100.00%	Total

VI. **Methods of Evaluation**

<u>% of Course</u>	<u>Topic</u>
10%	Class Participation: Participation in discussions, workshops, and in-class activities.
40%	Homework: Design and Research Assignments - no single assignment shall be more than 30%.
10%	Oral Presentation
20%	Projects: Midterm Project
20%	Final Project
100%	Total

VII. **Sample Assignments:**

Design Brief: Mobility Challenge: How might we create an interactive system that solves a transportation and mobility issue in Los Angeles? Most of us have experienced transportation and mobility issues in the city such as terrible parking kiosk interfaces, limited parking spaces, and difficulty navigating public transportation. Working in teams, the challenge is to create an interactive system that solves transportation and mobility issues within a city center. It must be based on research, and where you find an example of a system that suffers from a severe design issue that your team will help solve. This project should build upon your understanding of different platforms, user experience, design, and emerging technologies to solve real-world problems in the context of serving particular demographics and audiences. This project needs a strong, focused concept as well as thoughtful design and must address an entire system “end to end” (from the beginning of the experience to the end). And, It is not only about technology. It is about creating experiences and interactions that will solve, serve, and even delight people in a sustaining manner.

Research one human-centered design principle: Using historical and contemporary user interface examples, find 5 interfaces that follow the chosen principle and 5 interfaces that do not. Create a presentation for your fellow classmates that introduces the principle, what is it, and the user interfaces selected. Give an overview of each user interface, how it used or did not use the principle appropriately. For each of the 5 that did not utilize the principle, provide your opinion on how it could be improved.

VIII. **Student Learning Outcomes:**

1. Communicate their design brief response to relevant stakeholders through presentations and written documentation, based on clarity, persuasiveness, and audience engagement.

2. Demonstrate an understanding of human-centered design principles and iterative design processes.
3. Design, analyze, and evaluate technological interventions to influence human behaviors using human-centered design principles.

Substantial Change: INTERACTION DESIGN 330, Interaction Design Studio 2

Units:	3.00
Total Instructional Hours (usually 18 per unit):	90.00
Hours per week (full semester equivalent) in Lecture:	2.00
In-Class Lab:	1.00
Arranged:	2.00
Outside-of-Class Hours:	72.00
Transferability:	None
Degree Applicability:	Credit - Degree Applicable
Prerequisite:	Admission to the Bachelor of Science in Interaction Design
Proposed Start:	Fall 2025

Rationale

The course is proposed as a part of the program-wide update of the curriculum for the Bachelor's Degree in Interaction Design at Santa Monica College.

I. Catalog Description

This course focuses on principles, approaches, and methods for designing user interfaces. Building on the outcomes of Interaction Design Studio 1, the course prepares students to engage with a range of topics relevant to UI design, from information architecture to microinteraction. In the studio course, students will learn research, ideation, diagramming, and prototyping methods employed in interface design. Students learn to design for a wide range of devices, from wearable to screen-based to mixed reality. Students will analyze existing approaches to UI design and develop a critical understanding of how the interface affects user behavior and system performance.

II. Examples of Appropriate Text or Other Required Reading:

(include all publication dates; for transferable courses at least one text should have been published within the last 7 years)

1. Practical UI Patterns for Design Systems, Diana MacDonald, Apress © 2019, ISBN: 978-1484249376

III. Course Objectives

Upon completion of this course, the student will be able to:

1. Demonstrate a thorough understanding of components, methods and approaches of designing user interfaces.
2. Analyze systems and their components, and propose information architecture solutions based on their analysis.
3. Create appropriate artifacts (diagrams, descriptions, illustrations and digital prototypes) outlining information architecture for a design system
4. Analyze requirements for interfaces design based on efficiency, effectiveness and task completion.
5. Create interactive digital prototypes demonstrating their user interface designs.
6. Analyze a design brief and select the most appropriate method of responding to it.
7. Contribute to design critiques and discussions.
8. Create and deliver presentations that communicate their intent and accomplishments within the scope of a design project.

IIIb. Arranged Hours Objectives:

Upon completion of this course, the student will be able to:

1. Demonstrate an understanding of how to user-test a specific feature interaction.

IV. Methods of Presentation:

Lecture and Discussion, Projects, Critique, Group Work, Lab, Observation and Demonstration

IVb. Arranged Hours Instructional Activities:

Online instructor-provided resources; Other Methods: Build skill set in user testing for a specific interaction through video materials and instructor online resources.

V. Course Content

<u>% of Course</u>	<u>Topic</u>
10.000%	Presentations and critiques of assignments and projects.

25.000%	System audit and analysis, information architecture
25.000%	Microinteractions and task-flow analysis
25.000%	Diagramming and prototyping
15.000%	User testing and analysis
100.000%	Total

Vb. **Lab Content**

<u>% of Course</u>	<u>Topic</u>
50.00%	Critiques
50.00%	Team Exercises
100.00%	Total

VI. **Methods of Evaluation**

<u>% of Course</u>	<u>Topic</u>
20%	Class Participation: Participation in discussions, workshops, and in-class activities.
30%	Class Work
20%	Projects: Midterm project
30%	Final Project
100%	Total

VII. **Sample Assignments:**

Assignment 1: Design a task execution on a smartwatch platform with the primary focus on microinteractions. Start by selecting one of the tasks from the provided list or pick another common task that is facilitated by a smartwatch. Use Figma to create the prototype of your microinteraction. You can choose either watchOS or WearOS. Your interaction has to comply with the design guidelines for the selected platform. After you have finished your prototype you will need to create a documentation page for your designs, outlining the main functionality and design decisions, your design process and the final result.

Assignment 2: Redesign the interactions users have with desktop email clients (e.g Outlook, Apple Mail, Windows Mail). Focus our attention on the ability or microinteractions to make digital chores easier, simpler, more enjoyable and less noticeable, and the power of the well-designed user interface to move the task to the periphery, and to bring forward the delight of being able to communicate instantly across the globe. Identify 1 task that you will focus on in this project - it can be organization, composition, or contact and relationship management, or any other tasks of your choice. Within it identify 3 microinteractions that would make up the core of your proposed user interface. Draw flowchart diagrams for each one of them to outline your proposed computer-user interaction for each one. Research the technologies you will need and the methods of how they can be applied to make your proposals a reality. Create an interactive digital prototype showcasing your designs. Create a page on your design blog for this project and post the resulting materials on it.

VIII. **Student Learning Outcomes:**

1. Create interactive prototypes for user interfaces using methodologies and tools appropriate to the design brief.
2. Analyze existing user interfaces and identify their components, purposes and design models, and evaluate their effectiveness for a given design brief.
3. Communicate their response to the design brief for relevant stakeholders through presentations and written documentation, based on clarity, persuasiveness, and audience engagement.

Substantial Change: INTERACTION DESIGN 360, Product Design

Units:	3.00
Total Instructional Hours (usually 18 per unit):	90.00
Hours per week (full semester equivalent) in Lecture:	2.00
In-Class Lab:	1.00
Arranged:	2.00
Outside-of-Class Hours:	72.00
Transferability:	None
Degree Applicability:	Credit - Degree Applicable
Prerequisite:	Admission to the Bachelor of Science in Interaction Design and IXD 350
Proposed Start:	Fall 2025

Rationale

The course is proposed as a part of the program-wide update of the curriculum for the Bachelor's Degree in Interaction Design at Santa Monica College.

I. Catalog Description

This course introduces fundamental concerns, concepts, methods and approaches of product design disciplines for interaction designers. Students will learn how to use sketching, rapid prototyping, 3D modeling and other common product design techniques to create useful and engaging products. Students will be introduced to the use of electronics and microcontrollers in designing objects with interactive capabilities. The course employs "critical making" pedagogy and emphasizes the importance of craft and prototyping in the design process.

II. Examples of Appropriate Text or Other Required Reading:

(include all publication dates; for transferable courses at least one text should have been published within the last 7 years)

1. The Fundamentals of Product Design, Richard Morris, Bloomsbury Publishing © 2017, ISBN: 9781350033863

III. Course Objectives

Upon completion of this course, the student will be able to:

1. Create prototypes of physical products using tools and methods appropriate for the task
2. Determine the use of appropriate product design methodologies and tools
3. Apply the previously acquired user experience design skills into the practice of product design
4. Integrate electronics and microcontrollers into the prototypes of physical interfaces
5. Evaluate design tasks and recommend appropriate set of tools and technologies for their completion
6. Analyze a design brief and select the most appropriate method of responding to it.
7. Contribute to design critiques and discussions
8. Create and deliver presentations that communicate their intent and accomplishments within the scope of a design project

IIIb. Arranged Hours Objectives:

Upon completion of this course, the student will be able to:

1. Understand how to print a design using a 3D printer.

IV. Methods of Presentation:

Critique, Group Work, Lecture and Discussion, Observation and Demonstration, Projects

IVb. Arranged Hours Instructional Activities:

Online instructor-provided resources; Other Methods: Build understanding of how to use a 3D printer through video materials and instructor online resources.

V. Course Content

<u>% of Course</u>	<u>Topic</u>
10.000%	Presentations and critiques of assignments, and projects

15.000%	History and fundamental principles of product design
25.000%	Practicing sketching and other rapid prototyping techniques
25.000%	Working on implementing and refining design within 3D modeling software
25.000%	Exploring applications of electronics and microcontrollers in the design of physical interfaces
100.000%	Total

Vb. **Lab Content**

% of Course	Topic
50.00%	Critiques
50.00%	Team Exercises
100.00%	Total

VI. **Methods of Evaluation**

% of Course	Topic
20%	Class Participation: Participation in discussions, workshops, and in-class activities.
30%	Class Work
20%	Projects
30%	Final Project
100%	Total

VII. **Sample Assignments:**

Assignment 1: As our first design project, we will visualize something new as a lighting device for outdoor experiences. Using electronic LEDs as a light engine, conceptualize possible situations and places that this product will exist. How is the light carried? How is it stored? How is it charged or powered on and off? What materials are used for manufacturing? Could it have multiple uses? Submit design ideas for your lighting device using the design drawing methods we reviewed in class, using thumbnails to get started, then design sketches to develop the idea.

Assignment 2: Using your earlier assets of orthographics and design drawings, make a low-resolution 3D sketch model of your lighting device. You can use whatever you have on hand: cardboard, foamcore, heavy paper, etc. Be as faithful to your design and include as many details as possible - not all features need to be 3D; they can also be applied as a graphic to show the idea. Use white glue, hot glue or tape to fabricate.

VIII. **Student Learning Outcomes:**

1. Evaluate product design methods and approaches and determine the appropriate response to a given design brief.
2. Design and implement prototypes of interactive objects using principles and methods of product design

Substantial Change: INTERACTION DESIGN 410, Project Management for Design

Units:	3.00
Total Instructional Hours (usually 18 per unit):	90.00
Hours per week (full semester equivalent) in Lecture:	2.00
In-Class Lab:	1.00
Arranged:	2.00
Outside-of-Class Hours:	72.00
Transferability:	None
Degree Applicability:	Credit - Degree Applicable
Prerequisite:	Admission to the Bachelor of Science in Interaction Design
Proposed Start:	Fall 2025

Rationale

The course is proposed as a part of the program-wide update of the curriculum for the Bachelor's Degree in Interaction Design at Santa Monica College.

I. Catalog Description

This course contextualizes project management for interaction designers through three lenses: Time Management, Career Management, and applied Project Management. The first two lenses—Time and Career Management—take place in the first half of class. These sections make the connection between personal development and project management. During the first half of class, students will also develop a comprehensive overview of current design development processes and tools used to successfully deliver high-quality projects on time. In the second half of the class, students will then apply their evolving skills to a client-based project. Students will learn to clearly communicate with clients and manage the design process while integrating design objectives into the overall development timeline. In all three sections, students will develop leadership skills as well as learn to plan, organize, motivate, and control resources based on defined goals.

II. Examples of Appropriate Text or Other Required Reading:

(include all publication dates; for transferable courses at least one text should have been published within the last 7 years)

1. A World Without Email: Reimagining Work in an Age of Communication Overload, Cal Newport (Author), Portfolio © 2021, ISBN: 978-0525536550
2. Atomic Habits: An Easy & Proven Way to Build Good Habits & Break Bad Ones, James Clear (Author), Avery © 2018, ISBN: 978-0735211292
3. Four Thousand Weeks, Oliver Burkeman (Author), Picador Paper © 2023, ISBN: 978-1250849359
4. Radical Candor: Fully Revised & Updated Edition: Be a Kick-Ass Boss Without Losing Your Humanity, Kim Scott (Author), St. Martin's Press © 2019, ISBN: 978-1250235374

III. Course Objectives

Upon completion of this course, the student will be able to:

1. Demonstrate a comprehensive knowledge of different development processes, such as agile and continuous, such as agile, kanban, or waterfall methodologies
2. Comprehensively analyze and synthesize major milestones, as well as the necessary task to reach these milestones within the design process and articulate them clearly to a broad audience.
3. Identify and employ project management tools to plan and execute a design project.
4. Apply project goals into a plan and process for design.
5. Create a project proposal, including a project brief, major milestones, expected outcomes, and proposed budget as part of a client-based project.
6. Demonstrate the ability to recognize different objectives through negotiating and collaborating with clients and partners.

IIIb. Arranged Hours Objectives:

Upon completion of this course, the student will be able to:

1. Interview a potential client to create a project proposal.

IV. Methods of Presentation:

Lecture and Discussion, Observation and Demonstration, Projects, Critique, Distance Education, Discussion

IVb. Arranged Hours Instructional Activities:

Online instructor-provided resources; Other Methods: Build an understanding of how to successfully interview a client through video materials and instructor online resources.

V. Course Content

<u>% of Course</u>	<u>Topic</u>
24.000%	Project Proposal
6.000%	Reflection
24.000%	Homework
24.000%	In-Class Assignments
12.000%	Discussion
10.000%	Quizzes
100.000%	Total

Vb. Lab Content

<u>% of Course</u>	<u>Topic</u>
50.00%	Critiques
50.00%	Team Exercises
100.00%	Total

VI. Methods of Evaluation

<u>% of Course</u>	<u>Topic</u>
10%	Class Participation: Participation in discussions, workshops, and in-class activities.
30%	Homework: Assignments
10%	Oral Presentation
20%	Projects: Midterm project
30%	Final Project
100%	Total

VII. Sample Assignments:

Assignment 1: Calendar Creation: In this assignment, students will document every moment of every hour for ONE WEEK of their life. Students will bucket these events into three categories Immovable, Moveable, and Fun. While the task is ridiculous and over-the-top, students are asked to embrace an experimenters mindset to learn about themselves, their digital habits, how to effectively schedule time using a tool, and ways they can improve their own time management. Students are then asked to make connections between personal time management and project management.

Assignment 2: Project Proposal : Write a project proposal as part of a client-based, in-class project. Interview the client to establish the project goals and objectives. Based on that project, write a detailed project proposal. Include a project description, objectives, schedule, tasks, resources, skills, and cost. Present project proposal back to client and receive feedback. Assignment 2: Create a project schedule based on a provided project brief. Based on the

provided project brief, create an outline of key design milestones. Within each milestone provide a description of work, assign the types of designers needed, major deliverables, estimated time, and cost.

VIII. Student Learning Outcomes:

1. Communicate their design brief response to relevant stakeholders through presentations and written documentation, based on clarity, persuasiveness, and audience engagement.
2. Utilize Project Management tools and tactics to accurately manage project expectation, collaborate with clients, and clearly articulate design processes and outcomes through a variety of communication methods.
3. Demonstrate a comprehensive knowledge of different design development processes such as agile, kanban, or waterfall methodologies

Substantial Change: INTERACTION DESIGN 460, Programming Design Systems

Units:	3.00
Total Instructional Hours (usually 18 per unit):	90.00
Hours per week (full semester equivalent) in Lecture:	2.00
In-Class Lab:	1.00
Arranged:	2.00
Outside-of-Class Hours:	72.00
Transferability:	None
Degree Applicability:	Credit - Degree Applicable
Prerequisite:	Admission to the Bachelor of Science in Interaction Design and IXD 360
Proposed Start:	Fall 2025

Rationale

The course is proposed as a part of the program-wide update of the curriculum for the Bachelor's Degree in Interaction Design at Santa Monica College.

I. Catalog Description

This course allows students to explore the methods and approaches to high-level prototyping of digital systems. Situated on the intersection of computer graphics programming and interactive systems design, this class teaches students to analyze interactive systems, evaluate their components, and strategize their customization and improvement. Students will create their own programmed interactive graphical systems, collect, store and visualize data, and evaluate opportunities for other applications of computer graphics technologies in interactive digital systems.

II. Examples of Appropriate Text or Other Required Reading:

(include all publication dates; for transferable courses at least one text should have been published within the last 7 years)

1. Coding Art, Yu Zhang, Apress © 2021, ISBN: 978-1484262634

III. Course Objectives

Upon completion of this course, the student will be able to:

1. Develop functional prototypes of interactive graphics systems using contemporary computer programming paradigms
2. Create design system prototypes incorporating components for data collection, storage and presentation
3. Explain different representational models for binary computer data and their application in design of various media.
4. Analyze existing examples of interactive design systems and identify a set of technologies used to create them
5. Evaluate design tasks and recommend appropriate set of tools and technologies for their completion
6. Analyze a design brief and select the most appropriate method of responding to it.
7. Contribute to design critiques and discussions.
8. Create and deliver presentations that communicate their intent and accomplishments within the scope of a design project.

IIIb. Arranged Hours Objectives:

Upon completion of this course, the student will be able to:

1. Work effectively with git version control systems

IV. Methods of Presentation:

Critique, Experiments, Group Work, Lab, Lecture and Discussion, Observation and Demonstration

IVb. Arranged Hours Instructional Activities:

Online instructor-provided resources, Other (Specify)

Other Methods: Build understanding of how to work with Arduino and other creative technology through video materials and instructor online resources.

V. Course Content

<u>% of Course</u>	<u>Topic</u>
25.000%	Creating components of a design system in computer code
25.000%	Application of digital systems for creative work
25.000%	Collecting, storing and displaying user data
15.000%	History and fundamental principles of electronic computers
10.000%	Presentations and critiques of assignments, and projects.
100.000%	Total

Vb. **Lab Content**

<u>% of Course</u>	<u>Topic</u>
50.00%	Critiques
50.00%	Team Exercises
100.00%	Total

VI. **Methods of Evaluation**

<u>% of Course</u>	<u>Topic</u>
20%	Class Participation: Participation in discussions, workshops, and in-class activities.
30%	Class Work
20%	Projects
30%	Final Project
100%	Total

VII. **Sample Assignments:**

Assignment 1: Create a system capable of collecting data from your environments (temperature and lights in your room, how many times you open and close your door, how often your pet comes to a feeding bowl, etc.) using sensors connected to a networked microcontroller. Collect and store this data in a cloud-based database over the course of one week. Enable access to this database from your custom Web-based application and visualize this data observing cognitive, aesthetic and usability principles.

Assignment 2: Create an application that would simulate an existing natural system - look at physics, biology, and other natural sciences for good examples. Start with the environment - where is the system situated? What are the forces the environment might exert on the system? Examine the agents in the system, their relationships to each other and the environment they are in. Then look at how this system would develop over time. What are the rules that you are going to come up with, what are the parameters you are going to feed into them and what effect will the changes have on the development of the system.

VIII. **Student Learning Outcomes:**

1. Evaluate methods and approaches to programming interactive graphics and determine the appropriate response for a given design brief.
2. Design and implement high-fidelity prototypes of interactive graphics systems

Substantial Change: INTERACTION DESIGN 470, Interaction Design Senior Studio

Units:	4.00
Total Instructional Hours (usually 18 per unit):	108.00
Hours per week (full semester equivalent) in Lecture:	3.00
In-Class Lab:	1.00
Arranged:	2.00
Outside-of-Class Hours:	108.00
Transferability:	None
Degree Applicability:	Credit - Degree Applicable
Prerequisite:	IXD 430
Pre/corequisite:	IXD 410
Proposed Start:	Fall 2025

Rationale

The course is proposed as a part of the program-wide update of the curriculum for the Bachelor's Degree in Interaction Design at Santa Monica College.

I. Catalog Description

This is a capstone course where students work individually to build on the knowledge and skills they acquired in earlier course work. The course is organized around an independent project that requires students to explore various design concepts and alternatives as well as explore recent practices, tools, and systems that may be related to the project. Students will design and produce a prototype that they will then share with industry professionals as part of a presentation. Considering the pace of the development of the project, this requires students to engage in a considerable amount of independent learning.

II. Examples of Appropriate Text or Other Required Reading:

(include all publication dates; for transferable courses at least one text should have been published within the last 7 years)

1. [You Need a Manifesto: How to Craft Your Convictions and Put Them to Work](#), Charlotte Burgess-Auburn (Author), Stanford d.school (Author), Ten Speed Press © 2022, ISBN: 978-1984858061
2. [Experiments in Reflection: How to See the Present, Reconsider the Past, and Shape the Future](#), Leticia Britos Cavagnaro (Author), Stanford d.school (Author), Ten Speed Press © 2023, ISBN: 978-1984858108
3. [Design Portfolios: A Recruiter's View](#), Mark W. Smith (Author), Wiley © 2023, ISBN: 978-1394150465
4. [Unreasonable Hospitality: The Remarkable Power of Giving People More Than They Expect](#), Will Guidara (Author), Optimism Press © 2022, ISBN: 978-0593418574

III. Course Objectives

Upon completion of this course, the student will be able to:

1. Apply prior UX/interaction design knowledge to designing and implementing solutions to design problems while considering multiple constraints.
2. Evaluate design concepts and alternatives.
3. Gather design research.
4. Identify and assess tools and practices for solving given problems.
5. Analyze quality for each iteration of the project.
6. Demonstrate competency with deadline driven projects in an independent setting.
7. Create solutions to project management issues, such project scheduling, time management, establishing project milestones, and executing on final deliverables.
8. Produce design presentations to a range of audiences, including peers and industry professionals.
9. Compose techniques for effective written communication for a range of purposes (user research, design documentation, storyboards, etc.)

IIIb. Arranged Hours Objectives:

Upon completion of this course, the student will be able to:

1. Produce a professional design presentation responding to the design brief as part of a team.

IV. Methods of Presentation:

Group Work, Lecture and Discussion, Projects, Critique

IVb. Arranged Hours Instructional Activities:

Online instructor-provided resources; Other Methods: Build skill set in making professional presentations through video materials and instructor online resources.

V. Course Content

<u>% of Course</u>	<u>Topic</u>
25.000%	Final Capstone Presentation
10.000%	Case Study SMC site
10.000%	Case Study Personal site
25.000%	In-Class Assignments
25.000%	Homework
5.000%	Reflection
100.000%	Total

Vb. Lab Content

<u>% of Course</u>	<u>Topic</u>
50.00%	Critiques
50.00%	Team Exercises
100.00%	Total

VI. Methods of Evaluation

<u>% of Course</u>	<u>Topic</u>
24%	Homework
24%	Final Project
12%	Research Projects: SMC site
12%	Research Projects: Personal site
4%	Written assignment: Reflection
24%	Class Participation: Participation in discussions, workshops, and in-class activities.
100%	Total

VII. Sample Assignments:

Assignment 1: Project Discovery Through Self Discovery : In order for you students to identify a capstone directions, they will have to be willing to do a bit of “discovery” work in the beginning. In this assignment, students reflect back on the things that bring them joy when they were young. In addition, students are asked to identify what brings them inspiration, what activities they find exciting, and topics they love to talk about—and collect imagery that represents them. Then using words, pictures or other media, students express this on a box given to them in class. Students will then be asked to share their box with a small group of classmates with the goal experience the “Aha!” moment from their team. These reactions will help clarify what part of their story resonates with an audience.

Assignment 2: Presentation : Based on an self-identified project direction, students will produce a final presentation to industry partners. Students should be able to articulate the personal reasons why they chose this

project as well as how this projects positions them professionally as an interaction designer. As par of this presentation, students can share research insights, user experience documentation, design concepts, prototyping outcomes, project milestones, and next steps.

VIII. Student Learning Outcomes:

1. Communicate their design brief response to relevant stakeholders through presentations and written documentation, based on clarity, persuasiveness, and audience engagement.
2. Evaluate a complex design problem and justify a design solution to a group of industry professionals.
3. Employ design thinking methodology, including the ability to conceptualise, research, analyse, design, prototype and iterate to develop a design solution relavant to the design problem.

Santa Monica College Artificial Intelligence Department Certificate

As the impact of artificial intelligence expands to many different fields, foundational skills and familiarity with artificial intelligence systems are skillsets that are in increasing demand in various industry sectors today. The Department Certificate in Artificial Intelligence is suited for students in any field interested in learning about the applications of artificial intelligence and the ethical considerations when adopting artificial intelligence technologies and generative artificial intelligence.

Program Learning Outcomes:

- Upon completion of the program, students will gain an understanding of both the theoretical and practical aspects of artificial intelligence and its applications.
 - **BUS 1:** Explain the fundamental principles of capitalism and the tools used to measure and manage the economy.
 - **BUS 1:** Develop ethical business strategies for solving business problems in the areas of marketing, finance, human resources, investments, and management.
 - **BUS 1:** Demonstrate a level of engagement in the subject matter that reveals their understanding of the value of the course content beyond the task itself, specifically as it relates to linking the relevance of course content to careers in business and accounting and their personal lives.
 - **CS 3:** Using programming techniques, students will identify elements of software needs, gather data to identify customer requirements, identify input and output requirements, identify system processing requirements and write computer programs to address these requirements. As assessed by: Homework, Group projects, Written Examinations.
 - **CS 3:** Using a programming language, students will list the concepts behind electronic communication. As assessed by: Assignments where computer programs are written and exams are taken that address software issues.
 - **CS 4:** Analyze and explain the fundamentals of artificial intelligence and generative AI
 - **CS 4:** Identify diverse applications and use cases where AI can be leveraged
 - **CS 4:** Apply effective prompt engineering techniques to improve the performance and control the behavior of generative AI models
 - **CS 4:** Recognize the ethical challenges of generative AI models
 - **CS 87A:** Applying logical analysis, students will design, build and debug programming projects in Python.
 - **CS 87A:** Using the built-in functions of Python, students will be able to build data processing application.

- Upon completion of the program, students will apply artificial intelligence tools in various professional settings to enhance productivity.
 - **CS 4:** Identify diverse applications and use cases where AI can be leveraged
 - **CS 4:** Apply effective prompt engineering techniques to improve the performance and control the behavior of generative AI models
 - **CS 4:** Recognize the ethical challenges of generative AI models

- Upon completion of the program, students will evaluate ethical considerations in artificial intelligence development and identify potential biases within popular existing systems.
 - **CS 4:** Analyze and explain the fundamentals of artificial intelligence and generative AI
 - **CS 4:** Apply effective prompt engineering techniques to improve the performance and control the behavior of generative AI models
 - **CS 87A:** Applying logical analysis, students will design, build and debug programming projects in Python.
 - **CS 87A:** Using the built-in functions of Python, students will be able to build data processing application.

Required Courses

BUS 1 ^{DE} Introduction To Business	Units: 12.0
CS 3 ^{DE} Introduction To Computer Systems	3.0
CS 4 Copiloting with Artificial Intelligence Tools	3.0
CS 87A ^{DE} Python Programming	3.0

Total: 12.0

**Santa Monica College
Artificial Intelligence Department Certificate
Narrative**

Program Goals and Objectives:

As the impact of artificial intelligence expands to many different fields, foundational skills and familiarity with artificial intelligence systems are skillsets that are in increasing demand in various industry sectors today. The Department Certificate in Artificial Intelligence is suited for students in any field interested in learning about the applications of artificial intelligence and the ethical considerations when adopting artificial intelligence technologies and generative artificial intelligence.

Program Learning Outcomes:

Upon completion of the program, students will gain an understanding of both the theoretical and practical aspects of artificial intelligence and its applications.

Upon completion of the program, students will apply artificial intelligence tools in various professional settings to enhance productivity.

Upon completion of the program, students will evaluate ethical considerations in artificial intelligence development and identify potential biases within popular existing systems.

Catalog Description:

As the impact of artificial intelligence expands to many different fields, foundational skills and familiarity with artificial intelligence systems are skillsets that are in increasing demand in various industry sectors today. The Department Certificate in Artificial Intelligence is suited for students in any field interested in learning about the applications of artificial intelligence and the ethical considerations when adopting artificial intelligence technologies and generative artificial intelligence.

Program Learning Outcomes:

Upon completion of the program, students will gain an understanding of both the theoretical and practical aspects of artificial intelligence and its applications.

Upon completion of the program, students will apply artificial intelligence tools in various professional settings to enhance productivity.

Upon completion of the program, students will evaluate ethical considerations in artificial intelligence development and identify potential biases within popular existing systems.

Program Requirements:

Required Courses	Units: 12.0
<hr/>	
BUS 1 ^{DE} Introduction To Business	3.0
CS 3 ^{DE} Introduction To Computer Systems	3.0
CS 4 Copiloting with Artificial Intelligence Tools	3.0
CS 87A ^{DE} Python Programming	3.0
	Total: 12.0

Master Planning:

This Applied Artificial Intelligence Certificate aligns with the college's focus on career readiness and industry trends. It can be earned as a stackable certificate with the Certificate of Achievement in Applied Artificial Intelligence.

Enrollment and Completer Projections:

100 students annually.

Place of Program in Curriculum/Similar Programs:

This program would be taught in Computer Science, a discipline housed in CSIS - Computer Science Information Systems.

Similar Programs at Other Colleges in Service Area:

USC Artificial Intelligence Applications, Lahey Community College, Miami-Dade Community College

Santa Monica College Applied Artificial Intelligence Certificate of Achievement

As the impact of artificial intelligence expands to many different fields, foundational skills and familiarity with artificial intelligence systems are skillsets that are in increasing demand in various industry sectors today. The Certificate of Completion in Applied Artificial Intelligence is suited for students in any field interested in learning about the applications of artificial intelligence and the ethical considerations when adopting artificial intelligence technologies, generative artificial intelligence and chatbots. This certificate provides the foundational knowledge and practical skills to pursue careers in artificial intelligence development, data science, or prompt engineering.

Program Learning Outcomes:

- Upon completion of this program, students will explore applications of artificial intelligence and critically analyze its impact on decision-making and identify other societal impacts.
 - BUS 1: Develop ethical business strategies for solving business problems in the areas of marketing, finance, human resources, investments, and management.
 - BUS 1: Demonstrate a level of engagement in the subject matter that reveals their understanding of the value of the course content beyond the task itself, specifically as it relates to linking the relevance of course content to careers in business and accounting and their personal lives.
 - CS 3: Using programming techniques, students will identify elements of software needs, gather data to identify customer requirements, identify input and output requirements, identify system processing requirements and write computer programs to address these requirements. As assessed by: Homework, Group projects, Written Examinations.
 - CS 3: Using a programming language, students will list the concepts behind electronic communication. As assessed by: Assignments where computer programs are written and exams are taken that address software issues.
 - CS 4: Analyze and explain the fundamentals of artificial intelligence and generative AI
 - CS 4: Identify diverse applications and use cases where AI can be leveraged
 - CS 4: Apply effective prompt engineering techniques to improve the performance and control the behavior of generative AI models
 - CS 4: Recognize the ethical challenges of generative AI models
 - CS 82A: Understanding of the major areas in data science
 - CS 82A: Collect and organize small data sets
 - CS 82A: Identify simple patterns in data via visualization and via other means
 - CS 82B: Identify, analyze, and interpret trends in data sets with models
 - CS 82B: Effectively present compelling results using data visualization
 - CS 82D: Evaluate the performance of Artificial Intelligence systems with metrics that measure and assess the accuracy of the system.
 - CS 82D: Develop proficiency in creating Generative AI models and their application, such as chatbots which incorporate generative AI functionalities and sentiment analysis.
 - CS 82D: Evaluate the performance of Generative AI systems with metrics that measure and assess the accuracy of the system.
 - CS 87A: Applying logical analysis, students will design, build and debug programming projects in Python.
 - CS 87A: Using the built-in functions of Python, students will be able to build data processing application.

- Upon completion of the program, students will use common artificial intelligence tools and libraries to solve different business problems.
 - CS 4: Apply effective prompt engineering techniques to improve the performance and control the behavior of generative AI models
 - CS 82D: Evaluate the performance of Artificial Intelligence systems with metrics that measure and assess the accuracy of the system.
 - CS 82D: Develop proficiency in creating Generative AI models and their application, such as chatbots which incorporate generative AI functionalities and sentiment analysis.
 - CS 82D: Evaluate the performance of Generative AI systems with metrics that measure and assess the accuracy of the system.
 - CS 87A: Applying logical analysis, students will design, build and debug programming projects in Python.
 - CS 87A: Using the built-in functions of Python, students will be able to build data processing application.

- Upon completion of this program, students will understand and evaluate various ethical considerations in artificial intelligence development and identify potential biases within popular existing systems as well as those they create themselves.
 - CS 4: Analyze and explain the fundamentals of artificial intelligence and generative AI
 - CS 4: Identify diverse applications and use cases where AI can be leveraged
 - CS 4: Apply effective prompt engineering techniques to improve the performance and control the behavior of generative AI models
 - CS 82D: Evaluate the performance of Artificial Intelligence systems with metrics that measure and assess the accuracy of the system.

Required Courses:

Units: 21.0

BUS 1 ^{DE} Introduction To Business	3.0
CS 3 ^{DE} Introduction To Computer Systems	3.0
CS 4 Copiloting with Artificial Intelligence Tools	3.0
CS 87A ^{DE} Python Programming	3.0
CS 82A ^{DE} Introduction to Data Science	3.0
CS 82B ^{DE} Principles of Data Science	3.0
CS 82D Generative Artificial Intelligence Fundamentals	3.0

Total: 21.0

Santa Monica College
Applied Artificial Intelligence Certificate of Achievement
Narrative

Program Goals and Objectives:

As the impact of artificial intelligence expands to many different fields, foundational skills and familiarity with artificial intelligence systems are skillsets that are in increasing demand in various industry sectors today. The Certificate of Completion in Applied Artificial Intelligence is suited for students in any field interested in learning about the applications of artificial intelligence and the ethical considerations when adopting artificial intelligence technologies, generative artificial intelligence and chatbots. This certificate provides the foundational knowledge and practical skills to pursue careers in artificial intelligence development, data science, or prompt engineering.

Program Learning Outcomes:

Upon completion of this program, students will explore applications of artificial intelligence and critically analyze its impact on decision-making and identify other societal impacts.

Upon completion of the program, students will use common artificial intelligence tools and libraries to solve different business problems.

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Catalog Description:

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Upon completion of this program, students will understand and evaluate various ethical considerations in artificial intelligence development and identify potential biases within popular existing systems as well as those they create themselves.

Program Requirements:

Required Courses:	Units: 21.0
<hr/>	
BUS 1 ^{DE} Introduction To Business	3.0
CS 3 ^{DE} Introduction To Computer Systems	3.0
CS 4 Copiloting with Artificial Intelligence Tools	3.0
CS 87A ^{DE} Python Programming	3.0
CS 82A ^{DE} Introduction to Data Science	3.0
CS 82B ^{DE} Principles of Data Science	3.0
CS 82D Generative Artificial Intelligence Fundamentals	3.0
Total:	21.0

Master Planning:

This Applied Artificial Intelligence Certificate aligns with the college's focus on career readiness and industry trends. It can be earned as a stackable certificate with the department certificate in Artificial Intelligence.

Enrollment and Completer Projections:

100 students annually

Place of Program in Curriculum/Similar Programs:

This program would be taught in Computer Science, a discipline housed in CSIS - Computer Science Information Systems.

Similar Programs at Other Colleges in Service Area:

USC Artificial Intelligence Applications, Lahey Community College, Miami Dade Community College

Santa Monica College
Applied Artificial Intelligence Certificate of Achievement
Narrative

Program Goals and Objectives:

As the impact of artificial intelligence expands to many different fields, foundational skills and familiarity with artificial intelligence systems are skillsets that are in increasing demand in various industry sectors today. The Certificate of Completion in Applied Artificial Intelligence is suited for students in any field interested in learning about the applications of artificial intelligence and the ethical considerations when adopting artificial intelligence technologies, generative artificial intelligence and chatbots. This certificate provides the foundational knowledge and practical skills to pursue careers in artificial intelligence development, data science, or prompt engineering.

Program Learning Outcomes:

Upon completion of this program, students will explore applications of artificial intelligence and critically analyze its impact on decision-making and identify other societal impacts.

Upon completion of the program, students will use common artificial intelligence tools and libraries to solve different business problems.

Upon completion of this program, students will understand and evaluate various ethical considerations in artificial intelligence development and identify potential biases within popular existing systems as well as those they create themselves.

Catalog Description:

As the impact of artificial intelligence expands to many different fields, foundational skills and familiarity with artificial intelligence systems are skillsets that are in increasing demand in various industry sectors today. The Certificate of Completion in Applied Artificial Intelligence is suited for students in any field interested in learning about the applications of artificial intelligence and the ethical considerations when adopting artificial intelligence technologies, generative artificial intelligence and chatbots. This certificate provides the foundational knowledge and practical skills to pursue careers in artificial intelligence development, data science, or prompt engineering.

Program Learning Outcomes:

Upon completion of this program, students will explore applications of artificial intelligence and critically analyze its impact on decision-making and identify other societal impacts.

Upon completion of the program, students will use common artificial intelligence tools and libraries to solve different business problems.

Upon completion of this program, students will understand and evaluate various ethical considerations in artificial intelligence development and identify potential biases within popular existing systems as well as those they create themselves.

Program Requirements:

Required Courses:	Units: 21.0
<hr/>	
BUS 1 ^{DE} Introduction To Business	3.0
CS 3 ^{DE} Introduction To Computer Systems	3.0
CS 4 Copiloting with Artificial Intelligence Tools	3.0
CS 87A ^{DE} Python Programming	3.0
CS 82A ^{DE} Introduction to Data Science	3.0
CS 82B ^{DE} Principles of Data Science	3.0
CS 82D Generative Artificial Intelligence Fundamentals	3.0
Total:	21.0

Master Planning:

This Applied Artificial Intelligence Certificate aligns with the college's focus on career readiness and industry trends. It can be earned as a stackable certificate with the department certificate in Artificial Intelligence.

Enrollment and Completer Projections:

100 students annually

Place of Program in Curriculum/Similar Programs:

This program would be taught in Computer Science, a discipline housed in CSIS - Computer Science Information Systems.

Similar Programs at Other Colleges in Service Area:

USC Artificial Intelligence Applications, Lahey Community College, Miami Dade Community College

Labor Market Analysis: 0707.00 – Computer Software Development Applied Artificial Intelligence – Certificate requiring 16 to <30 units

Los Angeles Center of Excellence, May 2024

Program Endorsement:	Endorsed: All Criteria Met <input type="checkbox"/>	Endorsed: Some Criteria Met <input checked="" type="checkbox"/>	Not Endorsed <input type="checkbox"/>
Program Endorsement Criteria			
Supply Gap:	Yes <input checked="" type="checkbox"/>		No <input type="checkbox"/>
Living Wage: (Entry-Level, 25 th)	Yes <input checked="" type="checkbox"/>		No <input type="checkbox"/>
Education:	Yes <input type="checkbox"/>		No <input checked="" type="checkbox"/>
Emerging Occupation(s)			
	Yes <input checked="" type="checkbox"/>		No <input type="checkbox"/>

SUMMARY

This report analyzes whether local labor market demand is being met by community college programs aligned with the identified artificial intelligence-related occupations¹ or whether a shortage of workers exists. Labor market demand is measured by annual job openings while education supply is measured by the number of awards (degrees and certificates) conferred on average each year.

According to Harvard Business Review, artificial intelligence (AI) can support business needs through automating business processes, gaining insight through data analysis and mining, and by engaging with customers and employees.² A 2023 article highlights the multitude of ways that PepsiCo is utilizing AI on a daily basis to create new products and flavors, determine which stores are selling the most of specific products, and to optimize product placement.³ Since this field of technology is constantly evolving, the Standard Occupational Classification (SOC) system has yet to classify artificial intelligence occupations. Therefore, this report utilizes real-time job posting information from employer job advertisements to approximate demand for artificial intelligence-related jobs, as well as SOC codes that employ the skills necessary for artificial intelligence.

Based on the available data, there appears to be a supply gap for the three identified occupations in the region. While entry-level wages exceed the self-sufficiency standard wage in both Los Angeles and Orange counties, the Bureau of Labor Statistics (BLS) lists a bachelor's degree as the typical entry-level education.

¹ Middle-skill occupations typically require some postsecondary education, but less than a bachelor's degree. The COE classifies middle-skill jobs as the following:

- All occupations that require an educational requirement of some college, associate degree or apprenticeship;
- All occupations that require a bachelor's degree, but also have more than one-third of their existing labor force with an educational attainment of some college or associate degree; or
- All occupations that require a high school diploma or equivalent or no formal education, but also require short- to long-term on-the-job training where multiple community colleges have existing programs.

² Harvard Business Review: <https://hbr.org/2018/01/artificial-intelligence-for-the-real-world>

³ <https://www.axios.com/2023/04/06/pepsico-artificial-intelligence-kanjoura>

Recommendation: Due to two of three program endorsement criteria being met, the Los Angeles Center of Excellence for Labor Market Research (LA COE) endorses this proposed program.

Key Findings

Supply Gap

- 7,718 annual job openings are projected in the region through 2027. This number is greater than the three-year average of 5,169 awards conferred by educational institutions in the region.
 - Over the past 12 months in the LA/OC region, there were 3,012 online job postings for the three occupations in this report that also listed “artificial intelligence”, “machine learning”, “natural language” and/or “large language” as a specialized skill.

Living Wage

- All three occupations have entry-level wages **above** Los Angeles County’s self-sufficiency standard hourly wage (\$18.10/hour).⁴

Educational Attainment

- A bachelor’s degree is the typical entry-level education for these artificial intelligence-related occupations according to the Bureau of Labor Statistics (BLS).
- 13%-46% of workers in the field have completed an associate degree or less education, according to national educational attainment data.

Community college supply

- 28 community colleges issued awards related to artificial intelligence in the greater LA/OC region.
- 1,337 awards (degrees and certificates) were conferred on average each year between 2020 and 2023.

Other postsecondary supply

- 37 educational institutions in the LA/OC region offer programs related to artificial intelligence.
- 3,832 awards were conferred on average each year by other postsecondary institutions throughout the greater LA/OC region.

TARGET OCCUPATIONS

The LA COE prepared this report to provide regional labor market and postsecondary supply data for three occupations related to artificial intelligence. Although the occupations in this report typically require a bachelor’s degree, these SOC codes employ the skills necessary for artificial intelligence. [For full occupation descriptions, please see Appendix.](#)

- **Software Developers (15-1252)**⁵

⁴ Self-Sufficiency Standard wage data was pulled from The Self-Sufficiency Standard Tool for California. For more information, visit: <http://selfsufficiencystandard.org/california>.

⁵ [Software Developers, Quality Assurance Analysts, and Testers U.S. Bureau of Labor Statistics \(bls.gov\)](#)

- **Computer Occupations, All Other (15-1299)**⁶
- **Data Scientists (15-2051)**⁷

OCCUPATIONAL DEMAND

Exhibit 1 shows the five-year occupational demand projections for these occupations related to artificial intelligence. In the greater Los Angeles/Orange County region, the number of jobs related to these occupations is projected to increase by 13% through 2027. There will be more than 7,700 job openings per year through 2027 due to job growth and replacements. The majority of jobs in 2022 for these occupations related to artificial intelligence (69%) were located in Los Angeles County.

Exhibit 1: Current employment and occupational demand, Los Angeles and Orange counties⁸

Geography	2022 Jobs	2027 Jobs	2022-2027 Change	2022-2027 % Change	Annual Openings
Los Angeles	61,767	70,355	8,588	14%	5,438
Orange	28,223	31,310	3,087	11%	2,280
Total	89,990	101,665	11,675	13%	7,718

Detailed Occupation Data

Exhibit 2 displays the current employment and projected occupational demand for each of the target occupations in Los Angeles County. The percentage of workers aged 55+ and automation index is included in order visualize upcoming replacement demand for these occupations. The occupations in this report have a lower-than-average risk of automation, as well as a smaller share of older workers in the field.

Exhibit 2: Current employment, projected occupational demand, percentage of workers aged 55+, Los Angeles County⁹

Occupation	2022 Jobs	2027 Jobs	5-Yr % Change	Annual Openings	% Aged 55 and older*	Auto-mation Index**	% Full Time Workers***
Software Developers	38,270	44,454	16%	3,433	14%	80.2	99%
Computer Occupations, All Other	17,826	18,674	5%	1,307	19%	85.5	90%
Data Scientists	5,672	7,227	27%	698	14%	83.4	92%
Total	61,767	70,355	14%	5,438	-	-	-

⁶ [Computer Occupations, All Other \(bls.gov\)](https://www.bls.gov)

⁷ [Data Scientists U.S. Bureau of Labor Statistics \(bls.gov\)](https://www.bls.gov)

⁸ Five-year change represents new job additions to the workforce. Annual openings include new jobs and replacement jobs that result from retirements and separations.

⁹ Ibid.

*The average percentage of workers aged 55 and older across all occupations in the greater LA/OC region is 27%. These occupations have a smaller share of older workers, which typically indicates fewer replacements needs to offset the amount of impending retirements.

**The automation index captures an occupation’s risk of being affected by automation with a base of 100. An automation index greater than 100 indicates a higher-than average risk of automation; less than 100 indicates a lower-than-average risk.

***In California, 81% of workers are employed full-time.

WAGES

The labor market endorsement in this report considers the entry-level hourly wages for these occupations related to artificial intelligence in Los Angeles County as they relate to the county’s self-sufficiency standard wage. Orange County wages are included below in order to provide a complete analysis of the greater Los Angeles/Orange County region.

Los Angeles County

All three occupations have entry-level wages above the self-sufficiency standard wage for one adult (\$18.10 in Los Angeles County). Typical entry-level hourly wages are in a range between \$29.46 and \$58.80. (Exhibit 3). Experienced workers can expect to earn wages between \$71.29 and \$84.36.

Exhibit 3: Earnings for occupations in Los Angeles County

Occupation	Entry-Level Hourly Earnings (25 th Percentile)	Median Hourly Earnings	Experienced Hourly Earnings (75 th Percentile)	Median Annual Earnings*
Software Developers	\$58.80	\$74.09	\$84.36	\$154,100
Computer Occupations, All Other	\$29.46	\$48.11	\$71.29	\$100,100
Data Scientists	\$38.56	\$60.31	\$78.51	\$125,400

*Rounded to the nearest \$100

Orange County

All three occupations have entry-level wages above the self-sufficiency standard wage for one adult (\$20.63 in Orange County). Typical entry-level hourly wages are in a range between \$28.27 and \$57.29 (Exhibit 4). Experienced workers can expect to earn wages between \$68.39 and \$82.14.

Exhibit 4: Earnings for occupations in Orange County

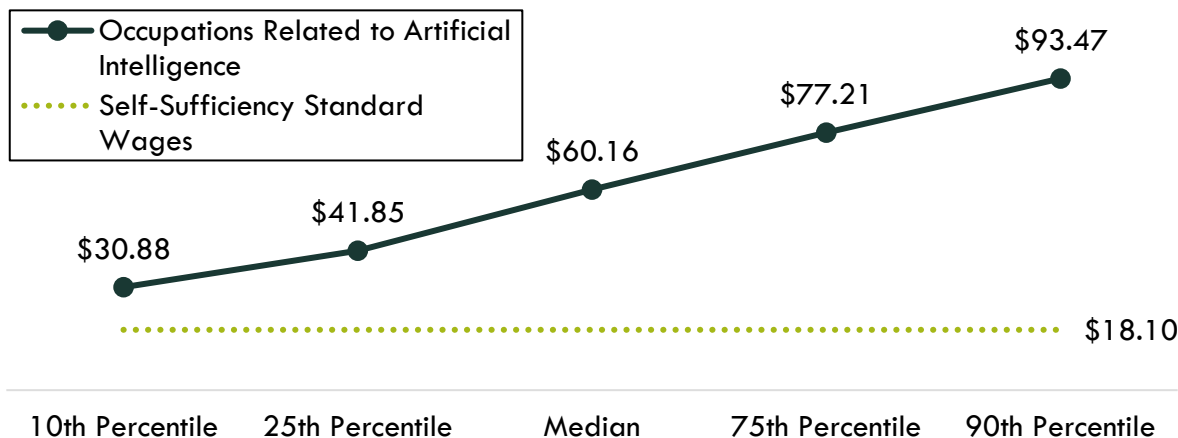
Occupation	Entry-Level Hourly Earnings (25 th Percentile)	Median Hourly Earnings	Experienced Hourly Earnings (75 th Percentile)	Median Annual Earnings*
Software Developers	\$57.29	\$72.16	\$82.14	\$150,100
Computer Occupations, All Other	\$28.27	\$46.17	\$68.39	\$96,000
Data Scientists	\$36.98	\$57.79	\$75.19	\$120,200

*Rounded to the nearest \$100

Across the greater Los Angeles and Orange County region, the average entry-level hourly earnings for the occupations in this report are \$41.85; this is above the living wage for one single

adult in Los Angeles County (\$18.10). Exhibit 5 shows the average hourly wage for the occupations in this report, for entry-level to experienced workers.

Exhibit 5: Average hourly earnings for occupations related to artificial intelligence, Los Angeles and Orange counties



JOB POSTINGS

Over the past 12 months in the region, there were 3,012 online job postings for the three occupations in this report that also listed “artificial intelligence”, “machine learning”, “natural language” and/or “large language” as specialized skills. Exhibit 6 displays the number of job postings by occupation. The majority of job postings (46%) were for software developers, followed by data scientists (35%) and computer occupations, all other (19%).

Exhibit 6: Job postings by occupation (last 12 months), Los Angeles and Orange counties



Job postings were analyzed for the most common job titles, skills, and employers associated with the target occupations in this report (Exhibit 7).

Exhibit 7: Most commonly requested job titles, skills and employers in job postings, Los Angeles and Orange counties

Top Job Titles	Top Skills	Top Employers
<ul style="list-style-type: none"> Data scientists Software engineers Machine learning engineers DevSecOps engineers 	<ul style="list-style-type: none"> Machine learning Python (programming language) Artificial intelligence Computer science 	<ul style="list-style-type: none"> Boeing Motion Recruitment* Amazon Snap Inc.

Top Job Titles	Top Skills	Top Employers
<ul style="list-style-type: none"> • Systems engineers • Data analysts • Expert software engineers 	<ul style="list-style-type: none"> • Software engineering • Data science • SQL (programming language) 	<ul style="list-style-type: none"> • The Aerospace Corporation • Disney • PricewaterhouseCoopers

*Staffing company

In the greater Los Angeles/Orange County region, 75% of the related job postings listed a minimum educational requirement. The number and percentage of job postings by educational level appear in exhibit 8.

Exhibit 8: Education levels requested in job postings for occupations related to artificial intelligence, Los Angeles and Orange counties

Education Level	Job Postings	% of Job Postings
Bachelor's degree	2,096	93%
Associate degree	100	4%
High school diploma or vocational training	49	2%

EDUCATIONAL ATTAINMENT

The Bureau of Labor Statistics (BLS) lists a bachelor's degree as the typical entry-level education for each of the occupations in this report (Exhibit 9). The national-level data indicates 13% of software developers and data scientists in the field have completed an associate degree or less education as their highest level of educational attainment. However, 46% of computer occupations, all other have completed an associate degree or less education as their highest level of educational attainment. The Bureau of Labor Statistics (BLS) lists the following typical entry-level education levels for the occupations in this report:

Exhibit 9: Entry-level education preferred by employers nationally, Bureau of Labor Statistics

Occupation	Education Level
Software Developers	Bachelor's degree
Computer Occupations, All Other	Bachelor's degree
Data Scientists	Bachelor's degree

EDUCATIONAL SUPPLY

Community College Supply

Exhibit 10 shows the annual and three-year average number of awards conferred by community colleges in programs that have historically trained for the occupations of interest. The colleges with the most completions in the region are Orange Coast, Mt. San Antonio, and Santa Monica.

Exhibit 10: Regional community college awards (certificates and degrees), 2020-2023

TOP Code	Program	College	2020-21 Awards	2021-22 Awards	2022-23 Awards	3-Year Average
0701.00	Information Technology, General	East LA	4	30	18	17
		Glendale	3	17	16	12
		LA Harbor	1	2	-	1
		LA Mission	1	4	3	3
		LA Southwest	2	12	1	5
		Long Beach	106	88	73	89
		Mt San Antonio	49	23	12	28
		Santa Monica	1	-	-	0
		West LA	-	6	4	3
		LA Subtotal	167	182	127	159
		Santa Ana	3	9	25	12
		OC Subtotal	3	9	25	12
		Supply Subtotal/Average			170	191
0702.00	Computer Information Systems	Citrus	4	6	2	4
		Compton	-	12	4	5
		East LA	23	11	23	19
		El Camino	11	28	19	19
		Glendale	6	8	11	8
		LA City	4	3	4	4
		LA Harbor	-	1	2	1
		LA Mission	1	1	-	1
		LA Southwest	-	21	20	14
		LA Trade-Tech	15	17	35	22
		Long Beach	3	-	6	3
		Mt San Antonio	6	68	41	38
		Rio Hondo	6	15	14	12
		Santa Monica	-	-	2	1
		West LA	9	14	8	10
		LA Subtotal	88	205	191	161
		Coastline	-	2	7	3
		Fullerton	31	49	48	43
		Irvine	-	-	1	0
		Orange Coast	-	1	-	0
Saddleback	1	-	1	1		

TOP Code	Program	College	2020-21 Awards	2021-22 Awards	2022-23 Awards	3-Year Average
		Santa Ana	16	18	8	14
		Santiago Canyon	1	1	5	2
		OC Subtotal	49	71	70	63
		Supply Subtotal/Average	137	276	261	225
0706.00	Computer Science (transfer)	Cerritos	35	33	26	31
		Citrus	27	44	57	43
		El Camino	31	32	21	28
		Glendale	7	16	14	12
		LA City	10	13	11	11
		LA Mission	6	3	3	4
		LA Southwest	2	-	-	1
		Long Beach	30	27	25	27
		Rio Hondo	-	2	9	4
		Santa Monica	73	86	64	74
		West LA	1	3	7	4
		LA Subtotal	222	259	237	239
		Cypress	3	7	16	9
		Golden West	1	5	2	3
		Irvine	48	62	55	55
		Orange Coast	66	66	-	44
		Saddleback	29	33	38	33
		Santa Ana	21	28	28	26
		Santiago Canyon	7	8	19	11
		Cypress	3	7	16	9
Golden West	1	5	2	3		
OC Subtotal	175	209	158	181		
		Supply Subtotal/Average	397	468	395	420
0707.00	Computer Software Development	LA City	-	1	-	0
		LA Harbor	-	2	2	1
		LA Mission	-	2	-	1
		LA Pierce	4	7	7	6
		Santa Monica	1	1	2	1
		West LA	-	6	1	2
		LA Subtotal	5	19	12	12
		Golden West	6	4	1	4

TOP Code	Program	College	2020-21 Awards	2021-22 Awards	2022-23 Awards	3-Year Average
		Orange Coast	2	-	-	1
		Saddleback	10	15	16	14
		OC Subtotal	18	19	17	18
		Supply Subtotal/Average	23	38	29	30
0707.10	Computer Programming	Cerritos	3	7	2	4
		Citrus	3	9	7	6
		East LA	1	-	1	1
		LA City	8	10	19	12
		LA Harbor	2	4	6	4
		LA Mission	7	7	6	7
		LA Pierce	5	5	7	6
		LA Southwest	2	2	3	2
		LA Valley	13	8	15	12
		Long Beach	3	7	4	5
		Mt San Antonio	83	125	65	91
		Pasadena	23	23	37	28
		Santa Monica	65	71	55	64
		LA Subtotal	218	278	227	241
		Coastline	-	1	2	1
		Cypress	6	5	5	5
		Fullerton	24	28	32	28
		Orange Coast	206	160	250	205
		Santiago Canyon	2	2	3	2
		OC Subtotal	238	196	292	242
		Supply Subtotal/Average	456	474	519	483
0799.00	Other Information Technology	LA Harbor	-	1	-	0
		Mt San Antonio	4	12	1	6
		LA Subtotal	4	13	1	6
		Orange Coast	1	-	-	0
		Santa Ana	-	-	5	2
		OC Subtotal	1	-	5	2
		Supply Subtotal/Average	5	13	6	8
		Supply Total/Average	1,188	1,460	1,362	1,337

Other Postsecondary Supply

For a comprehensive regional supply analysis, it is important to consider the supply from other institutions in the region that provide training programs for occupations related to artificial intelligence. Exhibit 11 shows the number of awards conferred by these institutions in relevant programs. Due to different data collection periods, the most recent data is from 2019 to 2022. Between 2019 and 2022, other postsecondary college institutions in the region conferred an average of 3,832 bachelor's and sub-baccalaureate awards. Sub-baccalaureate awards include associate degrees, postsecondary awards, and other academic awards that typically take fewer than four years to complete. The majority of awards in Exhibit 11 are bachelor's degrees (3,587 awards), followed by sub-baccalaureate awards (244 awards).

Exhibit 11: Other regional postsecondary awards, 2019-2022

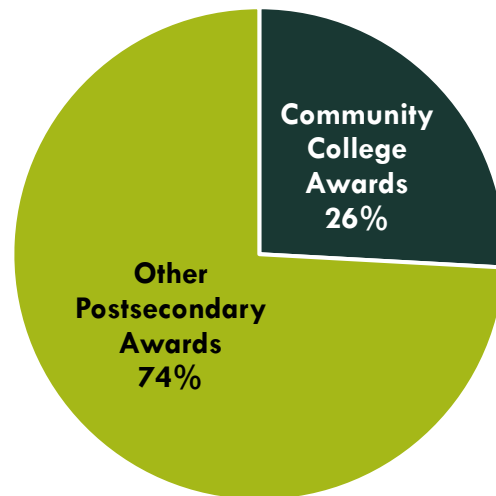
CIP Code	Program	Postsecondary Institution	2019-20 Awards	2020-21 Awards	2021-22 Awards	3-Year Average
11.0101	Computer and Information Sciences, General	Azusa Pacific Univ.	21	25	5	17
		Chapman Univ.	16	20	25	20
		LA Pacific College	6	2	2	3
		Loyola Marymount Univ.	27	44	51	41
		Pitzer College	-	1	-	0
		UC-Irvine	-	1	-	0
		Univ. of La Verne	23	36	20	26
		Univ. of Mass. Global	30	36	37	34
		Univ. of the People	203	292	478	324
11.0103	Information Technology	Brand College	13	17	18	16
		CA Intercontinental Univ.	2	-	-	1
		CSU-Dominguez Hills	4	10	17	10
		CSU-Los Angeles	134	111	90	112
		CSU-Northridge	29	51	45	42
		Platt College-Anaheim	15	17	12	15
		Platt College-LA	12	6	3	7
		Univ. of La Verne	2	3	15	7
		Univ. of Mass. Global	-	-	1	0
		Westcliff University	-	-	1	0
11.0199	Computer and Information Sciences, Other	CSU-Dominguez Hills	63	55	54	57
		CSU-Northridge	73	99	78	83
11.0201	Computer Programming/ Programmer, General	ABCO Technology	46	34	14	31
		Platt College-Anaheim	4	-	-	1

CIP Code	Program	Postsecondary Institution	2019-20 Awards	2020-21 Awards	2021-22 Awards	3-Year Average
11.0701	Computer Science	Azusa Pacific Univ.	-	-	9	3
		Biola University	18	18	15	17
		CA Institute of Tech.	72	83	77	77
		CSPU-Pomona	238	270	202	237
		CSU-Dominguez Hills	57	66	82	68
		CSU-Fullerton	259	307	325	297
		CSU-Long Beach	220	221	254	232
		CSU-Los Angeles	119	152	148	140
		CSU-Northridge	160	214	251	208
		Chapman Univ.	30	45	50	42
		Claremont McKenna College	25	17	13	18
		Concordia Univ.-Irvine	-	-	3	1
		Harvey Mudd College	47	48	48	48
		Occidental College	14	14	31	20
		Pitzer College	9	5	10	8
		Pomona College	34	33	49	39
		Scripps College	11	4	6	7
		Southern CA Institute of Technology	10	7	5	7
		UC-Irvine	794	805	729	776
UC-Los Angeles	287	345	348	327		
USC	247	293	287	276		
11.0804	Modeling, Virtual Environments and Simulation	ABC Adult School	-	-	1	0
		UC-Irvine	61	70	62	64
		USC	27	45	32	35
11.0899	Computer Software and Media Applications, Other	Art Center College of Design	20	14	21	18
		CA Institute of the Arts	7	1	6	5
		Learnet Academy	10	9	2	7
11.9999	Computer and Information Sciences and Support Services, Other	Woodbury Univ.	-	1	-	0
15.1202	Computer/Computer Systems	Learnet Academy	4	2	2	3

CIP Code	Program	Postsecondary Institution	2019-20 Awards	2020-21 Awards	2021-22 Awards	3-Year Average
	Technology/ Technician					
30.3001	Computational Science	Chapman Univ.	-	-	1	0
30.3101	Human Computer Interaction	Woodbury Univ.	4	2	2	3
Supply Total/Average			3,507	3,951	4,037	3,832

Exhibit 12 shows the proportion of community college awards conferred in the greater Los Angeles/Orange County region compared to the number of other postsecondary awards for the programs in this report. The majority of awards conferred in these programs are awarded by other institutions in the greater Los Angeles/Orange County region.

Exhibit 12: Percentage of community college awards compared to other postsecondary institution awards in the Los Angeles/Orange County region



APPENDIX: OCCUPATION DESCRIPTIONS

LA COE prepared this report to provide regional labor market supply and demand data related to these target occupations:

- Software Developers (15-1252)** Research, design, and develop computer and network software or specialized utility programs. Analyze user needs and develop software solutions, applying principles and techniques of computer science, engineering, and mathematical analysis. Update software or enhance existing software capabilities. May work with computer hardware engineers to integrate hardware and software systems, and develop specifications and performance requirements. May maintain databases

within an application area, working individually or coordinating database development as part of a team.¹⁰

- **Computer Occupations, All Other (15-1299)** All computer occupations not listed separately.¹¹
- **Data Scientists (15-2051)** Develop and implement a set of techniques or analytics applications to transform raw data into meaningful information using data-oriented programming languages and visualization software. Apply data mining, data modeling, natural language processing, and machine learning to extract and analyze information from large structured and unstructured datasets. Visualize, interpret, and report data findings. May create dynamic data reports.¹²

Contact information:

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POWERED BY



DATA SOURCES

- O*NET Online
- Lightcast (formerly Emsi)
- Bureau of Labor Statistics (BLS)
- California Employment Development Department, Labor Market Information Division, OES
- California Community Colleges Chancellor's Office Management Information Systems (MIS)
- Self-Sufficiency Standard at the Center for Women's Welfare, University of Washington
- Chancellor's Office Curriculum Inventory (COCI 2.0)

Important Disclaimer: All representations included in this report have been produced from primary research and/or secondary review of publicly and/or privately available data and/or research reports. Efforts have been made to qualify and validate the accuracy of the data and the reported findings; however, neither the Centers of Excellence, COE host District, nor California Community Colleges Chancellor's Office are responsible for applications or decisions made by recipient community colleges or their representatives based upon components or recommendations contained in this study.

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Centers of Excellence for Labor Market Research, Economic and Workforce Development Program

¹⁰ [Software Developers, Quality Assurance Analysts, and Testers \(bls.gov\)](#)

¹¹ [Computer Occupations, All Other \(bls.gov\)](#)

¹² [Data Scientists \(bls.gov\)](#)

Santa Monica College

Computer Science Information Systems

Computer Science Advisory Board

May 17, 2024

MINUTES

Attendees:

SMC Attendees: Howard Stahl (Chair), Mary Amirfazlian, Scott Bishop, Jinan Darwiche, Dan Hurley, Joan Kang, Koda Kol, Vicky Seno

Non-SMC Attendees: Elle Bonaventura (AWS), Ron Blanchard (AWS), Matt Gray (Coinbase), Paul Hill (jobsearchintelligence.com), Richard Korf (UCLA Computer Science), Neal Fultz (Fultz Consulting), Myra Roland (AWS)

Call to order: via Zoom - 9:30 AM

Following quick introductions, the following topics were discussed:

Department Review and Dashboard Indicators

Howard shared various data points with the committee. Highlights included:

- A growth in WTH of nearly 30% since 2016-17
- A growth in student headcount of more than 70% since 2014-2015
- A growth in awarded certificates of more than 400% since 2014-2015
- Two new full-time faculty hired last year

Existing Courses and Programs

Howard shared information about our existing classes, certificates and degrees. Attendees commented on the vibrancy and innovation being displayed in our ongoing efforts to stay in line with industry and employment trends.

Plans for the Future

Howard shared information regarding ongoing status of our proposed Bachelor's Degree in Cloud Computing to build off our existing Associate's Degree and Certificate of Achievement in Cloud Computer. Attendees were very supportive of our program and degrees.

Artificial Intelligence Certificates and Classes

Howard shared information regarding various curriculum updates and the new degree and classes that make up our proposed Artificial Intelligence degrees. After much discussion, the following motion was presented and voted upon.

MOTION: The Computer Science Advisory Board supports the Artificial Intelligence degree, the Applied Artificial Intelligence degree and new class that are a part of these programs as presented. Made by: Stahl Seconded by: Jinan. FOR-15 AGAINST-0 ABSTAIN-0 Attendees support these efforts and voted unanimously to support it.

Open Discussion

Various additional topics were discussed including Career Services and internships and the role of AI in an introductory Computer Science programming courses.

Meeting Adjourned: 11:03 AM

Santa Monica College Cloud Computing Bachelor of Science

Cloud computing is a major technology disrupter, changing countless industries. Cloud Computing delivers computing resources over the internet, replacing the reliance on local information technology infrastructure. Its impact has been profound, reshaping businesses' IT infrastructure due to its remarkable benefits in terms of flexibility, scalability, and cost-effectiveness. A degree in Cloud Computing offers an exceptional opportunity in response to the soaring demand in IT for cloud computing professionals. With organizations rapidly embracing cloud solutions, there is a significant need for skilled experts in cloud architecture, development, operations, security, and management. This is a four-year program with the lower division Cloud Computing Associates degree courses providing students with the skills necessary to enter the upper division courses in this exciting field.

Program Learning Outcomes:

Upon successful completion of this program, students will be able to design, develop and operate scalable cloud solutions that meet business needs.

Upon successful completion of this program, students will be able to employ the current practices, methodologies, tools and processes currently utilized in the cloud computing industry today.

Upon successful completion of this program, students will be able to critically analyze and construct effective oral and written communications tailored to engage business and technology professionals working on cloud projects and enterprise technologies.

Upon successful completion of this program, students will be able to work successfully and collaborate effectively as an individual contributor or as a member of an inclusive and diverse team, demonstrating skills in teamwork, communication, and cultural awareness.

Lower Division Preparation For Admission Into The Program Units: 60.0

CSUGE Area A - English Language Communication and Critical Thinking	6.0
CSUGE Area B - Scientific Inquiry and Quantitative Reasoning	9.0
CSUGE Area C - Arts and Humanities	9.0
CSUGE Area D - Social Sciences	6.0
CSUGE Area E - Lifelong Learning and Self-Development	3.0
CSUGE Area F - Ethnic Studies	3.0
CS 70 ^{DE} Network Fundamentals and Architecture	3.0
CS 79A ^{DE} Introduction to Cloud Computing	3.0
CS 80 ^{DE} Internet Programming	3.0
CS 87A ^{DE} Python Programming	3.0

Choose 1 Track Units: 9.0

Microsoft Azure Track

CS 33 ^{DE} C # Programming	3.0
CS 79Y ^{DE} Microsoft Azure Database Essentials	3.0
CS 79Z ^{DE} Microsoft Azure Essentials	3.0

OR

Amazon Web Services Track

CS 79B ^{DE} Database Essentials in Amazon Web Services	3.0
CS 79C ^{DE} Compute Engines in Amazon Web Services	3.0
CS 79D ^{DE} Security in Amazon Web Services	3.0

Restricted Elective Units: 3.0

CS 43 Windows Network Administration	3.0
CS 55 ^{DE} Java Programming	3.0
CS 79E ^{DE} Best Practices in Amazon Web Services	3.0
CS 83R ^{DE} Server-Side Ruby Web Programming	3.0
CS 82 ASP.NET Programming in C#	3.0

Lower Division Major Coursework Units: 18.0

CS 9A ^{DE} Technology Project Management I (<i>same as: CIS 9A</i>)	3.0
--	-----

CS 41 ^{DE} Linux Workstation Administration	3.0
CS 60 ^{DE} Database Concepts and Applications	3.0
CS 73A ^{DE} Fundamentals of Computer Security	3.0
CS 73B ^{DE} Computer Forensics Fundamentals	3.0
CS 81 ^{DE} Javascript Programming	3.0

Elective Choice **Units: 3.0**

BUS 63 ^{DE} Principles of Entrepreneurship	3.0
CIS 30T ^{DE} Tableau Desktop Essentials	3.0
CS 79F ^{DE} Machine Learning on AWS	3.0
CS 79X ^{DE} Data Science on Azure	3.0
CS 82A ^{DE} Introduction to Data Science	3.0

Upper Division General Education Coursework **Units: 9.0**

COM ST 310 ^{DE} Organizational and Small Group Communication	3.0
ENGL 300 ^{DE} Advanced Writing and Critical Thinking in the Disciplines	3.0
MEDIA 310 Race, Gender, and Computing	3.0

Upper Division Major Requirements **Units: 30.0**

CS 315 Cloud Compliance	3.0
CS 320 Cloud Developer	3.0
CS 330 Cloud Operations Technologies and Tools	3.0
CS 335 Cloud Infrastructure As Code	3.0
CS 340 System Virtualization Fundamentals	3.0
CS 350 Collaboration Technologies and Tools	3.0
CS 405 Cloud Capstone I	3.0
CS 410 Cloud Capstone II	3.0
CS 440 Cloud Patterns	3.0
CS 450 Cloud Certification Bootcamp	3.0

Total: 120.0

Santa Monica College

Cloud Computing Bachelor of Science

Narrative

Program Goals and Objectives:

Cloud computing is a major technology disrupter, changing countless industries. Cloud Computing delivers computing resources over the internet, replacing the reliance on local information technology infrastructure. Its impact has been profound, reshaping businesses' IT infrastructure due to its remarkable benefits in terms of flexibility, scalability, and cost-effectiveness. A degree in Cloud Computing offers an exceptional opportunity in response to the soaring demand in IT for cloud computing professionals. With organizations rapidly embracing cloud solutions, there is a significant need for skilled experts in cloud architecture, development, operations, security, and management. This is a four-year program with the lower division Cloud Computing Associates degree courses providing students with the skills necessary to enter the upper division courses in this exciting field.

Program Learning Outcomes:

Upon successful completion of this program, students will be able to design, develop and operate scalable cloud solutions that meet business needs.

Upon successful completion of this program, students will be able to employ the current practices, methodologies, tools and processes currently utilized in the cloud computing industry today.

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Upon successful completion of this program, students will be able to work successfully and collaborate effectively as an individual contributor or as a member of an inclusive and diverse team, demonstrating skills in teamwork, communication, and cultural awareness.

Catalog Description:

Cloud computing is a major technology disrupter, changing countless industries. Cloud Computing delivers computing resources over the internet, replacing the reliance on local information technology infrastructure. Its impact has been profound, reshaping businesses' IT infrastructure due to its remarkable benefits in terms of flexibility, scalability, and cost-effectiveness. A degree in Cloud Computing offers an exceptional opportunity in response to the soaring demand in IT for cloud computing professionals. With organizations rapidly embracing cloud solutions, there is a significant need for skilled experts in cloud architecture, development, operations, security, and management. This is a four-year program with the lower division Cloud Computing Associates degree courses providing students with the skills necessary to enter the upper division courses in this exciting field.

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Upon successful completion of this program, students will be able to work successfully and collaborate effectively as an individual contributor or as a member of an inclusive and diverse team, demonstrating skills in teamwork, communication, and cultural awareness.

Program Requirements:

Lower Division Preparation For Admission Into The Program	Units: 60.0
CSUGE Area A - English Language Communication and Critical Thinking	6.0
CSUGE Area B - Scientific Inquiry and Quantitative Reasoning	9.0
CSUGE Area C - Arts and Humanities	9.0
CSUGE Area D - Social Sciences	6.0
CSUGE Area E - Lifelong Learning and Self-Development	3.0
CSUGE Area F - Ethnic Studies	3.0
CS 70 ^{DE} Network Fundamentals and Architecture	3.0
CS 79A ^{DE} Introduction to Cloud Computing	3.0
CS 80 ^{DE} Internet Programming	3.0
CS 87A ^{DE} Python Programming	3.0

Choose 1 Track	Units: 9.0
<i>Microsoft Azure Track</i>	
CS 33 ^{DE} C # Programming	3.0
CS 79Y ^{DE} Microsoft Azure Database Essentials	3.0
CS 79Z ^{DE} Microsoft Azure Essentials	3.0
OR	
<i>Amazon Web Services Track</i>	
CS 79B ^{DE} Database Essentials in Amazon Web Services	3.0
CS 79C ^{DE} Compute Engines in Amazon Web Services	3.0
CS 79D ^{DE} Security in Amazon Web Services	3.0
Restricted Elective	Units: 3.0
CS 43 Windows Network Administration	3.0
CS 55 ^{DE} Java Programming	3.0
CS 79E ^{DE} Best Practices in Amazon Web Services	3.0
CS 83R ^{DE} Server-Side Ruby Web Programming	3.0
CS 82 ASP.NET Programming in C#	3.0
Lower Division Major Coursework	Units: 18.0
CS 9A ^{DE} Technology Project Management I (<i>same as: CIS 9A</i>)	3.0
CS 41 ^{DE} Linux Workstation Administration	3.0
CS 60 ^{DE} Database Concepts and Applications	3.0
CS 73A ^{DE} Fundamentals of Computer Security	3.0
CS 73B ^{DE} Computer Forensics Fundamentals	3.0
CS 81 ^{DE} Javascript Programming	3.0
Elective Choice	Units: 3.0
BUS 63 ^{DE} Principles of Entrepreneurship	3.0
CIS 30T ^{DE} Tableau Desktop Essentials	3.0
CS 79F ^{DE} Machine Learning on AWS	3.0
CS 79X ^{DE} Data Science on Azure	3.0
CS 82A ^{DE} Introduction to Data Science	3.0
Upper Division General Education Coursework	Units: 9.0
COM ST 310 ^{DE} Organizational and Small Group Communication	3.0
ENGL 300 ^{DE} Advanced Writing and Critical Thinking in the Disciplines	3.0
MEDIA 310 Race, Gender, and Computing	3.0
Upper Division Major Requirements	Units: 30.0
CS 315 Cloud Compliance	3.0
CS 320 Cloud Developer	3.0
CS 330 Cloud Operations Technologies and Tools	3.0
CS 335 Cloud Infrastructure As Code	3.0
CS 340 System Virtualization Fundamentals	3.0
CS 350 Collaboration Technologies and Tools	3.0
CS 405 Cloud Capstone I	3.0
CS 410 Cloud Capstone II	3.0
CS 440 Cloud Patterns	3.0
CS 450 Cloud Certification Bootcamp	3.0
	Total: 120.0

Master Planning:

The Cloud baccalaureate degree will be housed in Computer Science discipline in the Computer Science Information Systems department. Creation of the proposed Cloud Bachelor's degree is a natural progression for the Computer Science program at SMC, and one that leverages existing student populations, existing curriculum, and human and physical resources.

Our Associate's degree program in Cloud Computing was first launched at SMC in Fall 2017. In partnership with local high schools including LAUSD and Santa Monica-Malibu as well as industry partners like AWS Educate, we developed a

core set of four classes to prepare graduates to earn well-recognized industry certifications in Cloud, specifically AWS Cloud Practitioner and AWS Solutions Architect Associate exams. Faculty at Santa Monica College created course materials for these classes and have updated them three different times in the many years since they were first created. Program completers were invited to participate in weekend bootcamps to prep for these certification exams. With recent Perkins rules changes, SMC is providing exam vouchers to all program completers interested in taking these certification exams at no cost to the student.

This Cloud program became a model for regional efforts statewide and for many years was the largest funded Strong Workforce project in the Los Angeles region. SMC Faculty served as the lead faculty on this regional project and help to foster a rich community of practice focused on cooperation and coordination between the colleges. This regional project completed numerous professional development activities to build faculty skills in Cloud at nineteen local community colleges in the Los Angeles region. SMC's original four classes were adopted at a regional level speeding the development of programs across all these colleges. The regional project sponsored industry events called Cloud Days which were run twice a year at a regional level allowing employers to engage with students at scale in an efficient manner. Cloud Days typically attracted dozens of regional employers and 300-400 students from across the LA area.

Our proposed baccalaureate degree in Cloud Computing is a natural progression and next step for the regional efforts described above. The Labor Market data in support of this program shows more than 108,000 job postings in the LA area for positions in Cloud between September 2021 and August 2022, more than 60% of which required a bachelor's degree. In order to be competitive job candidates in this industry, many of our students want to earn a four-year degree. However, nearly all of our four-year partners have impacted programs in tech fields and regularly deny admission to many more students than they accept. The biggest equity gap our students face is the limited bandwidth of our four-year partners to enroll them into their programs.

Enrollment and Completer Projections:

The program launch plan calls for a first cohort in Fall 2024 of 45 students followed by cohorts of 45 students in the following Spring, Fall and Spring for a total of 180 students enrolled in the program. We will be marketing this program to the 1000 students who have completed cloud classes at SMC, to the 1000 students who signed up for cloud classes at SMC but never completed them and to the 5000 students from other local colleges who have completed cloud classes elsewhere.

Place of Program in Curriculum/Similar Programs:

Our proposed baccalaureate degree in Cloud Computing is a natural progression and next step for the regional efforts in the LA region in cloud computing. The Labor Market data in support of this program shows more than 108,000 job postings in the LA area for positions in Cloud between September 2021 and August 2022, more than 60% of which required a bachelor's degree. In order to be competitive job candidates in this industry, many of our students want to earn a four-year degree. However, nearly all of our four-year partners have impacted programs in tech fields and regularly deny admission to many more students than they accept. The biggest equity gap our students face is the limited bandwidth of our four-year partners to enroll them into their programs.

Similar Programs at Other Colleges in Service Area:

No other two-year or four-year institutions have a dedicated and focused Cloud Computing program. We are the lead college in a regional consortium teaching cloud computing skills in computer science programs at the community college level.



Unmet Workforce Demand for Cloud Computing Occupations in LA County:

Labor Market Supply and Demand for Cloud Computing Baccalaureate
of Applied Science (B.A.S.) degree at Santa Monica College

*Prepared by: Los Angeles Center of Excellence for Labor Market Research
September 2022*

Table of Contents

Key Findings	3
Introduction	4
Cloud computing	4
Uses of cloud computing	4
Impact on workforce and training	4
Occupational outlook for cloud computing	5
Key Cloud Computing Occupations	6
Labor Market Demand for Cloud Computing Occupations	6
Historical employment in LA County	6
Projected Annual Job Openings, 2021-2026	8
Average hourly wages for cloud computing occupations	9
Industry employment of cloud computing occupations	11
Job Postings for cloud computing	12
Educational Supply: Key Training Programs for Cloud Computing	14
Community College Enrollment and Awards related to Cloud Computing	14
Baccalaureate degrees related to Cloud Computing	17
Gap Analysis	18
Recommendations & Discussion	19
Methodology	20
Appendix	21

Key Findings

Demand:

- Employment in cloud computing occupations has grown at a much faster rate over the last 20 years (41.3%) than employment across all occupations (6.9%).
- Employment in cloud computing occupations declined at a much slower rate during the COVID-19 pandemic (-4.5%) than the average across all occupations (-8.3%), demonstrating a higher degree of resilience for cloud computing roles during this time.
- Over the next five years, more than 11,000 cloud computing jobs are projected to be available in Los Angeles County.
 - 87% of these projected job openings (9,561 openings) are for computer occupations that typically require a bachelor's degree for entry.
- Average hourly wages for cloud computing occupations are \$6.50 higher than the average across all occupations at the 10th percentile, \$10.50 higher at the 25th percentile, \$14.00 higher at the median, \$19.00 higher at the 75th percentile, and nearly \$21.00 more per hour at the 90th percentile.

Supply:

- Between 2018 and 2021, Los Angeles community colleges issued an average of 1,129 awards annually in programs related to cloud computing.
- Between 2017 and 2020, non-community college institutions in the region conferred an average of 292 sub-baccalaureate awards from related programs.
 - An average of 1,421 sub-baccalaureate awards (associate degrees and certificates) related to cloud computing are issued annually in Los Angeles County.
- Between 2017 and 2020, educational providers in the region conferred an average of 2,183 bachelor's degrees from programs related to cloud computing.

Gap Analysis:

- With 1,421 average annual sub-baccalaureate awards issued in the county and 1,440 projected annual job openings related to cloud computing roles that require less than a bachelor's degree, the potential supply gap at this level of education is only 19 unfilled jobs.
- With 2,183 average annual bachelor's degrees issued in the county and 9,561 projected annual job openings related to cloud computing that typically require a bachelor's degree for entry, the potential supply gap at this level of education is 7,378 unfilled jobs.

Introduction

Cloud computing

The introduction of cloud computing to the ever-growing world of information technology is introducing significant changes not only to technology processes but to the workforce. Cloud computing allows for the storage, management, and processing of data using internet technologies (“the cloud”). Some of the leading cloud computing providers include Amazon Web Services (AWS), Google Cloud Platform, Microsoft Azure, and IBM. Advantages of this evolving technology include:¹

- Payment for data center and server-type resources on an as needed basis or pay-as-you-go
- Cost savings due to economies of scale
- No more physical infrastructure and associated costs
- Global reach and access
- Deployment of technology services quickly

Uses of cloud computing

Cloud computing is utilized by a wide variety of organizations including small businesses, large global corporations, government agencies, and not-for-profits. Services available through cloud computing include:²

- Creation of new apps and services
- Storage, back up, and recovery of data
- Website and blog hosting
- Audio and video streaming
- Delivery of software on demand
- Analyzation of data for patterns and predictions

Impact on workforce and training

With the introduction and implementation of cloud computing into the information technology workforce, community colleges and other training providers will need to integrate related skills and technologies into the current curricula and training. Local community colleges currently offer several programs that train students in relational databases, programming, Linux, DevOps, quality assurance, and information security. Individual colleges are attempting to stack or

¹ [Amazon Web Services - What is cloud computing?](#)

² [Microsoft Azure – A beginner’s guide to cloud computing](#)

leverage certificates for cloud computing career paths with related disciplines including small business, computer science, web development, business analytics, IT, and mobile developers.

The emergence of cloud computing has preempted incumbent IT workers to upskill based on workforce and employer needs. With the right training, workers with traditional IT skills—such as data engineers, enterprise architects, web developers, and networking engineers—can expand their knowledge, skills, and abilities within the ever-changing field of information technology.

Occupational outlook for cloud computing

Businesses that employ cloud computing workers use various job titles, which are explored in the job posting section beginning on page 12. In the region, major cloud computing employers include Boeing, Northrup Grumman, Robert Half, Anthem Blue Cross, Amazon, Deloitte, Raytheon, and Disney.

The purpose of this study is to determine whether there is demand in the local labor market for cloud computing jobs that is not being met by the supply from relevant training programs. More specifically, this report addresses the labor market component of Assembly Bill 927, which requires evidence of unmet workforce needs related to Santa Monica College’s proposed cloud computing baccalaureate program.³

³ [AB-927 Public postsecondary education: community colleges: statewide baccalaureate degree program](#)

Key Cloud Computing Occupations

The cloud computing occupations analyzed in this report were selected from the 2018 Standard Occupational Classification (SOC) system, and all but one of these occupations belong to the computer and mathematical major occupational group (SOC 15-000). The occupations listed in Exhibit 1 comprise the cloud computing occupations used throughout this report.

Exhibit 1: Cloud computing occupations

SOC Code	Description
11-3021	Computer and Information Systems Managers
15-1211	Computer Systems Analysts
15-1212	Information Security Analysts
15-1231	Computer Network Support Specialists
15-1232	Computer User Support Specialists
15-1241	Computer Network Architects
15-1242	Database Administrators
15-1243	Database Architects
15-1244	Network and Computer Systems Administrators
15-1251	Computer Programmers
15-1252	Software Developers
15-1253	Software Quality Assurance Analysts and Testers
15-1254	Web Developers
15-1255	Web and Digital Interface Designers
15-1299	Computer Occupations, All Other

Source: [2018 Standard Occupational Classification \(SOC\) system](#)

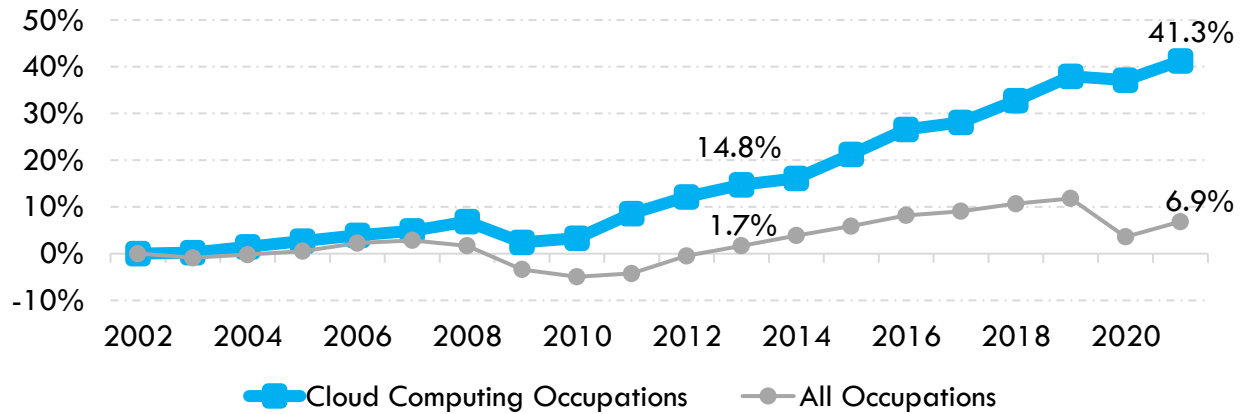
Labor Market Demand for Cloud Computing Occupations

Historical employment in LA County

Look back over the past 20 years and setting 2002 as the base year yields a clear picture regarding employment in cloud computing occupations. Exhibit 2 demonstrates that since 2002, employment in cloud computing occupations has grown by 41.3% while employment across all occupations has only grown by 6.9%. Furthermore, the Great Recession (2007-2009) brought employment across all occupations below the 2002 baseline from 2009 to 2012, and recovered to 1.7% above the baseline level in 2013. Conversely, employment in cloud computing

occupations never dropped below the 2002 baseline level and by 2013 had increased by nearly 15%.

Exhibit 2: Percent change in employment since 2002

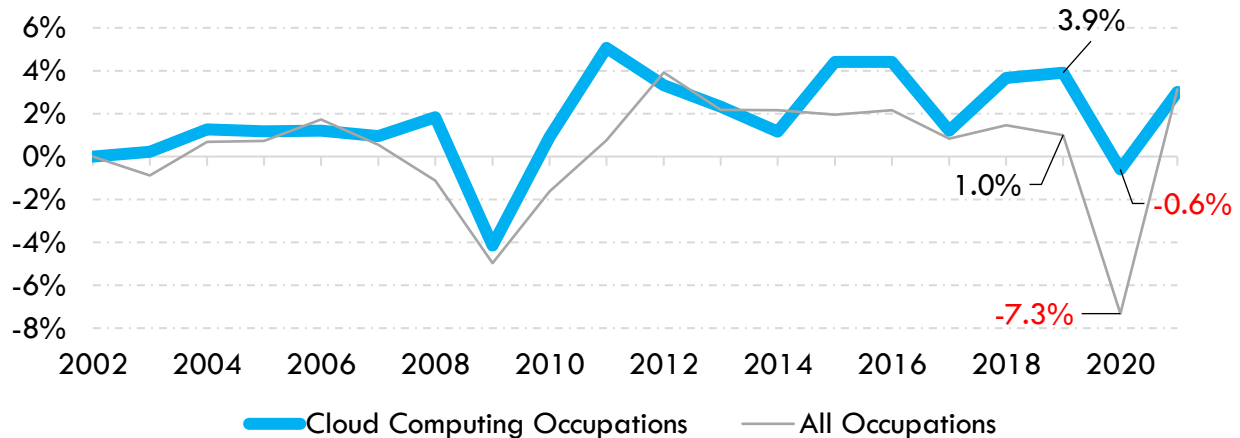


Source: Lightcast, Datarun 2022.3

Using the same data, Exhibit 3 displays the year-over-year change in employment from 2002 to 2021 for cloud computing occupations (thick blue line) and all occupations (thin grey line) in LA County. The location of the line in any given year indicates the percentage by which employment changed from the previous year. For instance, from 2019 to 2020, employment for all occupations plummeted at nearly twice the rate (-8.3%) as employment for cloud computing occupations (-4.5%).

During this 20-year timeframe, the year-over-year percent change in employment for cloud computing occupations peaks higher than for all occupations (see years 2011, 2015-2016, and 2018-2019), and also demonstrates that employment in cloud computing occupations was less adversely impacted by the COVID-19 pandemic than it was across all occupations.

Exhibit 3: Year-over-year employment percent change in LA County from 2002 to 2021



Source: Lightcast, Datarun 2022.3

Exhibits 2 and 3 demonstrate two major points. The first is that employment in cloud computing occupations has grown at a much faster rate over the last 20 years than employment across all occupations. Secondly, while employment in cloud computing occupations is not immune to large scale economic shocks such as the Great Recession and the COVID-19 pandemic, it is more insulated and less prone to job loss at the scale felt across all occupations.

Projected Annual Job Openings, 2021-2026

Exhibit 4 displays detailed 2021 job counts, projected employment figures through 2026, annual job openings, and typical entry-level education requirements for each occupation studied in this report. In Los Angeles County, there will be over 11,000 job openings, with *software developers* projected to have the largest share of those openings, followed by *computer occupations, all other*, and *computer and information systems managers*. Cloud computing occupations that typically require a bachelor's degree account for 87% of the 11,001 projected annual job openings.

Exhibit 4: Cloud computing occupational demand in Los Angeles County

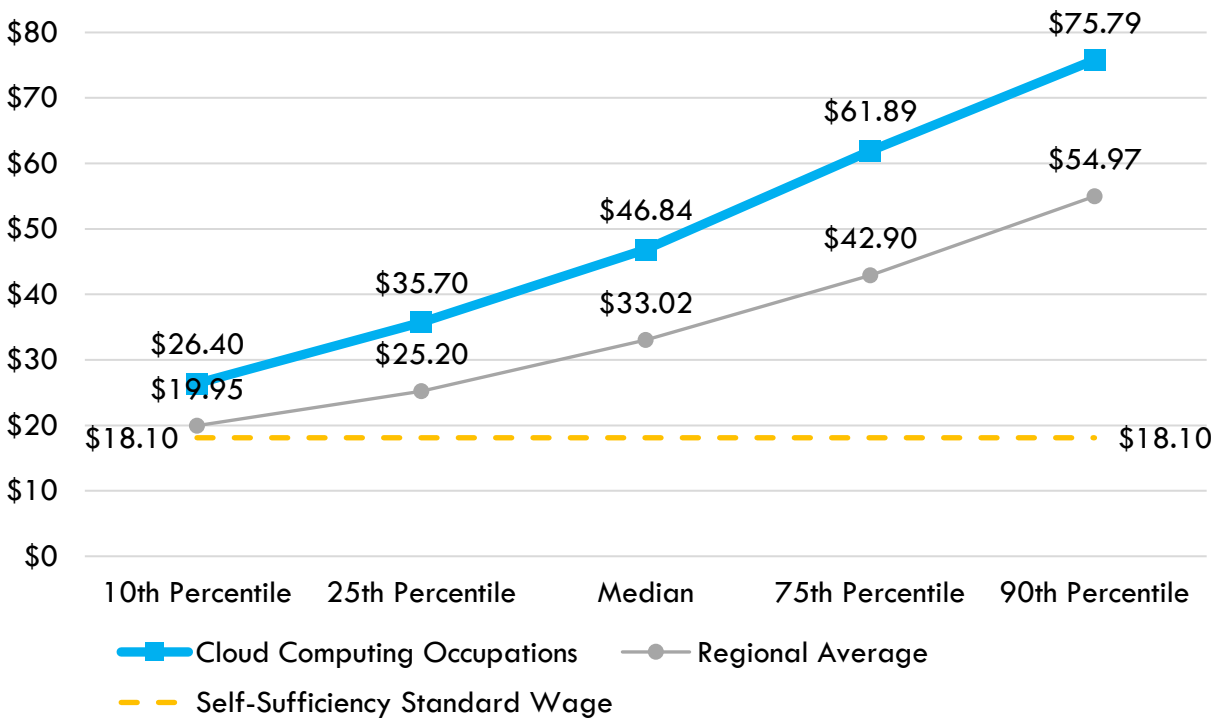
SOC	Occupation	2021 Jobs	2026 Jobs	5-Year % Change	Annual Openings	Typical Entry Level Education
15-1252	Software Developers	35,221	38,662	10%	3,336	Bachelor's degree
15-1299	Computer Occupations, All Other	18,452	18,400	(0%)	1,343	Bachelor's degree
11-3021	Computer and Information Systems Managers	17,744	17,840	1%	1,318	Bachelor's degree
15-1232	Computer User Support Specialists	15,375	15,622	2%	1,165	Some college, no degree
15-1211	Computer Systems Analysts	12,680	12,623	(0%)	888	Bachelor's degree
15-1253	Software Quality Assurance Analysts and Testers	4,977	5,401	9%	457	Bachelor's degree
15-1244	Network and Computer Systems Administrators	6,573	6,562	(0%)	424	Bachelor's degree
15-1254	Web Developers	4,317	4,527	5%	360	Bachelor's degree
15-1255	Web and Digital Interface Designers	3,620	3,876	7%	320	Bachelor's degree
15-1231	Computer Network Support Specialists	3,572	3,650	2%	275	Associate's degree
15-1251	Computer Programmers	4,242	3,949	(7%)	272	Bachelor's degree
15-1212	Information Security Analysts	2,601	2,942	13%	264	Bachelor's degree
15-1241	Computer Network Architects	4,125	4,088	(1%)	242	Bachelor's degree
15-1243	Database Architects	2,402	2,414	0%	176	Bachelor's degree
15-1242	Database Administrators	2,094	2,140	2%	161	Bachelor's degree
	Total	137,994	142,696	3%	11,001	

Source: Lightcast, Datarun 2022.3

Average hourly wages for cloud computing occupations

The average hourly wage for cloud computing occupations in Los Angeles County at the 10th, 25th, median, 75th, and 90th percentile is displayed in Exhibit 5. At the lowest percentile available (i. e., the 10th), workers employed in cloud computing occupations earn approximately \$6.50 per hour more than the regional average across all occupations. This is welcome news by itself, however, the lifelong benefit of being employed in a cloud computing occupation in Los Angeles County is that this gap widens among higher earners in a linear fashion. Progressing to the 25th percentile, workers in cloud computing occupations earn \$10.50 per hour more than the average worker in the region, nearly \$14 more at the median level, nearly \$19 more at the 75th percentile, and nearly \$21.00 more per hour at the 90th percentile, on average.

Exhibit 5: Hourly wage range for could computing occupations



Source: Lightcast, Datarun 2022.3 and the [Self-Sufficiency Standard for California](#)

Detailed median hourly and annual wages by occupation are displayed in descending order in Exhibit 6 for cloud computing occupations, from highest to lowest.

Exhibit 6: Median hourly and annual wages by detailed cloud computing occupations

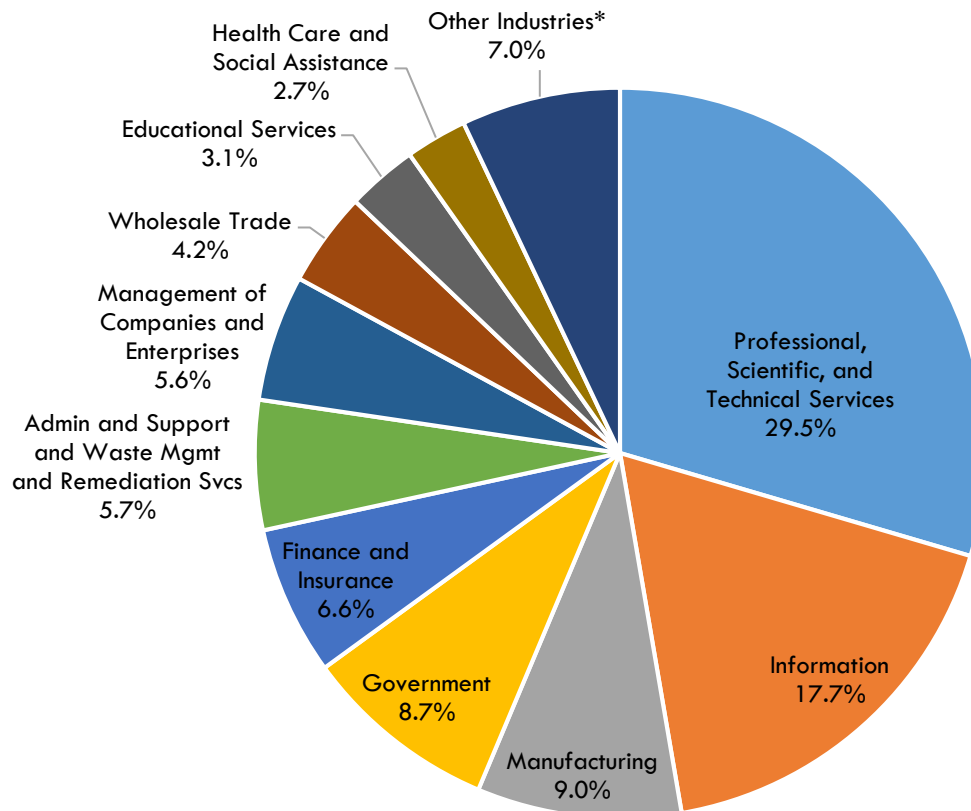
SOC Code	Description	Median Hourly Earnings	Median Annual Earnings
11-3021	Computer and Information Systems Managers	\$78.97	\$164,259
15-1252	Software Developers	\$61.53	\$127,973
15-1212	Information Security Analysts	\$57.85	\$120,337
15-1241	Computer Network Architects	\$54.69	\$113,760
15-1211	Computer Systems Analysts	\$50.12	\$104,255
15-1253	Software Quality Assurance Analysts and Testers	\$48.31	\$100,477
15-1251	Computer Programmers	\$47.97	\$99,774
15-1242	Database Administrators	\$47.72	\$99,249
15-1244	Network and Computer Systems Administrators	\$45.90	\$95,474
15-1299	Computer Occupations, All Other	\$38.49	\$80,066
15-1255	Web and Digital Interface Designers	\$37.43	\$77,859
15-1243	Database Architects	\$36.87	\$76,694
15-1254	Web Developers	\$36.25	\$75,392
15-1231	Computer Network Support Specialists	\$31.14	\$64,779
15-1232	Computer User Support Specialists	\$29.30	\$60,941

Source: Lightcast, Datarun 2022.3

Industry employment of cloud computing occupations

Unlike occupations that are largely concentrated within a single industry (e. g., surgeons in healthcare or police officers working in various levels of government), cloud computing occupations are employed across a wide spectrum of industries. Exhibit 7 displays the portion of cloud computing occupational employment within each industry sector. The two industry sectors with the largest share of cloud computing occupational employment are *professional, scientific, and technical services* (business that primarily provide consulting, legal, accounting, design, computer, and other services) at 29.5%, and *information* (comprised mostly of motion picture and sound recording businesses) at 17.7%. Combined, these two industry sectors account for nearly half of the employment in cloud computing occupations in Los Angeles County.

Exhibit 7: Industry concentration of cloud computing jobs in 2021



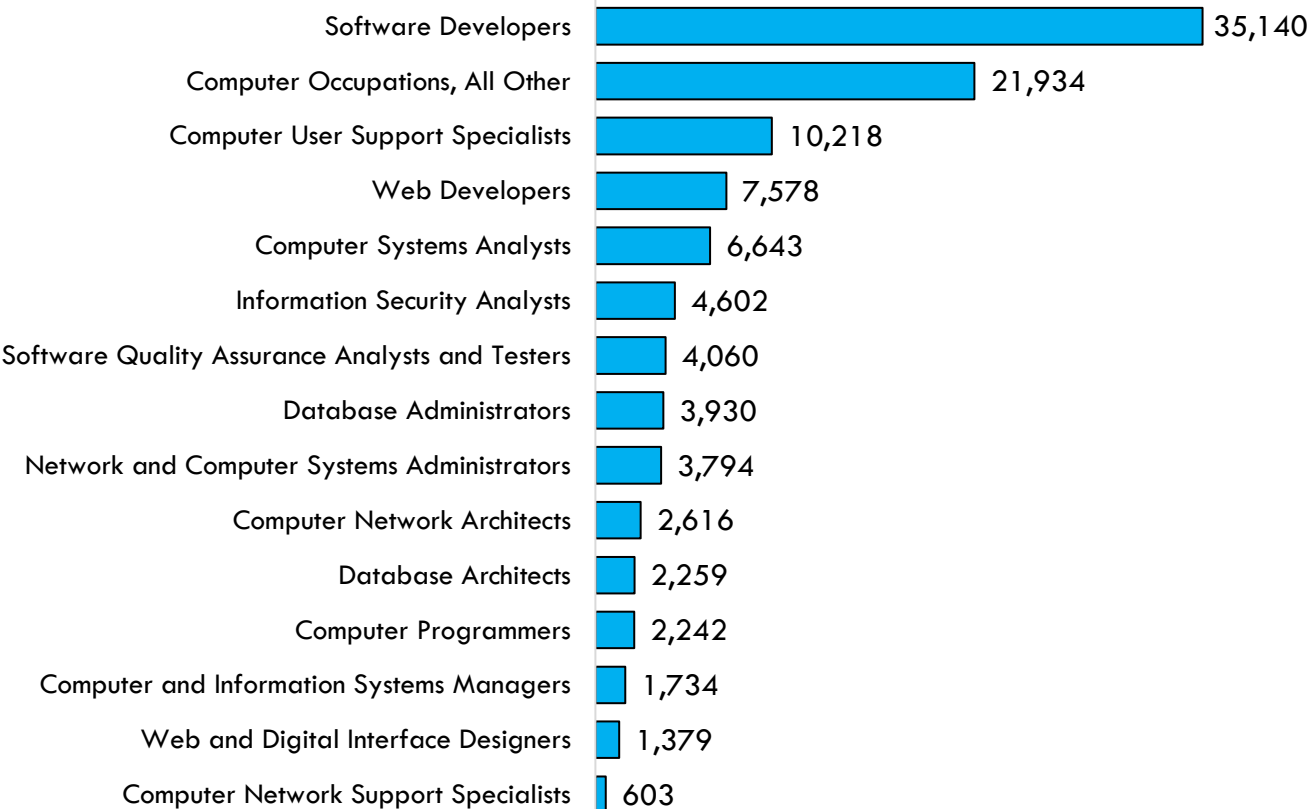
*Other Industries include: Retail Trade (1.9%); Other Services, except Public Administration (1.4%); Transportation and Warehousing (1.3%); Arts, Entertainment, and Recreation (0.7%); Real Estate and Rental and Leasing (0.6%); Construction (0.5%); Utilities (0.4%); Accommodation and Food Services (0.1%); and Mining, Quarrying, and Oil and Gas Extraction & Agriculture, Forestry, Fishing and Hunting (both <0.1%).

Source: Lightcast, Datarun 2022.3

Job Postings for cloud computing

Over the last 12 months (September 2021 through August 2022), there were 108,732 unique online job postings related to cloud computing occupations in Los Angeles County. The occupation with the highest number of online job postings, 35,140, was *software developers* (32% of total), followed by 21,934 job ads for *computer occupations, all other* (20% of total), and 10,218 job ads for *computer user support specialists* (9% of total). The number of job postings by occupation appear in Exhibit 8.

Exhibit 8: Job postings by occupation (Sep 2021 – Aug 2022)



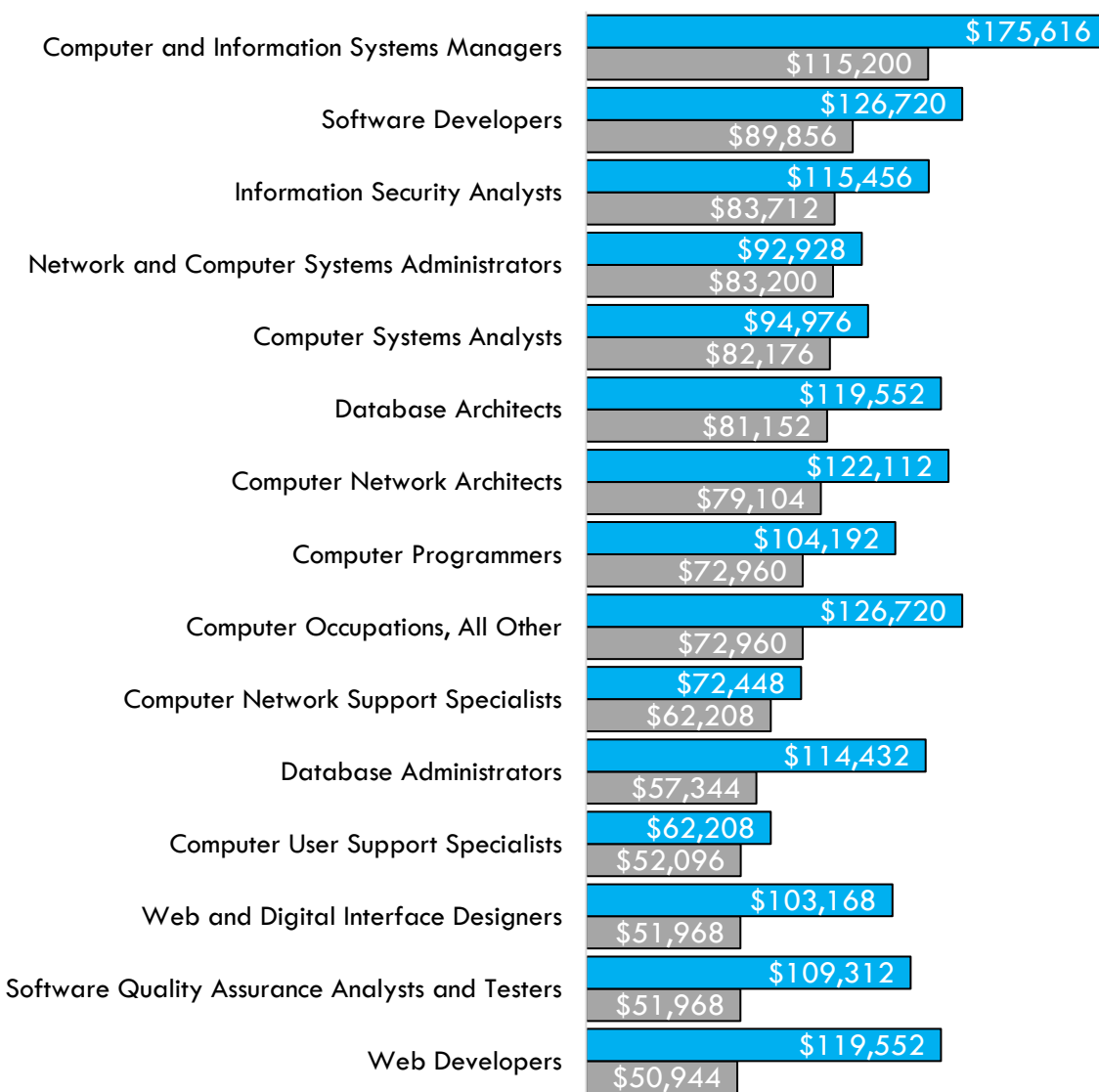
Source: Lightcast, Datarun 2022.3

The most common job titles from job postings were software engineers, systems engineers, data engineers, and DevOps engineers. The employers posting the most job ads during this timeframe were Boeing, Northrup Grumman, Robert Half, Anthem Blue Cross, Amazon, Deloitte, Raytheon, and Disney. The skills sought most frequently in these job ads were related to computer science, agile methodology, SQL, Python, Amazon Web Services, Java, JavaScript, automation, application programming interface, and Microsoft Azure. Beyond security clearances and certifications related to dealing with sensitive information, certifications most frequently sought by employers were project management certifications, Cisco Certified Network Associate, CompTIA Security+, and CompTIA Network+.

Of all the job postings that listed a minimum educational requirement, nearly two-thirds of employers were seeking candidates with a bachelor’s degree (63% of total), demonstrating that

employers postings job ads prefer candidates with a bachelor’s degree for these jobs. Taking a closer look at job postings that listed a high school diploma or associate degree as the required level of education versus those postings that listed a bachelor’s degree, employers seeking candidates with a bachelor’s degree for cloud computing jobs are advertising annual salaries that are over \$38,000 higher per year than those seeking candidates with a high school diploma or associate degree. The largest difference was for *web developers*, where employers were advertising salaries over \$68,600 higher for candidates with a bachelor’s degree. Exhibit 9 demonstrates that regional employers posting job ads for these cloud computing occupations are willing to pay significantly more for candidates with a bachelor’s degree than for candidates with a high school diploma or associate degree.

Exhibit 9: Annual median advertised salary by education level



■ BA Annual Median Advertised Salary ■ HS or AA Annual Median Advertised Salary

Source: Lightcast, Datarun 2022.3

Educational Supply: Key Training Programs for Cloud Computing

Community College Enrollment and Awards related to Cloud Computing

There are 17 TOP codes in the California Community College system designed to train students for occupations related to cloud computing. The top programs in Los Angeles County in terms of enrollment are Information Technology, General (0701.00), Computer Programming (0707.10) and Computer Information Systems (0702.00). The average enrollment between 2017 and 2020 in these cloud computing-related programs was 36,415 students in Los Angeles County. Exhibit 10 displays the number of students enrolled in these programs over the last three academic years.

Exhibit 10: Community college students enrolled in programs related to cloud computing

Program (TOP)	2017-18	2018-19	2019-20	3-Year Average
Information Technology, General (0701.00)	15,745	14,317	12,183	14,082
Computer Programming (0707.10)	6,584	6,974	8,274	7,277
Computer Information Systems (0702.00)	5,439	5,732	6,163	5,778
Software Applications (0702.10)	2,907	2,581	2,313	2,600
Computer Science (0706.00)	2,000	2,388	3,001	2,463
Computer Infrastructure and Support (0708.00)	903	1,065	1,331	1,100
Computer Networking (0708.10)	939	975	997	970
Computer Support (0708.20)	421	414	437	424
Database Design and Administration (0707.20)	299	348	485	377
Website Design and Development (0614.30)	291	324	320	312
Computer Systems Analysis (0707.30)	237	201	485	308
World Wide Web Administration (0709.00)	190	182	317	230
Computer Software Development (0707.00)	136	252	179	189
E-Commerce (technology emphasis) (0709.10)	95	142	173	137
Other Information Technology (0799.00)	35	35	290	120
Telecommunications Technology (0934.30)	31	64	35	43
E-Commerce (Business emphasis) (0509.70)	-	17	-	6
Total	36,252	36,011	36,983	36,415

Source: [Cal-PASS Plus LaunchBoard](#)

On average, 1,129 awards were conferred annually to community college students in these 17 programs related to cloud computing (see Exhibit 11). Awards from these programs have increased 19% during this three-year period from 1,028 in the 2018-19 academic year to 1,223 in 2020-21. The program that conferred the largest number of awards was Computer Programming (0707.10), followed by Information Technology (0701.00) and Computer Networking (0708.10). Of these 1,129 awards, 436 were associate degrees and 667 were certificates.

Exhibit 11: Regional community college awards (certificates and degrees), 2018-2021

Program (TOP)	2018-19	2019-20	2020-21	3-Year Average
Computer Programming (0707.10)	220	217	218	218
Information Technology, General (0701.00)	175	172	167	171
Computer Networking (0708.10)	221	145	136	167
Computer Science (0706.00)	112	147	222	160
Computer Information Systems (0702.00)	82	170	88	113
Computer Infrastructure and Support (0708.00)	40	83	118	80
Computer Support (0708.20)	34	60	84	59
World Wide Web Administration (0709.00)	50	40	68	53
Database Design and Administration (0707.20)	16	23	47	29
Software Applications (0702.10)	31	29	12	24
Telecommunications Technology (0934.30)	18	13	23	18
Website Design and Development (0614.30)	12	12	14	13
Other Information Technology (0799.00)	13	15	4	11
Computer Systems Analysis (0707.30)	2	5	9	5
E-Commerce (Business emphasis) (0509.70)	-	4	7	4
Computer Software Development (0707.00)	1	-	5	2
E-Commerce (technology emphasis) (0709.10)	1	1	1	1
Total	1,028	1,136	1,223	1,129

Source: [California Community Colleges Chancellor's Office Management Information Systems Data Mart](#)

In addition to the cloud computing awards issued by the nineteen community colleges in Los Angeles County, there are other educational institutions that issue sub-baccalaureate awards related to cloud computing. Between 2017 and 2020, an average of 292 sub-baccalaureate awards were issued across the 18 program areas listed in Exhibit 12. Awards from these programs have also increased during this three-year period from 295 in the 2017-18 academic

year to 357 in 2019-20, a 21% increase. The program with the most awards was Computer and Information Sciences, General (CIP 11.0101), conferring 145 such awards during the 2019-20 academic year.

Exhibit 12: Regional non-community college awards, 2017-2020

Program (CIP)	2017-18	2018-19	2019-20	3-Year Average
Computer and Information Sciences, General (11.0101)	71	31	145	82
Information Technology (11.0103)	38	57	25	40
Computer Programming/Programmer, General (11.0201)	23	29	46	33
Network and System Administration/Administrator (11.1001)	19	28	34	27
Web/Multimedia Management and Webmaster (11.1004)	17	24	37	26
Computer and Information Sciences, Other (11.0199)	47	6	-	18
System, Networking, and LAN/WAN Management/Manager (11.1002)	7	9	19	12
Computer/Information Technology Services Administration and Management, Other (11.1099)	9	5	15	10
Computer Science (11.0701)	16	12	-	9
Data Modeling/Warehousing and Database Administration (11.0802)	6	7	15	9
Computer Software and Media Applications, Other (11.0899)	14	-	10	8
Computer and Information Systems Security/Auditing/Information Assurance (11.1003)	17	-	5	7
Computer and Information Sciences and Support Services, Other (11.9999)	-	12	-	4
Data Processing and Data Processing Technology/Technician (11.0301)	6	1	-	2
Computer/Computer Systems Technology/Technician (15.1202)	1	-	4	2
Computer Systems Networking and Telecommunications (11.0901)	-	2	2	1
Computer Systems Analysis/Analyst (11.0501)	2	-	-	1
Computer Engineering, General (14.0901)	2	-	-	1
Total	295	223	357	292

Source: [National Center for Education Statistics' Integrated Postsecondary Education Data System](#)

Baccalaureate degrees related to Cloud Computing

In Los Angeles County, awards have been issued in nine programs related to cloud computing at 4-year colleges that award bachelor's degrees (see Exhibit 13). Between 2017 and 2020, there was an average of 2,183 bachelor's degrees awarded. Similar to community college awards related to cloud computing, bachelor's awards from these programs have also increased during this three-year period, from 2,004 in the 2017-18 academic year to 2,414 in 2019-20, a 20.5% increase. The program with the most awards was Computer Science, conferring more than half of the cloud computing-related bachelor's degrees in the county (1,396 awards).

Exhibit 13: Regional non-community college awards, 2017-2020

Program (CIP)	2017-18	2018-19	2019-20	3-Year Average
Computer Science (11.0701)	1,269	1,351	1,569	1,396
Computer Engineering, General (14.0901)	271	259	324	285
Information Technology (11.0103)	182	184	201	189
Computer and Information Sciences, General (11.0101)	123	159	146	143
Computer and Information Sciences, Other (11.0199)	136	142	138	139
Computer Software and Media Applications, Other (11.0899)	8	19	28	18
Computer Engineering Technology/Technician (15.1201)	11	11	4	9
E-Commerce/Electronic Commerce (52.0208)	2	3	4	3
Web/Multimedia Management and Webmaster (11.1004)	2	-	-	1
Total	2,004	2,128	2,414	2,183

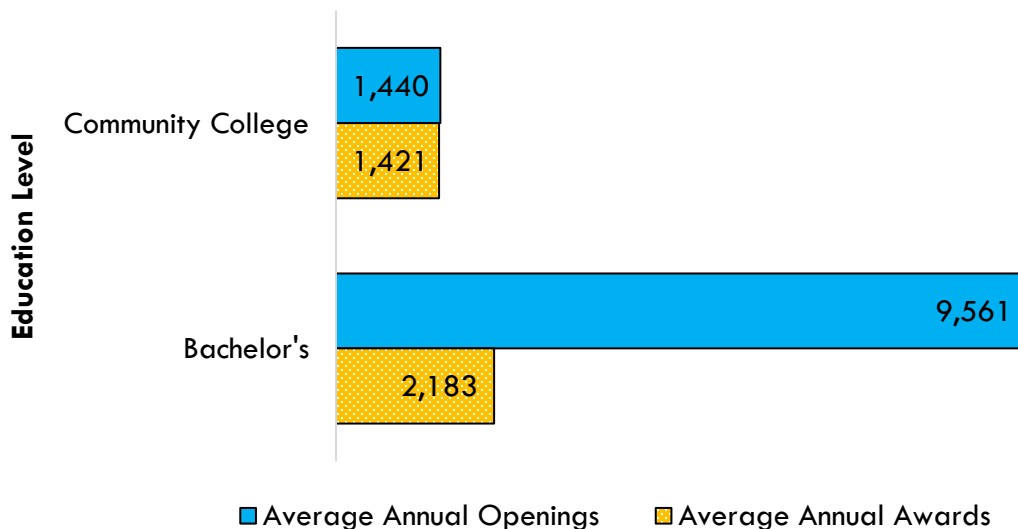
Source: [National Center for Education Statistics' Integrated Postsecondary Education Data System](#)

Gap Analysis

Breaking down the educational supply and occupational demand for cloud computing in Los Angeles County yields a clear pattern (see Exhibit 14). With 1,421 average annual sub-baccalaureate awards issued in the county and 1,440 projected annual job openings related to cloud computing, the potential supply gap at this level of education is only 19 unfilled jobs. For all practical intents and purposes, the supply and demand at this level of education is largely in equilibrium.

With 2,183 average annual bachelor's degrees issued in the county and 9,561 projected annual job openings related to cloud computing that typically require a bachelor's degree for entry, the potential supply gap at this level of education is 7,378 unfilled jobs. This significant projected workforce shortage facing Los Angeles County requires the attention of all regional education and training providers.

Exhibit 14: Supply and demand gap analysis for cloud computing by education level



Source: Lightcast, Datarun 2022.3; [California Community Colleges Chancellor's Office Management Information Systems Data Mart](#); [National Center for Education Statistics' Integrated Postsecondary Education Data System](#)

Recommendations & Discussion

This report demonstrates that while the demand for sub-baccalaureate jobs related to cloud computing is largely being met by related training programs in the region, the supply for baccalaureate jobs related to cloud computing pales in comparison to the number of projected job openings over the next five years. While this is a great starting point to engage in meaningful discussion about the prospects of a community college baccalaureate program helping to bridge the gap between supply and demand in the labor market, it is not sufficient based on legislation.

Therefore, this report can be used as a launch board to validate these findings with regional employers and training providers in an effort to assess that the following are true:

- Evidence that employers are having difficulty filling positions that require a baccalaureate degree.
- Evidence that employers are willing to pay baccalaureate degree holders more than those with a related associate degree or no postsecondary degree.
- Evidence that employers prefer candidates with the proposed baccalaureate degree.
- Evidence of job placement and/or promotion opportunities for candidates with a baccalaureate degree.
- Evidence that the occupation/field the proposed baccalaureate degree is in will provide for higher-wage job opportunities.

Methodology

This report has three primary objectives:

1. Assess and quantify the labor market demand for jobs related to cloud computing in Los Angeles County that typically require a bachelor's degree for entry.
2. Assess and quantify the educational supply for such jobs.
3. Calculate the potential unmet workforce demand for these jobs.

For the first objective, the most recent datarun (2022.3) from Lightcast was analyzed using 2021 as a base year and a five-year projection period through 2026. This five-year period approximates the time it takes for a typical community college training program to be developed, approved, and for the first cohort of students to enroll, complete the program, and enter the workforce. The average annual job openings for each computer occupation involved in cloud computing that typically requires a bachelor's degree for entry was the primary metric analyzed for this objective.

The second objective was calculated using two data sources. The California Community Colleges Chancellor's Office Management Information Systems Data Mart was queried for the number of certificates and associate degrees issued from programs related to cloud computing by the 19 community colleges in Los Angeles County during the most recent three academic years (2018-19, 2019-20 and 2020-21). The California Community Colleges use the Taxonomy of Programs (TOP) to organize and categorize programs. A full list of TOP codes used for this analysis appear in the appendix. Next, the National Center for Education Statistics' Integrated Postsecondary Education Data System (IPEDS) was queried for the number of bachelor's degrees issued from other educational institutions in Los Angeles County during the most recent three academic years available (2017-18, 2018-19, and 2019-20). Reporting in IPEDS is organized by Classification of Instructional Programs (CIP). Community college programs by TOP code were crosswalked to non-community college programs by CIP code utilizing the TOP-CIP-SOC crosswalk maintained by the Centers of Excellence for Labor Market Research.

The third objective was achieved by calculating the difference between the sum of annual job openings related to cloud computing and the number of awards issued from related programs. This calculation determines whether there is demand in the labor market is not being met by the supply from educational programs that align with the relevant occupations.

Santa Monica College
Computer Science Information Systems
Computer Science Advisory Board
May 13, 2022

MINUTES

Attendees:

SMC Attendees: Howard Stahl (Chair), Scott Bishop, Fariba Bolandhemat, Jinan Darwiche, Abbas Dehkhoda, Maral Hyeler, Dan Hurley, Joan Kang, Koda Kol, Keith Kurtz, David Morgan, Vicky Seno, Wihok Supat, Sean Vidal

SMC Student Attendees: Bishara Shamee

Non-SMC Attendees: Salomon Davila (Scopewave), Richard Korf (UCLA Computer Science), Neal Fultz (Fultz Consulting)

Call to order: via Zoom - 9:30 AM

Following quick introductions, the following topics were discussed:

Department Review and Dashboard Indicators

Howard shared various data points with the committee. Highlights included:

- A growth in WTH of nearly 40% since 2016-17
- A growth in student headcount of more than 85% since 2014-2015
- A growth in awarded certificates of more than 450% since 2014-2015
- No increase in full-time faculty in this discipline since 2001. Attendees commented that continued growth is not possible if the department continues to lack the people-power to make it happen.

Existing Courses and Programs

Howard shared information about our existing classes, certificates and degrees. Attendees commented on the vibrancy and innovation being displayed in our ongoing efforts to stay in line with industry and employment trends.

Plans for the Future

Howard shared information regarding ongoing discussions to create a Bachelor's Degree in Cloud Computing to build off our existing Associate's Degree and Certificate of Achievement in Cloud Computer. After much discussion, the following motion was presented and voted upon.

MOTION: The Computer Science Advisory Board supports the creation and development of a Bachelor's Degree in Cloud Computing as presented. Made by: Darwiche Seconded by: Seno.

FOR-18 AGAINST-0 ABSTAIN-0 Attendees support this new degree and voted unanimously to support it.

Curriculum Updates

Howard shared information regarding various curriculum updates. After much discussion, the following motion was presented and voted upon.

MOTION: The Computer Science Advisory Board supports the updates to the Web Developer degree and certificate as presented. Made by: Darwiche Seconded by: Kol. FOR-22 AGAINST-0 ABSTAIN-0 Attendees support this degree and voted unanimously to support it.

MOTION: The Computer Science Advisory Board supports the updates to the Database Application Developer degree and certificate as presented. Made by: Darwiche Seconded by: Kol. FOR-22 AGAINST-0 ABSTAIN-0 Attendees support this degree and voted unanimously to support it.

MOTION: The Computer Science Advisory Board supports the updates to the Data Science degree and certificate as presented. Made by: Darwiche Seconded by: Kol. FOR-22 AGAINST-0 ABSTAIN-0 Attendees support this degree and voted unanimously to support it.

Open Discussion

Various additional topics were discussed including the value of functional programming, Career Services and internships and the role of capstone projects in an undergraduate Computer Science program.

Meeting Adjourned: 11:03 AM

Santa Monica College
Yoga Teacher Training - 200 Hour Department Certificate

Yoga teachers design and instruct yoga classes for participants of various ability levels. They ensure through diligent planning, intelligent sequencing, and the inclusion of appropriate progressions of poses that each class experience is safe, effective and enjoyable for all participants. This program fulfills the requirement for the 200-hour registered yoga teacher (RYT) credentials with Yoga Alliance and covers a wide range of topics from the history and philosophy of yoga, to basic alignment principles and teaching methodologies.

Program Learning Outcomes:

*Upon completion of the program, students will demonstrate coherent design and comprehensive instruction for beginning yoga classes for participants of various ability levels. *Students ensure through diligent planning, intelligent sequencing, and the inclusion of appropriate progression of poses that each class experience is safe, effective and enjoyable for all participants. *This program fulfills the requirement for the 200-hour registered yoga teacher (RYT) credential with Yoga Alliance and covers a wide range of topics from the history and philosophy of yoga and yogic breathing, to basic alignment principles and teaching methodologies. *The U.S. Bureau of Labor and Statistics states that employment of fitness trainers and instructors (including yoga instructors) is projected to grow fourteen percent from 2016 to 2026, which is faster than average for all occupations. *Business, government, and insurance organizations continue to recognize the benefits of health and fitness programs for their employees. Incentives to join gyms and other types of health clubs are expected to increase the need for fitness trainers and instructors, including yoga instructors. *Upon completion of the program, students will be able to register with Yoga Alliance as a registered yoga teacher (RYT-200). This accreditation is the standard in the industry to be hired as a yoga instructor. This will give our graduates the opportunity to work with wellness centers, gyms, yoga studios, one to one private clients, and online platforms.

Required Courses:

	Units: 9.0
PRO CR 70 Yoga Teacher Training Essentials	3.0
PRO CR 71 Yoga Teacher Training Progressive Methodologies	3.0
PRO CR 72 Yoga Teaching Practicum	1.0
PRO CR 73 Anatomy & Physiology for Yoga Teachers	2.0

Select 1 course from the following:

	Units: 1.0
KIN PE 58A ^{DE} Beginning Yoga	1.0
KIN PE 58B ^{DE} Intermediate Yoga	1.0
KIN PE 58C ^{DE} Advanced Yoga	1.0
KIN PE 58D ^{DE} Advanced Yoga Level II	1.0

Total: 10.0

Santa Monica College
Yoga Teacher Training - 200 Hour Department Certificate
Narrative

Program Goals and Objectives:

Yoga teachers design and instruct yoga classes for participants of various ability levels. They ensure through diligent planning, intelligent sequencing, and the inclusion of appropriate progressions of poses that each class experience is safe, effective and enjoyable for all participants. This program fulfills the requirement for the 200-hour registered yoga teacher (RYT) credentials with Yoga Alliance and covers a wide range of topics from the history and philosophy of yoga, to basic alignment principles and teaching methodologies.

Program Learning Outcomes:

*Upon completion of the program, students will demonstrate coherent design and comprehensive instruction for beginning yoga classes for participants of various ability levels. *Students ensure through diligent planning, intelligent sequencing, and the inclusion of appropriate progression of poses that each class experience is safe, effective and enjoyable for all participants. *This program fulfills the requirement for the 200-hour registered yoga teacher (RYT) credential with Yoga Alliance and covers a wide range of topics from the history and philosophy of yoga and yogic breathing, to basic alignment principles and teaching methodologies. *The U.S. Bureau of Labor and Statistics states that employment of fitness trainers and instructors (including yoga instructors) is projected to grow fourteen percent from 2016 to 2026, which is faster than average for all occupations. *Business, government, and insurance organizations continue to recognize the benefits of health and fitness programs for their employees. Incentives to join gyms and other types of health clubs are expected to increase the need for fitness trainers and instructors, including yoga instructors. *Upon completion of the program, students will be able to register with Yoga Alliance as a registered yoga teacher (RYT-200). This accreditation is the standard in the industry to be hired as a yoga instructor. This will give our graduates the opportunity to work with wellness centers, gyms, yoga studios, one to one private clients, and online platforms.

Catalog Description:

Yoga teachers design and instruct yoga classes for participants of various ability levels. They ensure through diligent planning, intelligent sequencing, and the inclusion of appropriate progressions of poses that each class experience is safe, effective and enjoyable for all participants. This program fulfills the requirement for the 200-hour registered yoga teacher (RYT) credentials with Yoga Alliance and covers a wide range of topics from the history and philosophy of yoga, to basic alignment principles and teaching methodologies.

Program Learning Outcomes:

*Upon completion of the program, students will demonstrate coherent design and comprehensive instruction for beginning yoga classes for participants of various ability levels. *Students ensure through diligent planning, intelligent sequencing, and the inclusion of appropriate progression of poses that each class experience is safe, effective and enjoyable for all participants. *This program fulfills the requirement for the 200-hour registered yoga teacher (RYT) credential with Yoga Alliance and covers a wide range of topics from the history and philosophy of yoga and yogic breathing, to basic alignment principles and teaching methodologies. *The U.S. Bureau of Labor and Statistics states that employment of fitness trainers and instructors (including yoga instructors) is projected to grow fourteen percent from 2016 to 2026, which is faster than average for all occupations. *Business, government, and insurance organizations continue to recognize the benefits of health and fitness programs for their employees. Incentives to join gyms and other types of health clubs are expected to increase the need for fitness trainers and instructors, including yoga instructors. *Upon completion of the program, students will be able to register with Yoga Alliance as a registered yoga teacher (RYT-200). This accreditation is the standard in the industry to be hired as a yoga instructor. This will give our graduates the opportunity to work with wellness centers, gyms, yoga studios, one to one private clients, and online platforms.

Program Requirements:

Required Courses:	Units: 9.0
PRO CR 70 Yoga Teacher Training Essentials	3.0
PRO CR 71 Yoga Teacher Training Progressive Methodologies	3.0
PRO CR 72 Yoga Teaching Practicum	1.0
PRO CR 73 Anatomy & Physiology for Yoga Teachers	2.0
Select 1 course from the following:	Units: 1.0
KIN PE 58A ^{DE} Beginning Yoga	1.0
KIN PE 58B ^{DE} Intermediate Yoga	1.0
KIN PE 58C ^{DE} Advanced Yoga	1.0
KIN PE 58D ^{DE} Advanced Yoga Level II	1.0
	Total: 10.0

Master Planning:

Santa Monica College is the only public institution of higher education in the city of Santa Monica, the Santa Monica College District, the Los Angeles basin and San Fernando Valley and, for this reason, it is of great value for Santa Monica College to provide Yoga Teacher Training, as an important and needed certificate program for the student body and community. The program will offer yoga teacher certification through the Yoga Alliance, the esteemed governing board of yoga, and it will serve the diverse community of students at SMC by stimulating development and growth of the region through an increase in educational, economic and workforce opportunities. This program will offer certification and enable students to immediately enter into the fitness industry as group exercise leaders, and it will foster personal enrichment in these individuals that will help them excel in their lives in a multitude of ways.

Enrollment and Completer Projections:

Enrollment Projection: based on historical data, marketing efforts, and anticipated trends in yoga teacher training programs:

Fall 2025: 35

Spring: 2026: 40

Summer 2026: 25

Fall 2026: 45

Actual enrollment numbers may vary.

Completer Projections' estimation considers factors such historical completion rates, program durations, and shifts in student demographics:

Fall 2025: 30

Spring: 2026: 35

Summer 2026: 20

Fall 2026: 40

Actual completion numbers may vary.

Place of Program in Curriculum/Similar Programs:

This certificate program is a new addition to the Kinesiology Department. This program does not replace or alter any existing programs.

Similar Programs at Other Colleges in Service Area:

Pasadena City College

Rio Hondo College

Long Beach City College

Labor Market Analysis: 0835.20 – Fitness Trainer

Yoga Teacher Training – Certificate requiring 8 to fewer than 16 semester units

Pilates Teacher Training – Certificate requiring 8 to fewer than 16 semester units

Los Angeles Center of Excellence, May 2024

Program Endorsement:	Endorsed: All Criteria Met <input type="checkbox"/>	Endorsed: Some Criteria Met <input checked="" type="checkbox"/>	Not Endorsed <input type="checkbox"/>
Program Endorsement Criteria			
Supply Gap:	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Living Wage: (Entry-Level, 25th)	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	
Education:	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Emerging Occupation(s)			
	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	

SUMMARY

This report analyzes whether local labor market demand is being met by community college programs aligned with the identified middle-skill occupation¹ or whether a shortage of workers exists. Labor market demand is measured by annual job openings while education supply is measured by the number of awards (degrees and certificates) conferred on average each year.

Based on the available data, there appears to be a supply gap for the one identified middle-skill occupation in the region. While entry-level wages are lower than the self-sufficiency standard wage in both Los Angeles and Orange counties, more than 40% of current workers in the field have completed an associate degree as their highest educational attainment.

Recommendation: Due to two of three program endorsement criteria being met, the Los Angeles Center of Excellence for Labor Market Research (LA COE) endorses this proposed program.

Key Findings

Supply Gap

- 4,216 annual job openings are projected in the region through 2027. This number is greater than the three-year average of 183 awards conferred by educational institutions in the region.
 - However, the exercise trainers and group fitness instructors SOC code includes all fitness teacher jobs, and not solely yoga teachers or Pilates teachers. Therefore, the number of annual job openings is overstated for yoga teacher and Pilates teachers.

¹ Middle-skill occupations typically require some postsecondary education, but less than a bachelor's degree. The COE classifies middle-skill jobs as the following:

- All occupations that require an educational requirement of some college, associate degree or apprenticeship;
- All occupations that require a bachelor's degree, but also have more than one-third of their existing labor force with an educational attainment of some college or associate degree; or
- All occupations that require a high school diploma or equivalent or no formal education, but also require short- to long-term on-the-job training where multiple community colleges have existing programs.

- Over the past 12 months in the LA/OC region, there were online job postings for exercise trainers and group fitness instructors that also listed the following specialized skills:
 - 481 listed “yoga” as a specialized skill
 - 515 listed “Pilates” as a specialized skill

Living Wage

- \$16.88 is the typical entry-level hourly wages for exercise trainers and group fitness instructors, which is lower than Los Angeles County’s self-sufficiency standard hourly (\$18.10/hour).²

Educational Attainment

- A high school diploma or equivalent is the typical entry-level education for exercise trainers and group fitness instructors, according to the Bureau of Labor Statistics (BLS).
- 41% of workers in the field have completed an associate degree or less education, according to national educational attainment data.

Community college supply

- 16 community colleges issued awards related to fitness training in the greater LA/OC region.
- 112 awards (degrees and certificates) were conferred on average each year between 2020 and 2023.

Other postsecondary supply

- 4 educational institutions in the LA/OC region offer programs related to fitness training.
- 71 awards were conferred on average each year by other postsecondary institutions throughout the greater LA/OC region.

TARGET OCCUPATION

The LA COE prepared this report to provide regional labor market and postsecondary supply data related to one middle-skill occupation.

- **Exercise Trainers and Group Fitness Instructors (39-9031)** Instruct or coach groups or individuals in exercise activities for the primary purpose of personal fitness. Demonstrate techniques and form, observe participants, and explain to them corrective measures necessary to improve their skills. Develop and implement individualized approaches to exercise.³

OCCUPATIONAL DEMAND

Exhibit 1 shows the five-year occupational demand projections for exercise trainers and group fitness instructors. In the greater Los Angeles/Orange County region, the number of jobs related to this occupation is projected to increase by 21% through 2027. There will be more than 4,200 job openings per year through 2027 due to job growth and replacements. It is important to note

² Self-Sufficiency Standard wage data was pulled from The Self-Sufficiency Standard Tool for California. For more information, visit: <http://selfsufficiencystandard.org/california>.

³ [Fitness Trainers and Instructors \(bls.gov\)](https://www.bls.gov/occupations/39-9031)

that the exercise trainers and group fitness instructors (39-9031) SOC code includes all exercise training jobs and not solely yoga and/or Pilates instructors. Therefore, the data in Exhibit 1 is overstated for yoga teachers and Pilates teachers. The majority of jobs in 2022 for this middle-skill occupation (71%) were located in Los Angeles County.

Exhibit 1: Current employment and occupational demand, Los Angeles and Orange counties⁴

Geography	2022 Jobs	2027 Jobs	2022-2027 Change	2022-2027 % Change	Annual Openings
Los Angeles	12,308	14,714	2,406	20%	2,947
Orange	4,949	6,184	1,236	25%	1,269
Total	17,257	20,899	3,642	21%	4,216

Detailed Occupation Data

Exhibit 2 displays the current employment and projected occupational demand for the target occupation in Los Angeles County. The percentage of workers aged 55+ and automation index is included in order visualize upcoming replacement demand for these occupations. The occupation in this report has a lower-than-average risk of automation, as well as a smaller share of older workers in the field. There is a smaller percentage of exercise trainers and group fitness instructors working full-time compared to the average across all jobs, signaling that this occupation may lend itself to part-time or gig-based employment.

Exhibit 2: Current employment, projected occupational demand, percentage of workers aged 55+, Los Angeles County⁵

Occupation	2022 Jobs	2027 Jobs	5-Yr % Change	Annual Openings	% Aged 55 and older*	Auto-mation Index**	% Full Time Workers***
Exercise Trainers and Group Fitness Instructors	12,308	14,714	20%	2,947	16%	84.4	44%

*The average percentage of workers age 55 and older across all occupations in the greater LA/OC region is 27%. This occupation has a smaller share of older workers, which typically indicates fewer replacements needs to offset the amount of impending retirements.

**The automation index captures an occupation’s risk of being affected by automation with a base of 100. An automation index greater than 100 indicates a higher-than average risk of automation; less than 100 indicates a lower-than-average risk.

***In California, 81% of workers are employed full-time.

WAGES

The labor market endorsement in this report considers the entry-level hourly wages for exercise trainers and group fitness instructors in Los Angeles County as they relate to the county’s self-

⁴ Five-year change represents new job additions to the workforce. Annual openings include new jobs and replacement jobs that result from retirements and separations.

⁵ Ibid.

sufficiency standard wage. Orange County wages are included below in order to provide a complete analysis of the greater Los Angeles/Orange County region.

Los Angeles County

The typical entry-level hourly wages for exercise trainers and group fitness instructors are \$16.88, which is below the self-sufficiency standard wage for one adult (\$18.10 in Los Angeles County). Experienced workers can expect to earn wages of \$31.63, which is higher than the self-sufficiency standard (Exhibit 3).

Exhibit 3: Earnings for occupation in Los Angeles County

Occupation	Entry-Level Hourly Earnings (25 th Percentile)	Median Hourly Earnings	Experienced Hourly Earnings (75 th Percentile)	Median Annual Earnings*
Exercise Trainers and Group Fitness Instructors	\$16.88	\$23.69	\$31.63	\$49,300

*Rounded to the nearest \$100

Orange County

The typical entry-level hourly wages for exercise trainers and group fitness instructors are \$16.58, which is below the self-sufficiency standard wage for one adult (\$20.63 in Orange County). Experienced workers can expect to earn wages of \$31.02, which is higher than the self-sufficiency standard (Exhibit 4).

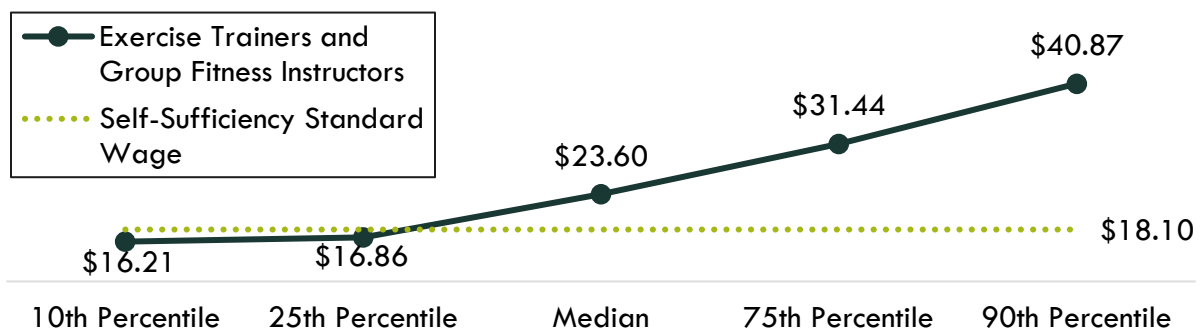
Exhibit 4: Earnings for occupations in Orange County

Occupation	Entry-Level Hourly Earnings (25 th Percentile)	Median Hourly Earnings	Experienced Hourly Earnings (75 th Percentile)	Median Annual Earnings*
Exercise Trainers and Group Fitness Instructors	\$16.58	\$23.33	\$31.02	\$48,500

*Rounded to the nearest \$100

Across the greater Los Angeles and Orange County region, the average entry-level hourly earnings for the occupation in this report are \$16.86; this is below the living wage for one single adult in Los Angeles County (\$18.10). Exhibit 5 shows the average hourly wage for the occupation in this report, for entry-level to experienced workers.

Exhibit 5: Average hourly earnings for exercise trainers and group fitness instructors, Los Angeles and Orange counties



JOB POSTINGS BY SKILL

Yoga Teachers

Over the past 12 months in the LA/OC region, there were 481 online job postings for exercise trainers and group fitness instructors that also listed “yoga” as a specialized skill. Job postings were analyzed for the most common job titles, skills, and employers associated with the target occupation in this report (Exhibit 6).

Exhibit 6: Most commonly requested job titles, skills and employers in job postings, Los Angeles and Orange counties

Top Job Titles	Top Skills	Top Employers
<ul style="list-style-type: none"> • Yoga instructors • Fitness instructors • Certified yoga instructors • Group fitness instructors 	<ul style="list-style-type: none"> • Yoga • Fitness training • Kinesiology • Exercise science • Group exercise instruction 	<ul style="list-style-type: none"> • Corepower Yoga • Kev’s Gym • Disney/Disneyland Resort • YMCA • Crunch

In the greater Los Angeles/Orange County region, 42% of the yoga-related job postings listed a minimum educational requirement. The number and percentage of job postings by educational level appear in exhibit 7.

Exhibit 7: Education levels requested in job postings for yoga-related occupations, Los Angeles and Orange counties

Education Level	Job Postings	% of Job Postings
Bachelor’s degree	28	14%
Associate degree	69	34%
High school diploma or vocational training	106	52%

Pilates Teachers

Over the past 12 months in the LA/OC region, there were 515 online job postings for exercise trainers and group fitness instructors that also listed “Pilates” as a specialized skill. Job postings were analyzed for the most common job titles, skills, and employers associated with the target occupation in this report (Exhibit 8).

Exhibit 8: Most commonly requested job titles, skills and employers in job postings, Los Angeles and Orange counties

Top Job Titles	Top Skills	Top Employers
<ul style="list-style-type: none"> • Pilates instructors • Certified Pilates instructors • Group exercise instructors • Group fitness instructors 	<ul style="list-style-type: none"> • Pilates • Yoga • Group exercise instruction • Fitness training • Anatomy 	<ul style="list-style-type: none"> • YMCA • Club Pilates • Equinox • Xponential Fitness • Crunch

In the greater Los Angeles/Orange County region, 15% of the Pilates-related job postings listed a minimum educational requirement. The number and percentage of job postings by educational level appear in exhibit 9.

Exhibit 9: Education levels requested in job postings for yoga-related occupations, Los Angeles and Orange counties

Education Level	Job Postings	% of Job Postings
Bachelor's degree	22	29%
Associate degree	1	1%
High school diploma or vocational training	54	70%

EDUCATIONAL ATTAINMENT

The Bureau of Labor Statistics (BLS) lists a high school diploma or equivalent as the typical entry-level education for exercise trainers and group fitness instructors (Exhibit 10). However, the national-level data indicates 41% of workers in the field have completed an associate degree or less education as their highest level of educational attainment. The Bureau of Labor Statistics (BLS) lists the following typical entry-level education level for the occupation in this report:

Exhibit 10: Entry-level education preferred by employers nationally, Bureau of Labor Statistics

Occupation	Education Level
Exercise trainers and group fitness instructors	High school diploma or equivalent

EDUCATIONAL SUPPLY

Community College Supply

Exhibit 11 shows the annual and three-year average number of awards conferred by community colleges in the related TOP codes: Fitness Trainer (0835.20) and Athletic Training and Sports Medicine (1228.00). The colleges with the most completions in the region are Saddleback, Orange Coast, and Mt. San Antonio.

Exhibit 11: Regional community college awards (certificates and degrees), 2020-2023

TOP Code	Program	College	2020-21 Awards	2021-22 Awards	2022-23 Awards	3-Year Average
0835.20	Fitness Trainer	Cerritos	3	5	8	5
		Compton	-	1	2	1
		East LA	-	2	1	1
		Glendale	6	4	3	4
		LA City	2	2	3	2
		LA Harbor	2	1	1	1
		Long Beach	-	-	5	2
		Mt San Antonio	1	5	4	3
		Pasadena	8	11	13	11
		Rio Hondo	1	-	4	2
		LA Subtotal	23	31	44	33
		Cypress	1	7	4	4
		Fullerton	6	1	3	3
		Irvine	-	3	2	2
		Orange Coast	26	28	14	23
		Saddleback	31	34	19	28
		Santa Ana	1	1	2	1
		OC Subtotal	65	74	44	61
Supply Subtotal/Average			88	105	88	94
1228.00	Athletic Training and Sports Medicine	Cerritos	4	12	3	6
		Mt San Antonio	25	9	3	12
		LA Subtotal	29	21	6	19
Supply Subtotal/Average			29	21	6	19
Supply Total/Average			117	126	94	112

Exhibit 12 focuses on the Los Angeles/Orange County region’s community colleges that have either a yoga training program, a Pilates training program, or both programs. The majority of programs in the region are certificate-level programs.

Exhibit 12: Regional yoga and Pilates instructor community college programs

TOP Code	College	Local Program Name	Award Type
Fitness Trainer (0835.20)	Cypress	Yoga Teacher Training (200-hour)	Certificate
		Yoga Therapy (300-hour)	Certificate
	Fullerton	Pilates	Certificate
	Long Beach	Yoga Teacher Training	Certificate
	Mt. San Antonio	Pilates Professional Teacher Training: Cadillac, Chair, Auxiliary	Certificate
		Pilates Professional Teacher Training: Mat and Reformer	Certificate
	Orange Coast	Yoga Instructor Training	Certificate, Noncredit
		Comprehensive Pilates Instructor	Certificate
		Pilates Mat Instructor	Certificate
	Pasadena	Yoga Techer Training	A.S. Degree; Certificate
		Yoga Instructor Training	Certificate
	Rio Hondo	Mat Pilates Instructor	Certificate
	Saddleback	Yoga Instructor	Certificate

Other Postsecondary Supply

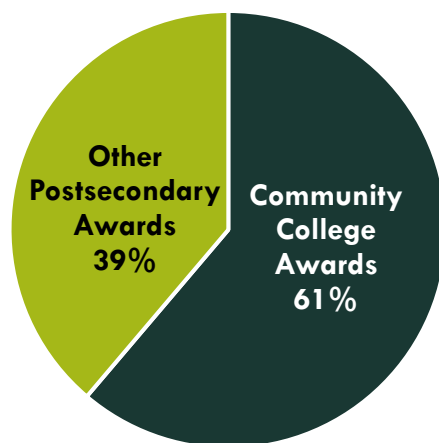
For a comprehensive regional supply analysis, it is important to consider the supply from other institutions in the region that provide training programs for fitness trainers. Exhibit 13 shows the number of awards conferred by these institutions in relevant programs. Due to different data collection periods, the most recent data is from 2019 to 2022. Between 2019 and 2022, other postsecondary college institutions in the region conferred an average of 71 sub-baccalaureate awards. Sub-baccalaureate awards include associate degrees, postsecondary awards, and other academic awards that typically take fewer than four years to complete.

Exhibit 13: Other regional postsecondary awards, 2019-2022

CIP Code	Program	Postsecondary Institution	2019-20 Awards	2020-21 Awards	2021-22 Awards	3-Year Average
31.0507	Physical Fitness Technician	American Fitness and Nutrition Academy	38	30	11	26
		California Healing Arts College	-	5	-	2
		Platt College-Anaheim	-	-	4	1
		Southern California Health Institute	81	30	13	41
Supply Total/Average			119	65	28	71

Exhibit 14 shows the proportion of community college awards conferred in the greater Los Angeles/Orange County region compared to the number of other postsecondary awards for the programs in this report. The majority of awards conferred in these programs are awarded by community colleges in the greater Los Angeles/Orange County region.

Exhibit 14: Percentage of community college awards compared to other postsecondary institution awards in the Los Angeles/Orange County region



Registered Yoga Schools in Los Angeles County

It is important to consider other avenues for yoga teacher training other than community colleges and traditional educational institutions. Online research regarding yoga instructor training indicates that there are many private institutions and studios in addition to the educational institutions mentioned above that provide certification and training for yoga instructors. The Yoga Alliance provides a search engine for registered yoga schools (RYS®) that train students to become registered yoga teachers (RYT®). According to their website, the Yoga Alliance and Yoga Alliance Registry is the largest nonprofit association of yoga teachers and schools with over 7,000 Registered Yoga Schools (RYS) and more than 100,000 Registered Yoga Teachers (RYT). A search for registered yoga schools within 50 miles of Santa Monica College (zip code: 90401)

found 181 registered yoga schools and 1,735 registered yoga teachers.⁶ These private studios do not report their annual awards to the National Center for Educational Statistics (NCES) and therefore, the number of annual yoga teacher training award recipients in LA County is unknown.

Pilates Teacher Training in Los Angeles County

Besides training courses at community colleges and other postsecondary universities, there are also many non-academic institutions that provide Pilates teacher training. Online research shows multiple training opportunities for Pilates Teacher training at private exercise studios throughout Los Angeles County. Since Pilates teachers do not need an academic award and awards information is not reported to the National Center for Educational Statistic (NCES), the number of Pilates teacher training award recipients in LA County is also unknown.

Contact information:

Luke Meyer, Director

Los Angeles Center of Excellence

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If for any reason this document is not accessible or if you have specific needs for readability, please contact us and we will do our utmost to accommodate you with a modified version.



POWERED BY



DATA SOURCES

- O*NET Online
- Lightcast (formerly Emsi)
- Bureau of Labor Statistics (BLS)
- California Employment Development Department, Labor Market Information Division, OES
- California Community Colleges Chancellor's Office Management Information Systems (MIS)
- Self-Sufficiency Standard at the Center for Women's Welfare, University of Washington
- Chancellor's Office Curriculum Inventory (COCI 2.0)

Important Disclaimer: All representations included in this report have been produced from primary research and/or secondary review of publicly and/or privately available data and/or research reports. Efforts have been made to qualify and validate the accuracy of the data and the reported findings; however, neither the Centers of Excellence, COE host District, nor California Community Colleges Chancellor's Office are responsible for applications or decisions made by recipient community colleges or their representatives based upon components or recommendations contained in this study.

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Centers of Excellence for Labor Market Research, Economic and Workforce Development Program

⁶ The Yoga Alliance. www.yogaalliance.org. Accessed May 22, 2024.



**Santa Monica College
Yoga & Pilates Certificate Advisory Board Meeting Minutes
August 19, 2024, 10:00am**

Welcome and Opening Statement:

Elaine Roque, Kinesiology Department Head

Introduction of SMC Faculty, Deans and Others:

Johanna Bennett: SMC Associate Professor, Kinesiology–Yoga

Karen Huner: SMC Associate Professor Kinesiology, Kinesiology Yoga/Pilates

Katelyn Qualey: SMC Adjunct Professor, Pilates/Yoga/Life Sciences

Steven Sedkey: SMC Associate Dean, Career Education & New Program Development

Linda Sullivan: SMC Associate Dean Facilities Programming

Introduction of Board Members:

Joelle Simmons, Aquatic program manager, City of Santa Monica

Kari Ross–Berry, Associate Professor of Exercise Science, Yoga, Southwestern College

Jason Burghorn: Pilates instructor/owner, Core Power Studio, Sherman Oaks.

Amit Heri: Yoga Instructor/owner, Magic Carpet Yoga, Los Angeles

Rick Rafael: Physical Therapist, Sportsfit, Los Angeles

Absent: Miwa Sakamoto, Pilates teacher

Guests:

Gizem Muftoglu: SMC student/certified Pilates instructor

Uche Ani: Psychologist First Points, Group, Neurodivergent Students

Johanna Bennett: Presentation of proposed yoga certificate program

Karen Huner: Presentation of proposed Pilates certificate program

Discussion:

Class Creations: Johanna presented a slide presentation detailing the 200–hour Yoga Certificate Program and its benefit to the SMC community and student body.

Rick Rafael posed the question of working with injuries because many people are referred to yoga and Pilates to repair injury and pain. Johanna responded by suggesting this question reflects the possibility of job security inherent in completing these certificate programs. In



addition, she explained that these certificate programs are meant for students to first learn about teaching to beginning level healthy bodies and work with clients/students after physical therapy/injuries. This was confirmed by both Kari Ross-Berry and Karen Huner. It was stated that these certificate programs prepare the instructor to teach entry level practices, and that lifelong learning is a part of this field. Learning also takes place while teaching and encountering divergent populations that seek these services. Elaine also mentioned the option that students could take additional classes like PRO CR 11: *Introduction to Sports Injuries*, to supplement their knowledge especially if they wish to teach to injured populations. Amit Heri added that it is important to teach (for the Yoga certificate) the Yama and Niyama, to ground the teachings in a non-violent and compassionate manner. Johanna confirmed that these concepts are built into the certificate program already. They are a requirement of the Yoga Alliance schools.

Class Structure: Class structure was discussed particularly for Pilates due to the technique's nature. How many students per class? Can the Pilates program start with Mat and Reformer only without losing integrity of the certificate program as compared to other colleges with similar programs? Board members said it would be a good start to begin with Mat and Reformer and to add Apparatus later as the Pilates Program grows. Details of Pilates certificate to be emailed to board after meeting to save time during meeting.

Ideas: The Board was asked to give feedback during the meeting or later by email. Each board member expressed enthusiasm and support for our program. Kari Ross shared her experience with the program at Southwestern College and helped us formulate ours. Her program is extremely successful. Board members welcomed us to reach out to them at any time with questions or for help.

The meeting adjourned at approximately 11:05am.

Vote to support SMC Certificate Program by email after meeting:

For: Joelle Simmons, Kari Ross-Berry, Rick Rafael, Miwa Sakamoto, Amit Heri and Jason Burghorn

Against: 0

Abstain: 0

Next Meeting: TBD

Santa Monica College Interaction Design Bachelor of Science

Interaction Designers help create useful, meaningful, and delightful interactions between people and the products and services they encounter. They collaborate on the design of the behavior, organization, usability, and aesthetics of interactive systems. The discipline was developed in response to the need to provide seamless connections between high-tech systems and their users. By now, it is integral to the development of modern digital technology.

The Interaction Design Bachelor of Science degree program prepares students for a successful career in the rapidly developing media and technology fields. It covers a wide range of topics from visual design, user experience, multimedia, and technology, through hands-on project-based learning focused on building a strong portfolio of work. Students are also introduced to the fundamentals of adjacent fields of psychology, computer programming, product design, and architecture. This two-year program covers the junior and senior college years; applicants are expected to have relevant previous college experience before applying.

Program Learning Outcomes:

- Upon completion of the program, students will demonstrate knowledge of Interaction Design/User Experience Design history, practices, methodologies, tools, and project-based processes in designing for the user.
 - AHIS 3: Acquire research skills including the ability to evaluate sources and evidence and distinguish common methodologies used in art historical analysis.
 - AHIS 3: Engage in interdisciplinary, cross-cultural, and relational thinking through a critical examination of interdisciplinary connections with art globally and throughout history; Contextualizing works of art within their larger social, political, and economic function.
 - ANTHRO 300: Evaluate the ethical issues involved in research with human subjects.
 - BUS 20: Apply marketing concepts including the marketing mix, marketing research, digital marketing, consumer behavior, segmentation, targeting and positioning to a business or an organization.
 - BUS 63: Demonstrate a level of engagement in the subject matter that reveals their understanding of the value of the course content beyond the task itself, specifically as it relates to linking the relevance of course content to careers in business and accounting and their personal lives.
 - CIS 54: Demonstrate their ability to develop web pages using the fundamental components in the JavaScript programming language, including form data validation techniques, and event handling using functions.
 - CS 7: Using the principles of programming students will develop small scale applications that use variables, conditionals, loops, and procedures.
 - CS 7: Using analysis and tracing skills, students will debug applications for logical, syntax and runtime errors.
 - CS 87A: Applying logical analysis, students will design, build and debug programming projects in Python.
 - DESIGN 11: Demonstrate conceptual and practical understanding of fundamental principles of visual communication.
 - DESIGN 11: Exhibit the ability to consistently apply design processes in their project implementations.
 - DESIGN 12: Demonstrate practical understanding of fundamental principles of typography, as assessed by homework assignments, in-class participation, midterm and final projects.
 - DESIGN 12: Exhibit the ability to correctly apply typography in graphic communication, as assessed by homework assignments, in-class participation, midterm and final projects.
 - DESIGN 13: Identify the strengths and capabilities of graphic design digital applications and how to integrate the applications in graphic design projects.
 - DESIGN 23: Identify and apply User Experience (UX) concepts, documentation, and conduct a successful user-testing session.
 - DESIGN 31: Conceptualize, research, analyze, design, prototype, and iterate a design solution from beginning to end.
 - DESIGN 32: Demonstrate the understanding of the core principles, methods and theories of visual communication and their applications.
 - DESIGN 33: Demonstrate an overall understanding of the design process and how design research fits into that process.
 - DESIGN 33: Build a variety of research methods and examples that they can utilize on design projects.
 - DESIGN 41: Conceptualize, research, analyze, design, prototype, and iterate a design solution from beginning to end.
 - DESIGN 42: Demonstrate an understanding of the core concepts, methods and principles of information design and their applications.
 - DESIGN 43: Demonstrate an understanding of professional practices in design.
 - DESIGN 43: Build a digital portfolio of work.

- ENGL 1: The student will demonstrate the ability to read, comprehend, and analyze college-level writing and respond with thesis-driven analytic essays, scored according to a rubric for appropriate and adequate development and clarity of language and critical thinking.
- ENGL 1: After defining a topic and using any combination of library, web-based, and/or field research, the student will write a research paper that appropriately uses carefully evaluated and well-documented research material to support a clearly articulated thesis.
- ENGL 2: Given full-length, college-level texts, the student will plan, write, and revise a well-articulated essay of at least 1000 words that demonstrates familiarity with genre conventions and the ability to analyze, interpret, and evaluate such texts. As assessed by: essay exams, essays demonstrating critical analysis, research projects
- ENGL 2: The student will identify the ways in which narratives, expository pieces, poetry, drama, and/or arguments (including literary analyses) are shaped by an author's social, historical, moral, psychological, and/or philosophical assumptions, so that the student can recognize and examine in writing the assumptions and values that frame his or her own critical responses. As assessed by: in-class writings, essay exams, analytical essays, research projects, oral presentations
- ENGL 300: Apply discipline-specific historical, critical, and theoretical knowledge to create written work in a variety of genres and formats.
- ENGL 300: Determine and evaluate appropriate genre/media for presentations of writing and research.
- ENGL 300: Critically analyze communications according to the rhetorical expectations and vocabulary of the discipline.
- IXD 310: Exhibit an understanding of interaction design history, human-centered design principles, and screen-based interaction design patterns.
- IXD 310: Design, analyze, and justify using human-centered design principles and screen-based interaction design patterns.
- IXD 320: Examine a variety of contemporary applications of interaction design to develop and formulate their own set of professional preferences.
- IXD 320: Evaluate historic developments in interaction design and propose opinions about future developments.
- IXD 320: Demonstrate a professional written and oral communication skills as a substantive individual or collaborative presentation of research projects.
- IXD 330: Demonstrate knowledge of historical and contemporary interaction patterns, forms, and paradigms for screen-based systems.
- IXD 360: Exhibit knowledge of Product Design history, contemporary methodologies, and emerging practices.
- IXD 410: Communicate their design brief response to relevant stakeholders through presentations and written documentation, based on clarity, persuasiveness, and audience engagement.
- IXD 410: Utilize Project Management tools and tactics to accurately manage project expectation, collaborate with clients, and clearly articulate design processes and outcomes through a variety of communication methods.
- IXD 410: Demonstrate a comprehensive knowledge of different design development processes such as agile, kanban, or waterfall methodologies
- IXD 420: Communicate their design brief response to relevant stakeholders through presentations and written documentation, based on clarity, persuasiveness, and audience engagement.
- IXD 420: Demonstrate designed end-to-end user experiences, detailed interaction flows, and user-testing to develop comprehensive prototypes, and deliver clear plans that support recognition of the challenges around the project.
- IXD 420: Summarize the project outcomes in terms relevant to stakeholders to communicate and demonstrate the value of the proposed design solutions.
- IXD 430: Students will exhibit strong academic behaviors including regular attendance, timeliness, participation in class activities and adherence to the College Honor Code.
- IXD 430: Exhibit knowledge of current interaction design topics such as new digital services, social networking, and The Internet of Things.
- IXD 460: Evaluate methods and approaches to programming interactive graphics and determine the appropriate response for a given design brief.
- IXD 470: Students will exhibit strong academic behaviors including regular attendance, timeliness, participation in class activities and adherence to the College Honor Code.
- IXD 470: Successfully conceptualize, research, analyze, design, prototype, and iterate a design solution from beginning to end.
- IXD 480: Analyze and discuss the spectrum of ethical, moral and social concerns related to the design and implementation of digital technologies
- IXD 481: Conduct independent research or study of well-defined topics in the discipline of Interaction Design.

- IXD 482: Conduct independent research or study of well-defined topics in the discipline of Interaction Design.
 - IXD 483: Conduct independent research or study of well-defined topics in the discipline of Interaction Design.
 - MATH 54: When given a data set, analyze the data set and design a presentation of the information using tables, graphs and statistical calculations.
 - MATH 54: When given sample data, decide on and use an appropriate test to reach conclusions about a hypothesis made about a population parameter.
 - MEDIA 20: Exhibit a basic understanding and competence in writing, producing, music selection, and directing voice-over talent for digital marketing and alternative media branding campaigns.
 - MEDIA 4: Demonstrate an understanding of how and why digital games matter to people and the world as a communication technology.
 - PSYCH 1: Demonstrate a critical understanding of how psychological, biological, social and cultural factors influence mental processes and behavior.
 - PSYCH 1: Explain how psychology relies upon scientific research to explain general principles that govern behavior while recognizing individual and cultural differences.
 - PSYCH 320: Apply cognitive psychology ideas, theories, and findings in numerous contexts (such as interaction design, human factors, cognitive disorders, etc.).
- Students will utilize human-centered design principles, user-testing outcomes, and ethnographic research insights, and will employ critical thinking, sketching, and iterative processes to define, develop, conceptualize, and solve problems.
 - ANTHRO 300: Evaluate the ethical issues involved in research with human subjects.
 - ANTHRO 300: Demonstrate how to conduct ethnographic research in the design process to analyze users' needs and issues.
 - ARC 45: Critically evaluate the ethical considerations and societal impacts of design in mixed reality, demonstrating an understanding of the potential challenges and opportunities in creating augmented environments.
 - DESIGN 11: Demonstrate conceptual and practical understanding of fundamental principles of visual communication.
 - DESIGN 11: Exhibit the ability to consistently apply design processes in their project implementations.
 - DESIGN 12: Demonstrate practical understanding of fundamental principles of typography, as assessed by homework assignments, in-class participation, midterm and final projects.
 - DESIGN 12: Exhibit the ability to correctly apply typography in graphic communication, as assessed by homework assignments, in-class participation, midterm and final projects.
 - DESIGN 13: Identify the strengths and capabilities of graphic design digital applications and how to integrate the applications in graphic design projects.
 - DESIGN 32: Demonstrate the ability to create consistent visual communication language and apply it to various media in the context of a promotional campaign.
 - DESIGN 33: Demonstrate an overall understanding of the design process and how design research fits into that process.
 - DESIGN 41: Conceptualize, research, analyze, design, prototype, and iterate a design solution from beginning to end.
 - DESIGN 43: Demonstrate an understanding of professional practices in design.
 - DESIGN 90A: Participate effectively in professional activities assigned by the internship supervisor
 - DESIGN 90B: Participate effectively in professional activities assigned by the internship supervisor
 - DESIGN 90C: Participate effectively in professional activities assigned by the internship supervisor
 - IXD 310: Design, analyze, and justify using human-centered design principles and screen-based interaction design patterns.
 - IXD 360: Utilize 3D tools and processes to solve user needs and inform their interaction design practice.
 - IXD 410: Utilize Project Management tools and tactics to accurately manage project expectation, collaborate with clients, and clearly articulate design processes and outcomes through a variety of communication methods.
 - IXD 420: Communicate their design brief response to relevant stakeholders through presentations and written documentation, based on clarity, persuasiveness, and audience engagement.
 - IXD 420: Summarize the project outcomes in terms relevant to stakeholders to communicate and demonstrate the value of the proposed design solutions.
 - IXD 481: Draw and analyze evidence based conclusions.
 - IXD 482: Draw and analyze evidence based conclusions.
 - IXD 483: Draw and analyze evidence based conclusions.
 - Students will design and prototype correct affordances, interaction paradigms, and patterns for a range of platforms including web, mobile, and tangible systems.

- ARC 45: Design and prototype interactive smart spaces and augmented public areas, demonstrating appropriate design strategies, and accounting for accessibility and inclusion in the designs.
 - DESIGN 11: Demonstrate conceptual and practical understanding of fundamental principles of visual communication.
 - DESIGN 12: Demonstrate practical understanding of fundamental principles of typography, as assessed by homework assignments, in-class participation, midterm and final projects.
 - DESIGN 13: Design and create a publication. Assessed by successful completion of the final project.
 - DESIGN 31: Conceptualize, research, analyze, design, prototype, and iterate a design solution from beginning to end.
 - DESIGN 41: Conceptualize, research, analyze, design, prototype, and iterate a design solution from beginning to end.
 - DESIGN 43: Build a digital portfolio of work.
 - IXD 320: Examine a variety of contemporary applications of interaction design to develop and formulate their own set of professional preferences.
 - IXD 330: Design with appropriate screen interaction paradigms and forms, creating detailed flow diagrams and digital prototypes.
 - IXD 360: Utilize 3D tools and processes to solve user needs and inform their interaction design practice.
 - IXD 410: Communicate their design brief response to relevant stakeholders through presentations and written documentation, based on clarity, persuasiveness, and audience engagement.
 - IXD 420: Demonstrate designed end-to-end user experiences, detailed interaction flows, and user-testing to develop comprehensive prototypes, and deliver clear plans that support recognition of the challenges around the project.
 - IXD 430: Exhibit knowledge of current interaction design topics such as new digital services, social networking, and The Internet of Things.
 - IXD 430: Ability to design large scale systems, services, and digital networks collaboratively.
 - IXD 460: Design and implement high-fidelity prototypes of interactive graphics systems
 - IXD 470: Successfully conceptualize, research, analyze, design, prototype, and iterate a design solution from beginning to end.
 - IXD 480: Implement emerging digital interfaces and technologies in design projects
 - IXD 481: Draw and analyze evidence based conclusions.
 - IXD 482: Draw and analyze evidence based conclusions.
 - IXD 483: Draw and analyze evidence based conclusions.
 - MEDIA 20: Demonstrate the ability to use digital video and audio workstations to produce promotional spots, commercials, public service announcements, and various other digital media projects.
 - MEDIA 4: Demonstrate an understanding of the theories and methods of studying digital games that have gradually formed between the 20th and early 21st centuries.
 - MEDIA 4: Demonstrate an understanding of how and why digital games matter to people and the world as a communication technology.
 - MEDIA 4: Analyze and evaluate games as a part of our culture.
- Students will collaborate with customers and clients, and in team projects, brainstorming sessions, and in-class critiques.
 - AHIS 3: Demonstrate that contemporary visual culture is not random but on the contrary a mediated chain of material signifiers that is both historically and culturally embedded.
 - ARC 45: Critically evaluate the ethical considerations and societal impacts of design in mixed reality, demonstrating an understanding of the potential challenges and opportunities in creating augmented environments.
 - DESIGN 41: As part of a team, solve a complex design problem and justify a design solution to a group.
 - DESIGN 42: Demonstrate an understanding of the core concepts, methods and principles of information design and their applications.
 - IXD 320: Examine a variety of contemporary applications of interaction design to develop and formulate their own set of professional preferences.
 - IXD 320: Demonstrate a professional written and oral communication skills as a substantive individual or collaborative presentation of research projects.
 - IXD 420: Communicate their design brief response to relevant stakeholders through presentations and written documentation, based on clarity, persuasiveness, and audience engagement.
- Students will exhibit proficient visual, verbal, and written communication skills, particularly presentation skills necessary in the design industry.
 - ARC 45: Demonstrate and apply fundamental principles, methods and concerns of spatial design, and their impact on user experience.

- DESIGN 11: Demonstrate conceptual and practical understanding of fundamental principles of visual communication.
- DESIGN 12: Demonstrate practical understanding of fundamental principles of typography, as assessed by homework assignments, in-class participation, midterm and final projects.
- DESIGN 13: Identify the strengths and capabilities of graphic design digital applications and how to integrate the applications in graphic design projects.
- DESIGN 31: Conceptualize, research, analyze, design, prototype, and iterate a design solution from beginning to end.
- DESIGN 32: Demonstrate the ability to create consistent visual communication language and apply it to various media in the context of a promotional campaign.
- DESIGN 41: Conceptualize, research, analyze, design, prototype, and iterate a design solution from beginning to end.
- DESIGN 42: Create consistent visual and narrative systems and apply it to various media to display information effectively.
- DESIGN 43: Build a digital portfolio of work.
- IXD 360: Utilize 3D tools and processes to solve user needs and inform their interaction design practice.
- IXD 470: Successfully conceptualize, research, analyze, design, prototype, and iterate a design solution from beginning to end.

Lower Division Preparation for the IxD Major

Units: 30.0

These courses, or equivalent, are required prior to enrollment in the IxD courses. SMC has several articulation agreements with other institutions for these courses.

DESIGN 11 ^{DE} Design Foundations (formerly GR DES 31)	3.0
DESIGN 12 ^{DE} Typography 1 (formerly GR DES 33)	3.0
DESIGN 13 ^{DE} Digital Design Tools (formerly GR DES 18)	3.0
DESIGN 23 ^{DE} User Experience Design 1 (formerly GR DES 61)	3.0
DESIGN 31 ^{DE} Interactive Advertising	3.0
DESIGN 32 ^{DE} Communication Design	3.0
DESIGN 33 ^{DE} User Experience Design 2 (formerly GR DES 62)	3.0
DESIGN 41 ^{DE} Industry Project	3.0
DESIGN 42 ^{DE} Information Design	3.0
DESIGN 43 ^{DE} Design Portfolio (formerly GR DES 67)	3.0

Required Lower Division Courses

Units: 31.0

MEDIA 20 ^{DE} Introduction to Media Writing and Producing Short-Form Content	3.0

AHIS 3 ^{DE} Global Art History Since 1860	3.0
OR	
AHIS (any AHIS course satisfies requirement; AHIS 3 highly recommended)	3.0

BUS 20 ^{DE} Principles of Marketing	3.0
OR	
BUS 63 ^{DE} Principles of Entrepreneurship	3.0

CIS 54 ^{DE} Web Development and Scripting	3.0
OR	
CS 7 ^{DE} Programming for Non-Computer Science Majors	3.0
OR	
CS 87A ^{DE} Python Programming	3.0

ARC 45 Designing Spaces: Enhancing the Human Experience	3.0
ENGL 1 ^{DE} Reading and Composition 1	3.0
ENGL 2 ^{DE} Critical Analysis and Intermediate Composition	3.0
MEDIA 4 ^{DE} Introduction to Game Studies*	3.0
PSYCH 1 ^{DE} General Psychology	3.0
MATH 54 ^{DE} Elementary Statistics	4.0
MEDIA 20 ^{DE} Introduction to Media Writing and Producing Short-Form Content	3.0
*or COM ST 16 only if taken prior to Fall 2016	

Upper Division Major Requirements

Units: 30.0

IXD 310 ^{DE} Interaction Design Studio 1	3.0
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IXD 320 History and Practice of Interaction Design	3.0
IXD 330 ^{DE} Interaction Design Studio 2	3.0
IXD 360 ^{DE} Product Design	3.0
IXD 410 ^{DE} Project Management for Design	3.0
IXD 420 Design for Social Innovation	3.0
IXD 430 ^{DE} Interaction Design Studio 3	3.0
IXD 460 ^{DE} Programming Design Systems	3.0
IXD 470 ^{DE} Interaction Design Senior Studio	3.0
IXD 480 ^{DE} Design for the Future	3.0

Upper Division General Education

Units: 9.0

ANTHRO 300 Ethnographic Research Methods for Designers	3.0
ENGL 300 ^{DE} Advanced Writing and Critical Thinking in the Disciplines	3.0
PSYCH 320 Cognitive Psychology	3.0

Optional Internship or Independent Study

DESIGN 90A Graphic Design Internship	1.0
DESIGN 90B Graphic Design Internship	2.0
DESIGN 90C Graphic Design Internship	3.0
IXD 481 Independent Studies in Interaction Design	1.0
IXD 482 Independent Studies in Interaction Design	2.0
IXD 483 Independent Studies in Interaction Design	3.0

Total: 100.0

Santa Monica College Interaction Design Bachelor of Science Narrative

Program Goals and Objectives:

Interaction Designers help create useful, meaningful, and delightful interactions between people and the products and services they encounter. They collaborate on the design of the behavior, organization, usability, and aesthetics of interactive systems. The discipline was developed in response to the need to provide seamless connections between high-tech systems and their users. By now, it is integral to the development of modern digital technology.

The Interaction Design Bachelor of Science degree program prepares students for a successful career in the rapidly developing media and technology fields. It covers a wide range of topics from visual design, user experience, multimedia, and technology, through hands-on project-based learning focused on building a strong portfolio of work. Students are also introduced to the fundamentals of adjacent fields of psychology, computer programming, product design, and architecture. This two-year program covers the junior and senior college years; applicants are expected to have relevant previous college experience before applying.

Program Learning Outcomes:

Upon completion of the program, students will demonstrate knowledge of Interaction Design/User Experience Design history, practices, methodologies, tools, and project-based processes in designing for the user.

Students will utilize human-centered design principles, user-testing outcomes, and ethnographic research insights, and will employ critical thinking, sketching, and iterative processes to define, develop, conceptualize, and solve problems.

Students will design and prototype correct affordances, interaction paradigms, and patterns for a range of platforms including web, mobile, and tangible systems.

Students will collaborate with customers and clients, and in team projects, brainstorming sessions, and in-class critiques.

Students will exhibit proficient visual, verbal, and written communication skills, particularly presentation skills necessary in the design industry.

Catalog Description:

Interaction Designers help create useful, meaningful, and delightful interactions between people and the products and services they encounter. They collaborate on the design of the behavior, organization, usability, and aesthetics of interactive systems. The discipline was developed in response to the need to provide seamless connections between high-tech systems and their users. By now, it is integral to the development of modern digital technology.

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Students will design and prototype correct affordances, interaction paradigms, and patterns for a range of platforms including web, mobile, and tangible systems.

Students will collaborate with customers and clients, and in team projects, brainstorming sessions, and in-class critiques.

Students will exhibit proficient visual, verbal, and written communication skills, particularly presentation skills necessary in the design industry.

Program Requirements:

Lower Division Preparation for the IxD Major

Units: 30.0

These courses, or equivalent, are required prior to enrollment in the IxD courses. SMC has several articulation agreements with other institutions for these courses.

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DESIGN 12 ^{DE} Typography 1 (formerly GR DES 33)	3.0
DESIGN 13 ^{DE} Digital Design Tools (formerly GR DES 18)	3.0
DESIGN 23 ^{DE} User Experience Design 1 (formerly GR DES 61)	3.0
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DESIGN 32 ^{DE} Communication Design	3.0
DESIGN 33 ^{DE} User Experience Design 2 (formerly GR DES 62)	3.0
DESIGN 41 ^{DE} Industry Project	3.0
DESIGN 42 ^{DE} Information Design	3.0
DESIGN 43 ^{DE} Design Portfolio (formerly GR DES 67)	3.0

Required Lower Division Courses

Units: 31.0

MEDIA 20 ^{DE} Introduction to Media Writing and Producing Short-Form Content	3.0

AHIS 3 ^{DE} Global Art History Since 1860	3.0
OR	
AHIS (any AHIS course satisfies requirement; AHIS 3 highly recommended)	3.0

BUS 20 ^{DE} Principles of Marketing	3.0
OR	
BUS 63 ^{DE} Principles of Entrepreneurship	3.0

CIS 54 ^{DE} Web Development and Scripting	3.0
OR	
CS 7 ^{DE} Programming for Non-Computer Science Majors	3.0
OR	
CS 87A ^{DE} Python Programming	3.0

ARC 45 Designing Spaces: Enhancing the Human Experience	3.0
ENGL 1 ^{DE} Reading and Composition 1	3.0
ENGL 2 ^{DE} Critical Analysis and Intermediate Composition	3.0
MEDIA 4 ^{DE} Introduction to Game Studies*	3.0
PSYCH 1 ^{DE} General Psychology	3.0
MATH 54 ^{DE} Elementary Statistics	4.0
MEDIA 20 ^{DE} Introduction to Media Writing and Producing Short-Form Content	3.0
*or COM ST 16 only if taken prior to Fall 2016	

Upper Division Major Requirements

Units: 30.0

IXD 310 ^{DE} Interaction Design Studio 1	3.0
IXD 320 History and Practice of Interaction Design	3.0
IXD 330 ^{DE} Interaction Design Studio 2	3.0
IXD 360 ^{DE} Product Design	3.0
IXD 410 ^{DE} Project Management for Design	3.0
IXD 420 Design for Social Innovation	3.0
IXD 430 ^{DE} Interaction Design Studio 3	3.0
IXD 460 ^{DE} Programming Design Systems	3.0
IXD 470 ^{DE} Interaction Design Senior Studio	3.0
IXD 480 ^{DE} Design for the Future	3.0

Upper Division General Education

Units: 9.0

ANTHRO 300 Ethnographic Research Methods for Designers	3.0
ENGL 300 ^{DE} Advanced Writing and Critical Thinking in the Disciplines	3.0
PSYCH 320 Cognitive Psychology	3.0

Optional Internship or Independent Study

DESIGN 90A Graphic Design Internship	1.0
DESIGN 90B Graphic Design Internship	2.0

DESIGN 90C Graphic Design Internship	3.0
IXD 481 Independent Studies in Interaction Design	1.0
IXD 482 Independent Studies in Interaction Design	2.0
IXD 483 Independent Studies in Interaction Design	3.0
Total: 100.0	

Master Planning:

Santa Monica College provides a safe, inclusive, and dynamic learning environment that encourages personal and intellectual exploration and challenges and supports students in achieving their educational goals. Students learn to contribute to the local and global community as they develop an understanding of their relationship to diverse social, cultural, political, economic, technological, and natural environments.

Santa Monica College provides open and affordable access to high-quality undergraduate degrees and certificates and partners with other colleges and universities to facilitate access to baccalaureate and higher degrees.

This program is consistent with SMC’s mission to “assist students in developing skills needed to succeed in college [and] prepare students for careers...” Students completing the AS degree may apply for transfer to a university for a 5-year professional degree or a 4-year non-professional degree. Alternatively, they may qualify for entry-level positions in the careers below.

Enrollment and Completer Projections:

The projected number of students annually enrolled is 24. In the past years, it has fluctuated between 17 and 27, depending on the outcome of the admission process.

Place of Program in Curriculum/Similar Programs:

The lower division courses offered by the Design and Technology, Media Studies, Computer and Information Sciences, and Art departments provide students with the skills necessary to enter the program. An A.S. degree in Graphic Design is considered to be a direct gateway to the program, but other paths are also supported.

Similar Programs at Other Colleges in Service Area:

- Long Beach City College, Digital Media: Multimedia Interaction & Game Design, Certificate of Achievement
- West LA College, Interactive Design 1, Certificate of Achievement
- West LA College, Interactive Design 2, Certificate of Achievement



CENTER OF EXCELLENCE
FOR LABOR MARKET RESEARCH

LOS ANGELES

Workforce Supply & Demand for Interaction Design Jobs in LA County

Labor Market Supply and Demand Analysis for Bachelor of Science in
Interaction Design at Santa Monica College

Table of Contents

Key Findings	3
Introduction	4
Key Occupations	5
Labor Market Demand	5
Historical employment	5
Projected annual job openings	6
Average hourly wages	7
Industry employment	9
Job postings	10
Educational Supply: Training Programs	11
Bachelor's degrees	11
Gap Analysis	13
Recommendations & Discussion	14
Methodology	15
Appendix	16

Key Findings

Demand:

- **Employment**—Employment for target interaction design occupations has grown by 155% over the last 20 years in LA County.
- **Job openings**—Over the next five years, jobs for target interaction design occupations are projected to grow by 7%, resulting in nearly 1,200 jobs available annually in Los Angeles County.
- **Wages**—Average hourly wages for *web and digital interface designers* are \$24.44 higher than the average across all occupations at the 10th percentile, \$32.03 higher at the 25th percentile, \$46.47 higher at the median, \$70.37 higher at the 75th percentile, and \$83.05 more per hour at the 90th percentile.
- **Job postings**—Of the employers posting job ads for interaction design occupations, the majority preferred a candidate with a bachelor's degree (87%).
- **Advertised Salaries**—The interaction design employers seeking candidates with a bachelor's degree are advertising annual salaries that are more than \$51,000 per year higher (\$129,729) than those seeking candidates with a high school diploma or associate degree (\$78,080), a 66% difference.

Supply:

- **Awards**—Over the past three years, educational providers in the region conferred an average of 81 bachelor's degrees in programs related to interaction design.

Gap Analysis:

- **Supply of workers**—With 81 average annual bachelor's degrees issued in the county and 1,181 job postings for target interaction design occupations, there is a potential supply gap of 1,100 unfilled interaction design jobs in LA County.
- **Employer preferences**—The majority of prospective employers (87%) prefer a bachelor's degree for employment.

Introduction

To be provided by requesting college...

The key occupations that would benefit from holding an interaction design bachelor's degree are:

- **Software Quality Assurance Analysts and Testers (15-1253)** Develop and execute software tests to identify software problems and their causes. Test system modifications to prepare for implementation. Document software and application defects using a bug tracking system and report defects to software or web developers. Create and maintain databases of known defects. May participate in software design reviews to provide input on functional requirements, operational characteristics, product designs, and schedules.¹
- **Web Developers (15-1254)** Develop and implement websites, web applications, application databases, and interactive web interfaces. Evaluate code to ensure that it is properly structured, meets industry standards, and is compatible with browsers and devices. Optimize website performance, scalability, and server-side code and processes. May develop website infrastructure and integrate websites with other computer applications.²
- **Web and Digital Interface Designers (15-1255)** Design digital user interfaces or websites. Develop and test layouts, interfaces, functionality, and navigation menus to ensure compatibility and usability across browsers or devices. May use web framework applications as well as client-side code and processes. May evaluate web design following web and accessibility standards, and may analyze web use metrics and optimize websites for marketability and search engine ranking. May design and test interfaces that facilitate the human-computer interaction and maximize the usability of digital devices, websites, and software with a focus on aesthetics and design. May create graphics used in websites and manage website content and links.³

The purpose of this study is to determine whether there is demand in the statewide and regional labor market for interaction design occupations that is not being met by the supply from relevant training programs. More specifically, this report addresses the labor market components of Assembly Bill 927, which require evidence of unmet workforce needs related to Santa Monica College's proposed Bachelor of Science in Interaction Design.⁴

¹ [Software Quality Assurance Analysts and Testers \(bls.gov\)](https://www.bls.gov)

² [Web Developers and Digital Designers \(bls.gov\)](https://www.bls.gov)

³ Ibid.

⁴ [AB-927 Public postsecondary education: community colleges: statewide baccalaureate degree program](#)

Key Occupations

The key occupations analyzed in this report were selected from the 2018 Standard Occupational Classification (SOC) system. All three target occupations are classified under the computer and mathematical occupations major group (15-0000). All three occupations typically require a bachelor's degree for employment and no previous work experience.

Exhibit 1: Key interaction design occupations

SOC Code	Description	Typical Entry-Level Education	Work Experience Required
15-1253	Software Quality Assurance Analysts and Testers	Bachelor's degree	None
15-1254	Web Developers	Bachelor's degree	None
15-1255	Web and Digital Interface Designers (includes Video Game Designers 15-1255.01)	Bachelor's degree	None

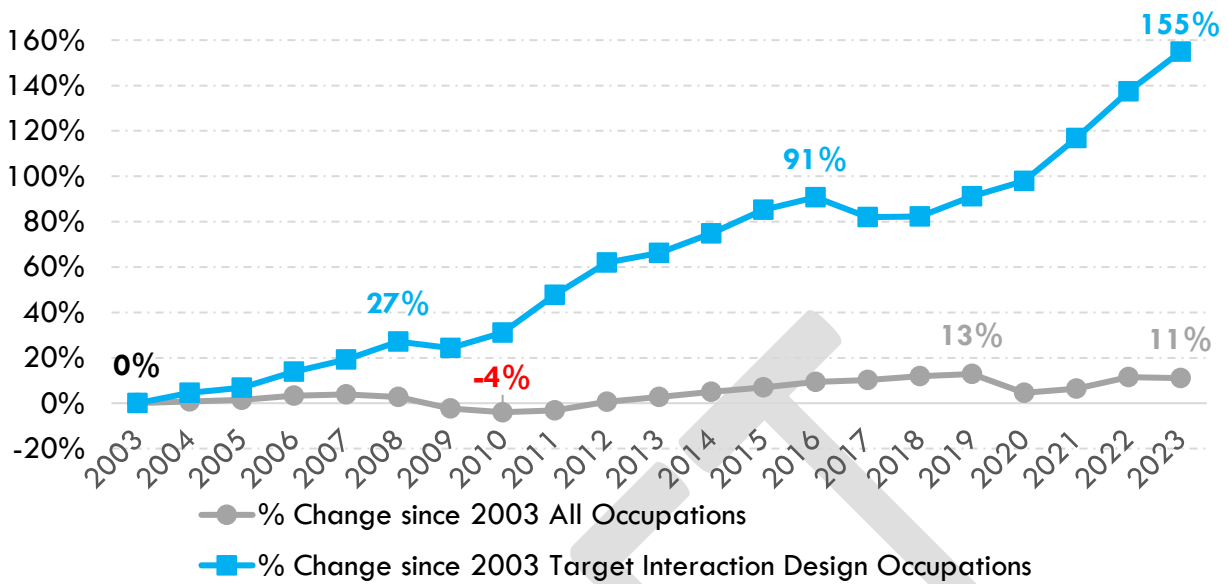
Source: [2018 Standard Occupational Classification \(SOC\) system](#)

Labor Market Demand

Historical employment

Exhibit 2 demonstrates that since 2003, employment for the target interaction design occupations in the report has increased by 155%, while employment across all occupations has grown by 11% in Los Angeles County. On average, these target interactive design occupations have experienced positive growth over the past 20 years, only decreasing slightly through the Great Recession (2007-2009) and during the years 2017-2018. Even after a slight dip in 2017-2018, the number of jobs for these target interaction design occupations has outpaced the average across all occupations, nearly doubling from 82% in 2018 to 155% in 2023. Since 2003, the number of jobs in Los Angeles County has increased by 11%, only dipping below the number of 2003 jobs during the Great Recession (2007-2009).

Exhibit 2: Percent change in employment since 2003



Source: Lightcast, Datarun 2024.3

Projected annual job openings

Exhibit 3 displays detailed 2023 job counts, projected employment figures through 2028, five-year percentage change in employment, and projected annual job openings for the target occupations. Los Angeles County will have nearly 1,200 annual job openings through 2028. These occupations are projected to grow by 7% through 2028 in LA County. In California, nearly 6,600 job openings are projected to be available annually, signaling that nearly one-fifth of job openings in California for these target occupations are in LA County. These occupations are expected to grow by 12% throughout the state, nearing 80,500 jobs by 2028.

Exhibit 3: Occupational demand in Los Angeles County and California

SOC	Occupation	Region	2023 Jobs	2028 Jobs	5-Year % Change	Annual Openings
15-1253	Software Quality Assurance Analysts and Testers	Los Angeles	4,887	5,299	8%	392
		California	32,279	36,598	13%	2,957
15-1254	Web Developers	Los Angeles	2,918	3,101	6%	223
		California	12,641	14,013	11%	1,100
15-1255	Web and Digital Interface Designers	Los Angeles	6,744	7,150	6%	566
		California	27,227	29,858	10%	2,525
TOTAL		Los Angeles	14,549	15,549	7%	1,181
		California	72,147	80,469	12%	6,582

Source: Lightcast, Datarun 2024.3

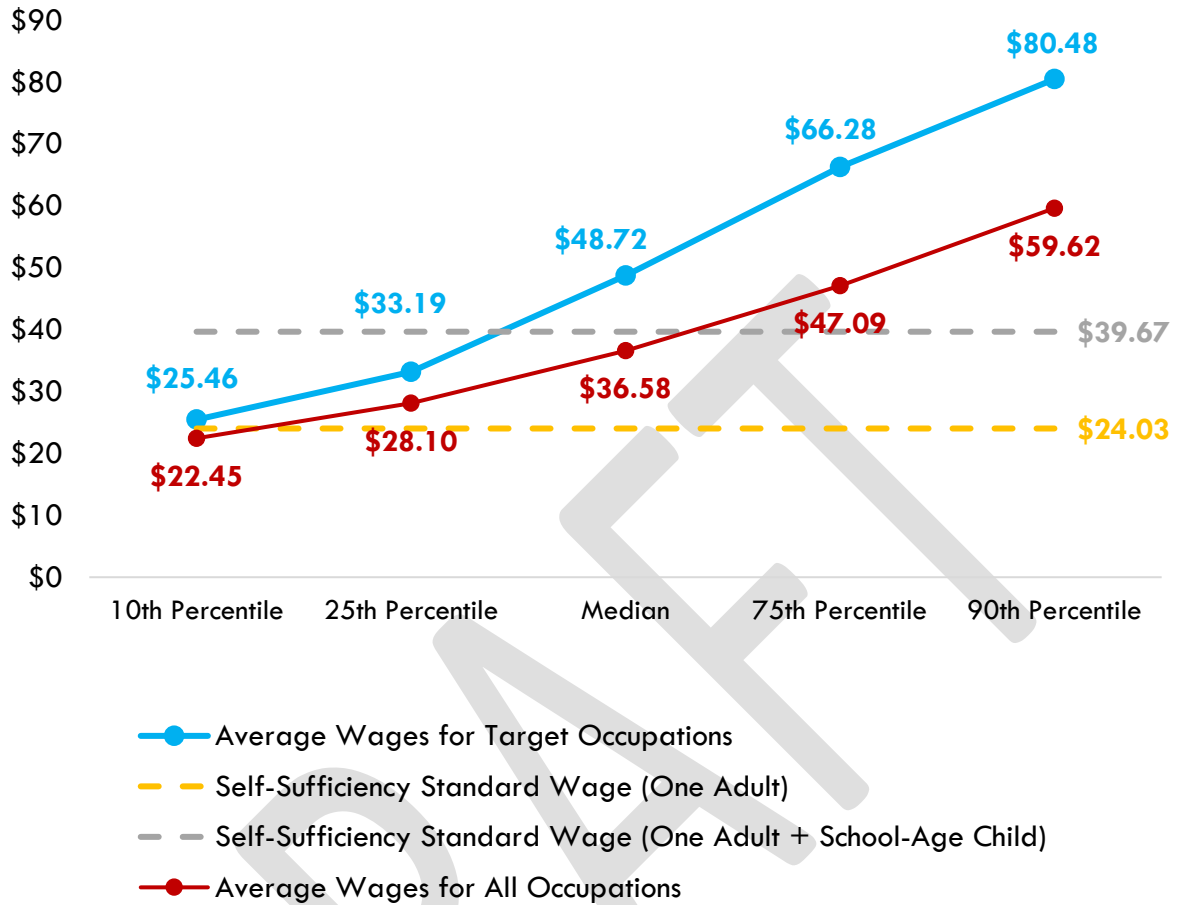
Average hourly wages

The average hourly wage for the target occupations in Los Angeles County at the 10th, 25th, median, 75th, and 90th percentile is displayed in Exhibit 4. *Software quality assurance analysts and testers* have the highest wages at the lower percentiles. At the lowest percentile available (i.e., the 10th), workers employed as *software quality assurance analysts and testers* earn \$9.99 per hour more than the regional average across all occupations. This is welcome news by itself; however, the lifelong benefit of being employed as *software quality assurance analysts and testers* in Los Angeles County is that this gap widens among higher earners in a primarily linear fashion. Progressing to the 25th percentile, this target occupation earns \$11.27 per hour more than the average worker in the region, \$18.46 more at the median level, \$18.76 more at the 75th percentile, and \$22.17 more per hour at the 90th percentile, on average.

Workers employed as *web and digital interface designers* in Los Angeles County have similar wage trends as *software quality assurance analysts and testers*, earning \$1.99 per hour more than the regional average across all occupations at the lowest percentile (10th). At the 25th percentile, this target occupation earns \$3.93 per hour more than the average worker in the region, \$9.89 more at the median level, \$23.28 more at the 75th percentile, and \$23.43 more per hour at the 90th percentile, on average.

Web developers earn less than the regional average across all occupations at the lowest percentile available (10th). However, labor market data shows that wages for *web developers* begin to increase compared to the average wages across all Los Angeles County occupations. At the 25th percentile, this target occupation earns \$0.08 per hour more than the average worker in the region, \$8.06 more at the median level, \$15.54 more at the 75th percentile, and \$16.97 more per hour at the 90th percentile, on average. While earnings may vary depending on employer, industry, and city of employment, these represent average wages across Los Angeles County.

Exhibit 4: Hourly wage range for target interaction design occupations



Source: Lightcast, Datarun 2024.3 and the [Self-Sufficiency Standard for California](#)

Detailed 25th percentile, median, and 75th percentile hourly and median annual wages are displayed in Exhibit 5 for the target occupations as well as the average across all occupations in Los Angeles County.

Exhibit 5: 25th percentile, median, and 75th percentile hourly and median annual earnings for the target occupations compared to average across all occupations in LA County

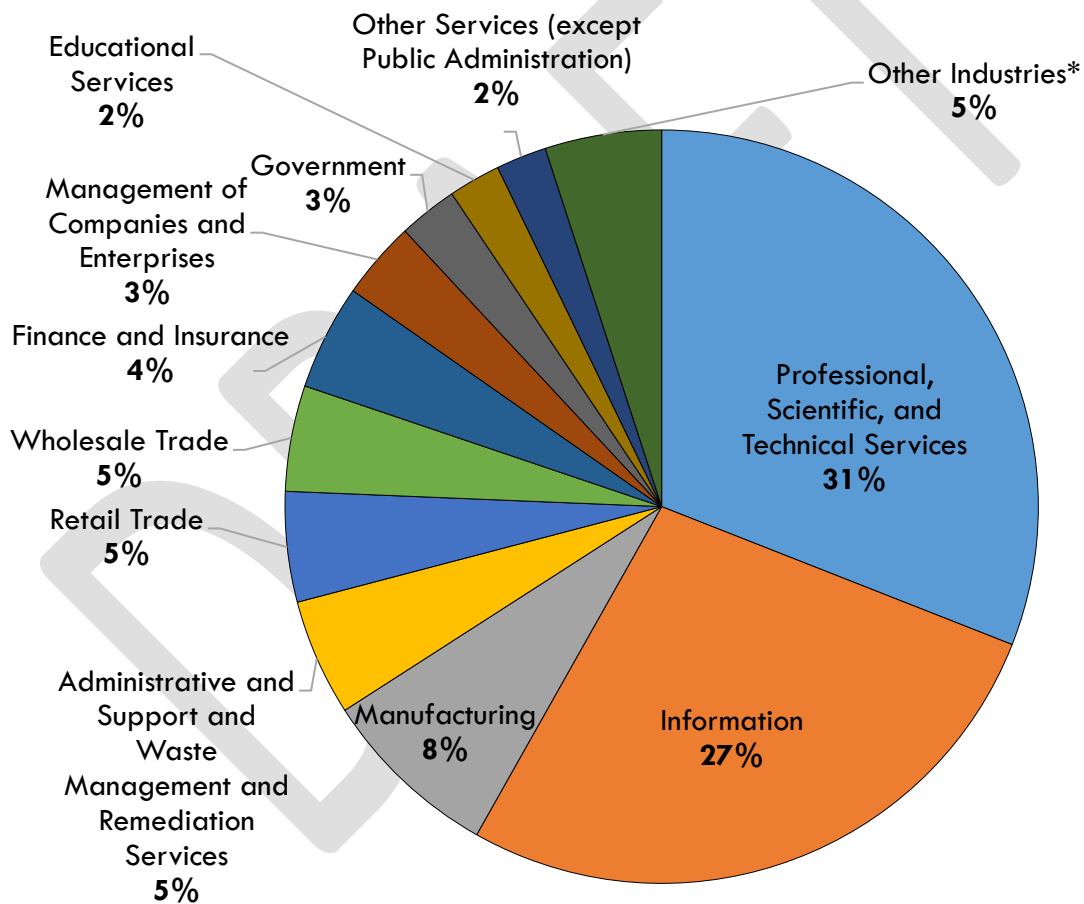
SOC Code	Description	25 th Percentile Hourly Earnings	Median Hourly Earnings	75 th Percentile Hourly Earnings	Median Annual Earnings
15-1253	Software Quality Assurance Analysts and Testers	\$39.36	\$55.04	\$65.58	\$114,481
15-1254	Web Developers	\$28.18	\$44.64	\$62.63	\$92,852
15-1255	Web and Digital Interface Designers	\$32.03	\$46.47	\$70.37	\$96,663
-	Avg for all occupations	\$28.10	\$36.58	\$47.09	\$76,086

Source: Lightcast, Datarun 2024.3

Industry employment

Exhibit 6 displays the portion of the target occupations working within each industry sector. Two industry sectors hold large shares of these occupations: *professional, scientific, and technical services (NAICS 54)* (31%) and *information (NAICS 51)* (27%). Together, these two industry sectors comprise more than half of all employment for the target occupations in Los Angeles County (58%). The largest share of employment within the *professional, scientific, and technical services* sector is within the *computer systems design and related services* sector (NAICS 5415). The largest share of employment within the *information* sector is the *motion picture and video industries* (NAICS 5121).

Exhibit 6: Industry concentration of target occupations in 2023



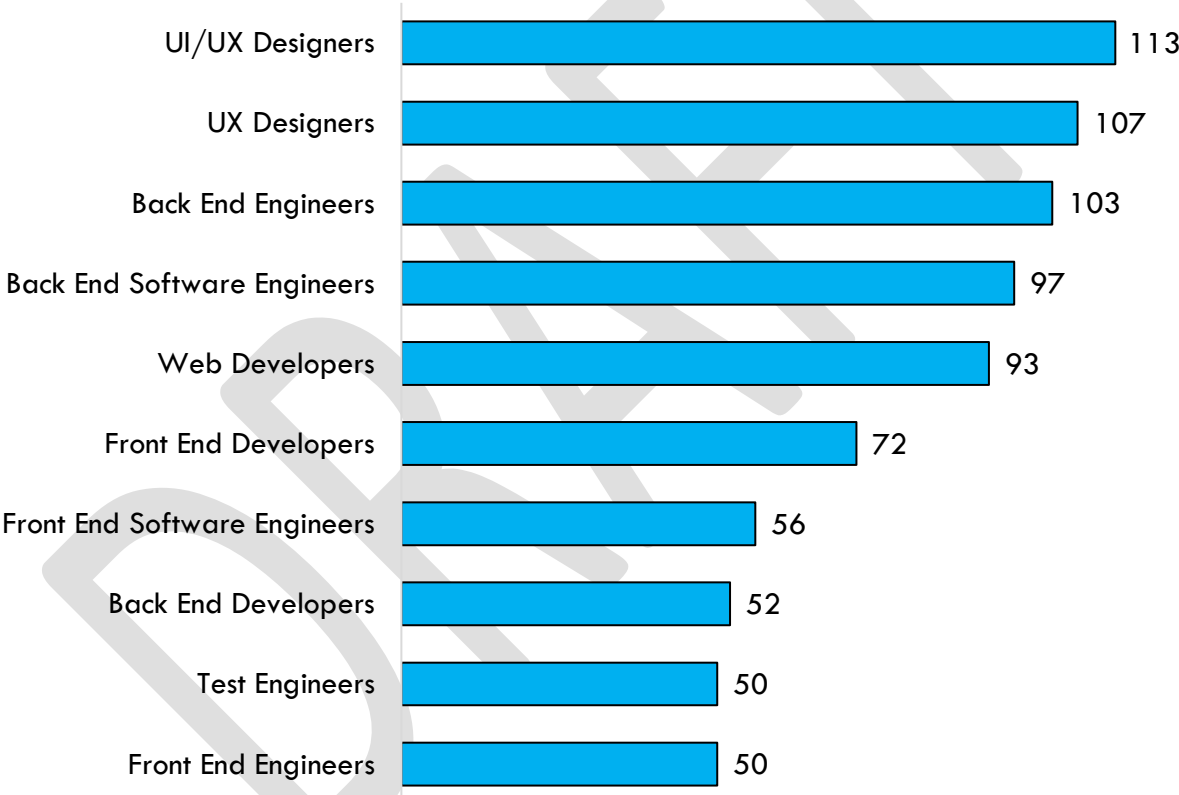
*Other Industries include Arts, Entertainment, and Recreation (1.7%), Health Care and Social Assistance (1.4%), Transportation and Warehousing (0.8%), Real Estate and Rental and Leasing (0.6%), Construction (0.3%), Accommodation and Food Services (0.1%), and Utilities (0.1%).

Source: Lightcast, Datarun 2024.3

Job postings

Over the last 12 months (September 2023 - August 2024), there were 3,479 unique online job postings for the three target interaction design occupations and one emerging occupation (video game designers - 15-1255.01). The number of job postings by job title appears in Exhibit 7. The most common job titles from job postings were UI/UX designers, UX designers, back-end engineers, back-end software engineers, and web developers. The employers posting the most job ads during this timeframe were Insight Global, Jobot, Amazon, Coalition Technologists, and Motion Recruitment. The skills sought most frequently in these job ads were related to JavaScript (programming language), computer science, user experience (UX), cascading style sheets (CSS), and hypertext markup language (HTML).

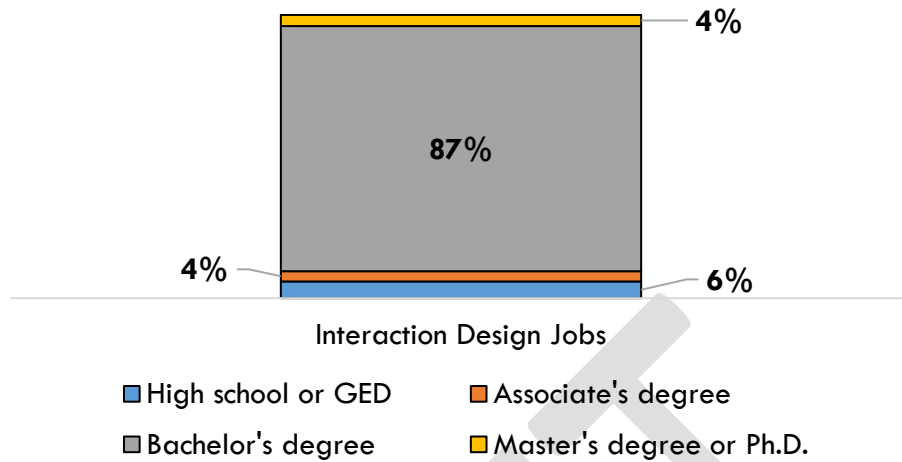
Exhibit 7: Job postings by job title in Los Angeles County (September 2023 – August 2024)



Source: Lightcast job posting data

Of all the job postings that listed a minimum educational requirement, most employers sought candidates with bachelor’s degrees (87% of the total). Exhibit 8 shows a breakdown of education levels listed in job postings for these interaction design jobs. There were 10% of job postings that desired a candidate holding less than a bachelor’s degree: 6% requested a high school diploma or GED, while 4% of job postings desired an associate degree. Only 4% of the job postings desired a candidate with a master’s degree or Ph. D. In Los Angeles County, there were 1,552 job postings that required a bachelor’s degree for entry for these interaction design occupations.

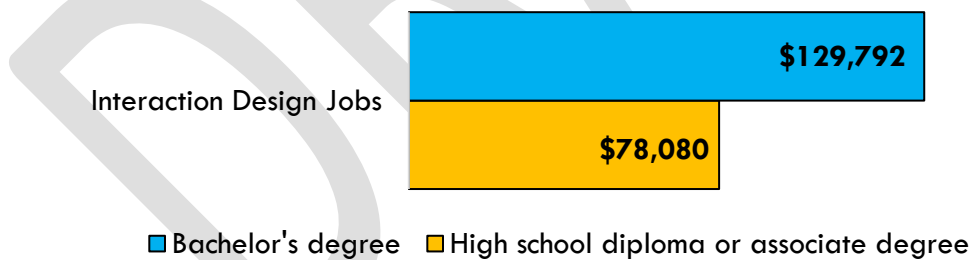
Exhibit 8: Education breakdown in job postings in Los Angeles County



Source: Lightcast job posting data

Taking a closer look at job postings that listed a bachelor’s degree as the required level of education versus postings that listed a high school diploma or associate degree, employers seeking candidates with a bachelor’s degree for these target interaction design jobs are advertising annual salaries that are more than \$51,000 per year higher than those seeking candidates with a high school diploma or associate degree. Exhibit 9 demonstrates that regional employers posting interaction design job ads are willing to pay 66% more for candidates with a bachelor’s degree than for candidates with a high school diploma or associate degree.

Exhibit 9: Annual median advertised salary by education level in Los Angeles County



Source: Lightcast job postings data

Educational Supply: Training Programs

Bachelor’s degrees

In Los Angeles County, awards training for the target occupations have been conferred at one community college and five 4-year colleges (see Exhibit 10 below for summary data and Appendix for details). Between 2021 and 2023, there was an annual average of 25 bachelor’s degrees awarded at Santa Monica College. Due to different data collection periods, data for 4-year colleges throughout the state is available from 2020 to 2022. Between 2020 and 2022, there was an average of 57 bachelor’s degrees awarded annually at 4 different 4-year

colleges in Los Angeles County. Currently, there are no programs in Los Angeles County that are coded under the following related CIP codes: Human-Centered Technology Design (11.0105) and Web Page, Digital/Multimedia and Information Resources Design (11.0801).

Exhibit 10: LA County bachelor’s degrees, 2020 to 2023

Program (TOP)	2020-	2021-	2022-	3-Year Average
	21	22	23	
Other Fine and Applied Arts (1009.00)	26	21	27	25
Program (CIP)	2019-	2020-	2021-	3-Year Average
	20	21	22	
Digital Communication and Media/Multimedia (09.0702)	51	66	45	54
Human Computer Interaction (30.3101)	4	2	2	3

Source: [National Center for Education Statistics’ Integrated Postsecondary Education Data System](#)

In California, bachelor’s degrees related to the target occupations have been issued at 15 colleges: 14 4-year colleges and one 2-year community college (see Exhibit 11). Between 2021 and 2023, an average of 25 bachelor’s degrees were awarded annually at one community college (Santa Monica). Due to different data collection periods, data for 4-year colleges throughout the state is available from 2020 to 2022. Between 2020 and 2022, there was an average of 171 bachelor’s degrees awarded annually at 14 different 4-year colleges. Nearly half of the interaction design-related awards conferred in California were at colleges in Los Angeles County (81 of 196 awards). Currently, no programs in California are coded under the following related CIP code: Human-Centered Technology Design (11.0105).

Exhibit 11: California bachelor’s degrees, 2020 to 2023

Program (TOP)	2020-	2021-	2022-	3-Year Average
	21	22	23	
Other Fine and Applied Arts (1009.00)	26	21	27	25
Program (CIP)	2019-	2020-	2021-	3-Year Average
	20	21	22	
Digital Communication and Media/Multimedia (09.0702)	102	118	85	102
Web Page, Digital/Multimedia and Information Resources Design (11.0801)	54	32	38	41
Human Computer Interaction (30.3101)	38	22	24	28

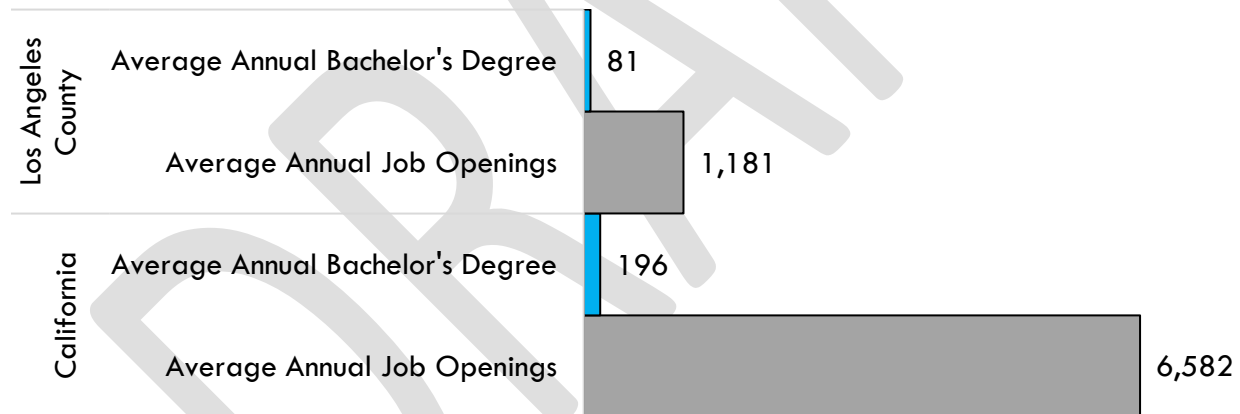
Source: [National Center for Education Statistics’ Integrated Postsecondary Education Data System](#)

Gap Analysis

Breaking down the educational supply and occupational demand for these target occupations in Los Angeles County highlights the potential need for an interaction design bachelor's program. With 81 average annual bachelor's degrees awarded and 1,181 job openings for interaction design occupations, the potential supply gap for these target interaction design occupations is 1,100. Furthermore, job posting data from interaction design employers shows that the majority of employers prefer a candidate with a bachelor's degree for employment. This projected workforce shortage facing Los Angeles County requires the attention of all regional education and training providers.

In California as a whole, there is a more pronounced gap between the average annual job openings and the annual bachelor's degrees awarded. While 6,582 interaction design-related jobs are projected to be available annually in California, only 196 annual bachelor's awards are conferred in related programs. Therefore, a statewide projected workforce shortage of 6,386 unfilled annual job openings for interaction design-related occupations is undoubtedly a cause for conversation and planning among education and training providers.

Exhibit 12: Supply and demand gap analysis for target interaction design occupations



Source: [Lightcast job postings data](#); [California Community Colleges Chancellor's Office Management Information Systems Data Mart](#); [National Center for Education Statistics' Integrated Postsecondary Education Data System](#)

Recommendations & Discussion

This report demonstrates that the demand for projected jobs related to target interaction design occupations is unmet by the talent supply from related education and training programs over the next five years, both in Los Angeles County and California as a whole. While this is a strong starting point for engaging in meaningful discussion about the prospects of a community college baccalaureate program that will help bridge the gap between talent supply and occupational demand in the labor market, it is not sufficient based on legislation.

Therefore, this report can be used as a launch board to validate these findings from traditional labor market information and job postings with regional employers and training providers in an effort to validate the following (sub-bullets summarize key points of support from this report):

- **Evidence that employers are having difficulty filling positions that require a baccalaureate degree.**
 - With 3,479 job postings for target interaction design occupations in Los Angeles County over the last year, there is strong evidence that regional employers are actively seeking qualified individuals for these jobs. 87% of these job postings are seeking candidates with a bachelor's degree.
- **Evidence that employers are willing to pay baccalaureate degree holders more than those with a related associate degree or no postsecondary degree.**
 - Regional employers seeking candidates with a bachelor's degree are advertising annual salaries that are 66% higher, or more than \$51,000 higher per year, than those seeking candidates with a high school diploma or associate degree.
- **Evidence that employers prefer candidates with the proposed baccalaureate degree.**
 - The majority of job postings for regional targeted interaction design employers were seeking candidates with a bachelor's degree (87% of total), demonstrating that employers posting job ads prefer candidates with a bachelor's degree for these jobs.
- **Evidence of job placement and/or promotion opportunities for candidates with a baccalaureate degree.**
 - Evidence of this criterion requires additional information from regional employers.
- **Evidence that the occupation/field of the proposed baccalaureate degree will provide higher-wage job opportunities.**
 - Average hourly wages for *web and digital interface designers* are \$24 higher than the average across all occupations at the 10th percentile, \$32 higher at the 25th percentile, \$46 higher at the median, \$70 higher at the 75th percentile, and \$83 more per hour at the 90th percentile.

Methodology

This report has three primary objectives:

1. Assess and quantify the labor market demand for target occupations in Los Angeles County and California.
2. Assess and quantify the educational supply for such jobs.
3. Calculate the potential unmet workforce demand for these jobs.

For the first objective, the most recent datarun (2024.3) from Lightcast was analyzed using 2023 as a base year and a five-year projection period through 2028. This five-year period approximates the time it takes for a typical community college training program to be developed, approved, and for the first cohort of students to enroll, complete the program, and enter the workforce. The average annual job openings for targeted interaction design occupations was the primary metric analyzed for this objective.

The second objective was calculated using the National Center for Education Statistics' Integrated Postsecondary Education Data System (IPEDS). This dataset was queried for the number of bachelor's degrees issued from educational institutions in Los Angeles County and California during the most recent three academic years available (2021-23 for TOP programs and 2020-22 for CIP programs). Reporting in IPEDS is organized by Classification of Instructional Programs (CIP). The California Community Colleges Chancellor's Office Management Information Systems Data Mart was queried for sub-baccalaureate awards. Reporting in this system is organized by the Taxonomy of Programs (TOP).

The third objective was achieved by calculating the difference between the sum of job openings and the number of baccalaureate awards issued from related bachelor's-level programs. This calculation determines whether there is demand in the labor market for bachelor's level candidates that is not being met by the bachelor's supply from educational programs that align with the relevant occupations.

Appendix

Table A: Los Angeles County bachelor's degrees issued for interaction design programs

TOP - Program	Institution		2020-21 Awards	2021-22 Awards	2022-23 Awards	3-Year Average
1099.00 - Other Fine and Applied Arts	Santa Monica		26	21	27	25
TOP TOTALS		-	26	21	27	25
CIP - Program	Institution	2019-20 Awards	2020-21 Awards	2021-22 Awards		3-Year Average
09.0702 - Digital Communication and Media/Multimedia	Azusa Pacific University	0	0	3		1
	CSU-Dominguez Hills	41	57	33		44
	Marymount California Univ.	10	9	9		9
30.3101 - Human Computer Interaction	Woodbury University	4	2	2		3
CIP TOTALS		55	68	47	-	57
GRAND TOTAL		-	-	-	-	81

Table B: California bachelor's degrees issued for interaction design programs

TOP - Program	Institution		2020-21 Awards	2021-22 Awards	2022-23 Awards	3-Year Average
1099.00 - Other Fine and Applied Arts	Santa Monica		26	21	27	25
TOP TOTALS		-	26	21	27	25
CIP - Program	Institution	2019-20 Awards	2020-21 Awards	2021-22 Awards		3-Year Average
09.0702 - Digital Communication and Media/Multimedia	Academy of Art University	34	30	20		28
	Azusa Pacific Univ.	0	0	3		1
	CSU-Dominguez Hills	41	57	33		44
	Holy Names Univ.	1	2	0		1
	Marymount California Univ.	10	9	9		9
	Univ. of the Pacific	14	19	10		14
	Vanguard Univ. of Southern California	2	1	0		1
	William Jessup Univ.	0	0	10		3

CIP - Program	Institution	2019-20 Awards	2020-21 Awards	2021-22 Awards		3-Year Average
11.0801 - Web Page, Digital/Multimedia and Information Resources Design	Academy of Art University	39	20	23		27
	Ashford University	0	0	7		2
	DeVry University	5	3	0		3
	Laurus College	0	2	0		1
	Santa Clara Univ.	10	7	8		8
30.3101 - Human Computer Interaction	California College of the Arts	34	20	22		25
	Woodbury Univ.	4	2	2		3
CIP TOTALS		194	172	147	-	171
GRAND TOTAL		-	-	-	-	196

About the Centers of Excellence for Labor Market Research

The Centers of Excellence (COE) is a statewide initiative supported by the California Community Colleges' Economic and Workforce Development program. The COE research team represents expertise in labor market analysis with a focus on research design, educational and training program mapping, and identifying skill sets for emerging occupations as well as geospatial analysis. The COE maintains strategic alliances with research organizations whose relationships and technical expertise enhance COE research efforts and with industry associations that assist in validating research findings, ensuring that the most recent industry and labor market conditions are captured. COE studies are used to inform policy discussions, industry-wide legislative efforts, and regional workforce and economic development strategies, as well as guide program and resource development efforts by the California Community Colleges. These reports can be accessed at www.coecc.net.

Santa Monica College
Program Of Study
Political Science Associate in Arts for Transfer (AA-T)

The Associate in Arts in Political Science for Transfer (AA-T) introduces students to the major fields of study in Political Science. The program includes the study of American Politics (principles, institutions, and policies). Depending upon the student's chosen course of study, the program may also include Comparative Politics (institutional structures, processes, and political cultures), International Relations (structure and operation of the international system), and/or Political Philosophy (ideas about human nature, power, justice, and the state).

Upon completion of the Associate in Arts in Political Science for Transfer (AA-T), students will have a strong academic foundation in the field and be prepared for upper division baccalaureate study. Completion of the degree indicates that the student will have satisfied the lower division requirements for transfer into political science or similar majors for many campuses in the California State University system.

Students must complete the following Associate Degree for Transfer requirements:

- Completion of 60 semester units or 90 quarter units of degree-applicable courses,
- Minimum overall grade point average of 2.0,
- Minimum grade of "C" (or "P") for each course in the major, and
- Completion of IGETC and/or CSU GE-Breadth.

Program Learning Outcomes:

- Upon completion of the program, students will demonstrate strong academic behaviors and integrity, and critically evaluate their responsibilities and opportunities as engaged political participants.
 - POL SC 1: Exhibit, through their behavior and course work, strong academic behaviors as well as a heightened sense of personal efficacy and civic responsibility and awareness of their rights and duties as citizens of their community, their country, and the wider world.
 - POL SC 2: Exhibit, through their behavior and course work, strong academic behaviors as well as a heightened sense of personal efficacy and civic responsibility and awareness of their rights and duties as citizens of their community, their country, and the wider world.
 - POL SC 51: Exhibit, through their behavior and course work, strong academic behaviors as well as a heightened sense of personal efficacy and communal responsibility, and awareness of their opportunities and obligations as political thinkers.
 - POL SC 7: Exhibit, through their behavior and course work, strong academic behaviors as well as a heightened sense of personal efficacy and civic responsibility and their awareness of their rights and duties as citizens of their community, their country, and the wider world.
- Upon completion of the program, students will critically analyze, through written or oral work, how power is structured, obtained, and exercised.
 - POL SC 1: Demonstrate through oral and/or written work an understanding of the basic political science concepts including power, institutions, political systems, policy making, theories of the state, political conflict, citizenship, and contending analytical and theoretical approaches.
 - POL SC 2: Demonstrate through oral and/or written work knowledge of the course content: the institutional structure, political processes, and political cultures of selected industrial democracies and Communist and Third World political systems.
 - POL SC 51: Demonstrate through oral and/or written work knowledge of the course content: the fundamental philosophical claims and political implications contained in the political philosophies of major Western thinkers from Plato to Foucault.
 - POL SC 7: Demonstrate through oral and/or written work knowledge of the course content: the structure and operation of the international system, the nature and sources of conflict and cooperation, and issues of war and peace among states in the international system.
- Upon completion of the program, students will evaluate political phenomena through written or oral analysis.
 - POL SC 1: Demonstrate proficiency in the research, analytical, and communication skills necessary to present, orally and/or in writing, compelling and original arguments that advance reasonable conclusions concerning American and California politics.
 - POL SC 2: Demonstrate proficiency in the research, analytical, and communication skills necessary to present, orally and/or in writing, compelling and original arguments that advance reasonable conclusions concerning the utility of the major theories of Comparative Politics to the creation of case study and/or cross-national models applicable to one or more countries.

- POL SC 51: Utilize the research, analytical, and communication skills necessary to present compelling and original arguments, orally and/or in writing, that advance reasonable conclusions concerning the work of certain political philosophers and the current political implications of their work.
- POL SC 7: Demonstrate proficiency in the research, analytical, and communication skills necessary to present, orally and/or in writing, compelling and original arguments that advance reasonable conclusions concerning the utility of realist, liberal, Marxist/neo-Marxist, and constructivist explanations for international conflict and cooperation.
- Upon completion of the program, students will articulate arguments, through written or oral work, regarding how power should be organized to achieve desired political outcomes.
 - POL SC 1: Demonstrate through oral and/or written work an understanding of the basic political science concepts including power, institutions, political systems, policy making, theories of the state, political conflict, citizenship, and contending analytical and theoretical approaches.
 - POL SC 2: Demonstrate proficiency in the research, analytical, and communication skills necessary to present, orally and/or in writing, compelling and original arguments that advance reasonable conclusions concerning the utility of the major theories of Comparative Politics to the creation of case study and/or cross-national models applicable to one or more countries.
 - POL SC 51: Demonstrate through oral and/or written work knowledge of the course content: the fundamental philosophical claims and political implications contained in the political philosophies of major Western thinkers from Plato to Foucault.
 - POL SC 7: Demonstrate proficiency in the research, analytical, and communication skills necessary to present, orally and/or in writing, compelling and original arguments that advance reasonable conclusions concerning the utility of realist, liberal, Marxist/neo-Marxist, and constructivist explanations for international conflict and cooperation.

Required Core: (3 units)

Units: 3.0

POL SC 1 ^{DE} American and California Politics	3.0
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List A: Select three courses (9 units minimum)

Units: 9.0

MATH 54 ^{DE} Elementary Statistics	4.0
PHILOS 51 ^{DE} Political Philosophy (<i>same as: POL SC 51</i>)	3.0
POL SC 2 ^{DE} Comparative Government and Politics	3.0
POL SC 7 ^{DE} International Politics	3.0
POL SC 51 ^{DE} Political Philosophy (<i>same as: PHILOS 51</i>)	3.0

List B: Select two courses (6 units minimum)

Units: 6.0

<i>Any course from List A not used above</i>	
ECON 1 ^{DE} Principles of Microeconomics	3.0
ECON 2 ^{DE} Principles of Macroeconomics	3.0
ECON 5 ^{DE} International Political Economy: Introduction To Global Studies (<i>same as: GLOBAL 5 , POL SC 5</i>)	3.0
ENGL 2 ^{DE} Critical Analysis and Intermediate Composition	3.0
ENVRN 14 ^{DE} U.S. Environmental History (<i>same as: HIST 14</i>)	3.0
ENVRN 20 ^{DE} Environmental Ethics (<i>same as: PHILOS 20</i>)	3.0
ENVRN 22 Environmental Politics and Policies (<i>same as: POL SC 22</i>)	3.0
GEOG 2 ^{DE} Introduction To Human Geography	3.0
GEOG 8 ^{DE} Introduction to Urban Studies (<i>same as: URBAN 8</i>)	3.0
GEOG 11 ^{DE} World Geography: Introduction to Global Studies (<i>same as: GLOBAL 11</i>)	3.0
GLOBAL 5 ^{DE} International Political Economy: Introduction To Global Studies (<i>same as: ECON 5 , POL SC 5</i>)	3.0
GLOBAL 11 ^{DE} World Geography: Introduction to Global Studies (<i>same as: GEOG 11</i>)	3.0
HIST 1 ^{DE} History of Western Civilization I	3.0
HIST 2 ^{DE} History of Western Civilization II	3.0
HIST 10 ^{DE} Ethnicity and American Culture	3.0
HIST 11 ^{DE} United States History Through Reconstruction	3.0
HIST 12 ^{DE} The United States History Since Reconstruction	3.0
HIST 13 ^{DE} United States History After 1945	3.0
HIST 14 ^{DE} U.S. Environmental History (<i>same as: ENVRN 14</i>)	3.0
PHILOS 1 ^{DE} Knowledge and Reality	3.0
PHILOS 3 ^{DE} Early Philosophers	3.0
PHILOS 4 ^{DE} Modern Philosophers	3.0
PHILOS 7 ^{DE} Logic and Critical Thinking	3.0
PHILOS 20 ^{DE} Environmental Ethics (<i>same as: ENVRN 20</i>)	3.0
PHILOS 48 Nonviolent Resistance	3.0

PHILOS 52 ^{DE} Contemporary Political Thought (<i>same as: POL SC 52</i>)	3.0
POL SC 3 Introduction to Politics: Justice, Power and Agency	3.0
POL SC 5 ^{DE} International Political Economy: Introduction To Global Studies (<i>same as: ECON 5 , GLOBAL 5</i>)	3.0
POL SC 8 The Modern Far East	3.0
POL SC 10 Government Internships	3.0
POL SC 11 World Affairs And The United Nations	3.0
POL SC 14 Middle East Government And Politics	3.0
POL SC 21 ^{DE} Race, Ethnicity, and the Politics of Difference	3.0
POL SC 22 Environmental Politics and Policies (<i>same as: ENVRN 22</i>)	3.0
POL SC 23 Sex, Gender, and Power	3.0
POL SC 31 ^{DE} Introduction to Public Policy	3.0
POL SC 47 International Politics Seminar	3.0
POL SC 52 ^{DE} Contemporary Political Thought (<i>same as: PHILOS 52</i>)	3.0
SOCIOL 1 ^{DE} Introduction to Sociology	3.0
SOCIOL 1 S Introduction to Sociology - Service Learning	3.0
SOCIOL 2 ^{DE} Social Problems	3.0
SOCIOL 2 S Social Problems -- Service Learning	3.0
SOCIOL 30 ^{DE} African Americans in Contemporary Society	3.0
SOCIOL 31 ^{DE} Latinas/os in Contemporary Society	3.0
SOCIOL 32 ^{DE} Asian Americans In Contemporary Society	3.0
SOCIOL 33 ^{DE} Sociology of Sex and Gender	3.0
SOCIOL 34 ^{DE} Racial and Ethnic Relations in American Society	3.0
URBAN 8 ^{DE} Introduction to Urban Studies (<i>same as: GEOG 8</i>)	3.0
<i>Or any course articulated as fulfilling CSUGE Area D</i>	

Total: 18.0