SANTA MONICA COLLEGE
ACADEMIC
SENATE
1900 Pico Boulevard Santa Monica, CA 90405
310.434.4611

Curriculum Committee Agenda

Wednesday, March 3, 2021, 3:00 p.m.

Zoom Meeting:

Join from PC, Mac, Linux, iOS or Android: https://cccconfer.zoom.us/j/95031029072

Or iPhone one-tap (US Toll): +16699006833,95031029072# or +12532158782,95031029072#

Or Telephone:
Dial:
+1 669 900 6833 (US Toll)
+1 253 215 8782 (US Toll)
+1 346 248 7799 (US Toll)
+1 312 626 6799 (US Toll)
+1 646 876 9923 (US Toll)
+1 301 715 8592 (US Toll)
Meeting ID: 950 3102 9072
International numbers available: https://cccconfer.zoom.us/u/arvwh0fbu

Or Skype for Business (Lync):
SIP:95031029072@lync.zoom.us

Members:

Dana Nasser, *Chair*	Sheila Cordova	Estela Narrie	Briana Simmons
Jason Beardsley, *Vice Chair*	Guido Davis Del Piccolo	Yvonne Ortega	Lydia Strong
Brenda Antrim	Sharlene Joachim	Quyen Phung	Esau Tovar
Fariba Bolandhemat	Emin Menachekanian	Patricia Ramos	Audra Wells
Susan Caggiano	Jennifer Merlic	Brandon Reilly	Kelsey Molle (A.S.)
Aurélie Chevant-Aksoy	Jacqueline Monge	Scott Silverman	

Interested Parties:

Stephanie Amerian	Rachel Demski	Maral Hyeler	Estela Ruezga
Maria Bonin	Kiersten Elliott	Laura Manson	Tammara Whitaker
Dione Carter	Tracie Hunter	Stacy Neal	A.S. President

Ex-Officio Members:
Nathaniel Donahue

(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. Redesign of the Student Experience

(Non-Substantial Changes: SLO Updates)
2. HIST 12 The United States History Since Reconstruction
3. LIBR 1 Library Research Methods

VII. Action Items

(Courses: New)

(Courses: Substantial Change)

(Courses: Distance Education)

(Courses: Global Citizenship)

(Courses: Deactivation)

(Programs: New)

(Programs: Revisions)

VIII. New Business

- Guided Pathway Program Map Approval Process Proposal

IX. Old Business

X. Adjournment

Please notify Dana Nasser or Jason Beardsley by email if you are unable to attend this meeting.

SANTA MONICA COLLEGE
ACADEMIC
SENATE
1900 Pico Boulevard Santa Monica, CA 90405
310.434.4611

Curriculum Committee Minutes

Wednesday, February 24, 2021, 3:00 p.m.
Zoom Meeting

Members:

Dana Nasser, *Chair*	Aurélie Chevant-Aksoy	Jacqueline Monge	Scott Silverman
Jason Beardsley, *Vice Chair*	Sheila Cordova	Estela Narrie	Briana Simmons
Brenda Antrim	Guido Davis Del Piccolo	Quyen Phung	Lydia Strong
Garen Baghdasarian	Sharlene Joachim	Patricia Ramos	Esau Tovar
Fariba Bolandhemat	Emin Menachekanian	Brandon Reilly	Audra Wells
Susan Caggiano			

Members Absent:

Jennifer Merlic	Kelsey Molle (A.S.)

Others Present:

Joelle Adams	Alex Schwartz	Sal Veas	Fabiola Valcin-Lewis
Rachel Demski			

(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 3:01 pm. Motion to approve the agenda with revision to remove ENGL 53 (VII. i.) from consideration on this agenda at the request of the department.
Motion made by: Briana Simmons; **Seconded by:** Aurélie Chevant-Aksoy
The motion passed unanimously.

II. Public Comments

None

III. Announcements

None

IV. Approval of Minutes

Motion to approve the minutes of December 2 with no revisions.
Motion made by: Audra Wells; **Seconded by:** Estela Narrie
The motion passed with the following vote: Y: 18; N: 0; A: 1 (Patricia Ramos)

V. Chair's Report

The Chair welcomed Tricia Ramos and Quyen Phung to the Curriculum Committee.

She clarified some details regarding course approval in META. Members can now make comments on the proposals in META. The Chair also summarized the distinction between "sub" and "non-sub" changes to the proposals.

VI. Information Items

1. USC Community College Leadership Alliance: "Meaningfully Integrating Race Across the Curriculum"

Guest Speaker: Sal Veas

Members were asked to contribute their thoughts, ideas, and work they've done for integrating race in curriculum:

One class focusing on integrating race in the curriculum isn't enough, it's something that needs to be a part of all curriculum – equity is a lens, not a topic, and every discipline, every department can be seen through that lens

Title 5 will be updated to be inclusive of Ethnic Studies, and will be a graduation requirement for all community colleges. Questions were brought up of whether this will impact the existing SMC Global Citizenship graduation requirement – either through a combination, merging, or replacement – this will return as a further conversation at future Curriculum meetings. Also, the Ethnic Studies requirement will not impact the ADTs, as the CSU GE pattern is being revised to remove 3 units from Area D, and instead require 3 units from the new "Area F: Ethnic Studies"

The conversation should also be expanded beyond assignments – a lot of people are finding good ways to have meaningful conversations, but we should look at whether there's an opportunity, as the Curriculum Committee, to include/revise questions we ask in applications and forms, to ask the faculty or department to describe how they are addressing issues of equity throughout the course. What we can do as gatekeepers is find logical ways to require that people just don't do the same thing they've been doing.

English is developing an ADT, and reviewing and revising all of their course outlines, to decolonize the curriculum across the entire COR – assignments, textbooks, course content, etc. before bringing the ADT forward.

Another component to the conversation is professional development – how can we teach and incentivize faculty to be willing and motivated to consider equity through every step in the process.

There is work being done on a project involving all full time and associate faculty, to look at decolonizing the curriculum – it's important to remember, anti-racism work is different than diversity work. The hope is to launch this Fall with huge numbers. At the same time, don't wait to start the work, get started now – it's going to take us to bring about the change.

Sal also shared a guide: Toward Equity: An Interactive Guide for Santa Monica College Faculty.

2. **Associate Degrees for Transfer Updates**

We're not currently able to offer some disciplines, due to unit requirements set forth by the TMC, but there are some degrees that would be great for SMC –

- Philosophy – many of the courses for the TMC already are approved for C-ID
- Film and TV – Media and Communication Studies is already in discussions on what needs to happen to create this degree
- Elementary Teacher Education – a few courses are still pending – those may be resolved
- Global Studies – we may need to develop one course to meet the TMC requirements
- Law, Public Policy, and Society – this may be possible through submitting a few courses to C-ID
- Social Justice Studies – also very possible

A challenge that arises with the C-ID requirements is jeopardizing articulation. If a course is denied C-ID, and needs to undergo substantial revisions for approval, those courses would likely need to be resubmitted and would be pending for articulation.

3. **Redesign of the Student Experience**

The Redesign team will be bringing forth a formal proposal to the committee regarding the mapping

approval process, to align course and program approvals with program maps. This keeps the student experience in mind, when changes are being submitted. The question is, what are the logistics, how to integrate maps as a new step in the process, but keep it streamlined, remaining transparent, and making sure all of the work doesn't fall to one person, but rather is a collaborative process.

Also, in terms of the Ethnic Studies requirement – we need to look at how that could impact all of our programs across the board, to ensure it doesn't delay graduation or transfer for our students.

(Non-Substantial Changes)

4. AHIS 71/ETH ST 71 African American Art History
5. BUS 51/ETH ST 51 Intercultural Business Communication
6. COM ST 20/ETH ST 20 Agitational and Protest Communication
7. COM ST 37/ETH ST 37 Intercultural Communication
8. DANCE 2/ETH ST 12 Dance in American Culture
9. ENGL 41/ETH ST 44 Introduction To Asian American Literature
10. ENGL 9/ETH ST 19 Literature of California
11. FILM 7/ETH ST 17 American Cinema: Crossing Cultures
12. HIST 41/ETH ST 41 Native-American History
13. HIST 42/ETH ST 42 The Latina/o Experience in the United States
14. HIST 43/ETH ST 43 Mexican-American History
15. HIST 62/ETH ST 62 Asian-American History
16. MUSIC 33/ETH ST 33 Jazz in American Culture
17. MUSIC 36/ETH ST 36 History of Rock Music
18. MUSIC 37/ETH ST 38 Music in American Culture
19. NUTR 7/ETH ST 18 Food and Culture in America

VII. Action Items

(Consent Agenda)

- Program Maps

a. Broadcasting Sales and Marketing AS/Certificate of Achievement
b. Entertainment Promotion and Marketing Production AS
c. Entertainment Promotion and Marketing Production Certificate of Achievement
d. Environmental Studies AA/Certificate of Achievement
e. Ethnic Studies AA/Certificate of Achievement
f. Global Studies AA/Certificate of Achievement
g. Nature-based Pedagogy Certificate of Achievement

Motion to approve consent agenda of Program Maps (VII. a., b., c., d., e., f., and g.) with no revisions.
Motion made by: Audra Wells; **Seconded by:** Estela Narrie
The motion passed unanimously.

(Courses: Distance Education)

h. ENGL 38 Literature of the Absurd

Motion to approve distance education for ENGL 38 with revision to fix copyright date in META (most likely due to glitch in the system).
Motion made by: Estela Narrie; **Seconded by:** Scott Silverman
The motion passed unanimously.

~~i. ENGL 53 Latino Literature in the United States~~

j. NURSNG 17 Pharmacological Aspects of Nursing

Motion to approve distance education for NURSNG 17 with revision to the Distance Education "Assessments" – change "Exams" percentage from 43% to 30%, add assessment of "Projects" for 13%; and update the course Textbook to the 7th edition (2017)
Motion made by: Susan Caggiano; **Seconded by:** Briana Simmons
The motion passed unanimously.

k. PSYCH 7 Research Methods in Psychology
Motion to table distance education for PSYCH 7 (VII. k.) and PSYCH 13 (VII. l.), pending revisions to language re: synchronous vs. asynchronous.
Motion made by: Audra Wells; **Seconded by:** Sharlene Joachim
The motion passed unanimously.

l. PSYCH 13 Social Psychology
Tabled with PSYCH 7 (VII. k.)

(Courses: Approved for Online Delivery in Emergency Contexts Only)

m. ANIM 10 Quick-Sketch & Rapid Visualization
Motion to approve distance education for ANIM 10 with revisions to rename Distance Education Assessment "Participation" to "Project Discussion"
Motion made by: Estela Narrie; **Seconded by:** Sheila Cordova
The motion passed unanimously.

n. PSYCH 320 Cognitive Psychology
Motion to approve distance education for PSYCH 320 with no revisions.
Motion made by: Estela Narrie; **Seconded by:** Sharlene Joachim
The motion passed unanimously.

(Programs: Revisions)

o. Changes to degrees and certificates as a result of courses considered on this agenda
None

VIII. New Business
None

IX. Old Business
None

X. Adjournment
Motion to adjourn the meeting at 4:43 pm.
Motion made by: Briana Simmons; **Seconded by:** Esau Tovar
The motion passed unanimously.

New Course: BUS 34C, Digital Marketing Analytics

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
Date Submitted:	October 2020

Transferability:	Transfers to CSU
Degree Applicability:	Credit - Degree Applicable
Proposed Start:	Fall 2021
TOP/SAM Code:	050900 - Marketing and Distribution / C - Clearly Occupational
Grading:	Letter Grade or P/NP
Repeatability:	No
Library:	Library has adequate materials to support course
Minimum Qualification:	Business, Business Education, Journalism, Management, Marketing, Mass Communication Media Production, Public Relations
Program Impact:	Proposed for inclusion in a forthcoming degree or certificate • Digital Marketing Certificate of Achievement

Rationale

The analytics of digital marketing are critical for understanding the effectiveness of an organization's digital marketing strategy. With the growing relevance of online consumer activity, digital marketing analytical skills are vital for an organization's success. Knowledge of the analytics, metrics and tools are required for an entry level career in digital marketing. Students enrolled in the BUS 34 series Digital Marketing courses are the target population for this course. BUS 34C is one of the Digital Marketing courses in the BUS 34 series, the core courses for our proposed Digital Marketing certificate.

I. **Catalog Description**

This course provides an overview of approaches and practices in digital marketing measurements and analysis and offers an understanding of how tools, such as Google Analytics, can be utilized to inform strategic direction. Focusing on key performance indicators for digital marketing, students will learn how to measure and track online performance to determine digital marketing ROI. Students will review factors that drive conversion and how to optimize conversion rates using data and A/B testing.

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 five years)

1. Digital Marketing Analytics: Making Sense of Consumer Data in a Digital World, 2, Hemann & Burbary , Que Publishing © 2018, ISBN: 9780789759603
2. DigitalTrainingAcademy.com; a library of digital marketing case studies that is online educational resource

III. **Course Objectives**

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

1. Demonstrate an understanding of digital marketing channels.
2. Identify and implement digital marketing metrics associated with web analytics, lead magnets, email marketing, content and social media marketing and product and e-commerce.
3. Demonstrate an understanding of key performance indicators for different marketing channels.
4. Execute digital marketing analysis with a range of data analytics tools and resources.
5. Attribute digital marketing insights, information and data analysis to the improvement and optimization of marketing performance and the success of a digital marketing strategy.

IV. **Methods of Presentation:**

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

V. **Course Content**

% of Course	Topic
10%	Understanding the digital marketing channel mix
20%	Defining and understanding digital marketing metrics
40%	Identifying and utilizing web analytics, digital marketing analytics and tools to track data
20%	Identifying key performance indicators and analyzing data to measure return on investment (ROI) performance
20%	Utilizing data to shape future digital marketing strategy
100%	Total

VI. **Methods of Evaluation**

% of Course	Topic
20%	Homework
60%	Projects Case studies and projects
20%	Other Peer/group discussions and reviews
100%	Total

VII. **Sample Assignments:**

Digital Marketing Metrics: Review Digital Highlighter Pen Facebook case study. Explain which digital marketing metrics Scanmarker used, what tools they used and how they utilized the data to adjust their digital marketing strategy.

Key Performance Indicators and Analytics: Review YouTube Drives better ROI and sales for Snickers case study. Identify the digital marketing challenge Mars UK was analyzing and what key performance indicators were tracked, the tools utilized, the results and how the data would be used to adjust their digital marketing strategy.

VIII. **Student Learning Outcomes:**

1. Demonstrate knowledge of digital marketing metrics and how the data generated by these metrics can resolve digital marketing challenges.
2. Demonstrate knowledge of digital marketing analytics tools to compare different marketing channels' ROI of their digital marketing activities.
3. 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 marketing and their personal lives.

BUS 34C Distance Education Application

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

1a. Instructor - Student Interaction:

Introductions with several welcome emails prior to class start that include Course Info file. Then several times a week students will be contacted via announcements, emails, video announcements, GPS, Gradebook Comments feedback, virtual weekly office hours, feedback in discussions and phone calls, if needed for additional support.

1b. Student - Student Interaction:

Weekly via participation in group activities, discussions and peer reviews of discussion contributions. Students will work in groups on projects and case studies and engage with peers through responses to discussion posts.

1c. Student - Content Interaction:
Several times a week via lectures, video demonstrations, case studies, discussions. Students review hands-on, guided video demonstrations for using various digital marketing analytical tools and resources. Through case studies, students evaluate outcomes of organizations utilizing digital marketing analysis and analytical tools. Students can also access additional content resources through blogs, articles, case studies and external sites, such as LinkedIn Learning.

1d. Distance Ed Interactions:

Online class activities that promote class interaction and engagement	Brief Description	Percentage of Online Course Hours
Online Lecture	Lectures are provided via video	40.00%
Videos	Demonstrations via video provide exposure to using digital analytics applications and tools	30.00%
Discussion	Students review current relevant content via blogs and periodicals as well as research alternative or evolving digital marketing applications and discuss their findings with peers	20.00%
Project Presentation	Project presentations to review case studies	10.00%

2. Organization of Content:
Zoom for live lectures and recorded lectures and office hours, PowerPoint slides, online resources (texts, blogs, articles and case studies), video content for lectures and demonstrations of applications and tools, topical webinars. Content will be delivered via weekly modules in Canvas.

3. Assessments:

% of grade	Activity	Assessment Method
20.00%	Assignments	Review of digital marketing analytics concepts
60.00%	Case studies and projects	Apply analytics tools, key performance indicators and measure ROI to evaluate performance through case studies
20.00%	Discussions	Share and review projects, relevant topics and other online reference sources with other students

4. Instructor's Technical Qualifications:
SMC technology, training and resources

5. Student Support Services:
SMC GPS, Tutoring Services, Counseling, Financial Aid, DSPS, International Students Services, Bookstore, Library

6. Accessibility Requirements:
Course design and content will comply with regulations by using correct features, tools, captioning of materials etc.

7. Representative Online Lesson or Activity:
Students will track the online performance data of an organization's website using Google Analytics.

New Course: COMPUTER APPLICATIONS 30T, Tableau Desktop Essentials

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
Date Submitted:	August 2020

Transferability:	Transfers to CSU
Degree Applicability:	Credit - Degree Applicable
Proposed Start:	Spring 2021
TOP/SAM Code:	070210 - Software Applications / C - Clearly Occupational
Grading:	Letter Grade or P/NP
Repeatability:	No
Library:	List of suggested materials has been given to Librarian
Minimum Qualification:	Computer Information Systems
Program Impact	Proposed for inclusion in a forthcoming degree or certificate In conjunction with this class, we are also bringing forward a Department Certificate and a Certificate of Achievement in Data Science. We are very excited to launch these classes. We have received significant support from our Advisory Board for this kind of program.

Rationale

In today's data-driven world, companies increasingly replying on data analysis and reporting to improve productivity. Tableau is one of fastest growing data visualization software provides the most efficient way to change or transform the raw data into an easily understandable format. Tableau is a popular analytic software that is available in the market and it is in almost every industry, healthcare to transportation, everywhere. As a Career Education program and actively introducing new courses to increase job placement for our students, knowledge of Tableau will achieve this goal.

I. **Catalog Description**

This course introduces students to Tableau, a popular platform for data visualization and simplification of complex data. It was designed to help the user to create visuals and graphics without the help of any programmer or any prior knowledge of programming. Topics include: connecting to different data types, exploring and analyzing the data visually, build custom calculations. Students will build a fully interactive dashboard, build a story to present and share the findings with publishing online or via Tableau server.

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 five years)

1. Learning Tableau 2019, 3rd, Joshua N. Milligan, Packt Publishing © 2019, ISBN: 978-1-78883-952-5

III. **Course Objectives**

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

1. Identify different Tableau terminology
2. Connect to different data sources
3. Explore data geographically
4. Organize data for Tableau visualization
5. Identify dashboard components
6. Apply the sorting, grouping, filtering tools to refine the data
7. Build interactive dashboards for findings to present
8. Share dashboard findings

IV. **Methods of Presentation:**

Lecture and Discussion, Observation and Demonstration, Projects, Group Work, Online instructor-provided resources, Other

Other Methods: Case studies will highlight different methods of data visualization.

V. **Course Content**

% of Course	Topic
10%	Tableau desktop navigation
8%	Tableau terminology
7%	Connecting to data
15%	Tableau dashboard
10%	Tableau mapping
15%	Create formulas for data analysis
15%	Advanced visualizations, techniques, tips, and tricks
10%	Build dashboard to share visualizations
5%	Publish to Tableau online
5%	Publish to Tableau server
100%	Total

VI. **Methods of Evaluation**

% of Course	Topic
10%	Class Participation Students will present their individual projects for class critique and discuss their findings on various case studies.
20%	Quizzes Weekly quizzes are given to assess students knowledge of the topics.
25%	Homework Weekly assignments are given to apply and practice with every new topic/s.
25%	Projects 2-3 projects including final project is assigned to assess students with the knowledge of the topics covered in the course.
20%	Final exam Final exam assesses the overall knowledge and understanding of the course materials.
100%	Total

VII. **Sample Assignments:**

1: Cloud infrastructure and database investments are a growing IT trends. The ability to understand and plan these costs is an imperative for any organization with a cloud strategy. In this assignment students use Tableau to combine and visualize cloud data streamlines cost reporting and advanced analytics capabilities that enable efficient cloud management.

2: In this assignment Tableau is used to visualize a sport team data comprised of player statistics, media contracts, ticket and merchandise sales, and licensing deals to identify the most valuable players, develop their abilities, and build balanced teams. Tableau helps team owner/s and coaches to streamline operations, engage fans, and stay relevant and transforming sports management analytics.

VIII. **Student Learning Outcomes:**

1. Given the data, students will apply various Tableau Desktop concepts and techniques for simple and complex visualizations and interactive dashboards.
2. Students will connect to a variety of data sources and build and refine visualizations with basic calculations and analytical formulas.

3. Students will produce various presentations to share visualizations reports. will dashboards to share visualizations.

CIS 30T Distance Education Application

☑ Fully Online

1a. Instructor - Student Interaction:
Intregular instructor-initiated contact with students using CMS communication tools and a clear explanation for students of when and how communication will happen. Instructor initiates welcome email a couple of weeks prior to class starting, followed by weekly announcements on grades postings and special notes and reminders. Instructor uses Canvas Inbox for any class and/or individual student communication.

1b. Student - Student Interaction:
Weekly threaded discussions and chats will be available to students to discuss or work with topics along with classmates to learn and retain content better.

1c. Student - Content Interaction:
Course will be organized in weekly modules where students complete reading/lecture materials, take a quiz, work on assignment/s and participate in threaded discussions for answering instructor's questions and replying to other classmates postings.

1d. Distance Ed Interactions:

Online class activities that promote class interaction and engagement	Brief Description	Percentage of Online Course Hours
Discussion Boards	Students will share topics over the discussion board.	10.00%
Online Lecture	Students will attend online lectures each week	30.00%
Exams	Student knowledge will be assessed regularly throughout the course.	30.00%
Written assignments	Students will complete various homework assignments each week.	30.00%

2. Organization of Content:
Course content will be organized in weekly modules including: course objectives, readings, quiz, assignment/s and threaded discussions. Course content will be delivered in Lecture, Online instructor-provided resources, Threaded Discussions, Projects, Case studies will highlight different methods of data visualization.

3. Assessments:

% of grade	Activity	Assessment Method
10.00%	Online Discussions	Students will complete weekly discussion prompts.
30.00%	Assigned Homework	Each unit will include assigned homework to complete.
30.00%	Quizzes	There will be regular student knowledge assessment as the course proceeds
15.00%	Class Project	Students will complete a class project
15.00%	Final Exam	Students will complete a final exam

4. Instructor's Technical Qualifications:
Instructor who delivers this course should have a working knowledge of Canvas and its features, working knowledge in the software (Tableau), ability to troubleshoot the software in different platforms (Windows and Mac OS).

5. Student Support Services:
Student support services for textbook (bookstore and library), for counseling and financial aid, for contacting Disable Students Programs and Services (DSPS) + departmental tutoring will be posted in Canvas.

6. Accessibility Requirements:
Course content will be fully delivered in Canvas and videos will have proper captioning.

7. Representative Online Lesson or Activity:
In threaded discussions students review and critique number of case studies and answer instructor's questions from weekly related topics and reply to each other's postings.

New Course: CS 79X, Data Science on Azure

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
Date Submitted:	August 2020

Transferability:	Transfers to CSU
Degree Applicability:	Credit - Degree Applicable
Skills Advisory(s):	CS 79A
Proposed Start:	Fall 2021
TOP/SAM Code:	070700 - Computer Software Development / B - Advanced Occupational
Grading:	Letter Grade or P/NP
Repeatability:	No
Library:	Library has adequate materials to support course
Minimum Qualification:	Computer Science
Program Impact:	Proposed for inclusion in a forthcoming degree or certificate • In conjunction with this class, we are also bringing forward a Department Certificate and a Certificate of Achievement in Data Science. Both AWS and Azure provide great tool and services for this kind of program. We are very excited to launch these classes. We have received significant support from our Advisory Board for this kind of program. This class mirrors what we are already offering with AWS in CS 79F

Rationale

According to Forbes, Machine learning is now being widely applied to businesses to compute vast quantities of data and to collect metrics in real time to make intelligent business decision. Microsoft Azure has developed numerous services in Machine Learning, Artificial Intelligence and Deep Learning that are now widely used in industry. This course will cover how the Azure Machine Learning stack, Artificial Intelligence and Deep Learning services work using application use cases, frameworks and infrastructure that will allow us to build, train, and deploy learning models at scale. Vast amounts of data is a vital part of machine learning. We will cover how to import data into Data Lakes from multiple sources.

I. **Catalog Description**

In this course, students will learn how Machine Learning can yield deeper insights in different industry domains. Students will learn the various Azure tools and services for developing and deploying predictive solutions using Azure Artificial Intelligence, Machine Learning and Deep Learning. By using application use cases, frameworks and infrastructure, students will build, train, and deploy learning models at scale. Since data is a vital part of machine learning, we will cover how data is stored, moved and processed throughout the machine learning pipeline.

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 five years)

1. Azure Machine Learning Studio : A Complete Guide, 1st, Gerardus Blokdyk, 5STARCooks © 2018, ISBN: 978-0655342748
2. Deep Learning with Azure, 1st, Mathew Salvaris, Danielle Dean, Wee Hyong Tok, Apress © 2018, ISBN: 978-1484236789

III. **Course Objectives**

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

1. Describe the terms and processes to build a machine learning model using the Microsoft Azure platform.
2. Describe the fundamental concepts of how an industry challenge can be modeled in a machine learning model.
3. Perform mass storage of relevant data to be used in machine learning model.
4. Describe how data can be moved and processed through the machine learning pipeline.
5. Evaluate a machine learning trained model and predictions.

IV. **Methods of Presentation:**
Lecture and Discussion, Observation and Demonstration, Group Work, Online instructor-provided resources, Projects

V. **Course Content**

% of Course	Topic
10%	Introduction to ML/AI/DL and Data Lakes on Azure
10%	Implement and Identify data storage, ingestions and transformation
20%	Evaluate different possible models for a Machine Learning problem
20%	Build Machine Learning solution for performance, availability, scalability and resiliency
20%	Train and evaluate machine learning model solutions
20%	Apply Azure security principles and best practices to Machine Learning solutions
100%	Total

VI. **Methods of Evaluation**

% of Course	Topic
25%	Exams/Tests
20%	Projects
20%	Homework
25%	Final exam
10%	Final Project
100%	Total

VII. **Sample Assignments:**
Assignment 1: Using the IMDb dataset provided, which includes a comprehensive listing of files including data such as cast, synopsis and production data. It is your task to predict which movies will most likely be nominate for an award during the upcoming year by building an awards analyses prediction model.

Assignment 2: By analyzing the plant classification data provided, it is your object in the lab to train a machine learning model to predict if a plant is edible. The data set provided contains 20 attributes for training the model and class indicates if that particular variety of plant is edible.

VIII. **Student Learning Outcomes:**
1. Select and justify the appropriate ML approach for a given business problem
2. Identify appropriate Azure services to implement ML solutions.
3. Design and implement scalable, cost-optimized, reliable, and secure ML solutions.

CS 79X 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. 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 that

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 encourage 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 on 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	Percentage of Online Course Hours
Discussion Boards	Students post weekly answers to questions. Instructor will provide a 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%
Project Presentation	Students complete a final project utilizing cloud services. The instructor will be providing individual feedback for each project.	20.00%
Exams	Midterm and Final Exam	20.00%
Written assignments	Students submit written programming assignments, and 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, an overall comments for the whole class will help students avoid pitfalls and adopt good cloud practices and techniques.

3. Assessments:

% of grade	Activity	Assessment Method
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
20.00%	Exams/Tests	Exams will help to summarize the extent of student learning
20.00%	Final Project	Students will get feedback on a real-life project of their own choosing using web services discussed in class
25.00%	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%	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.

4. Instructor's Technical Qualifications:
An instructor needs to have the proper training and the experience teaching in an online course delivery system before teaching this course. In addition, the instructor needs to have extensive knowledge in Cloud Computing to teach this class.

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 reading of Azure published whitepaper and developer guides on the basics of Machine Learning, Artificial Intelligence and Deep Learning. Once the reading has been completed, students will use that knowledge to build out a basic Azure Learning studio model with a written report on how the model was designed. Students will submit this assignment into dropbox for grading and individual comments.

ADVISORY Checklist and Worksheet: CS 79X – Machine Learning in Azure

Proposed Advisory: CS 79A – Introduction to Cloud Computing

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	

ENTRANCE SKILLS RECOMMENDED FOR SUCCESS IN: **CS 79X**

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

A)	Students will have familiarity with the concepts of a cloud services platform
B)	Students will create a free Azure account with platform credits
C)	Students will learn how to use the Azure Portal

EXIT SKILLS (objectives) FROM: **CS 79A**

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

1.	Students will understand the concepts of a cloud services platform
2.	Students will create a free Azure account with platform credits
3.	Students will be familiar with the Azure Portal

		ENTRANCE SKILLS FOR: **CS 79X**							
EXIT SKILLS From: **CS 79A**		A	B	C	D	E	F	G	H
	1	X							
	2		X						
	3			X					
	4								
	5								
	6								
	7								
	8								

New Course: CS 82A, Introduction to Data Science

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
Date Submitted:	July 2020

Transferability:	Transfers to CSU, UC (pending review)
Degree Applicability:	Credit - Degree Applicable
Proposed Start:	Fall 2021
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:	Proposed for inclusion in a forthcoming degree or certificate • In conjunction with this class, we are also bringing forward a Department Certificate and a Certificate of Achievement in Data Science. Both AWS and Azure provide great tool and services for this kind of program. We are very excited to launch these classes. We have received significant support from our Advisory Board for this kind of program.

Rationale

There is a shortage of qualified data science professionals on the market. This course will provide students with an introduction to data science and how data science can be used to make important business decisions. They will be introduced to key areas of data science data such as acquisition and management, data modeling, analysis visualization, and data reporting. CS Advisory Board members are all in favor of the development of data science courses and a new certificate. Additionally, this course may transfer to four-year universities that have established undergraduate programs in data science.

I. **Catalog Description**

In this course, students will explore the field of data science and the possible career pathway that can be taken. Students will learn how the data science process can be used to address real-world problems. The course will cover a basic introduction to the key areas of data science including data acquisition and management, data modeling, analysis visualization, and data reporting. Students will be introduced to tools to analyze and visualize data for data-driven decision making.

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 five years)

1. Build a Career in Data Science , 1st, Emily Robinson and Jacqueline Nolis, Manning Publications © 2020, ISBN: 978-1617296246
2. DATA ANALYTICS: A Comprehensive Beginner's Guide To Learn About The Realms Of Data Analytics From A-Z, Benjamin Smith, Independently published © 2020, ISBN: 979-8640455267

III. **Course Objectives**

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

1. Fundamental understanding of the data science domains
2. Perform data preparation to get a manageable data set
3. Use different software tools to understand data
4. Use data science tools to create predications
5. Effectively present data analysis results

IV. **Methods of Presentation:**

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

V. **Course Content**

% of Course	Topic
20%	Introductions to the field of Data Science
10%	Careers in Data Science
20%	Data Science used to solve business problems
20%	Data in Data Science
10%	Introduction to data visualization
10%	Introduction to data modeling
10%	Presenting written reports on findings
100%	Total

VI. **Methods of Evaluation**

% of Course	Topic
25%	Exams/Tests
20%	Projects
20%	Homework
20%	Final exam
15%	Final Project
100%	Total

VII. **Sample Assignments:**
Understanding the Field of Data Science: Research Paper Required: 2 - 3 pages MLA Format Topic: What is a data scientist? What do you think a data scientist does in their day to day job?

Intro to a Data Set: Using the provided Data Set on the Los Angeles area housing prices perform the below tasks: 1. Read the file and display the columns. 2. Select columns that will probably be important to predict new home prices 3. If you removed columns explain why you removed those. 4. Use one-hot encoding for categorical features.

VIII. **Student Learning Outcomes:**

1. Understanding of the major areas in data science
2. Collect and organize small data sets
3. Identify simple patterns in data via visualization and via other means

CS 82A 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 that

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	Percentage of Online Course Hours
Discussion Boards	Students post weekly answers to questions. Instructor will provide a 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%
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)	20.00%
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
10.00%	Threaded Discussions	Students will discussion specific topics, sharing their experiences, mistakes, and providing solutions to the issues. Students will be learning from each other mistakes.
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.

4. Instructor's Technical Qualifications:
An instructor needs to have the proper training and the experience teaching in an online course delivery system before teaching this course. In addition, the instructor needs to have extensive knowledge in Data Science to teach this class.

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 Canvas for grading and individual comments.

New Course: CS 82B, Principles of Data Science

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
Date Submitted:	July 2020

Transferability:	Transfers to CSU, UC (pending review)
Degree Applicability:	Credit - Degree Applicable
Skills Advisory(s):	CS 82A
Proposed Start:	Fall 2021
TOP/SAM Code:	070700 - Computer Software Development / B - Advanced Occupational
Grading:	Letter Grade or P/NP
Repeatability:	No
Library:	Library has adequate materials to support course
Minimum Qualification:	Computer Science
Program Impact:	Proposed for inclusion in a forthcoming degree or certificate • In conjunction with this class, we are also bringing forward a Department Certificate and a Certificate of Achievement in Data Science. Both AWS and Azure provide great tool and services for this kind of program. We are very excited to launch these classes. We have received significant support from our Advisory Board for this kind of program.

Rationale

There is a shortage of qualified data science professionals on the market. This course will provide students with entry-level understanding to data science. They will be introduced to key areas of data science data such as acquisition and management of data sets, data modeling, analysis visualization, and data reporting. CS Advisory Board members are all in favor of the development of data science courses and a new certificate. Additionally, this course may transfer to four-year universities that have established undergraduate programs in data science.

I. **Catalog Description**

In this course students will focus on the data science pipeline including problem formulation, data cleaning and preprocessing, exploration of data with visualization, model prediction and inference for decision making. Students will use different software tools and programming for each step of the data science pipeline, include data exploration and transformation, algorithms for machine learning concepts such as classification, regression, and clustering. In addition, students will learn how to effectively present any findings to an audience.

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 five years)

1. Practical Data Science with R, 2nd, Nina Zumel and John Mount , Manning Publications © 2019, ISBN: 978-1617295874
2. Data Science from Scratch: First Principles with Python, Joel Grus, O'Reilly Media © 2019, ISBN: 978-1492041139

III. **Course Objectives**

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

1. Developing business problem to Data Science problem formulation
2. Collecting, cleaning and munging data
3. Program analytical models
4. Create data visualization using programming
5. Create dashboards from large set of data
6. Use cloud services to store data and scale analysis

IV. **Methods of Presentation:**

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

V. **Course Content**

% of Course	Topic
10%	Introduction to Data Science Modeling, Analysis and Visualization
20%	Data Collecting and Preprocessing
10%	Jupyter Notebook for Data Science
15%	Visualization and data exploration
10%	Introduction to machine learning
20%	Modeling and machine learning
15%	Model Evaluation and Deployment
100%	Total

VI. **Methods of Evaluation**

% of Course	Topic
25%	Exams/Tests
20%	Projects
20%	Homework
20%	Final exam
15%	Final Project
100%	Total

VII. **Sample Assignments:**

Coding Exercise: Provided: Data file: creditCreditCardFraudInfo.csv Objective: Build a supervised learning model that will determine if a credit card transaction is fraudulent. Please do the following steps (hint: use numpy, scipy, pandas, sklearn and matplotlib) 1. Read the file and display columns. 2. Select columns that will probably be important 3. If you removed columns explain why you removed those. 4. Use one-hot encoding for categorical features. 5. Create training and testing sets (use 60% of the data for the training and reminder for testing). 6. Build a machine learning model to predict if a transaction is fraudulent 7. What is the correlation between the training set and testing data sets.

Concept Written Report: Research Paper Required: 2 - 3 pages MLA Format Topic: Supervised and Unsupervised Learning Instructions: Write a report summarizing Supervised and Unsupervised Learning. Go into detail of the machine learning algorithms that are categorized under Supervised and Unsupervised Learning. Provide one example of a business problem that could be solved using Binary Classification.

VIII. **Student Learning Outcomes:**

1. Collect, interpret, and preprocess data sets
2. Identify, analyze, and interpret trends in data sets with models
3. Effectively present compelling results using data visualization

CS 82B 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. 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 that 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	Percentage of Online Course Hours
Discussion	Students post weekly answers to questions. Instructor will provide a 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%
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 (2 Exams)	20.00%
Written assignments	Students submit written programming assignments, and 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, an overall comments for the whole class will help students avoid pitfalls and adopt good cloud practices and techniques.

3. Assessments:

% of grade	Activity	Assessment Method
10.00%	Threaded Discussions	Students will discussion specific topics, sharing their experiences, mistakes, and providing solutions to the issues. Students will be learning from each other mistakes.
20.00%	Exams/Tests	Exams will help to summarize the extent of student learning.
20.00%	Final Project	Students will get feedback on a real-life business project of their own choosing using data science concepts.
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.

4. Instructor's Technical Qualifications:
An instructor needs to have the proper training and the experience teaching in an online course delivery system before teaching this course. In addition, the instructor needs to have extensive knowledge in Cloud Computing to teach this class.

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 Models. Once the reading has been completed, students will use that knowledge to program a basic model with a written report on how the model was designed. Students will submit this assignment into Canvas for grading and individual comments.

ADVISORY Checklist and Worksheet: CS 82B Principles of Data Science

Proposed Advisory: CS 82A – Introduction to Data Science

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	

ENTRANCE SKILLS RECOMMENDED FOR SUCCESS IN: **CS 82B**

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

A)	Students will have familiarity with the data science process
B)	Students will be able to complete data acquisition and management of real-world problems
C)	Students will be able to complete data reporting tasks that summarize the data science process

EXIT SKILLS (objectives) FROM: **CS 82A**

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

1.	Students will understand the data science process for addressing real-world problems
2.	Students will understand how to complete data acquisition and management of real-world problems
3.	Students will complete data reporting tasks that summarizes the data science process

	ENTRANCE SKILLS FOR: **CS 82B**								
EXIT SKILLS From: **CS 82A**		A	B	C	D	E	F	G	H
	1	X							
	2		X						
	3			X					
	4								
	5								
	6								
	7								
	8								

New Course: CS 82C, R 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
Date Submitted:	July 2020

Transferability:	Transfers to CSU, UC (pending review)
Degree Applicability:	Credit - Degree Applicable
Skills Advisory(s):	CS 82A
Proposed Start:	Fall 2021
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:	Proposed for inclusion in a forthcoming degree or certificate • In conjunction with this class, we are also bringing forward a Department Certificate and a Certificate of Achievement in Data Science. Both AWS and Azure provide great tool and services for this kind of program. We are very excited to launch these classes. We have received significant support from our Advisory Board for this kind of program.

Rationale
R is a programming language and environment commonly used in computing data, data analytics, and scientific research. It is one of the most popular languages used by data scientists, data analysts, researchers, and marketers to retrieve, clean, analyze, visualize, and present data. Additionally, this course may transfer to four-year universities that have established undergraduate programs in data science.

I. **Catalog Description**
R is a commonly used programming language for data analysis, data visualization, machine learning, and data science. In this course students will learn the fundamentals of R syntax, how to organize and modify data, prepare data for analysis, and create visualizations.

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 five years)
1. Machine Learning with R: Expert techniques for predictive modeling, 3rd Edition, Brett Lantz, Packt Publishing © 2019, ISBN: 978-1788295864
2. R for Data Science: Import, Tidy, Transform, Visualize, and Model Data, 1st, Hadley Wickham and Garrett Grolemund , O'Reilly Media © 2017, ISBN: 978-1491910399

III. **Course Objectives**
Upon completion of this course, the student will be able to:
1. Learn to use a practical strategy to design R code
2. Use data set as a vector, matrix, array, list, or data frame
3. Manipulate data within R
4. Perform basic data analysis procedures
5. Plot different types of data and draw insights

IV. **Methods of Presentation:**
Lecture and Discussion, Observation and Demonstration, Projects, Group Work, Lab

V. **Course Content**

% of Course	Topic
10%	R Environment Setup with RStudio
10%	Data Types
10%	Variables and Constants
10%	Operators
10%	Condition Statements
10%	Loops and Arrays
10%	Functions
10%	Classes and Objects
10%	R for Data Science
10%	R for Machine Learning
100%	Total

VI. **Methods of Evaluation**

% of Course	Topic
10%	Class Participation
20%	Exams/Tests
20%	Final Project
30%	Homework
20%	Quizzes
100%	Total

VII. **Sample Assignments:**

R Cleaning Function: Create an R script file that interacts with the dataset provided with this assignment. The data set provides the monthly power consumption of 500 residential houses contains the following features. Area: The area of the house. City: The city at which the house is placed3. P.Winter: The average monthly power consumption of the house in winter in kW.h4. P.Summer: The average monthly power consumptions of the house in summer in kW.h Write a data cleaning function that makes the data set ready for further analysis. This function may perform various data cleaning tasks including but not limited to: 1. Correcting possible typos 2.Removing irrelevant data 3.Removing outliers, e.g. negative area, negative power consumptions, very high areas, very high power consumptions Note: You should not clean the data set manually. All the data cleaning tasks should be carried out by the data cleaning function automatically.

Modeling: Create an R script file that interacts with the dataset provided with this assignment. The data set provides two months of data from a local power telecommunication company. The features included in the data set are listed below. Area: The area of the customer. Time: The city at which the house is placed3. Date: The average monthly power consumption of the house in winter in kW.h4. Day of Week: The average monthly power consumptions of the house in summer in kW.h CRevenue: Revenue made on Customer Write R codes that calculate a regression model for “CRevenue” and “Area” variables. Show the linear model in the scatterplot.

VIII. **Student Learning Outcomes:**

1. Develop scripts for data analysis.
2. Create data visualizations using R scripts.

CS 82C 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 fix errors, improve code efficiency, 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 two midterm tests 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.

1b. Student - Student Interaction:
Every week, students must post samples of short code snippets as a response to a problem specification. They must comment on each other codes. 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	Percentage of Online Course Hours
Discussion Boards	Students post weekly answers to questions. Instructor will provide a 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%
Exams	Midterm and Final Exam (2 Exams)	20.00%
Project Presentation	Students complete a final project utilizing cloud services. The instructor will be providing individual feedback for each project.	25.00%
Written assignments	Students submit written programming assignments and get individual feedback as well as sample solutions and general comments from the whole class.	25.00%

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 a programming assignment/project or a quiz.

3. Assessments:

% of grade	Activity	Assessment Method
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.
10.00%	Midterm	Feedback on where the student can improve and what topics to study more in addition to answer keys are provided.
15.00%	Final Exam	Feedback on where the student can improve.
15.00%	Final Project	Students will get feedback on a real-life data science project of their own choosing using R programming.
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.

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:
Through the syllabus, faculty can place links to library, bookstore, financial aid, disabled students center and counseling resources.

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:
In Canvas create a discussion thread that requires each student to write an R program snippet to create a data frame using two given vectors and display the duplicated elements and unique rows of the said data frame.

ADVISORY Checklist and Worksheet: CS 82C – R Programming

Proposed Advisory: CS 82A – Introduction to Data Science

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	

ENTRANCE SKILLS RECOMMENDED FOR SUCCESS IN: **CS 82C**

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

A)	Students will have familiarity with the data science process
B)	Students will be able to complete data acquisition and management of real-world problems
C)	Students will be able to complete data reporting tasks that summarize the data science process

EXIT SKILLS (objectives) FROM: **CS 82A**

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

1.	Students will understand the data science process for addressing real-world problems
2.	Students will understand how to complete data acquisition and management of real-world problems
3.	Students will complete data reporting tasks that summarizes the data science process

	ENTRANCE SKILLS FOR: **CS 82C**								
EXIT SKILLS From: **CS 82A**		A	B	C	D	E	F	G	H
	1	X							
	2		X						
	3			X					
	4								
	5								
	6								
	7								
	8								

New Course: MUSIC 27, Music for Early Childhood Education

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
Date Submitted:	May 2019

Transferability:	Transfers to CSU
Degree Applicability:	Credit - Degree Applicable
Proposed Start:	Fall 2020
TOP/SAM Code:	100400 - Music / E - Non-Occupational
Grading:	Letter Grade or P/NP
Repeatability:	No
Library:	List of suggested materials has been given to Librarian
Minimum Qualification:	MusicMaster's in Music OR Bachelor's in music AND Master's in Humanities OR equivalent
Program Impact:	Proposed for inclusion in a forthcoming degree or certificate • Music Teacher Certificate of Achievement

Rationale
Currently, most of the music studio teachers teach young children on an individual basis, but are not trained or comfortable with teaching infant and toddlers in a group setting. The new class will help them acquire the ability to extend their teaching practices,and therefore, be more versatile and successful in the music teaching field. In addition, this course is also ideal for students pursuing an early childhood education degree.

I. **Catalog Description**
This course is an introduction to teaching music classes for children ages infancy through age 6 in a group setting. Various music teaching techniques and teaching materials will be explored.

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 five years)
1. Music Play: The Early Childhood Music Curriculum Guide for Parents, Teachers and Caregivers , Valerio, W., H. Reynolds, A., M. Bolton, B., M. Taggart, C., C. Gordon, E., E., Alec and Ed Harris GIA Publications, Inc. © 1998, ISBN: 1-57999-027-4
2. Music Learning and Teaching in Infancy, Childhood, and Adolescence: An Oxford Handbook of Music Education, Volume 2, McPherson, G., E. Welch, G., F. eds. , Oxford University Press © 2018, ISBN: 9780190674595

III. **Course Objectives**
Upon completion of this course, the student will be able to:
1. Understand and examine the value of music education in helping young children develop their emotional, physical and intellectual abilities.
2. Describe the stages of primary music development in young children.
3. Develop and evaluate lessons that are age and developmentally appropriate using teaching techniques and strategies explored, such as Dalcorze, Kodaly, Orff methods.

IV. **Methods of Presentation:**
Critique, Field Experience, Group Work, Lecture and Discussion, Observation and Demonstration, Online instructor-provided resources, Projects, Visiting Lecturers

V. **Course Content**

% of Course	Topic

10%	Music development in young children aged from infancy to age 6.
5%	Parents and Caregivier education
10%	Materials search: Finding approperiate song selections, recordings for movements and dancing, listening examples, music games.
20%	Oberservation of on-site, off-site early childhood music classes, and video recordings of music classes. Write critiques on each class observed.
10%	Research early childhood teaching methods
20%	Plan and teach one music activity (2-3 times a semester)
20%	Prepare 45 minute lesson plans including multi-activities such as songs, rhythms, movements, listening, and tonal patterns.
5%	Explore business aspects of music teaching for early childhood music, for example: how to begin offering early childhood music classes in the student's desired business locale.
100%	Total

VI. **Methods of Evaluation**

% of Course	**Topic**
20%	Class Participation Attendance, preparedness, group discussions
20%	Final Project Lesson plan for a 45 minute music class for early childhood
10%	Homework Read/watch assigned materials (articles, books and videos)
20%	Performance Teach one music activity, 2-3 times a semester
10%	Projects Create your own music class business start-up kit. Create your own parent/care giver education mini library
20%	Written assignments Music classes observation critiques
100%	Total

VII. **Sample Assignments:**

1. Observe the video recording of a master teacher teaching a music class. Write your own critique and answer the questions provided by the insturctor.

2. Design a business card/flyer for your studio using the template provided by the instructor.

VIII. **Student Learning Outcomes:**

1. Articulate the benefit and importance of music for early childhood and be able to assess children's music developmental stages.
2. Construct age and developmental appropriate music activities and lesson plans.

New Course: TH ART 48A, Introduction to Acting Shakespeare

Units:	3.00
Total Instructional Hours (usually 18 per unit):	108.00
Hours per week (full semester equivalent) in Lecture:	2.00
In-Class Lab:	1.00
Arranged:	3.00
Outside-of-Class Hours:	72.00
Date Submitted:	August 2018

Transferability:	Transfers to CSU, UC (pending review)
Degree Applicability:	Credit - Degree Applicable
Proposed Start:	Fall 2021
TOP/SAM Code:	100700 - Dramatic Arts / E - Non-Occupational
Grading:	Letter Grade or P/NP
Repeatability:	No
Library:	
Minimum Qualification:	Theater Arts
Program Impact:	Proposed for inclusion in an existing degree or certificate

Rationale

Shakespeare is one of the greatest writers of all time. His plays and other works have made a significant contribution to English language and literature. Studying and performing Shakespeare's plays is relevant and enriching for the student in many ways. His timeless themes, complex characters and poetic language illuminate the human spirit and provide a vehicle for social commentary.

I. **Catalog Description**

This course introduces students to acting in the world of Shakespeare. It will focus on exploring the historical, social and poetic aspects of Shakespeare and how this relates to the performance of his plays on the stage. Students will explore pedagogy and participate in performing scenes from selected Shakespeare plays.

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 five years)

1. Acting Shakespeare's Language, Hinds, Andy, Oberon Books © 2015, ISBN: 9781783190089
2. 2. Shakespeare: The World As A Stage , Bryson, Bill, Harper Perennial, © 2016
3. Thinking Shakespeare (Revised Edition), Kindle edition, Edelstein, Barry, Theatre Communication Group © 2018
4. Clues to Acting Shakespeare, Van Tassel, Wesley, Allenworth Press © 2006
5. Speaking Shakespeare, Rodenburg, Patsy, St. Martin's Griffin © 2004

III. **Course Objectives**

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

1. Demonstrate knowledge of Shakespeare, his works and the historical cultural milieu from which he came
2. Analyze Shakespeare's impact during his lifetime and in later centuries
3. Develop a thorough understanding and use of Shakespeare's language.
4. Recognize the various types of Shakespeare's poetic devices and conventions.
5. Build a repertoire of scenes and monologues.
6. Identify the various genres of Shakespeare's plays and the appropriate background for each.
7. Illustrate knowledge and use of appropriate costuming for Shakespeare's various work.
8. Design a ground plan and blocking for scenes from Shakespeare.
9. Scan Shakespearean text.

IIIb. **Arranged Hours Objectives:**

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

1. Rehearsal of scenes or monologues for presentation.
2. Application of specific techinques to shape aspects of performances.

IV. **Methods of Presentation:**
Lecture and Discussion, Observation and Demonstration, Critique, Projects, Group Work, Online instructor-provided resources

IVb. **Arranged Hours Instructional Activities:**
Projects, Group Work

V. **Course Content**

% of Course	Topic
40%	Performing four scenes and replays from Shakespeare's plays. This includes creating paperwork based on script analysis and scansion and appropriate acting techniques for each scene. A. Cutting Shakespeare's scenes B. Introduction and end of scene C. Avoiding overdone and exploring why D. Setting realistic parameters for selection E. Rehearsing and performing F. Costuming and staging G. Critiquing and choosing
20%	Performing selected Monologues with script analysis and scansion. A. Cutting Shakespeare's monologues B. Introduction and end of performance C. Avoiding overdone monologues and exploring why D. Setting realistic parameters for selection E. Rehearsing and performing F. Costuming and staging
5%	History of Shakespeare A. Pre-Shakespearean writers who influenced Shakespeare. B. Growing up in Stratford-Upon-Avon. C. Shakespeare's public school life. D. Shakespeare's London life.
5%	Shakespeare's categorization of plays A. Exploration of tragedies B. Appreciation of comedies C. Understanding of histories D. Finalizing of romances E. The do's and dont's of "updating" Shakespeare
15%	Shakespeare's language A. Language of the day and its implications B. Use of poetic devices with conventions of the day C. Iambic pentameter D. Voice production E. Application to his printed lines
5%	Shakespeare's influence A. The folios B. From 1500 to 2000 C. Current modern media and approaches
5%	Shakespeare's costuming A. Heightened period clothing B. Selected realistic touches
5%	Introduction to professional Shakespeare companies A. Researching professional companies in the United States and Canada and listing all important info B. Preparing application, resume, headshot for submission C. Preparing monologue choices for specific companies and year's season offerings D. Rehearse interview approaches E. Submit application F. Signing the contract
100%	Total

Vb. **Lab Content**

% of Course	Topic
50.00%	Analyzing scripts in terms of: A. Scansion B. Poetic Devices
50.00%	Workshop and Exploration of specific acting techniques applicable to the discrete genres within Shakespeare's plays
100.00%	Total

VI. **Methods of Evaluation**

% of Course	Topic
40%	Group Projects Scene and/ or monologue performances, replays, critiques and written analyses of scenes performed

20%	Final exam
30%	Papers Written analyses of SMC theatre productions
5%	Class Participation Exploration/ Workshops to develop and evaluate skills that can be applied towards performing Shakespeare
5%	Research Projects Written analyses of selected play readings
100%	Total

VII. **Sample Assignments:**

1: Perform a pre-approved scene or monologue from Shakespeare's plays by scanning the text, creating an appropriate ground plan, blocking physical actions and approximate costuming. Break down your scene into units and objectives. Locate appropriate transitions, tempo-rhythm changes, climactic compositions. Present appropriate scene analysis in the specific paperwork format given by your instructor.

2: Write a critique of a Theatre production at Santa Monica College based on any three acting elements you have studied in class. Analyze each element in depth using appropriate examples.

VIII. **Student Learning Outcomes:**

1. Understand and analyze Shakespeare's plays in terms of their poetic devices and their cultural and historical significance.
2. Perform scenes or monologues from Shakespeare's plays through script analysis, scansion and appropriate acting techniques.
3. Evaluate a play in terms of theme and dramatic action, communicate effectively as a stage performer and develop an awareness of theatre as an art form reflecting man's social experience and cultural heritage.

Substantial Change, Global Citizenship, Distance Education: AHIS 71, African American Art History

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
Date Submitted:	January 2021

Transferability:	Transfers to CSU, UC
IGETC Area:	3A: Arts
CSU GE Area:	C1 - Arts, Dance, Music, Theater
SMC GE Area:	Area III: Humanities
Degree Applicability:	Credit - Degree Applicable

Rationale
We are updating assignments and textbook and submitting for DE and Global Citizenship

I. **Catalog Description**
This course surveys artworks made by African Americans in the United States and abroad. Students will explore visual and material culture from the inception of chattel slavery in the sixteenth-century to contemporary Black Art Movements including Reconstruction and the Harlem Renaissance. Additionally, the impact of political movements on artists and their work such as the Black Liberation Movement and #BlackLivesMatter. In addition, students will consider how artists have contended with issues of race, gender, and sexuality and will examine transnational artist networks in Latin America and Europe among other places. Course content includes cross-historical phenomena such as the AIDS crisis, Afrofuturism, and the history of the Black Panther.

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 five years)
1. I Too Sing America: The Harlem Renaissance at 100, Wil Haygood, Rizzoli Electa © 2018
2. South of Pico: African American Artists in Los Angeles in the 1960s and 1970s, Kellie Jones, Duke University Press © 2017
3. Black Refractions: Highlights from the Studio Museum in Harlem, Connie Choi and Kellie Jones, Rizzoli Electa © 2019
4. Aperture: Vision & Justice (223), Sarah Lewis, Aperature © 2017
5. Black Futures, Kimberly Drew and Jenna Wortham, One World © 2020
6. Soul of a Nation: Art in the Age of Black Power, Mark Godfrey and Zoé Whitley, Tate Museum Publications © 2017
7. We Wanted a Revolution: Black Radical Women, 1965-85: A Sourcebook , Catherine Morris and Rujeko Hockley, Duke University Press © 2017

III. **Course Objectives**
Upon completion of this course, the student will be able to:
1. Follow the chronological development of the architecture, painting, sculpture, and photography of African-American art.
2. Compare and contrast the historical relationship and cross-cultural influences African-American art has had on global cultures and art practices, especially the impact on Africa, Europe, and Latin America.
3. Demonstrate knowledge of the cultural and political factors that have shaped African-America visual culture.
4. Verbalize and analyze visual conceptions and understandings of African American art.

IV. **Methods of Presentation:**
Lecture and Discussion, Discussion, Field Trips, Group Work, Projects, Critique, Distance Education

V. **Course Content**

% of Course	Topic
20%	Introduction to African American art Methodologies and Historiographies
10%	From inception of chattel slavery through the founding of the United States of America.
10%	War of Independence (1776) through the Civil War (1864)
10%	Reconstruction and the Gilded Age
10%	1900 - 1945 including the Harlem Renaissance Movement and the Works Progress Administration (WPA)
10%	Post World War II (1945-1960)
10%	Civil Rights Era (1960-1979)
10%	African American Art in the Late Twentieth Century (1980 - 2000)
10%	African American Art in the Twenty-First Century
100%	Total

VI. **Methods of Evaluation**

% of Course	Topic
10%	Class Participation
20%	Group Projects
30%	Exams/Tests
20%	Homework
20%	Written assignments
100%	Total

VII. **Sample Assignments:**

Evaluating Museums: The National Museum of African American History and Culture:

Assignment #1: Watch The Black Museum (2020) documentary about the Smithsonian National Museum of African American History and Culture (NMAAHC) and answer the following questions. 1. How does the design of the building convey a specifically African-influenced visual aesthetic? How does it compare to the other buildings on the Washington D.C. mall? 2. Examine the curatorial choices for the display of the material. What is the justification for only displaying “original, historical pieces” as opposed to copies? 3. Imagine that you are going to be a guest-curator for a visiting show at the NMAAHC. Write a paragraph describing the theme of the show and select three artworks that illustrate that theme. Be sure to include what floor of the museum your exhibition will be displayed on and write a justification for how it fits in with that specific floor theme.

Practicing Visual Analysis:

Assignment #2 Close looking and visual analysis: Students must select and watch one of the following music videos and respond to questions in complete sentences; additionally, students should submit a simplified drawing that outlines the key shapes of one particular moment. Music Video Options: Childish Gambino, This is America Beyoncé, Black is King Kendrick Lamar and SZA, All of the Stars Solange, Don’t Touch My Hair The Internet and Kaytranada, Girl Questions: 1. In as much detail as you can, describe what you see in the still you selected. Be sure to discuss the elements of art and principles of design. 2. What do you think the artist is sharing with the viewer and how is that particular message expressed? What are the specific elements that communicate that message? 3. After close-looking and making your simple drawing, is there anything new you observed in this music video? 4. Are there any historical connections you can make—either visually or thematically—between the music video and the material we have covered so far? For example, how does the Harlem Renaissance, Great Migration or era of Reconstruction relate to the music video you selected? Please be as detailed as possible.

VIII. **Student Learning Outcomes:**

1. Demonstrate visual literacy and effectively communicate visual phenomenon with appropriate art historical terms; emphasizing cultural connections with the art objects' larger social, political, and economic context while noting how that function may have changed over time.
2. Acquire research skills including the ability to evaluate sources and evidence and distinguish common methodologies used in art historical analysis.
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.
4. 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.

Global Citizenship

Global Citizenship Category: American Cultures

Course meets both of the following two criteria: (Please check)

- ☑ Utilizes a comparative framework to explore how the American identity and experience have been shaped—and will continue to be shaped—by a diverse array of cultural influences and traditions
- ☑ Compares and contrasts at least three American cultures including Latino American, African American, Asian American, Native American and European American.

Outcomes that pertain to this Global Citizenship Category

- Demonstrate visual literacy and effectively communicate visual phenomenon with appropriate art historical terms; emphasizing cultural connections with the art objects' larger social, political, and economic context while noting how that function may have changed over time.
- Acquire research skills including the ability to evaluate sources and evidence and distinguish common methodologies used in art historical analysis.
- 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.
- 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.

Narrative

This course introduces students to key events, individuals, institutions, and experiences that shaped the history and culture of Africans and their descendants from their arrival in North America to the present. It is expected that beyond attaining a general knowledge of the multidimensional experiences of African American history, students will also critically analyze important issues and questions that comprise African American Studies in general. Issues of race, gender, class, and freedom all intersect within the readings and lectures throughout the course, and students will gain a deeper understanding of the development of "blackness" in American cultural and political discourse. The course content explores African American art as informed by interactions with other racial groups including Latinx Americans, European Americans, and Native Americans.

Department Vote: 8 Yes; 0 No; 0 Abstain; 0 Not Voting

AHIS 71 Distance Education Application

☑ Fully Online

1a. Instructor - Student Interaction:

Instructor will send frequent announcements about upcoming deadlines. Instructor will provide feedback on graded assignments and students' discussions. There will be virtual office hours discussions and the instructor will comment on threaded discussion boards.

1b. Student - Student Interaction:

Students will interact with each other through asynchronous discussion forums and have collaborative digital group projects.

1c. Student - Content Interaction:
Student assignments include written assignments, discussion boards, lecture materials, quizzes and projects.

1d. Distance Ed Interactions:

Online class activities that promote class interaction and engagement	Brief Description	Percentage of Online Course Hours
Discussion Boards	Respond to a discussion question and then to other students' responses	20.00%
Project Presentation	Work on a group project and present results to the class	20.00%
Online Lecture	Watch online lectures and make comments/questions about material	20.00%
Written assignments	Written assignments that respond to readings and videos.	20.00%
Exams	Exams on course content	20.00%

2. Organization of Content:
Course content will be organized into weekly modules in the learning management system.

3. Assessments:

% of grade	Activity	Assessment Method
10.00%	Class Participation	Class participation is achieved through asynchronous discussion board post assignments. A question will be posted by the instructor and then students will respond to that question in a post and also respond to the posts of two other classmates. Instructor will also provide commentary on the discussion topic.
30.00%	Exams/Tests	Students will complete exams consisting of short answer and essay questions using images and written resources covered in the course. These will be submitted to the course learning management system where the instructor will provide a grade and feedback.
20.00%	Group Projects	Students will collaborate on group projects covering content related to the course. Students will communicate with each other via their school email or video chat. Students can submit a presentation to the instructor and their peers, who will provide feedback.
20.00%	Homework	Students will have written homework assignments on course topics to be submitted via the course learning management system. Instructor will provide feedback on submitted work.
20.00%	Written Assignments	Students will complete writing assignments on course topics and submit them to the learning management system for grading and instructor feedback.

4. Instructor's Technical Qualifications:
The instructor will need the college's existing technology.

5. Student Support Services:
Links to counseling, financial aid, and library

6. Accessibility Requirements:
Images will have descriptive alternative text, content pages will include heading styles, accurate captioning for videos, content will have sufficient color contrast and font size.

7. Representative Online Lesson or Activity:
Read the attached description of African American conceptual artist, Hank Willis Thomas series' entitled, History Doesn't Laugh.Then read the article, An African American's remixing of apartheid-era images is raising images of Cultural Appropriation. After you have thought about the articles, then write a Discussion Post answering the question, "Is Hank Willis Thomas' series an example of appropriation? Why or why not?" After you have posted your response, please respond to two other classmates.

Distance Education: SST 905, Organics Recycling

Units:	0.00
Total Instructional Hours (usually 18 per unit):	36.00
Hours per week (full semester equivalent) in Lecture:	2.00
In-Class Lab:	0.00
Arranged:	0.00
Outside-of-Class Hours:	72.00
Date Submitted:	September 2020
Degree Applicability:	Noncredit
Proposed Start:	Fall 2018
TOP/SAM Code:	193000 - Earth Science / C - Clearly Occupational
Grading:	Noncredit (Progress Indicators Used)
Repeatability:	Yes
Library:	Library has adequate materials to support course
Minimum Qualification:	Environmental Technologies

Rationale
This course provides both non-traditional and pathway students the opportunity to develop a skill-set in the field of sustainability that provides potential employment and entrepreneurial opportunities within the multi-trillion dollar sustainability industry.

I. **Catalog Description**
This course is a hands-on introduction to integrated organics recycling and management including: waste prevention, food rescue, recovery through onsite and offsite technologies, energy production, and marketing of processed by-products. Students will participate in operating the on-campus worm farm for recycling food wastes and provides both non-traditional and pathway students the opportunity to develop a skill-set in the field of sustainability

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 five years)
1. All course materials will be provided by the instructor.

III. **Course Objectives**
Upon completion of this course, the student will be able to:
1. Describe integrated organics waste management.
2. Describe small-scale onsite management systems for organics.
3. Prepare a predesign of an onsite or offsite organic wastes recycling program.
4. Identify biological, mechanical and thermal processes to manage organic wastes including composting, decomposers, dehydrators, syn-fuel, and digestors.
5. Discuss food rescue and food waste prevention programs.
6. Identify potential occupational opportunities in industry and government.

IV. **Methods of Presentation:**
Observation and Demonstration, Field Experience, Lecture and Discussion

V. **Course Content**

% of Course	Topic
10%	Overview of organics waste management and sources of organics waste generation, and why organic wastes' proper management is important to GHG reduction.
10%	Mechanical and thermal processes for organic waste recycling.
30%	Operation of a vermicomposting system.
10%	Preliminary design of onsite or offsite organics waste recycling systems.

10%	Food rescue and food waste prevention programs.
10%	Basics of organics by-products marketing.
20%	Integrated strategies for businesses or communities for organics waste recycling.
100%	Total

VI. **Methods of Evaluation**

% of Course	**Topic**
40%	Class Work
30%	In Class Assessment (noncredit)
30%	Class Participation
100%	Total

VII. **Sample Assignments:**
Vermicompost: 1. Working as a group, assist in the operation of the SMC vermicomposting (worm bin) program.

Compost or Vermicompost at home : Students are required to start their own compost or worm compost at home. The class is given a workshop and students are provided with resources and guidelines, all OER and usually online. Students give bi-weekly oral progress reports in class - where they have a chance to ask questions and share advice and resources - and on Canvas, in words and pictures.

VIII. **Student Learning Outcomes:**
1. Operate a small-scale vermicomposting system.
2. Market organic rich materials such as worm castings.
3. Utilize soil amendments in the on-campus organic garden
4. Obtain the skill of food rescue and food waste prevention.
5. Prepare written reports and communications.

SST NC 905 Distance Education Application

☑ Fully Online

1a. Instructor - Student Interaction:
There will be multiple, frequent, and on-going communication exchanges between the instructor and each student via course communication and collaboration features. Examples include: frequent announcements, gradebook feedback and comments on students' work, virtual office discussion, participation in the threaded discussion boards, among others.

1b. Student - Student Interaction:
Students are expected to interact with each other throughout the course and communicate regarding the course material and homework experiences. In this course, students will use asynchronous discussion forums and email for communication and collaboration activities. This activity will include assignments where students are asked to review their peers' papers, provide discussion forums, and share collaborative assignments.

1c. Student - Content Interaction:
All presentation materials are provided for easy download via Canvas. Any additional reading material is provided discussion boards, lecture materials, selections from films, and learning objectives linked to course work and writing assignments. Students take the lead in an ongoing threaded Discussion forum: Ongoing Conversation about Waste Reduction: Thoughts and Resources Students share weekly, at a Zoom meeting, the ongoing successes and challenges of their required home composting activity. If they can't join the Zoom they post their composting report and questions on Canvas.

1d. Distance Ed Interactions:

Online class activities that promote class interaction and engagement	Brief Description	Percentage of Online Course Hours
Written assignments	Each student is required to provide written and/or a video presentation of their individual and/or group contribution towards class assignments and activities.	30.00%
Discussion	Students will post all assignments such as film and reading reviews on a Discussion Board to be read by instructor and classmates' and responded to. Weekly or bi-weekly updates on hands-on projects will be posted on Discussion Boards. Ongoing conversation - generated by students or instructor and followed by all - will take place in a threaded Discussion.	30.00%
Online Lecture	Student's review presentations in video mode & hear from industry professionals.	30.00%
Other (describe)	Individual and group research.	10.00%

2. Organization of Content:
Class content is organized into modular units or weekly modules in the learning management system such as Canvas in the interest of achieving course outcomes/objectives. Lectures will be delivered as synchronous live lecture on zoom, always followed by Q/A and discussion. Students who can't attend will watch the lecture recording and post a response on a Discussion Board. Instruction in composting and other sustainable food skills are taught in interactive online workshops. These workshops are on zoom and are recorded for those who can't attend synchronously. Finally, students will utilize information in shared online group projects designed to address real world issues.

3. Assessments:

% of grade	Activity	Assessment Method
30.00%	Presentation	Each student is required to provide written and oral presentation of their individual and/or group contribution towards class assignments and activities.
10.00%	Participation	Each student is expected to engage actively in class discussion. The instructor assures that all students are given the opportunity to discuss topics by keeping track of individual student engagement for each class module. Students provide input through oral and 'Chat' comments during zoom meetings, and written responses in threaded Discussion Boards.
30.00%	Written Assignments	Students will write and post on Canvas a substantial Introductory personal statement at the beginning of the semester and a substantial concluding Reflection at the end of the course.
30.00%	Hands on skills development	Students are required to start their own compost or vermicompost at home or work.

4. Instructor's Technical Qualifications:
All faculty who teach this course have previously taught fully online courses at SMC and other LA CCs. These faculty are knowledgeable of (about) the SMC online learning system (LMS) to organize and manage the course. All faculty who teach this course will have a working understanding of online conferencing programs such as Zoom and Skype. Besides instructional qualifications, the instructor must posses the ability to provide online instruction either through CCCConfer certification or demonstrated prior college level online instructional experience. The college must be able to provide online instructional technology and support. Where needed, the college must be able to provide technical and financial assistance to students who may not have access to online learning platforms, devices, and broadband connection needed to adequately view delivered course content.

5. Student Support Services:
The existing curriculum is linked to online counseling, tutoring, library resources and services, financial aid, the bookstore, technical support, special academic programs (i.e. Black Collegians, Latinx Center, Guardian Scholars, Student Veterans, etc) and other resources as they are developed.

6. Accessibility Requirements:
The existing curriculum currently offers accessibility for students with disabilities including compliance with the regulations of Section 508 of the Rehabilitation Act.

7. Representative Online Lesson or Activity:
There are two aspects to this assignment:
Students are taught the principles of composting and its importance through live online workshops, and through films

and assigned readings. They are then required to start their own compost or vermicompost. They must provide weekly updates to the class in a zoom gathering or on Canvas. At the end of the semester they will upload photos or video of their composting project to a Discussion board on Canvas.

The second element of this assignment is outreach and persuasion. Students must spark enthusiasm in a friend or family member and attempt to get them to start their own compost. Students share their progress and challenges on this aspect of the project on zoom and in Canvas Discussion or Chat. Classmates help find solutions to various challenges.

Global Citizenship: AHIS 2, Western Art History II

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
Date Submitted:	May 2011

Transferability:	Transfers to CSU, UC
IGETC Area:	3A: Arts
CSU GE Area:	C1 - Arts, Dance, Music, Theater
SMC GE Area:	Area III: Humanities
Degree Applicability:	Credit - Degree Applicable
Skills Advisory(s):	Eligibility for English 1

Rationale
Global Citizenship

I. Catalog Description
This course is a survey of the chronological development of Western art from the Renaissance to the contemporary with emphasis on the cultural, political, and social factors that influenced this evolution. This includes: Italian and Northern Renaissance,Mannerism, 15th Century Flemish, Baroque, Rococo, Neoclassicism, Romanticism, Realism, impressionism and Post Impressionism and the major movements of the 20th century. painting.

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 five years)
1. Princes of the Renaissance: The Hidden Power Behind an Artistic Revolution, Hollingsworth, Mary, Pegasus © 2021, ISBN: 1643135465;
2. Gardner's Art Through the Ages, 15, Kleiner, F., Cengage © 2017, ISBN: 978-1305645059;
3. A History of Art History, Wood, Christopher, Princeton University Press © 2019, ISBN: 0691156522;

III. Course Objectives
Upon completion of this course, the student will be able to:
1. Document elements of the patronage system that developed during the Renaissance and examine the architecture and art as responsive to the growing European power structures at that time.
2. Report the effect of political power in the development of Northern European art and the variety and types of media used in this period, identifying specific artists, their respective styles, and their key works of art.
3. Discuss the integration of sacred and secular power and wealth, along with its resultant display in 15th-century Italian art.
4. Understand the transition from the early Renaissance to the High Renaissance, defining the technical and aesthetic achievements of the High Renaissance and the Mannerist era and distinguish High Renaissance and Mannerist works of art.
5. Describe the consequences of the Protestant Reformation and the Catholic Counter-Reformation on artistic production and relate the diversity of cultures and artistic styles in Spain and Northern Europe
6. Recognize and cite artistic terminology from this period while explaining the distinctive characteristics of the Baroque style
7. Understand the diversity of cultures and artistic styles throughout Europe in the 17th Century identifying representative Baroque artists and architects.
8. Outline the origins and spread of the luxurious and decorative style known as Rococo, recognizing the distinctive characteristics of the Rococo style
9. Distinguish the main styles of Neoclassicism and Romanticism in the early 19th century Europe and America and examine reasons for the broad range of subject matter, from portraits and landscape to mythology and history.
10. Document initial reaction by artists and the public to the new art medium known as photography and how this medium affected art production.
11. Describe why the Industrial Revolution, Darwinism, Marxism and sociopolitical changes altered ideas about the nature and subject matter of art in the later 19th century.

12. Outline the roll of impressionism and Post impressionism in the development of Modern art.
13. Report the development of the major movements of 20th century art and architecture.
14. Identify, examine, and assess representative works of art and architecture from the Renaissance to the contemporary period employing appropriate art historical terminology
15. Analyze, discuss and differentiate the works of art and architecture in terms of historical context and cultural values.
16. Analyze, discuss, and distinguish the roles of art, architecture, and the artist from the Renaissance to the contemporary period.

IV. Methods of Presentation:

Projects, Visiting Lecturers, Other (Specify), Group Work, Lecture and Discussion
Other Methods: The instructor will conduct lectures and discussions that will be illustrated with the appropriate slides and videos.

V. Course Content

% of Course	Topic
5%	Introduction: Overview of course and art definitions and principles
8%	14th Century Italian Art
9%	15th Century Art in Northern Europe and Spain
14%	15th Century Italian Art
14%	High Renaissance and Mannerism
10%	16th Century art in Northern Europe and Spain
13%	Baroque Art
10%	Rococo
10%	Neoclassicism, Romanticism & Realism
7%	Impressionism, Post Impressionism & Major Movements of the 20th Century
100%	Total

VI. Methods of Evaluation: (Actual point distribution will vary from instructor to instructor but approximate values are shown.)

Percentage	Evaluation Method
40 %	Exams/Tests - 2 exams
25 %	Final exam
10 %	Other - Participation
15 %	Projects - (Written)
10 %	Quizzes
100 %	Total

VII. Sample Assignments:

Writing Assignment: Describe the changes in the patronage system during the Rennaissance and how it is reflected in the artworks produced. Think about how changes in patronage might relate to socio/religious changes as well as geopolitical ones. Are there distinctions in patronage that result in different aesthetics? Does this account for the distinct differences between the Northern and Italian Renaissance?

Discussion: Post an Image of a Martyr: Discussion: Post an Image of a Martyr John the Baptist is considered a martyr, or a person who suffers or dies for what they believe in. Many of the Christian Saints are martyrs, because they were put to death for their religious or political beliefs. For this assignment please find, post, and provide the

title, artist, date, and material of another work of art that depicts a martyr. In addition, please state why the person depicted is a martyr. Your image need not represent a Biblical figure, although there are many examples of Biblical martyrs depicted in the history of art. Choose a work of art from any period of the history of art and any culture, as long as it depicts someone that you would consider a martyr according to the definition I have provided. Don't forget to comment on the work of art and martyr another student in the class has chosen. Here is an example of mine. Gustav Moreau depicts Saint John the Baptist after he has been martyred by decapitation. Herod, pictured in the shadows, promises his step-daughter Salome anything she wants, if she will do the erotic dance of the seven veils for his pleasure. Upon completion of her task, she asks for the head of the Baptist on a silver platter as compensation. Though Herod was fearful of creating political unrest among a growing Christian population, he was forced to oblige. Here salome is haunted by her choice, and seems to longingly call out for him.

VIII. Student Learning Outcomes

1. Demonstrate visual literacy and effectively communicate visual phenomenon with appropriate art historical terms; emphasizing cultural connections with the art objects' larger social, political, and economic context while noting how that function may have changed over time.
2. Acquire research skills including the ability to evaluate sources and evidence and distinguish common methodologies used in art historical analysis.
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.
4. 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.

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

- Demonstrate visual literacy and effectively communicate visual phenomenon with appropriate art historical terms; emphasizing cultural connections with the art objects' larger social, political, and economic context while noting how that function may have changed over time.
- 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.

Narrative

Art history is an interdisciplinary subject that emphasizes cultural connections with the art object's larger social, political and economic context, while noting how that function may have changed over time. This includes the current display of art in museums and cultural institutions and tourism, as well as its appropriation by pop culture. The discipline emphasizes cross cultural and relational thinking by examining global connections of art through a comparative approach. For example, the AHIS 2 content covers the Global Renaissance, in which regions around the world were tied together through networks of trade, knowledge, capitalistic endeavors, and religion. The course considers how religious prints made in the Netherlands were used for worship in the Americans, and how raw materials from different regions were traded and used to create vibrant colors which changed art production. We also examine the legacy of the visuals created in the early modern period in our contemporary culture as well as how those older cultures are represented today. Art history emphasizes that contemporary visual culture is not random, but a mediated chain of material signifiers that is both culturally and historically embedded.

Department Vote: 8 Yes; 0 No; 0 Abstain; 0 Not Voting

Deactivate Course: HIST 47, The Practice of History

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
Date Submitted:	September 2020

Transferability:	Transfers to CSU, UC

Degree Applicability:	Credit - Degree Applicable
Prerequisite(s):	ENGL 1
Proposed Start:	Fall 2002
TOP/SAM Code:	220500 - History / E - Non-Occupational
Grading:	Letter Grade or P/NP
Repeatability:	No
Library:	Library has adequate materials to support course
Minimum Qualification:	History
Program Impact:	Administration of Justice AS-T, Anthropology AA-T, Economics AA-T, Geography AA-T, History AA-T, Journalism AA-T, Liberal Arts - Social & Behavioral Science AA, Nutrition and Dietetics AS-T, Psychology AA-T, Public Policy AA/Certificate of Achievement, Sociology AA-T, Spanish AA-T

Rationale

Differences in Teaching Critical Analysis in English 2 and Practice of History: Historical methodology and research rely on the same critical reading, reasoning, and writing skills as taught in English 2. Clear logical thinking and writing cross disciplines. However, historical research also requires knowledge of historical fields, historiographic trends, and theory and the ability to identify, locate, and critically use a range of sources to answer a historical question. To address both these areas of need, this course focuses on students' skills in critical analysis and in research, including information competency in on-line catalogue, database, and Internet searching.

I. **Catalog Description**

This course presents an overview of historians' methods of research, critical analysis, and written argumentation and introduces historiography and historical theory. Students will apply these methods through a variety of written assignments, including a properly-documented academic research paper. This course's research component will further students' information competency 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 five years)

1. Historiography: An Introduction , Spaulding, Roger and Christopher Parker , Manchester UP © 2008, ISBN: 0719072840
2. The Pursuit of History, Tosh, John, Longman © 2010, ISBN: 0582894123
3. A Manual for Writers of Research Papers, Theses, and Dissertations, 7th, Turabian, Kate et al, U Chicago Press © 2007, ISBN: 0226823377
4. Writing History: A Guide for Students, Storey, William K., Oxford University Press © 2012, ISBN: 0199830045
5. Historical secondary and primary sources such as monographs and archival material.

III. **Course Objectives**

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

1. Describe, discuss, and apply orally and/or in writing, an understanding of history as a discipline characterized by the application of critical analysis to factual evidence (including its genres, explanatory theories and assumptions, and historiography).

2. Frame a question for historical research and design and implement a research proposal, producing a research paper whose thesis is clearly stated and effectively supported with logically organized, soundly interpreted, and properly documented factual evidence.
3. Select, critically examine and evaluate secondary sources, attentive to their structural and analytical components including the author's identity and intended audience, thesis, argumentation, methodology and use of sources, and date and context of publication.
4. Locate, critically examine and evaluate the use of primary sources, attentive to concepts of historical agency, context, perspective, and multi-causation.
5. Distinguish forms of logical reasoning, including inductive and deductive reasoning, and demonstrate their use; identify and effectively address such fallacies common in historical analysis as those involving issues of causation, over-simplification of complex occurrences, and application of judgment not interpretation, as well as more general fallacies of reasoning.
6. Identify and effectively address common problems in the use of evidence, including contradictory and/or incomplete evidence; demonstrate awareness of the shifting use and meaning of language, including the denotative and connotative meaning of terms and labels.
7. Critically evaluate, revise, and strengthen their own argument.

IV. **Methods of Presentation:**

Projects, Other (Specify), Critique, Lecture and Discussion
Other Methods: Methods of presentation will vary among instructors but all will include lectures to present basic concepts of history as a discipline, historiography, and historical methodology. Class discussion and weekly assignments will emphasize incremental practice in the analytical skills and components that are necessary to produce an academic research paper and oral presentation. Time will also be allocated for individual critiques by peers and instructor. In total, students will write a minimum of 6,000 words, approximately half in critical exercises and half in a ten- to twelve-page researched and documented paper. The papers will require students to apply the critical skills introduced in the course.

V. **Course Content**

% of Course	Topic
20%	Historiography: overview and case study through analysis of two to three secondary sources, as to author, audience, methodology and assumptions, selection and use of evidence; thesis and argument; and date and context of publication.
20%	Logical reasoning and fallacies, including those common to historical argumentation and more generally; handling contradictory and incomplete factual evidence; attention to language and terminology.
30%	Use of primary and secondary sources: locating, analyzing, and determining utility of range of sources, emphasizing diverse authors' perspectives and audiences, context, and evidentiary significance.
30%	Research project/application of historical methodology: frame a historical question and devise and implement a research strategy, through preparation of a properly documented and logically coherent research paper.
100%	Total

VI. **Methods of Evaluation**

% of Course	Topic
40%	Papers Multiple analytic essays
30%	Projects Formal research paper and oral presentation
30%	Quizzes Quizzes and exams
100%	Total

VII. **Sample Assignments:**

Sample Assignment #1: 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?

Sample Assignment #2: Write an 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.

VIII. **Student Learning Outcomes:**

1. Describe and discuss, orally and/or in writing, history as a discipline characterized by the application of critical analysis to factual evidence (including its genres, explanatory theories and assumptions, and historiography).
2. Critically examine historical material, including primary sources, attentive to such concepts as historical agency, context, perspective, and multi-causation.

SANTA MONICA COLLEGE
PROGRAM OF STUDY

Data Analyst
Department Certificate

Data science is an applied field that uses scientific methods, processes, algorithms and systems to extract knowledge and insights from both structured and unstructureddata sources. Data science incorporates data mining, machine learning and big data to make predictions and identify actions that organizations can take to be more effective. Data scientists are responsible for breaking down big data into usable information and creating software and algorithms that help companies and organizationsdetermine optimal operations. This certificate will prepare students for jobs in this field by providing students with skills in different technologies and techniques that are used for data science and machine learning. Students may also choose to transfer to four-year universities with established undergraduate programs in Data Science.

Program Learning Outcomes:
Upon completion of the program, students will be able to analyze data and employ different software tools to make certain predictions and optimize organizational operations.

Area of Emphasis

Required Courses		**Units:** 9.0
CS 82A	Introduction to Data Science	3.0
CS 82B	Principles of Data Science	3.0
CIS 30T	Tableau Desktop Essentials	3.0
Choose 1 Course		**Units:** 3.0
CS 87A DE	Python Programming	3.0
OR		
CS 82C	R Programming	3.0
		Total: 12.0

SANTA MONICA COLLEGE

Data Analyst Department Certificate

1. **Program Goals and Objectives**
   - Data science is an applied field that uses scientific methods, processes, algorithms and systems to extract knowledge and insights from both structured and unstructured data sources. Data science incorporates data mining, machine learning and big data to make predictions and identify actions that organizations can take to be more effective. Data scientists are responsible for breaking down big data into usable information and creating software and algorithms that help companies and organizations determine optimal operations. This certificate will prepare students for jobs in this field by providing students with skills in different technologies and techniques that are used for data science and machine learning. Students may also choose to transfer to four-year universities with established undergraduate programs in Data Science.
   - Upon completion of the program, students will be able to analyze data and employ different software tools to make certain predictions and optimize organizational operations.

2. **Catalog Description**
   - Data science is an applied field that uses scientific methods, processes, algorithms and systems to extract knowledge and insights from both structured and unstructured data sources. Data science incorporates data mining, machine learning and big data to make predictions and identify actions that organizations can take to be more effective. Data scientists are responsible for breaking down big data into usable information and creating software and algorithms that help companies and organizations determine optimal operations. This certificate will prepare students for jobs in this field by providing students with skills in different technologies and techniques that are used for data science and machine learning. Students may also choose to transfer to four-year universities with established undergraduate programs in Data Science.
   - Upon completion of the program, students will be able to analyze data and employ different software tools to make certain predictions and optimize organizational operations.

3. **Program Requirements**
   - Required Courses
     CIS 30T : Tableau Desktop Essentials
     CS 82A : Introduction to Data Science
     CS 82B : Principles of Data Science
   - Choose 1 Course
     CS 82C : R Programming
     CS 87A : Python Programming AND CS 87B : Advanced Python Programming

4. **Master Planning**
   - This degree fulfills the need to provide students with an occupation with a living wage and builds upon our existing certficates in cloud computing. In Los Angeles County, labor market data shows 5,000 job openings that include Cloud skills and Data Science in particular. In the region, major cloud computing employers include Deloitte, Amazon, Costar Realty Information, Raytheon, Northrop Grumman, Aerospace Corporation, KPMG, SMCI and Accenture. The program draws students from our Computer Science program that may or may not be interested in transfer to a four-year university

5. **Enrollment and Completer Projections**
   - We are expecting 90 completers annually. All of the students who have been taking the Cloud classes (79A, 79B, 79C, 79D, 79E, 79F, 79Y and 79Z) are likely to enroll as it quite a popular specialty now in industry.

6. **Place of Program in Curriculum/Similar Program**
   - This program is a natural outgrowth of our popular Cloud program. Both Azure and AWS offer popular data science tools and certification in this area. Students have been asking for a program like this.

7. Similar Programs at Other Colleges in Service Area

- Coastline Community College

8. Transfer Preparation Information

- Numerous UCs and CSUs have developed undergraduate programs in Data Science. Many of the proposed courses will articulate with various undergraduate classes offered at certain UCs. Student will be able to transfer into these majors after completing our certificate.

SANTA MONICA COLLEGE
PROGRAM OF STUDY

Data Science
Certificate of Achievement

Data science is an applied field that uses scientific methods, processes, algorithms and systems to extract knowledge and insights from both structured and unstructured data sources. Data science incorporates data mining, machine learning and big data to make predictions and identify actions that organizations can take to be more effective. Data scientists are responsible for breaking down big data into usable information and creating software and algorithms that help companies and organizations determine optimal operations. This certificate will prepare students for jobs in this field by providing students with skills in different technologies and techniques that are used for data science and machine learning. Students may also choose to transfer to four-year universities with established undergraduate programs in Data Science.

Program Learning Outcomes:
Upon completion of the program, students will be able to analyze data and employ different software tools to make certain predictions and optimize organizational operations.

Area of Emphasis

Required Courses		**Units:** 12.0
CIS 30T	Tableau Desktop Essentials	3.0
CS 79A DE	Introduction to Cloud Computing	3.0
CS 82A	Introduction to Data Science	3.0
CS 82B	Principles of Data Science	3.0
Choose 1 Track		**Units:** 3.0-6.0
R Track		*Units: 3.0*
CS 82C	R Programming	3.0
OR		
Python Track		*Units: 6.0*
CS 87A DE	Python Programming	
AND		
CS 87B DE	Advanced Python Programming	3.0
Choose 1 Track		**Units:** 6.0
Azure Track		*Units:* 6.0
CS 79Y DE	Microsoft Azure Database Essentials	3.0
AND		
CS 79X	Data Science on Azure	3.0
OR		
AWS Track		*Units:* 6.0
CS 79B DE	Database Essentials in Amazon Web Services	3.0
AND		
CS 79F DE	Machine Learning on AWS	3.0
		Total: 21.0-24.0

SANTA MONICA COLLEGE

Data Science Certificate of Acheivement

1. **Program Goals and Objectives**
   - Data science is an applied field that uses scientific methods, processes, algorithms and systems to extract knowledge and insights from both structured and unstructured data sources. Data science incorporates data mining, machine learning and big data to make predictions and identify actions that organizations can take to be more effective. Data scientists are responsible for breaking down big data into usable information and creating software and algorithms that help companies and organizations determine optimal operations. This certificate will prepare students for jobs in this field by providing students with skills in different technologies and techniques that are used for data science and machine learning. Students may also choose to transfer to four-year universities with established undergraduate programs in Data Science.
   - Upon completion of the program, students will be able to analyze data and employ different software tools to make certain predictions and optimize organizational operations.

2. **Catalog Description**
   - Data science is an applied field that uses scientific methods, processes, algorithms and systems to extract knowledge and insights from both structured and unstructured data sources. Data science incorporates data mining, machine learning and big data to make predictions and identify actions that organizations can take to be more effective. Data scientists are responsible for breaking down big data into usable information and creating software and algorithms that help companies and organizations determine optimal operations. This certificate will prepare students for jobs in this field by providing students with skills in different technologies and techniques that are used for data science and machine learning. Students may also choose to transfer to four-year universities with established undergraduate programs in Data Science.
   - Upon completion of the program, students will be able to analyze data and employ different software tools to make certain predictions and optimize organizational operations.

3. **Program Requirements**
   - Required Courses
     CIS 30T : Tableau Desktop Essentials
     CS 79A : Introduction to Cloud Computing
     CS 82A : Introduction to Data Science
     CS 82B : Principles of Data Science
   - Choose 1 Track
     R Track – CS 82C : R Programming
     Python Track – CS 87A : Python Programming AND CS 87B : Advanced Python Programming
   - Choose 1 Track
     AWS Track – CS 79B : Database Essentials in Amazon Web Services AND
     CS 79F : Machine Learning on AWS
     Azure Track – CS 79Y : Microsoft Azure Database Essentials AND
     CS 79X : Data Science on Azure

4. **Master Planning**
   - This degree fulfills the need to provide students with an occupation with a living wage and builds upon our existing certficates in cloud computing. In Los Angeles County, labor market data shows 5,000 job openings that include Cloud skills and Data Science in particular. In the region, major cloud computing employers include Deloitte, Amazon, Costar Realty Information, Raytheon, Northrop Grumman, Aerospace Corporation, KPMG, SMCI and Accenture. The program draws students from our Computer Science program that may or may not be interested in transfer to a four-year university

5. **Enrollment and Completer Projections**

- We are expecting 90 completers annually. All of the students who have been taking the Cloud classes (79A, 79B, 79C, 79D, 79E, 79F, 79Y and 79Z) are likely to enroll as it quite a popular specialty now in industry.

6. Place of Program in Curriculum/Similar Program

- This program is a natural outgrowth of our popular Cloud program. Both Azure and AWS offer popular data science tools and certification in this area. Students have been asking for a program like this.

7. Similar Programs at Other Colleges in Service Area

- Coastline Community College

8. Transfer Preparation Information

- Numerous UCs and CSUs have developed undergraduate programs in Data Science. Many of the proposed courses will articulate with various undergraduate classes offered at certain UCs. Student will be able to transfer into these majors after completing our certificate.

LAOCRC/Centers of Excellence Program Application

Section I: Program Information

Program Title: Program title must match exactly as it appeared on the LMI request.
Data Science

Submission Type: Is your submission a new program or are substantial changes being made to an existing program?

☒ New Program
☐ Substantial Changes

TOP Codes 0702.00, 0707.30

Projected Start Date (mm/dd/yyyy) 08/31/2021

Catalog Description Catalog Description includes program requirements, prerequisite skills or enrollment limitations, student learning outcomes, and information relevant to program goal.
Data science is an applied field that uses scientific methods, process, algorithms and systems to extract knowledge and insights from both structured and unstructured data sources. Data science incorporates data mining, machine learning and big data to make predictions and identify actions that organizations can take to be more effective. Data scientists are responsible for breaking down big data into usable information and creating software and algorithms that help companies and organizations determine optimal operations. This certificate will prepare students for jobs in this field by providing students with skills in different technologies and techniques that are used for data science and machine learning.

Enrollment Completer Projections Enrollment Completer Projections are projections of number of students to earn certificate or degree annually.
50 completers annually

Section II: Program Proposal Attributes

Program Award Type(s)
Check all that apply

Type of Program

☐ Certificate of Achievement: 8 to fewer than 16 semester (or 16 to fewer than 24 quarter) units (B)
☒ Certificate of Achievement: 16 or greater semester (or 24 or greater quarter) units (C)
☐ Associate of Science Degree (S)
☐ Associate of Arts Degree (A)
☐ A.A. – T Degree (Y)
☐ A.S. – T Degree (X)
☐ Noncredit Program (NIL)

Program Goal Program Goals and Objectives must address a valid transfer, occupational, basic skills, civic education, or lifelong learning purpose. Regional recommendation is only needed for programs with an occupational goal.
We are seeking to serve industry needs, as stated by our Advisory Board members based on jobs such as data scientist, data engineer, data analyst, machine learning specialist, data consultant, data architect and application architect. Additionally, this program would be UC/CSU transferrable as many four-year universities have developed undergraduate Data Science programs.

Section III: Course Unit and Hours

Total Certificate Units (Minimum and Maximum) 21-24

Units of Degree Major or Area of Emphasis (Minimum and Maximum) 21-24

Total Units for Degree (Minimum and Maximum) 21-24

Section IV: Course Report

Program Requirements Narrative

Course	Title	Units	Year/Semester (Y1 or S1)
CIS 30T	Tableau Desktop Essentials	3.0	Y1
CS 79A	Introduction to Cloud Computing	3.0	Y1
CS 82A	Introduction to Data Science	3.0	Y1
CS 82B	Principles of Data Science	3.0	Y1
Choose: CS 82C Or: CS 87A and	R Programming Python Programming	3.0 3.0	Y1 Y1

CS 87B	Advanced Python Programming	3.0	Y1
Choose Either: CS 79B And CS 79F Or: CS 79Y And CS 79X	 AWS Database Essentials Machine Learning on AWS Azure Database Essentials Machine Learning on Azure	 3.0 3.0 3.0 3.0	 Y1 Y1 Y1 Y1

Program Requirements Program Requirements includes course requirements and sequencing that reflect program goals.

Section V: Supporting Documents

Please attach to the email

Section VI: Los Angeles/Orange County Region Specific Questions

District Santa Monica Community College District
College Santa Monica College
CRLC Member Patricia G. Ramos
Email ramos_patricia@smc.edu
Phone 310) 434-3311

Reason for approval request

☒ New Program
☐ Substantial Change
☐ Local Approved

Place of program in college's curriculum/similar program.

Computer Science discipline in Computer Science & Information Systems department

List similar programs at other colleges in the Los Angeles and Orange County Region

Uncertain

Annual Enrollment projects (non-duplicative)
50 annually

Advisory Minutes
Please attach to the email.

C·O·E CENTERS OF EXCELLENCE FOR LABOR MARKET RESEARCH

Program Endorsement Brief: 0707.30/Computer Systems Analysis
Data Science

Los Angeles/Orange County Center of Excellence, October 2020

Summary Analysis

Program Endorsement:	Endorsed: All Criteria Met	☒	Endorsed: Some Criteria Met	☐	Not Endorsed	☐

Program Endorsement Criteria		
Supply Gap:	Yes ☑	No ☐
Living Wage: (Entry-Level, 25th)	Yes ☑	No ☐
Education:	Yes ☑	No ☐
Emerging Occupation(s)		
	Yes ☐	*No* ☑

The Los Angeles/Orange County Center of Excellence for Labor Market Research (COE) prepared this report to provide Los Angeles/Orange County regional labor market supply and demand data related to two middle-skill occupations: *computer user support specialists* (15-1151), and *computer network support specialists* (15-1152). Middle-skill occupations typically require some postsecondary education, but less than a bachelor's degree,[1] and are highlighted in this report to show which data science occupations are immediately accessible to community college-level award earners. However, the field of data science is comprised of many occupations that typically require workers to obtain a bachelor's degree. Therefore, above middle-skill occupations are included in this report to illuminate a pathway for students who continue their education past the community college level. The above middle-skill data science occupations in this report include *computer systems analysts* (15-1121), *information security analysts* (15-1122) and *operations research analysts* (15-2031).

This report is intended to help determine whether there is demand in the local labor market that is not being met by the supply from community college programs that align with the relevant occupations. While demand data for above middle-skill data science occupations are included in this report, the program endorsement only takes into account the middle-skill data science occupations when considering the local supply and demand.

Based on the available data, there appears to be a supply gap for these middle-skill data science occupations in the region. Furthermore, all of the annual openings for these occupations typically require an associate degree or some college, and entry-level wages exceed the living

[1] 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.

wage in both Los Angeles and Orange counties. **Therefore, due to all of the criteria being met, the COE endorses this proposed program.** Detailed reasons include:

Demand:

- ***Supply Gap Criteria –*** Over the next five years, there is projected to be **3,333 jobs available annually** in the region due to new job growth and replacements, **which is more than the 634 awards conferred annually** by educational institutions in the region.
- ***Living Wage Criteria –***Within Los Angeles County, **all of the annual job openings** for these middle-skill data science occupations have **entry-level wages above the California Family Needs Calculator living wage** ($15.04/hour).[2]
- ***Educational Criteria –***Within the LA/OC region, **all of the annual job openings** for these middle-skill data science occupations **typically require an associate degree or some college.**
    - Furthermore, the national-level educational attainment data indicates **41% of workers in the field have completed some college or an associate degree.**

Supply:

- There are **17 community colleges** in the LA/OC region that issue awards related to data science, conferring an average of **129 awards annually** between 2016 and 2019.
- Between 2014 and 2017, there was an average of **505 awards conferred annually** in related training programs by non-community college institutions throughout the region.

Occupational Demand

Exhibit 1 shows the five-year occupational demand projections for these middle-skill data science occupations. In Los Angeles/Orange County, the number of jobs related to these occupations is projected to increase by 6% through 2024. There will be more than 3,300 job openings per year through 2024 due to job growth and replacements.

Exhibit 1: Middle-skill occupational demand in Los Angeles and Orange Counties[3]

Geography	2019 Jobs	2024 Jobs	2019-2024 Change	2019-2024 % Change	Annual Openings
Los Angeles	24,121	25,603	1,482	6%	2,333
Orange	10,239	10,901	662	6%	999
Total	**34,360**	**36,505**	**2,145**	**6%**	**3,333**

Exhibit 2 shows the five-year occupational demand projections for the above middle-skill group of data science occupations. In Los Angeles/Orange County, the number of jobs related to these

[2] Living wage data was pulled from California Family Needs Calculator on 10/2/20. For more information, visit the California Family Needs Calculator website: https://insightcced.org/2018-family-needs-calculator/.

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

occupations is projected to increase by 7% through 2024. There will be more than 2,300 job openings per year through 2024 due to retirements and workers leaving the field.

This report includes employment projection data by Emsi which uses EDD information. Emsi's projections are modeled on recorded (historical) employment figures and incorporate several underlying assumptions, including the assumption that the economy, during the projection period, will be at approximately full employment. To the extent that a recession or labor shock, such as the economic effects of COVID-19, can cause long-term structural change, it may impact the projections. At this time, it is not possible to quantify the impact of COVID-19 on projections of industry and occupational employment. Therefore, the projections included in this report do not take the impacts of COVID-19 into account.

Exhibit 2: Above middle-skill occupational demand in Los Angeles and Orange Counties

Geography	2019 Jobs	2024 Jobs	2019-2024 Change	2019-2024 % Change	Annual Openings
Los Angeles	18,271	19,489	1,218	7%	1,581
Orange	8,533	9,190	657	8%	760
Total	**26,804**	**28,679**	**1,875**	**7%**	**2,341**

Wages

The labor market endorsement in this report considers the entry-level hourly wages for these data science occupations in Los Angeles County as they relate to the county's living wage. Orange County wages are included below in order to provide a complete analysis of the LA/OC region. Detailed wage information, by county, is included in Appendix A.

Los Angeles County—All of the annual openings for these data science occupations have entry-level wages above the living wage for one adult ($15.04 in Los Angeles County).[4] For the middle-skill occupations, typical entry-level hourly wages are in a range between $21.25 and $25.56. For the above middle-skill occupations, typical entry-level hourly wages are in a range between $32.59 and $36.27. Experienced workers can expect to earn wages between $34.98 and $61.08, which are higher than the living wage estimate. Los Angeles County's average wages are below the average statewide wage of $41.15 for these occupations.

Orange County—All of the annual openings for these data science occupations have entry-level wages above the living wage for one adult ($17.36 in Los Angeles County).[5] For the middle-skill occupations, typical entry-level hourly wages are in a range between $20.69 and $24.89. For the above middle-skill occupations, typical entry-level hourly wages are in a range between $31.27 and $34.84. Experienced workers can expect to earn wages between $53.87 and $58.67, which are higher than the living wage estimate. Orange County's average wages are below the average statewide wage of $41.15 for these occupations.

[4] Living wage data was pulled from California Family Needs Calculator on 10/2/2020. For more information, visit the California Family Needs Calculator website: https://insightcced.org/2018-family-needs-calculator/.
[5] Living wage data was pulled from California Family Needs Calculator on 10/2/2020. For more information, visit the California Family Needs Calculator website: https://insightcced.org/2018-family-needs-calculator/.

Job Postings
There were 10,945 online job postings related to middle-skill data science occupations listed in the past 12 months. The highest number of job postings were for help desk analysts, desktop support, desktop support technicians, help desk technicians, and IT support specialists. The top skills were: technical support, customer service, help desk support, repair, and Microsoft Active Directory. The top three employers, by number of job postings, in the region were: Best Buy, IBM and Northrop Grumman.

It is important to note that the job postings data included in this section reflects online job postings listed in the past 12 months and does not yet demonstrate the impact of COVID-19. While employers have generally posted fewer online job postings since the beginning of the pandemic, the long-term effects are currently unknown.

Educational Attainment
The Bureau of Labor Statistics (BLS) lists the following typical entry-level education levels for these data science occupations:

- **Bachelor's degree:** Computer Systems Analysts, Information Security Analysts, and Operations Research Analysts
- **Associate degree:** Computer Network Support Specialists
- **Some college/no degree:** Computer User Support Specialists

In the LA/OC region, all of the annual job openings for these middle-skill data science occupations typically require an associate degree or some college. Furthermore, the national-level educational attainment data indicates 41% of workers in the field have completed some college or an associate degree. Of the 26% of middle-skill data science job postings listing a minimum education requirement in Los Angeles/Orange County, 72% (2,044) requested a high school diploma and 28% (812) requested an associate degree.

Educational Supply
Community College Supply—Exhibit 3 shows the three-year average number of awards conferred by community colleges in the related TOP codes: Computer Information Systems (0702.00) and Computer Systems Analysis (0707.30). The colleges with the most completions in the region are Rio Hondo, East LA, El Comino and LA Trade-Tech. Over the past 12 months, there were six other related program recommendation requests from regional community colleges.

Exhibit 3: Regional community college awards (certificates and degrees), 2016-2019

TOP Code	Program	College	2016-2017 Awards	2017-2018 Awards	2018-2019 Awards	3-Year Award Average
0702.00	Computer Information Systems	Citrus	5	7	5	6
		Compton	1	-	1	1
		East LA	14	16	19	16
		El Camino	15	18	14	16
		Glendale	2	-	-	1
		LA City	3	4	1	3

TOP Code	Program	College	2016-2017 Awards	2017-2018 Awards	2018-2019 Awards	3-Year Award Average
		LA Mission	3	9	5	6
		LA Trade	23	14	8	15
		Pasadena	2	1	-	1
		Rio Hondo	10	19	21	17
		West LA	13	6	8	9
		LA Subtotal	**91**	**94**	**82**	**89**
		Cypress	5	8	5	6
		Fullerton	7	20	15	14
		Orange Coast		3	4	2
		Santa Ana	18	6	4	9
		Santiago Canyon	2	2	3	2
		OC Subtotal	**32**	**39**	**31**	**34**
Supply Subtotal/Average			**123**	**133**	**113**	**123**
0707.30	Computer Systems Analysis	Cerritos	6	4	2	4
		LA Subtotal	**6**	**4**	**2**	**4**
		Cypress	-	5	2	2
		OC Subtotal	**0**	**5**	**2**	**2**
Supply Subtotal/Average			**6**	**9**	**4**	**6**
Supply Total/Average			**129**	**142**	**117**	**129**

Exhibit 4 displays the Strong Workforce Program (SWP) metrics for the Computer Systems Analysis (0707.30) programs in the region.

Exhibit 4: Strong Workforce Program metrics for LA/OC Computer Systems Analysis (0707.30) programs

Strong Workforce Program Metrics (2017-18, unless noted otherwise)	Los Angeles/ Orange County	California
Unduplicated count of enrolled students (2018-19)	201	1,153
Median annual earnings	$36,080	$32,354
Median change in earnings	24%	30%
Students who attained the living wage	56%	58%
Job closely related to field of study (2016-17)	67%	63%

Non-Community College Supply—It is important to consider the supply from other institutions in the region that provide training programs for data science. Exhibit 5 shows the annual and three-year average number of awards conferred by these institutions in the related Classification of Instructional Programs (CIP) Codes: Information Technology (11.0103), Computer Systems Analysis/Analyst (11.0501), and Computer Technology/Computer Systems Technology (15.1202). Due to different data collection periods, the most recent three-year period of available data is from 2014 to 2017. Between 2014 and 2017, four-year colleges in the region conferred an average of 505 awards annually in related training programs.

Exhibit 5: Regional non-community college awards, 2014-2017

CIP Code	Program	College	2014-2015 Awards	2015-2016 Awards	2016-2017 Awards	3-Year Award Average
11.0103	Information Technology	Argosy University-Orange County	-	1	-	0
		Bethesda University	1	1	-	1
		Brand College	55	42	28	42
		California Intercontinental University	-	-	1	0
		California State University-Los Angeles	102	92	117	104
		California State University-Northridge	49	48	43	47
		Stanbridge University	29	21	25	25
		Trident University International	96	77	74	82
		University of Phoenix-California	2	3	16	7
11.0501	Computer Systems Analysis/ Analyst	Brand College	1	2	4	2
		DeVry University-California	110	103	94	102
		University of Phoenix-California	9	8	4	7
15.1202	Computer Technology/ Computer Systems Technology	Advanced Computing Institute	67	74	92	78
		Learnet Academy Inc	-	13	11	8
		Supply Total/Average	**521**	**485**	**509**	**505**

Appendix A: Occupational demand and wage data by county

Exhibit 5. Los Angeles County

Occupation (SOC)	2019 Jobs	2024 Jobs	5-Yr Change	5-Yr % Change	Annual Openings	Entry-Level Hourly Earnings (25th Percentile)	Median Hourly Earnings	Experienced Hourly Earnings (75th Percentile)
Computer User Support Specialists (15-1151)	19,263	20,531	1,268	7%	1,884	$21.25	$27.19	$34.98
Computer Network Support Specialists (15-1152)	4,858	5,072	214	4%	450	$25.56	$32.71	$42.68
Middle-Skill Subtotal	**24,121**	**25,603**	**1,482**	**6%**	**2,333**			
Computer Systems Analysts (15-1121)	13,806	14,467	661	5%	1,151	$34.26	$45.60	$58.38
Information Security Analysts (15-1122)	1,816	2,085	269	15%	191	$36.27	$48.91	$61.08
Operations Research Analysts (15-2031)	2,649	2,937	288	11%	239	$32.59	$43.85	$56.16
Above Middle-Skill Subtotal	**18,271**	**19,489**	**1,218**	**7%**	**1,581**			
Total	**42,392**	**45,092**	**2,700**	**6%**	**3,915**			

Exhibit 6. Orange County

Occupation (SOC)	2019 Jobs	2024 Jobs	5-Yr Change	5-Yr % Change	Annual Openings	Entry-Level Hourly Earnings (25th Percentile)	Median Hourly Earnings	Experienced Hourly Earnings (75th Percentile)
Computer User Support Specialists (15-1151)	8,258	8,832	574	7%	815	$20.69	$26.49	$34.10
Computer Network Support Specialists (15-1152)	1,980	2,069	89	4%	184	$24.89	$31.88	$41.64
Middle-Skill Subtotal	**10,239**	**10,901**	**662**	**6%**	**999**			
Computer Systems Analysts (15-1121)	6,472	6,841	369	6%	554	$33.08	$43.99	$56.30
Information Security Analysts (15-1122)	862	1,013	151	18%	96	$34.84	$46.98	$58.67
Operations Research Analysts (15-2031)	1,200	1,336	136	11%	109	$31.27	$42.07	$53.87
Above Middle-Skill Subtotal	**8,533**	**9,190**	**657**	**8%**	**760**			
Total	**18,772**	**20,092**	**1,320**	**7%**	**1,759**			

Exhibit 7. Los Angeles and Orange Counties

Occupation (SOC)	2019 Jobs	2024 Jobs	5-Yr Change	5-Yr % Change	Annual Openings	Typical Entry-Level Education	On-The-Job Training & Work Experience
Computer User Support Specialists (15-1151)	27,521	29,363	1,842	7%	2,699	Some college/ no degree	None & None
Computer Network Support Specialists (15-1152)	6,838	7,141	303	4%	634	Associate degree	None & None
Middle-Skill Subtotal	**34,360**	**36,505**	**2,145**	**6%**	**3,333**		
Computer Systems Analysts (15-1121)	20,277	21,308	1,031	5%	1,705	Bachelor's degree	None & None
Information Security Analysts (15-1122)	2,678	3,098	420	16%	288	Bachelor's degree	None & Less than 5 Years
Operations Research Analysts (15-2031)	3,849	4,273	424	11%	348	Bachelor's degree	None & None
Above Middle-Skill Subtotal	**26,804**	**28,679**	**1,875**	**7%**	**2,341**		
Total	**61,164**	**65,184**	**4,020**	**7%**	**5,673**		

Appendix B: Sources

- O*NET Online
- Labor Insight/Jobs (Burning Glass)
- Economic Modeling Specialists, International (Emsi)
- Bureau of Labor Statistics (BLS)
- Employment Development Department, Labor Market Information Division, OES
- California Community Colleges Chancellor's Office Management Information Systems (MIS)
- California Family Needs Calculator, Insight Center for Community Economic Development
- Chancellor's Office Curriculum Inventory (COCI 2.0)

For more information, please contact:

Luke Meyer, Director
Los Angeles/Orange County Center of Excellence
lmeyer7@mtsac.edu

C·O·E
CENTERS OF EXCELLENCE
FOR LABOR MARKET RESEARCH

October 2020

Santa Monica College

Computer Science Information Systems

Computer Science Advisory Board

May 15, 2020

MINUTES

Attendees:

SMC Attendees: Howard Stahl (Chair), Edwin Ambrosio, Scott Bishop, Fariba Bolandhemat, Nancy Cardenas, Jinan Darwiche, Mark Edmonds, Mary Eshaghian, Sira Hotsinpiller, Dan Hurley, Koda Kol, David Morgan, Vicky Seno, Joseph Su

SMC Students: Nashir Janmohamed, Ariel Young

Non-SMC Attendees: Charlotte Augenstein (State Chancellor's Office ICT Sector Navigator), Matt Gray (Honey), Richard Korf (UCLA Computer Science), Cord Thomas (RAND Corporation), Christian Williamson (Amazon Web Services)

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 42% since 2016-17, of 110% since 2009-2010
- A growth in student headcount of 72% since 2014-2015
- A growth in awarded certificates of 170% since 2014-2015
- No increase in full-time faculty in this discipline since 2001. Attendees commented that more growth is possible if the department had 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. New courses recently approved were discussed including CS 79Y-Microsoft Azure Database Essentials, CS 79Z-Microsoft Azure Essentials, CS 73L-Cybersecurity Literacy and CS 87B-Advanced Python Programming.

Plans for the Future

Howard shared information regarding an Associates Degree in Cloud Computing. This effort is a natural outgrowth of all our classes in the CS 79 Series, both Azure and Amazon Web Services.

MOTION: The Computer Science Advisory Board supports the creation and development of an Associates Degree in Cloud Computing. Made by: Stahl Seconded by: Korf. FOR-21 AGAINST-0 ABSTAIN-0 Attendees support this degree and voted unanimously to support it.

Howard shared information regarding a certificate in Data Science. This effort is a natural outgrowth of many of the topics we are already teaching, including Python, SQL and Machine Learning. The new certificate is being discussed with CIS and Business to see how best to position it and how best to meet student interest. We are proposing to create new courses in R Programming and in Data Science concepts.

MOTION: The Computer Science Advisory Board supports the creation and development of an certificate in Data Science. Made by: Stahl Seconded by: Gray. FOR-21 AGAINST-0 ABSTAIN-0 Attendees support this certificate and voted unanimously to support it.

Meeting Adjourned: 10:35 AM

SANTA MONICA COLLEGE
PROGRAM OF STUDY

Computer Business Applications
Associate in Science (AS) / Certificate of Achievement

The core of this certificate program provides advanced computer skills and business concepts that can be applied in nearly every industry. Students will learn to use Microsoft Office products, as well as other computer software applications, that can be applied in business situations to create, edit, format and publish documents, spreadsheets, presentations and databases.

Students can select from three specializations within the Computer Business Applications Certificate program:

- Social Media Specialist students will be introduced to the finer points of the most popular social media applications, including search engine optimization, HTML and digital marketing.
- Office Finance Specialist students will develop the skills necessary to handle basic accounting and bookkeeping procedures for small businesses.
- Microsoft Office Specialist students will develop additional expertise in each of the Microsoft Office applications. This specialization assists in preparation for the Microsoft Office Specialist (MOS) certification exams.

Program Learning Outcomes:
Upon completion of the program in Computer Business Applications, students will be able to analyze different type of business information, use the Internet to support findings, and use software applications to produce various business reports and presentations used in industry of concentration area.

Area of Emphasis

Required courses: (21 units)		**Units:** 21.0
BUS 1 DE	Introduction To Business	3.0
CIS 1 DE	Introduction to Computer Information Systems	3.0
CIS 4 DE	Business Information Systems with Applications	3.0
CIS 37 DE	Microsoft Word	3.0
CIS 39 DE	MS Outlook - Comprehensive Course	3.0
OFTECH 5 DE	English Skills for the Office	3.0
OFTECH 1 DE	Keyboarding I	3.0
OR		
OFTECH 10 DE	Skill Building on the Keyboard	3.0
Complete one of the following specialization tracks below based on your career interests: (9 units minimum)		**Units:** 9.0
Track 1: Social Media Specialist		
BUS 34A DE	Introduction to Social Media Marketing	3.0
CIS 50 DE	Internet, HTML, and Web Design	3.0
CIS 70 DE	Digital Marketing Applications	3.0
Track 2: Office Finance Specialist		
CIS 30	Microsoft Excel	3.0

ACCTG 1	Introduction to Financial Accounting	5.0
OR		
ACCTG 21	Business Bookkeeping	3.0

CIS 35A DE	QuickBooks Desktop	3.0
OR		
CIS 35B DE	QuickBooks Online	3.0
Track 3: Microsoft Office Specialist		
CIS 30 DE	Microsoft Excel	3.0
CIS 32 DE	Microsoft Access	3.0
CIS 38 DE	Microsoft PowerPoint	3.0

Total: 30.0

SANTA MONICA COLLEGE
PROGRAM OF STUDY

Early Intervention/Special Education Assistant
Associate in Science (AS) / Certificate of Achievement

Early Childhood Education majors will be trained to supervise and provide care and learning experiences for children from infancy through eight years of age in a variety of early childhood settings.

Early Childhood Education professionals adhere to the guidelines as well as the Professional Code of Ethics of the National Association for the Education of Young Children (NAEYC) and provide developmentally appropriate learning opportunities for the enhancement of the physical, intellectual, social, emotional and creative domains of young children.

The Early Intervention/Special Education Assistant program will prepare students for career placements in public and/or private early intervention and educational settings that serve young children with a range of developmental strengths, abilities and needs. Specific jobs and responsibilities may include serving as an early childhood educator with a specialization in working with children with exceptionalities, a special education assistant for children birth to eight years of age, a one-to-one assistant for children with exceptionalities (e.g., inclusion facilitator), a classroom assistant with expertise in special needs, or as an assistant teacher on an early intervention team serving infants and toddlers birth to three years of age.

Program Learning Outcomes:
Upon completion of the program, students will demonstrate the knowledge, skills and dispositions to work with young children with exceptionalities and those who may be at risk for developmental delays and disabilities, and with their families. The degree and certificate programs are appropriate for students working as assistants or paraprofessionals in early intervention or early childhood special education. The degree program is also appropriate for students working as early childhood teachers in inclusive early childhood programs licensed by the California Department of Social Services (Title 22). The degree is designed to meet the requirements for the California Child Development Teacher permit, while the certificate is designed to meet two of the three requirements needed to qualify for the California Child Development Teacher permit.

Area of Emphasis

Required Courses:		**Units:** 33.0
ECE 2 DE	Principles and Practices of Teaching Young Children	3.0
ECE 11 DE	Child, Family and Community	3.0
ECE 17 DE	Introduction to Curriculum	3.0
ECE 21 DE	Observation and Assessment	4.0
ECE 23 DE	Practicum In Early Intervention/Special Education	5.0
ECE 45 DE	Introduction to Children with Special Needs	3.0
ECE 46 DE	Infant and Toddler Development	3.0
ECE 49 DE	Curriculum and Strategies for Children with Special Needs	3.0
ECE 64 DE	Health, Safety, and Nutrition for Young Children	3.0
PSYCH 11 DE	Child Growth and Development	3.0
		Total: 33.0

SANTA MONICA COLLEGE
PROGRAM OF STUDY

Social Media Assistant
Certificate of Achievement

Social media has revolutionized the way businesses interact with consumers. This program is designed to give students an understanding of the concepts involved in marketing and the role social media plays in advertising, public relations, branding, and corporate communication strategies.

Students will gain practical skills and learn the latest technical tools in social media through various projects and other assignments.

Program Learning Outcomes:
Upon completion of the program, students will demonstrate the difference between social media platforms, including functionality, target audience, and intended use.

Upon completion of the program, students will determine which social media platforms are best for their business and examine recent changes associated with popular social media platforms.

Area of Emphasis

Required Courses:		**Units:** 15.0
MEDIA 20 DE	Introduction to Media Writing and Producing Short-Form Content	3.0
OR		
DMPOST 3 DE	Digital Video Fundamentals	3.0
BUS 34A DE	Introduction to Social Media Marketing	3.0
CIS 50 DE	Internet, HTML, and Web Design	3.0
CIS 60A DE	Photoshop I	3.0
CIS 70 DE	Digital Marketing Applications	3.0
		Total: 15.0