CS M25M: IOS DEVELOPMENT I

Originator

Loay Alnaji

College

Moorpark College

Attach Support Documentation (as needed)

CS M25M_Computer Programming_Moorpark_Analysis_Report.pdf CS M25M_Mobile App Developer Statistics Roundup.pdf CS M25M_Minutes_1st CS Advisory Meeting_ 4-16-18_Esmaail Nikjeh (6).docx CS M25M_state approval letter_CCC000608538.pdf

Discipline (CB01A)

CS - Computer Science

Course Number (CB01B) M25M

Course Title (CB02)

iOS Development I

Banner/Short Title

iOS Development I

Credit Type Credit

Honors

No

Start Term

Spring 2020

Catalog Course Description

Introduces students to the basics of mobile app development using iOS as a development platform. Assists students in building foundation programming skills to create well-designed mobile apps based on user requirements. Applies core graphics and touch handling techniques to allow users to interface with their applications.

Taxonomy of Programs (TOP) Code (CB03)

0706.00 - Computer Science (transfer)

Course Credit Status (CB04)

D (Credit - Degree Applicable)

Course Transfer Status (CB05) (select one only)

B (Transferable to CSU only)

Course Basic Skills Status (CB08) N - The Course is Not a Basic Skills Course

SAM Priority Code (CB09)

E - Non-Occupational

Course Cooperative Work Experience Education Status (CB10)

N - Is Not Part of a Cooperative Work Experience Education Program

Course Classification Status (CB11)

Y - Credit Course

Educational Assistance Class Instruction (Approved Special Class) (CB13)

N - The Course is Not an Approved Special Class

Course Prior to Transfer Level (CB21) Y - Not Applicable

Course Noncredit Category (CB22) Y - Credit Course

Funding Agency Category (CB23) Y - Not Applicable (Funding Not Used)

Course Program Status (CB24)

1 - Program Applicable

General Education Status (CB25) Y - Not Applicable

Support Course Status (CB26) N - Course is not a support course

Field trips Will not be required

Grading method Student Option- Letter/Pass

Does this course require an instructional materials fee? No

Repeatable for Credit No

Units and Hours

Carnegie Unit Override No

In-Class

Lecture Minimum Contact/In-Class Lecture Hours 35 Maximum Contact/In-Class Lecture Hours 35

Activity

Laboratory Minimum Contact/In-Class Laboratory Hours 52.5 Maximum Contact/In-Class Laboratory Hours 52.5

Total in-Class

Total in-Class Total Minimum Contact/In-Class Hours 87.5 Total Maximum Contact/In-Class Hours 87.5

Outside-of-Class

Internship/Cooperative Work Experience

Paid

Unpaid

Total Outside-of-Class

Total Outside-of-Class Minimum Outside-of-Class Hours 70 Maximum Outside-of-Class Hours 70

Total Student Learning

Total Student Learning Total Minimum Student Learning Hours 157.5 Total Maximum Student Learning Hours 157.5

Minimum Units (CB07)

3

Maximum Units (CB06)

3

Student Learning Outcomes (CSLOs)

	Upon satisfactory completion of the course, students will be able to:
1	design and create a user interface for a mobile App.
2	compare and contrast between different interfaces from a usability and user experience point of view.
3	analyze the strengths and weaknesses of a given interface design for a mobile App.
4	demonstrate ability to create a flexible and engaging interface for a given mobile program.

Course Objectives

	Upon satisfactory completion of the course, students will be able to:
1	program solutions for given problems by writing code that meets user requirements.
2	identify the proper use of loops and decision statements to write code to solve a problem.
3	design an appropriate functioning interface using different controls such as text boxes, buttons, and labels to read input from user and display data to user.
4	apply different techniques to store, retrieve and use data on mobile devices.

Course Content

Lecture/Course Content

- 5% Introduction to Mobile Architecture and Development
- 15% Xcode Development
- 10% Objective-C for Experienced Programmers
- 10% Application Patterns and Architecture
- 10% Views and Windows
- 20% Storyboards
- 15% Table Views
- 15% Navigation-Based Applications

Laboratory or Activity Content

- 10% Create a new project using XCode
- · 10% Start a new workspace to begin your project.
- 10% Create classes, attributes and methods to solve a given problem
- · 10% Explain different memory management strategies in a given application
- 10 % Create an app to run on different mobile apps (iPhone, iPad, iPhone7, iPhone X...etc.)
- · 20% Build a graphical user interface (GUI) to meet user requirements
- 10% Identify bugs in given code
- 10% Use auto-sizing to build dynamic apps
- 10% Using storyboards to create apps

Methods of Evaluation

Which of these methods will students use to demonstrate proficiency in the subject matter of this course? (Check all that apply):

Problem solving exercises Skills demonstrations

Methods of Evaluation may include, but are not limited to, the following typical classroom assessment techniques/required assignments (check as many as are deemed appropriate):

Individual projects Journals Objective exams Other (specify) Skills demonstrations

Other

•Code writing •Code review •Classroom discussion •Participation

Instructional Methodology

Specify the methods of instruction that may be employed in this course

Class activities Distance Education Laboratory activities Lecture Other (specify) Small group activities

Specify other method of instruction

•Videos •Interactive multimedia

Describe specific examples of the methods the instructor will use:

Student will work on assigned tutorials that Apple has setup to help learn mobile development. Faculty will also present lecture notes using powerpoint as well as demonstrate code writing using tutorial videos.

Representative Course Assignments

Writing Assignments

1. Create an app that reads user's information and displays the information on the device screen.

2. Create an app that displays the student's picture with their name, address, and student ID number under it.

3. Write a report to discuss the advantages and disadvantages of using Swift as a development tool.

Critical Thinking Assignments

1. Defend the best application design that meets industry standards from a list of different designs.

2. Explain the best practices applied when writing code; pick one practice you did not implement and explain why it was not implemented.

3. Explain the different security protocols you would follow when designing a mobile app.

Reading Assignments

- 1. Read hand-outs provided by the instructor regarding mobile development and discuss the difference between writing mobile applications vs. regular applications (running on PC).
- 2. Read and study selected chapters from the textbook and the accompanying lecture notes, then answer solve problems assigned by the instructor.

Outside Assignments

Representative Outside Assignments

1. Research the internet and compare the different Integrated Development Environments (IDE) used to create mobile applications.

2. Use the library resources to list at least 2 references on mobile app development using iOS; provide a brief summary of each resource.

3. Research the internet to find different iOS development tutorials and lessons.

Articulation

Equivalent Courses at other CCCs

College	Course ID	Course Title	Units
Santa Monica College	CS 53B	iOS Mobile App Development	3
Cuesta College	CIS 2013	IOS Development 1	3
De Anza College	CIS 55	iOS Development	4.5
Palomar College	CSCI 275	iOS Development	3

District General Education

A. Natural Sciences

B. Social and Behavioral Sciences

C. Humanities

D. Language and Rationality

E. Health and Physical Education/Kinesiology

F. Ethnic Studies/Gender Studies

Course is CSU transferable Yes

CSU GE-Breadth

Area A: English Language Communication and Critical Thinking

Area B: Scientific Inquiry and Quantitative Reasoning

Area C: Arts and Humanities

Area D: Social Sciences

Area E: Lifelong Learning and Self-Development

CSU Graduation Requirement in U.S. History, Constitution and American Ideals:

IGETC

Area 1: English Communication

Area 2A: Mathematical Concepts & Quantitative Reasoning

Area 3: Arts and Humanities

Area 4: Social and Behavioral Sciences

Area 5: Physical and Biological Sciences

Area 6: Languages Other than English (LOTE)

Textbooks and Lab Manuals

Resource Type Textbook

Classic Textbook Yes

Description Neuburg, Matt. <u>Programming iOS 12: Dive Deep into Views, View Controllers, and</u> <u>Frameworks</u>. O'Reilly Media, 2018.

Resource Type Textbook

Classic Textbook

Yes

Description

Neuburg, Matt. iOS 12 Programming Fundamentals with Swift: Swift, Xcode, and Cocoa Basics. O'Reilly Media, 2018.

Resource Type Other Resource Type

Description

The Swift Programming Language (Swift 4.1) (Free)

Resource Type

Websites

Description

https://itunes.apple.com/us/book/the-swift-programming-language-swift-4-1/id881256329?

mt=11

Resource Type

Other Resource Type

Description

Apple Swift Resources (free)

Resource Type

Websites

Description https://developer.apple.com/swift/resources/

Library Resources

Assignments requiring library resources

Use the Library's print and online resources to research such topics as the ethical and security concerns using iOS development applications.

Sufficient Library Resources exist

Yes

Distance Education Addendum

Definitions

Distance Education Modalities

Hybrid (51–99% online) Hybrid (1–50% online) 100% Online

Faculty Certifications

Faculty assigned to teach Hybrid or Fully Online sections of this course will receive training in how to satisfy the Federal and state regulations governing regular effective/substantive contact for distance education. The training will include common elements in the district-supported learning management system (LMS), online teaching methods, regular effective/substantive contact, and best practices.

Yes

Faculty assigned to teach Hybrid or Fully Online sections of this course will meet with the EAC Alternate Media Specialist to ensure that the course content meets the required Federal and state accessibility standards for access by students with disabilities. Common areas for discussion include accessibility of PDF files, images, captioning of videos, Power Point presentations, math and scientific notation, and ensuring the use of style mark-up in Word documents.

Yes

Regular Effective/Substantive Contact

Hybrid (1%-50% online) Modality:

Method of Instruction	Document typical activities or assignments for each method of instruction
Other DE (e.g., recorded lectures)	Recorded video lectures on specific topic.
E-mail	Instructor will use email communication to help guide students who have questions about the system.

Hybrid (51%-99% online) Modality:

Method of Instruction	Document typical activities or assignments for each method of instruction
Other DE (e.g., recorded lectures)	Recorded video lectures on specific topic.
E-mail	Instructor will use email communication to help guide students who have questions about the system.
Synchronous Dialog (e.g., online chat)	Instructor may be available on a certain day or days for an hour or more to meet with students online to chat with them about the course topic.
Telephone	Instructor may provide his/her phone number to students where they can leave a voicemail and expect a call back with in 24 hour.
100% online Modality:	
Method of Instruction	Document typical activities or assignments for each method of instruction
Asynchronous Dialog (e.g., discussion board)	Discussion reaction to assigned topic.
Asynchronous Dialog (e.g., discussion board) Other DE (e.g., recorded lectures)	Discussion reaction to assigned topic. Recorded video lectures on specific topic.
Asynchronous Dialog (e.g., discussion board) Other DE (e.g., recorded lectures) E-mail	Discussion reaction to assigned topic. Recorded video lectures on specific topic. Instructor will use email communication to help guide students who have questions about the system.
Asynchronous Dialog (e.g., discussion board) Other DE (e.g., recorded lectures) E-mail Synchronous Dialog (e.g., online chat)	Discussion reaction to assigned topic. Recorded video lectures on specific topic. Instructor will use email communication to help guide students who have questions about the system. Instructor may be available on a certain day or days for an hour or more to meet with students online to chat with them about the course topic.

Examinations

Hybrid (1%–50% online) Modality Online On campus

Hybrid (51%–99% online) Modality Online On campus

Primary Minimum Qualification COMPUTER SCIENCE

Review and Approval Dates

Department Chair 01/10/2019

Dean 11/29/2018

Technical Review 01/31/2019

Curriculum Committee 02/05/2019

DTRW-I 09/12/2019

Curriculum Committee MM/DD/YYYY

Board 10/08/2019 **CCCCO** 10/12/2019

Control Number CCC000608538

DOE/accreditation approval date MM/DD/YYYY