

CS M26M: IOS DEVELOPMENT II

Originator

Loay Alnaji

College

Moorpark College

Attach Support Documentation (as needed)

CS M26M_Computer Programming_Moorpark_Analysis_Report.pdf
 CS M26M_Mobile App Developer Statistics Roundup.pdf
 CS M26M_Minutes_1st CS Advisory Meeting_ 4-16-18_Esmaail Nikjeh (7).docx
 CS M26M_state approval letter_CCC000608539.pdf

Discipline (CB01A)

CS - Computer Science

Course Number (CB01B)

M26M

Course Title (CB02)

iOS Development II

Banner/Short Title

iOS Development II

Credit Type

Credit

Honors

No

Start Term

Spring 2020

Catalog Course Description

Exposes students to different programming standards relating to mobile/user interaction. Develops the skills needed to create network-based apps. Develops code that uses mobile device peripherals such as Global Positioning System (GPS), camera and maps to provide users with better services.

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

Prerequisites

CS M25M

Requisite Justification

Requisite Type

Prerequisite

Requisite

CS M25M

Requisite Description

Course in a sequence

Level of Scrutiny/Justification

Content review

Student Learning Outcomes (CSLOs)

Upon satisfactory completion of the course, students will be able to:	
1	develop a fully running application using stand-alone or client/server framework
2	determine the proper development framework for a mobile app
3	utilize features in mobile devices, such as location awareness and other sensors, your application
4	implement advanced animation techniques to create an interactive app

Course Objectives

Upon satisfactory completion of the course, students will be able to:	
1	create a flexible and engaging interface for a given mobile program.
2	debug and correct a mobile application written in Swift.
3	create mobile apps that use external peripherals and hardware such as GPS and face recognition.

- | | |
|---|--|
| 4 | create basic games using animation and graphics libraries. |
| 5 | create apps that communicate with other apps over a network. |

Course Content

Lecture/Course Content

- 10% - Model/View/Controller
- 10% - Drawing with Swift
- 10% - Introduction to Scrollable Views, Tabs and Pages
- 20% - Asynchronous Network Access
- 15% - Gesture Recognizers
- 15% - Core Location, MapKit and Geofencing
- 10% - Core Data; Music Libraries and Media Picker
- 10% - Data security and Networking

Laboratory or Activity Content

- 10% - Using Maps SDK, turn maps locator on and off
- 10% - Use Maps SDK to search databases using a given keyword
- 15% - Add animation to different controls
- 15% - Create a two player game that allows players to interact over a network
- 15% - Design an app that uses third party controls to communicate with social media objects
- 15% - Design the appropriate Graphical User Interface (GUI) based on given requirements
- 10% - Write an app that plays music
- 10% - Use a mobile device camera to capture and store images

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. Write a mobile app that displays an image on the screen.
2. Write a mobile app that allows the user to swipe between two images.
3. Write a paper explaining the steps required to publish an mobile app online.

Critical Thinking Assignments

1. Write a mobile app that uses "touch" to interact with the user.
2. Use a third party component to add new features to a mobile app; discuss any security and ethical implications you might have from using the new component.
3. Compare and contract different mobile app components; discuss what security and ethical issues might a developer deal with when using such components?

Reading Assignments

1. Read hand-outs provided by the instructor regarding using third party components in mobile development such as GPS and Camera, then discuss the legal and ethical ramifications from using such tools without the knowledge of the user.
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. Use the Library's resources to compare and contrast iOS development with Android development; explore different programming tools, logic, and Integrated Development Environments (IDE).
2. Discuss the different IDEs used to create mobile apps.
3. Research the internet to find different third party controls that you can add to your app to make it unique.

Articulation**Equivalent Courses at other CCCs**

College	Course ID	Course Title	Units
Santa Monica College	CS 53C	iOS Advanced Mobile App Development	3
Cuesta College	CIS 204	iOS Development II	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

Sadun, Erica. The Advanced iOS 6 Developer's Cookbook. 4th ed. Addison-Wesley Professional, 2013.

Resource Type

Other Resource Type

Description

App Development with Swift Curriculum Guide

Resource Type

Websites

Description

https://www.apple.com/education/docs/App_Development_with_Swift_Curriculum_Guide.pdf

Resource Type

Websites

Description

The Swift Programming Language
<https://itunes.apple.com/us/book/the-swift-programming-language-swift-4-2-beta/id1002622538?mt=11>

Resource Type

Other Resource Type

Description

Developing iOS 11 Apps with Swift

Resource Type

Websites

Description<https://itunes.apple.com/us/course/developing-ios-11-apps-with-swift/id1309275316>**Library Resources****Assignments requiring library resources**

Use the Library's print and online resources to research the different tools and third party components you can use to support your app by providing the user with better interactivity with your app.

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.
Telephone	Instructor may provide his/her phone number to students where they can leave a voicemail and expect a call back within 24 hours.

Hybrid (51%–99% online) Modality:

Method of Instruction	Document typical activities or assignments for each method of instruction
Other DE (e.g., recorded lectures)	Instructor may provide students with recorded lectures that explain the topic of the week.

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.
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.

100% online Modality:

Method of Instruction	Document typical activities or assignments for each method of instruction
Asynchronous Dialog (e.g., discussion board)	Instructor will use a learning tool like CANVAS to create a Question and Answer thread to answer any questions related to the course and will post a Question every week in the discussion threads for students to answer and discuss.
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.
E-mail	Instructor will use email communication to help guide students who have questions about the system.
Other DE (e.g., recorded lectures)	Instructor may provide students with recorded lectures that explain the topic of the week.
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.

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

CCC000608539

DOE/accreditation approval date

MM/DD/YYYY