

Montgomery County Community College
 CIS 240
 Mobile Application Development
 3-2-2

COURSE DESCRIPTION:

This is a comprehensive course on how to develop applications for phones, tablets and other mobile devices targeted for business needs. Students will learn how to utilize a modern mobile development environment using standard mobile development tools to build applications for distribution. Students will learn how to design mobile interfaces and how to apply mobile technology to solve common business needs. Although students may use the College's computer labs to complete their course work, it is highly recommended that students have access to a relevant mobile device or virtual machine to complete work outside of class.

PREREQUISITE:

Prerequisites: CIS 111B with a C or better, or prior object-oriented programming experience and permission of the Instructor.

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

| LEARNING OUTCOMES | LEARNING ACTIVITIES | EVALUATION METHODS |
|---|--|--|
| 1. Program mobile applications utilizing relevant mobile development tools. | Assigned Readings AV/Multimedia Materials Case Study Demonstration and Practice Lecture/Discussion | Student Programming Assignments Examinations |
| 2. Design mobile user interfaces. | Assigned Readings AV/Multimedia Materials Case Study Demonstration and Practice Lecture/Discussion | Student Programming Assignments Examinations |
| 3. Differentiate distribution methods for mobile sites and apps. | Assigned Readings AV/Multimedia Materials Case Study Demonstration and Practice Lecture/Discussion | Student Programming Assignments Examinations |

| LEARNING OUTCOMES | LEARNING ACTIVITIES | EVALUATION METHODS |
|---|--|--|
| 4. Design applications that utilize and align with the unique hardware and multi-touch software features of mobile devices. | Assigned Readings AV/Multimedia Materials Case Study Demonstration and Practice Lecture/Discussion | Student Programming Assignments Examinations |
| 5. Design mobile solutions that integrate with other computer systems using a service model. | Assigned Readings AV/Multimedia Materials Case Study Demonstration and Practice Lecture/Discussion | Student Programming Assignments Examinations |

At the conclusion of each semester/session, assessment of the learning outcomes will be completed by course faculty using the listed evaluation method(s). Aggregated results will be submitted to the Associate Vice President of Academic Affairs. The benchmark for each learning outcome is that *70% of students will meet or exceed outcome criteria*.

SEQUENCE OF TOPICS:

1. Introduction to mobile development
2. Understanding mobile development fundamentals
 - a. Frameworks
 - b. Application Management
 - c. Syntax and language features
 - d. Development environment
3. Utilize a modern mobile development environment for app development.
4. Designing and managing interfaces
5. Device configuration and deployment for development
6. Designing applications
7. Data persistence
8. Integrations
9. Understanding and using device capabilities
11. Typical application models cross-platform development tools.

LEARNING MATERIALS: Additional Resources may be added as needed.

Jackson, Wallace. *Android Apps for Absolute Beginners: Covering Android 7*. Fourth edition, Apress, 2017. ISBN 9781484222676

Other learning materials may be required and made available directly to the student and/or via the College's Libraries and/or course management system.

COURSE APPROVAL:

Prepared by: Sergio Carbone

Revised by: Anil Datta

Date: 11/2011

Date: 3/2014

Revised by: Matt Krause, Marie Hartlein and Jason Wertz

Provost or designee Compliance Verification:

Date: 10/1/2019

Date: 2/26/2020



This course is consistent with Montgomery County Community College's mission. It was developed, approved and will be delivered in full compliance with the policies and procedures established by the College.