SAN JUAN COLLEGE
Success Matters

# COSC-247 MOBILE APPLICATIONS DEVELOPMENT 3 CREDITS

## SYLLABUS

### CATALOG DESCRIPTION

Designing mobile application programs for the Android operation system. Learning mobile device screen design principles per industry standard. Working in the Eclipse integrated development environment and the XML interface design environment. Time permitting, paired project programming, device sensors, database interfacing, and application publication.

Prerequisites: COSC 118 & COSC 240 (preferred), instructor permission

Semester Offered: Spring

## *COMMON STUDENT LEARNING OUTCOMES*

*Upon successful completion of San Juan College programs and degrees, the student will demonstrate competency in…*

### BROAD AND SPECIALIZED LEARNING

Students will actively and independently acquire, apply, and adapt skills and knowledge with an awareness of global contexts.

### CRITICAL THINKING

Students will think analytically and creatively to explore ideas, make connections, draw conclusions and solve problems.

### CULTURAL AND CIVIC ENGAGEMENT

Students will act purposefully, reflectively, and ethically in diverse and complex environments.

### EFFECTIVE COMMUNICATION

Students will exchange ideas and information with clarity in multiple contexts.

### INFORMATION LITERACY

Students will be able to recognize when information is needed and have the ability to locate, evaluate, and use it effectively.

### INTEGRATING TECHNOLOGIES

Students will demonstrate fluency in the application and use of technologies in multiple contexts.

Student work from this class may be randomly selected and used anonymously for assessment of course, program, and/or institutional learning outcomes. For more information, please refer to the Dean of the appropriate School.

## COURSE LEARNING OUTCOMES

*Upon successful completion of the course, the student will be able to…*

1. Understanding the lifecycle of mobile application design.
2. Utilization of industry design guidelines for application creation.

3. Mastering of mobile development and graphical user interfaces for a mobile device.
4. Creation of mobile application via MIT Appinventor web-based service.
5. Appreciating the concept of code reusability and putting it to work through classes.
6. Analyzing the system requirements of a given mobile device and adjust code creation accordingly.
7. Implementing the design of a mobile application via the Java programming language and XML layout design.
8. Understanding how to package and publish a mobile application.
9. Appreciating and understanding the concepts of event driven programming.
10. Recognizing and using explicit and implicit intents of a mobile device.
11. Understanding and implementing drawing in a window.
12. Understanding and implementing applications that utilize mobile device sensors (e.g. GPS, accelerometer, etc…).
13. Utilizing and implementing multiple screens via activity creation.
14. Identifying and implementing graphical user interface techniques (dialog boxes, messages, checkboxes, alerts).
15. Designing and coding several large projects in a paired programming environment.

COURSE CHALLENGE PROCEDURES

This course may not be challenged. The primary focus of the class is a class team programming project that cannot be replicated without taking the class.