

ACTIVE COURSE FILE*Curricular Area: COMPUTER INFORMATION SYSTEMSCourse Number: 2840Course Title: Android Application DevelopmentSemester Credit Hours: 4Clinical Hours: 0Lecture Hours: 4Lab Hours: 0

Course description to appear in catalog:

Introduces design and programming principles used in creating applications for Android, an open source software stack for mobile devices. Overview of the Android architecture, activity lifecycle, NUI (Natural User Interface) guidelines, and the SDK (Software Development Kit) are covered. Students will be able to create simple Android applications. Knowledge of Java programming highly recommended.

Repeatable for credit: Yes

No, this class is not repeatable.

Pre-Enrollment Criteria:

Prerequisite: CIS 1400 Programming Logic and Technique with a grade of "C" or better, or equivalent.
or
Consent of Instructor

A. General Course Objectives:

Upon successful completion of the course the student should be able to do the following:

1. Identify major vendors of mobile devices
2. Summarize the history of the Android platform
3. Install and configure the Android development environment
4. Identify the major components of the Android operating system architecture (software stack)
5. Describe the lifecycle of an Android activity
6. Explain the relationship between activities, intents, services, and content providers
7. Apply NUI (Natural User Interface) guidelines for icon, widget, and menu design
8. Implement alternative methods for storing persistent application data
9. Describe how security issues are handled in design and application execution
10. Explain how networking connections are implemented
11. Analyze how GPS (Global Positioning Systems) track location data
12. Recognize the importance of the manifest file and its structure
13. Describe how to publish on the Android Market

B. Topical Outline:

1. Major vendors of mobile devices
2. History of the Android platform
3. Installation and configuration of the Android development environment (Java, Eclipse, Android SDK (Software Development Kit), ADT (Android Development Toolkit) Plugin, AVD (Android Virtual Device))
4. Major components of the Android operating system architecture (software stack)
5. Lifecycle of an Android activity
6. Relationship between activities, intents, services, and content providers
7. NUI guidelines for icon, widget, and menu Design
8. Alternative methods for storing persistent application data
9. Security issues in design and application execution
10. Implementing networking connections
11. Location data tracking with GPS (Global Positioning Systems)

- 12. The manifest file and its structure
- 13. Publishing on the Android Market

C. Methods of Evaluating Students:

- 1. Methods of evaluation must include a combination of tests, quizzes, projects, participation, assignments, and attendance.

<u>CAROLYN ENGLAND</u>	<u>02-11-2011</u>
Initiator	Date
<u>CAROLYN ENGLAND</u>	<u>02-11-2011</u>
Sponsor	Date

_____	_____
Division Dean	Date