

NorthWest Arkansas Community College
Business & Computer Information Systems Division
Computer Information Department Course Outline

PROG 2513 Advanced iOS App Development (Demand)

Catalog Description

The student will extend their knowledge and skills in the development of complex apps for devices equipped with Apple's iOS operating system, including iPhones, iPod Touch's, and iPads. Specific areas of emphasis will include design and development of complex user interfaces, use of web services, use of interactive multimedia, interaction with device sensors, and testing apps with both the iPhone/iPad simulator and with Apple iOS hardware. The student will gain additional hands-on experience with the iOS development tools, interaction with the user, presentation of multimedia content, interaction with web services, and use of the device's sensors. All students will participate in Apple's iOS University Developer Program for the duration of this course. (Outside lab time will be required.)

Prerequisites

PROG 1603 Apple Programming
PROG 2503 iOS App Development
CISM 1433 SQL Concepts

Credit hours/Contact hours/Load hours

3/3/3

Target Audience/Transferability

This course is for students seeking advanced training and experience in developing apps for mobile devices that use Apple's iOS operating system, and is applicable to students seeking self-improvement or an AAS Degree in Computer Information.

Student Learning Outcomes

The students completing this course will:

- Be able to design and develop complex native iOS apps
- Be able to design and develop complex iOS web apps and hybrid apps
- Be able to build engaging user interfaces
- Be able to display interactive multimedia content
- Be able to build and use simple databases with SQLite
- Be able to utilize web services
- Be able to use data from a mobile device's sensors
- Be able to test apps with the iPhone/iPad simulator and with Apple iOS devices
- Be able to develop effective technical documentation

Topics

- Advanced iOS graphical user interface controls
- Interactive Multimedia techniques
- Interacting with websites and web services
- Accessing and using sensors, including GPS, accelerometer, and gyroscope
- Testing iOS apps with the iOS simulator and iOS hardware
- Use of available debugging tools and techniques
- Programming ethics and data privacy
- Publication options for iOS apps

Forms of Assessment

Chapter quizzes or programs, programming projects, and formal writing project.