Introduction to iOS Mobile App Development

Credits: 0.5

Course Overview and Goals

Introduction to iOS Mobile App Development is a comprehensive one-semester course focused on iOS mobile app development. This course assesses various aspects of iOS app development. Throughout the course, you will analyze the evolution of mobile app development and evaluate the latest industry trends. You will identify educational pathways and essential skills required for success, categorize different types of mobile applications, and formulate strategies for launching your own app development company. Additionally, you will apply the steps necessary for developing a successful mobile app, including creating a new project in Xcode, designing a user interface (UI) that supports multiple screens, and developing an interactive app that enhances user engagement.

The course consists of 12 lessons organized into four units, each featuring engaging Lesson Activities. You will assess your performance in these activities by comparing your work to sample responses. The course also includes five Course Activities and Discussions. You will submit the Course Activity to your teacher for grading.

By the end of this course, you will be able to do the following:

- Analyze the history of mobile app development and evaluate the latest industry trends, identifying relevant career options and essential skills for success.
- Outline the training requirements and assess various platforms for developing iOS mobile apps.
- Examine the different types of mobile applications available in the market and strategize on starting a mobile app development company.
- Design an iOS app by applying design principles and create a user interface (UI) that supports multiple screens.

Course Components and Grading Rubric

The table gives a breakdown of the weight for each component in the course. Weight represents the percentage of the total score coming from each activity.

Course Components	Count	Weight
Pretests. *Pretests are optional assessments, typically designed for credit recovery use. If a student shows mastery of a lesson's objective, the student may be automatically exempted from that lesson in the upcoming unit. Typically, teachers do not choose to employ exemptive pretests for first-time credit courses. Pretests are not included as a component of the student's final grade.*	4	0%
Module. *Each module in this course contains an interactive tutorial and an associated mastery test. Tutorials may include one or more Lesson Activities that constitute tasks associated with the tutorial. This course also includes practice questions to prepare students for the mastery test. The module score comes from a student's score on the mastery test.*	12	30%
Discussion. *Online discussions allow for higher-order thinking about terminal objectives. An online threaded discussion mirrors the educational experience of a classroom discussion. Teachers can initiate a discussion by asking a complex, open-ended question. Students can engage in the discussion by responding both to the question and to the thoughts of others. Each unit in a course has one predefined discussion topic; teachers may add more discussion topics.*	5	15%
Posttest. *The posttest appears at the end of the unit and mirrors the pretest in structure, content, and complexity.*	4	20%
Course Activity. *Course Activities are similar to Unit Activities in scope but may be found at any point in the course, either to prepare the student for new learning or to act as a performance-based activity required for a learning objective. Like Unit Activities, Course Activities include simple rubrics, and sample answers are available for teachers. Course Activities are teacher graded.*	5	20%
End of Semester Test. *The end of semester test (EOS) appears at the end of the course. Students are delivered a few items from every tutorial in the course in order to assess the major course objectives.*	1	15%
Total	**31**	**100%**

*Teachers may manually adjust these weights if desired, per district grading requirements.

UNIT 1: EXPLORING MOBILE APP DEVELOPMENT (DAYS 1 – 21)

In this unit, you will analyze the evolution of mobile app development and current trends, including technologies like 5G, AR, and AI. You will also identify career options and necessary skills for mobile app developers, evaluating the benefits of freelancing and effective ways to showcase work. Additionally, you will outline essential training requirements and identify organizations, online courses, and free resources available for skill development in mobile app development.

Lesson	Lesson Objective
Syllabus and Student Orientation	Review the Student Orientation and Course Syllabus at the beginning of this course.
Mobile App Development - History and Trends	Analyze the history of mobile app development and the latest trends in app development.
Careers and Skills	Identify career options in mobile app development and skills required for mobile app development.
Training	Examine the training required for mobile app development.
Job Profiles, Qualifications, and Skills	Identify job opportunities and qualifications required for a career in mobile app development and create a career plan.

UNIT 2: INNOVATING IN MOBILE APP DEVELOPMENT (DAYS 22 – 41)

In this unit, you will analyze the various types of mobile apps available in the market, identifying their needs, benefits, and specific categories like utility, productivity, and enterprise apps. You will also examine the process of starting a mobile app development company, including requirements for legal protections, monetization strategies, investor pitch creation, and client retention tactics.

Lesson	Lesson Objective
Types of Apps	Analyze the types of apps available in the market.
Developing an App	Develop an idea for an app and analyze its unique features.
Entrepreneurship	Analyze how to start a mobile app development company.
Exploring Entrepreneurship	Analyze a local angel investor group and create a business proposal.

UNIT 3: COMPREHENSIVE MOBILE APP DEVELOPMENT (DAYS 42 – 62)

In this unit, you will assess various platforms for developing iOS mobile apps, differentiating between iOS and Android environments while identifying programming languages and essential tools like Xcode. You will also analyze the steps involved in creating a successful mobile app, including design, technical requirements, prototyping, deployment, and upgrades. Finally, you will apply design principles specific to iOS, summarizing material design guidelines and interaction design principles to enhance user experience.

Lesson	Lesson Objective
Platforms for Developing Apps	Assess various platforms for developing iOS mobile apps.
Mobile App Development Steps	Analyze the steps to develop a successful mobile app.
Design Guidelines	Design an iOS app using design principles.
Developing a Mockup for an App	Develop a mockup for an iOS app.

UNIT 4: GETTING STARTED WITH iOS (DAYS 63 – 90)

In this unit, you will analyze the iOS development environment, including different iOS versions, features of Xcode, and the architecture and libraries associated with it. You will also create a new project in Xcode, examining project structure, and essential tools for debugging. Finally, you will develop a user interface (UI) that supports multiple screens by analyzing screen characteristics and incorporating UI elements and images. Additionally, you will make the app interactive by creating activities, defining fragments and intents, and demonstrating data storage, debugging, and running the app.

Lesson	Lesson Objective
Introduction to iOS	Analyze the iOS development environment.
Creating a New Project	Create a new project in Xcode.
Creating a User Interface (UI)	Create a user interface that supports multiple screens.
Making an App Interactive	Create an interactive app.
Creating a Journal App	Create a journal app.