

The Hong Kong University of Science and Technology

UG Course Syllabus

Course Title: Mobile Application Development

Course Code: COMP 4521

No. of Credits: 3

Any pre-/co-requisites: Nil

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Course Description

This course provides a comprehensive introduction to mobile application development. Students will learn the essential concepts, techniques, and tools required to design, develop, and deploy mobile applications for the Android platform. The course emphasizes hands-on learning and practical implementation, enabling students to build functional and user-friendly mobile applications. Including different aspects, e.g. Principles of application development for mobile and embedded devices. Mobile software development environments and software architectures. Features of typical mobile platforms: user-interface and user-experience design, multimedia, and data storage support, networking, location, mapping services, and mobile back-end support features. This course will also introduce you to the concepts and tools of cross-platform mobile development, providing a broader perspective on the mobile development landscape.

This course utilizes a blended approach of lectures, tutorials, assignments, lab sessions, and interactive discussions to guide students through the project-based curriculum. Students need to design and implement a full-fledged mobile application. No formal prerequisites, however, familiarity with programming logic and problem-solving approaches is beneficial that helps students learn Android development more efficiently.

List of core topics

- Introduction
- User Interface Design
- UX Design
- User Interaction
- Cross-platform Mobile Development
- Multimedia Integration
- Location-based Services
- Databases and Data Storage
- Network Communication and APIs
- Background Processing and Services
- Advanced Features

Assessments:

Assessment Task	Contribution to Overall Course grade (%)
Assignment	15%
Lab	15%
In-class quiz	10%
Group project	60%

Required Texts and Materials

None