

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

Name: SZETO Lok Chun

Email: lcszeto@ust.hk

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
- Android Overview
- User Interface Design
- Activities and Intents
- User Interaction
- Preferences and Settings
- Databases and Data Storage
- Multimedia Integration
- Location-based Services
- Background Processing and Services
- Advanced Features

Assessments:

| Assessment Task | Contribution to Overall Course grade (%) |
|------------------------|---|
| Assignment | 10% |
| Lab | 15% |
| In-class quiz | 5% |
| Group project | 70% |

Required Texts and Materials

None