

Course Code	Course Title
COMP 4521	Mobile Application Development

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, and mapping services. Mobile back-end support features. 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 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

Textbooks

None

Reference books

None (*Some reference materials will be provided*)

Grading Scheme

Class activities	10 %
In-class quizzes	15 %
Course project (including presentation)	40 %
Examination	35 %

Course Intended Learning Outcomes

By the end of this course, students are expected to demonstrate competence in the following:

CILO₁: Ability to build fully functional mobile apps including the design and implementation using different Android application components.

CILO₂: Capability to design an intuitive user interface by using common Android patterns and navigation using activities, XML layouts, etc.

CILO₃: Knowledge to integrate data handling techniques e.g. how to persist and retrieve local data using SQLite, SharedPreferences, etc.

CILO₄: Ability to utilize multimedia features and device capabilities, e.g. the skills to incorporate multimedia features such as images, audio, video, etc.

Assessment Rubrics

N/A