

Course Code	Course Title
COMP 4521	Mobile Application Development

Course Description

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, 2D and 3D graphics and data storage support, networking, location and mapping services. Design patterns and application frameworks. Mobile back-end support. Web applications. Students need to design and implement a full-fledged mobile application.

List of Topics

- Introduction
- Android Overview
- Android User Interface
- User Interaction
- Delightful User Experience
- Background Tasks
- Alarms and Schedulers
- Preferences and Settings
- Storing Data with Room
- Expand the User Experience
- Add Geo Features to your Apps
- Advanced Graphics and Views

Textbooks

None

Reference books

None (*Some reference materials will be provided*)

Grading Scheme

App Idea	10 %
Project Proposal	15 %
Course Project (Including Presentation)	25 %
Examination	50 %

Course Intended Learning Outcomes

- 1 . Critically discuss embedded systems and software development.
- 2 . Assess cross-platform development.
- 3 . Analyze the salient features and characteristics of embedded systems and differentiate them from traditional computer systems.
- 4 . Evaluate real-time operating systems.

Assessment Rubrics

Initial Application Idea

Initial Application Idea

Criteria	Ratings	Pts
Introduction to the Project		4 pts
Expected List of Features		3 pts
Market Survey		3 pts
Total Points: 10		

Proposal

Proposal

Criteria	Ratings	Pts
Description of the application structure including activities, services, and broadcast receivers		4 pts
Details of the data storage including design of the content provider		4 pts
Details of the specific Android features like multimedia, graphics, location, maps etc. that are used in the application		4 pts
Expected results from your project		3 pts
Total Points: 15		

Final Project Rubric**Final Project Rubric**

Criteria	Ratings	Pts
Project Design & Implementation		10 pts
Project Demonstration (Include Presentation)		10 pts
Project Report		5 pts
Total Points: 25		