

Mobile Device Application Development

INSTRUCTOR

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AIMS

This course provides an introduction to developing applications for the Android mobile platform. The emphasis will be on the fundamentals of mobile application programming. This is primarily a **project-based** course in which the goal is to produce a working app by the end of course. You will develop an app from scratch, assuming a basic knowledge of Java, and learn how to set up Android Studio, work with various Activities and create simple user interfaces to make your apps run smoothly.

Smartphone devices: Android smartphone devices to develop on, will be available for every registered student in the course, upon request, to be used during the course time.

OBJECTIVES

At the successful completion of this course, the student will have demonstrated the ability to:

1. Understand the basic operation of the mobile devices
 2. Identify and discuss general useful application on the android platform, for mobile devices
 3. Build an android application.
 4. Debug, visualize and evaluate a running application
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RESOURCES

1. Lecture notes and slides
2. There is no required textbook for the course

Recommended Resources

1. The Busy Coder's Guide to Android Development
2. Android Programming: The Big Nerd Ranch Guide, by Bill Phillips and Brian Hardy
3. Professional Android Application Development, by Reto Meier

ASSESSMENT

1. Assignments 20%

Two assignments on android programming at the 5th and the 10th day of the course.

2. Final exam: 20%

Final exam on the 10th day of the course with multiple choice questions. It will test all material covered in lectures.

3. Participation: 10%

Class participation/ attendance.

4. Project: 50%

Project is to be completed individual within two weeks after the last day of the classes. Project grade divided in the following milestones:

Milestone	Activity	Due date
M1 (5%)	Project Proposal/ Plan	5 th class (in class)
M2 (5%)	Interim Presentations	10 th class (in class)
M3 (40%)	Final Project	Two weeks after 10 th class (online)

Passing Grade: The passing grade is 65%.

TEACHING AND LEARNING ACTIVITIES

Lecture Schedule

Lectures	Lecture Topics (Tentative*)
Day 1	Android basics, Layout
Day 2	More widgets and lists, File processing
Day 3	Activity lifecycle, Multiple activities
Day 4	Fragments, landscape orientation
Day 5	Animation, media player, text-to-speech, camera
Day 6	2D graphics, games
Day 7	Localization
Day 8	Databases and SQL
Day 9	Services and notifications
Day 10	More services

*Topics schedule will be adjusted throughout the course as needed.