

Course Title:	<i>Software Applications for Mobile devices</i>
Course Code:	SEN – 436
Credit Hours Theory:	2
Credit Hours Lab (If Applicable):	1
Instructor Name with Qualification:	Faisal Imran, MSSE
Course Objectives:	Handheld systems, such as smartphones and tablets are now the most common way for people to access and interact with computing services. The demand for application development skills is therefore growing at a breathtaking pace. These skills, however, are multi-- faceted, requiring students to master computer science and engineering principles, to learn the details of specific mobile application platforms, and to design artistic and engaging user interfaces that respond to how, where and why handheld applications are used.
Course Learning Outcomes:	<p>CLO 1:Understanding of the basic concepts and technique of developing applications for the mobile phones</p> <p>CLO 2:Be able to understand java programming as it related to application development for Android platform.</p> <p>CLO 3: Know how to require additional resource and security information needed for various types of Mobile applications features and services.</p> <p>CLO 4: Design module based approach to gratify those requirements, and organize program code for implementation.</p>
Contents (Catalog Description):	This course will cover the fundamental programming principles, software architecture and user experience considerations underlying handheld software applications and their development environments. To bring these concepts alive, the course will involve in - depth, hands - on examples, implemented in the Android Platform, the fastest growing segment of the handheld system user base. Students will apply these teachings, also using the Android Platform, in laboratory projects and in a large - scale semester project.
Recommended Text Books:	Reto Meier, “ professional android application development”, Ed. Wrox Programmer to Programmer
Reference Books:	Reto Meier, “ professional android application development”, Ed. Wrox Programmer to Programmer

General Instructions for students:

Attendance is mandatory. Every class is important. All deadlines are hard. Under normal circumstances late work will not be accepted. Students are required to take all the tests. No makeup tests will be given under normal circumstances. Any form of cheating on exams/assignments/quizzes is subject to serious penalty.

Attendance

75% attendance is mandatory. Latecomers will be marked as absent.

Evaluation Criteria

Assignments/projects	20%
Quizzes	10%
Mid-Term	20%
Final	50%

Quizzes Schedule

Quiz # 1	Week # 4
Quiz # 2	Week # 7
Quiz # 3	Week # 11
Quiz # 4	Week # 14

Assignments

Assignment	Delivery date	Submission Date
Assignment # 1	Week # 2	Week # 3
Assignment # 2	Week # 6	Week # 7
Assignment # 3	Week # 9	Week # 10
Assignment # 4	Week #12	Week #13

Sixteen Week Lesson Plan

- 1.0 The Android platform
 - 1.1 Introduction to android platform
 - 1.2 The android development environment
 - 1.3 Introduction to IDE for android

- 2.0 How android works
 - 2.1 Android tools
 - 2.2 Android language

- 3.0 Android application fundamentals
 - 3.1 Overview of application fundamentals
 - 3.2 Project structure

**Sixteen Week
Lesson Plan**

- 3.3 Android Manifest
- 3.4 Android Activities
- 3.5 Explicit intents

4.0 Application Fundamentals

- 4.1 Implicit intents
- 4.2 Resources
- 4.3 Permissions
- 4.4 Debugging
- 4.5 The activity class

5.0 User interface and controls

- 5.1 Layouts
- 5.2 Controls, lists, custom lists and other useful controls

6.0 Graphics and Styling

- 6.1 Styles
- 6.2 Themes
- 6.3 Icons
- 6.4 Ninepatch

7.0 Screens in Android

- 7.1 Supporting Multiple screens
- 7.2 Screen densities
- 7.3 Alternative layouts

8.0 **Midterm Exam**

9.0 Android status and android Toast

10.0 Android media handling

- 10.1 Working with media
- 10.2 Audio and video

11.0 Android shared data

- 11.1 Preference
- 11.2 Shared storage
- 11.3 SQL lite
- 11.4 Network
- 11.5 Content provider

12.0 Locations and maps

- 12.1 Sensors
- 12.2 GPRS
- 12.3 Location handing in android

13.0 Animation and Graphics

- 13.1 Frame by frame animation
- 13.2 Tween
- 13.3 Drawing

14.0 Creating a home screen widget

