Software for Mobile Devices
Course Outline (Spring 2016)

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Office Hours: Tuesday / Thursday 8:30 – 9:30 AM

Objective

This course focuses on the development of software for mobile devices/smartphones. Students will learn how to develop software applications for current and emerging mobile device platforms. This will involve primarily following:

- Understanding the challenges of application development for mobile devices,
- Understanding the user experience issues associated with mobile application development,
- Designing, developing, testing and deploying mobile applications using various tools and technologies, and
- Discussion on selected articles about recent developments in mobile technologies.

Projects and assignments will ensure that students go through all phases of software development for mobile devices.

Prerequisites Object-Oriented Analysis & Design

Course Outline

Topics	No of Lectures

- **Software Development for Mobile Devices—An Overview**
  ○ Introduction to the Mobile Development
  ○ Types of Mobile Applications
  ○ Introduction to JAVA
	2-3

- **Application Development on Google Android Platform**
  ○ Android Platform Architecture and Application Fundamentals
  ○ Activities
  ○ The Intent Class
  ○ Permissions
  ○ The Fragment Class
  ○ User Interface components
  ○ Alarms and User Notifications
  ○ Data Storage and Content Providers
  ○ Services and Broadcast Receivers
  ○ Threads, AsyncTask & Handlers
  ○ Graphics & Animation
  ○ Multi-touch & Gestures
  ○ Networking
  ○ Application Resources and other android structures
  ○ Application Testing Framework
	21-23

• **Other Topics**
  ○ Introduction to the game development
  ○ Introduction to cross-platform development tools and latest trends in mobile application development
  ○ Research potential in the field of smart phones technologies
	2– 5
	[Completion of this section is subject to the time availability]

Evaluation

Assignments/Quiz(s)/Homeworks   20%
Projects   15%
Midterms   25%
Final Exam   40%

Books / References

- Android Developer Resources (http://developer.android.com/index.html)
- Pro Android 4   by   Satya Komatineni etc.
- Professional Android 2 Application Development (2010)   by   Reto Meier
- Hello, Android: Introducing Google's Mobile Development Platform (2010)   by   Ed Burnette
- Beginning Android Games (2010)   by   Mario Zechner
- Designing the Mobile User Experience (2007)   by   Barbara Ballard