

Software for Mobile Devices

Course Outline (Fall 2016)

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Office Hours: Monday / Wednesday 11:00 AM – 12:00 Noon

Objective

This course focuses on the development of software for mobile devices. Students shall learn how to develop software applications for current and emerging mobile device platforms. This involves primarily:

- 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

Prerequisites Object-Oriented Analysis & Design

Course Outline

| Topic | Lectures |
|---|----------|
| Introduction to Software Development for Mobile Devices | |
| Introduction to Mobile Application Development | 1 |
| Introduction to Java Programming | 2 |
| Android Programming | |
| Introduction to Android Platform | 1 |
| UI Programming | 4 |
| Data Storage | 2 |
| Application Architecture | 3 |
| Processes and Inter-process communication Threads and Asynchronous Programming | 3 |
| Applications and Engineering Issues | |
| Web-based and Hybrid Mobile Applications | 3 |
| Monetization, Analytics and Distribution | 1 |
| Responsive UI Design | 2 |
| Location-based Services | 1 |
| Network Programming (Client-server, Bluetooth, etc) | 2 |
| Wearables, Other Platforms (iOS, J2ME, etc) & Cross-platform Development | 3 |

Assessment

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

Reference Material

- Android Developer Resources (<http://developer.android.com>)
- Android Developer's Cookbook, Second Edition (2013) by Ronan Schwarz et. al.
- Designing the Mobile User Experience (2007) by Barbara Ballard
- Mobile Developer's Guide to Galaxy, 16th Edition by Enough Software
<http://enough.de/en/app-coaching/devguide/>