

City University of Hong Kong

Information on a Course
offered by Department of Electronic Engineering
with effect from Semester A in 2011/2012

Part I

Course Title:	Mobile Applications Design and Development
Course Code:	EE5415
Course Duration:	One Semester (13 weeks)
No. of credits:	3
Level:	P5
Medium of Instruction:	English
Prerequisites :	Nil
Precursors :	EE2311 Object-Oriented Programming and Design or EE3206 Java Programming and Applications or EE5414 Development and Design in Embedded Systems or equivalent
Equivalent Course:	Nil
Exclusive Courses:	Nil

Part II

Course Aims:

The course aims to provide students with an understanding of the principle and hand-on experience on mobile application design and development. The course combines a conceptual overview, design issues, and practical development via mobile apps projects. Students will learn skills leading to creating and deploying mobile applications, with particular emphasis on software engineering topics including software architecture, software process, usability, and deployment in embedded systems.

Course Intended Learning Outcomes (CILOs)

Upon successful completion of this course, students should be able to:

No.	CILOs
1.	Describe the principles of software requirements for the mobile application design and development, and the skills required to produce and maintain a high-quality mobile application.
2.	Apply the principles of software requirements engineering, to the mobile application software development.
3.	Evaluate and apply software process and software best practices.

Teaching and learning Activities (TLAs)

(Indicative of likely activities and tasks designed to facilitate students' achievement of the CILOs. Final details will be provided to students in their first week of attendance in this course)

CILO	Teaching and Learning Activities
1, 2, 3	Lectures, tutorials, in-class exercises, self-study, laboratory sessions and group projects.

Timetabling Information

Pattern	Hours
Lecture:	39*
Tutorials:	
Laboratory:	
Other activities:	

*Some of the lectures will be conducted in the laboratory.

Assessment Tasks/Activities

(Indicative of likely activities and tasks designed to assess how well the students achieve the CILOs. Final details will be provided to students in their first week of attendance in this course)

	Type of assessment tasks	Weighting (if applicable)
Continuous Assessment	Assignments, tests, Labs, lab reports, mobile app project with formal report and presentations with demo	100%
Examination	Written exam	N/A

Remarks: To pass the course, students are required to achieve a minimum of 75% attendance in the laboratory. A formal report of the mobile app project is also required. A final presentation with demo of the mobile app project will also be assessed by an assessment panel appointed by the Programme Leaders.

Grading of Student Achievement: - Please consider amending it according to the recommended sample attached.

Letter Grade	Grade Point	Grade Definitions
A+	4.3	Excellent
A	4.0	
A-	3.7	
B+	3.3	Good
B	3.0	
B-	2.7	
C+	2.3	Adequate
C	2.0	
C-	1.7	
D	1.0	Marginal
F	0.0	Failure

Constructive Alignment with Programme Outcomes

PILO	How the course contribute to the specific PILO(s)
1,2,3,4,5	This course provides essential knowledge and techniques for designing and implementing mobile application software product. Students have ample opportunities to practice these skills with modern software development tools. A mobile app design project will be carried out by

	students. They are required to propose their mobile app, analyse some practical problems, develop and present their own solutions with a demonstration.
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Part III

Keyword Syllabus:

Mobile App Design and Development Principles

Overview and history of mobile app, mobile app markets, design principles, software architecture, software development cycles, software development tools, programming languages, operating systems for mobile devices, usability, and deployment.

User Interface and Functionality Design

UI Overview, Activities, Application Lifecycle, Intents, Intent Filters, Broadcasts, Broadcast Receiver, Shared Preferences, Files, SQLite DB, Content Provider.

Mobile App Software Development

Automated testing, Test-Driven Development, Google Maps, MapView, MapActivity, Threads, Services, Status Bar Notifications, Deployment to Market, Monetization.

Related Links and References

- [Department of Electronic Engineering](#)

Examples of Mobile Apps Projects:

- Mobile apps for Android based smartphones
- Mobile apps for Android based tablet computers
- Mobile apps for Apple iOS based iPhone or iPod
- Mobile apps for Apple iOS based iPad