COURSE SYLLABUS

Subject: Mobile Application Development **Academic field: ICT**

Lecturer: Tran Giang Son

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Academic year : 2015-2016

COURSE DESCRIPTION

Credit points	4 ECTS	
Level	Undergraduate	
Teaching time Location	22/02/2016 – 25/03/2016 University of Science and Technology of Hanoi	
Time Commitment	Lecture	26 hrs
	Tutorial	_ hrs
	Practice	_ hrs
	Lab-work	14 hrs
	Total	40 hrs
Prerequisites	Object-oriented programming	
Recommended background knowledge	Web Application Development	
Subject description:	Mobile application development has been becoming a multi-billion-dollar industry where ICT engineers can build their own career and fortune. This course provides the basic knowledge and necessary skills to develop app for Android, one of the three major mobile platforms. The course will cover core concepts such as UI design, asynchronous programming, to platform specific features including background transfer or notification. After the course, student will be able to develop apps based on their own idea.	
Objectives & Out-come	By completing this course, students will be able to: • Understand key features of mobile devices, mobile application, and mobile platforms. • Develop app for the Android platform, including core concepts and OS' specific services • Analyze and improve the performance of app to maximize overall user experience. • Improve team work and communication skill to work on the course project.	

Assessment/ Evaluation	Attendance/Attitude	10%
	Class exercise(s)	_%
	Assignment(s)	_%
	Report(s)	_%
	Mid-term project	30%
	Final project	60%
Prescribed Textbook(s)	[1]. Dawn Griffiths and David Griffiths, Head First Android Development, Oreilly, 2015.	

COURSE CONTENTS & SCHEDULE

Class	Contents	Hours			Ref./Resources	Assignment(s)
		Lect	**Exr.**	**Prc.**		
1	OS Review & Android Introduction - Concepts of OS - Introduction and History of Android	3				Organization of groups Project list
2	Android Fundamentals - Architecture - Application, Activity, Fragments - View, Context	3		3		
3	Resources - Layout, Values - 9-patch images	3		3		
4	Handling Input - Click, Long click, Touch events - Soft keyboard - Sensors	2		2		
5	Storage - Preferences - Files - Database: SQLite, some ORM framework	2		1		
6	Mid-term Project Presentation	3				
7	Background Tasks & Services - Threads, AsyncTasks - Services	2		1		
8	Networking - Embedded library: HttpUrlConnection - Framework: Volley - Data Representation	3		3		
9	Application Optimization - User Interface - Networking	2		1		
10	Final Project Presentation	3				

Notes:

- *Abbreviation: Lect. (lecture), Exr. (Exercise), Prc. (Practise).*
- *Assignments may include assignments, practical work, reports, exercises ...for each class sessions*

Reference Literature:

[1]. Dawn Griffiths and David Griffiths, Head First Android Development, Oreilly, 2015.