

Course unit title:	Smartphone Programming
Course unit code:	CSC392
Type of course unit: (Compulsory/optional)	Optional
Level of course unit: (First, second or third cycle)	Bachelor (1st cycle)
Year of study:	3
Semester when the unit is delivered:	6
Number of ECTS credits allocated:	6
Name of lecturer(s):	TBA

Learning outcomes of the course unit:

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

- Use the smartphone's programming language
- Apply the touch User Interface (UI) controls for effective UI design and development.
- Create and query local databases.
- Develop software using several smartphone capabilities.
- Deploy smartphone applications to online stores.

Mode of delivery:	Face- to- face
Prerequisites and co-requisites:	CSC205 or CSW205
Recommended optional program components:	None

Course Contents:
Objective:

The aim of this course is to make an introduction to software application development for smartphones. Within this course we will focus on the various aspects of smartphones. These include user interface design and implementation, gestures, sensor programming, location awareness, multi-threading, camera programming, internet applications, databases and effective application development and deployment using the aforementioned technologies.

Description:					
Introduction: the smartphone programming platform, architecture, capabilities, setting programming environment, tools, history and evolution, application deployment.					
Programming language: introduction to the smartphone's programming language, similarities to other languages, API description, memory management.					
User Interface: Using the user interface (UI) components and patterns for effective UI design and development.					
Gestures: using built-in gestures, creating custom gestures.					
Sensors: programming using camera, compass, GPS, accelerometer, and other sensors.					
Databases: creating an SQLite database on the smartphone, querying the database, showing the results.					
Communication: creating applications that access the Internet, RSS, XML, peer to peer.					
Other: future developments and other topics.					
Recommended or required reading:	<p>E. Sadun, The iPhone Developers Cookbook, Addison-Wesley.</p> <p>J. Brannan, B. Ward, iOS SDK Programming, McGraw Hill.</p> <p>S. G. Kochan, Programming in Objective-C 2.0, Addison-Wesley.</p> <p>Z. Mednieks, L. Dornin, G. Blake Meike and M. Nakamura, Programming Android: Java Programming for the New Generation of Mobile Devices, O'Reilly Media.</p> <p>J. Steele, N. To, The Android Developer's Cookbook: Building Applications with the Android SDK, Addison-Wesley Professional.</p> <p>N. Randolph, C. Fairbairn, Professional Windows Phone 7 Application Development: Building Applications and Games Using Visual Studio, Silverlight, and XNA, Wrox.</p>				
Planned learning activities and teaching methods:	<table border="1"> <tr> <td>Class Instruction</td> <td>42 Hours</td> </tr> <tr> <td>Consultation/Computer Lab</td> <td>30 Hours</td> </tr> </table>	Class Instruction	42 Hours	Consultation/Computer Lab	30 Hours
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Assessment methods and criteria:	<table border="1" style="margin-left: auto; margin-right: auto;"> <tr> <td style="padding: 5px;">Examinations</td> <td style="text-align: center; padding: 5px;">40%</td> </tr> <tr> <td style="padding: 5px;">Assignments/ Class Participation</td> <td style="text-align: center; padding: 5px;">60%</td> </tr> <tr> <td></td> <td style="text-align: center; padding: 5px;">100%</td> </tr> </table>	Examinations	40%	Assignments/ Class Participation	60%		100%
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Assignments/ Class Participation	60%						
	100%						
Language of instruction:	English						
Work placement(s):	No						
Place of Teaching:	<p>Theoretical Part: Regular Classroom European University Cyprus, Nicosia</p> <p>Practical Part: Computer Laboratory European University Cyprus, Nicosia</p>						