

H9MPA: Mobile Platforms and Application Design

Module Code:	H9MPA
Long Title	Mobile Platforms and Application Design APPROVED
Title	Mobile Platforms and Application Design
Module Level:	LEVEL 9
EQF Level:	7
EHEA Level:	Second Cycle
Credits:	10
Module Coordinator:	Anu Sahnii
Module Author:	Sinead O'Sullivan
Departments:	School of Computing
Specifications of the qualifications and experience required of staff	
Learning Outcomes	
<i>On successful completion of this module the learner will be able to:</i>	
#	Learning Outcome Description
LO1	Demonstrate a deep knowledge of mobile devices, hardware, software and their application in industry.
LO2	Compare and implement frameworks design principles and patterns in Mobile Applications.
LO3	Evaluate the suitability of various platforms, frameworks and architectures for mobile devices.
LO4	Create mobile applications using a variety of current technologies, SDK's and API's.
Dependencies	
Module Recommendations	
No recommendations listed	
Co-requisite Modules	
No Co-requisite modules listed	
Entry requirements	

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Module Content & Assessment			
Indicative Content			
Mobile Devices and Hardware (15%) • Evaluate different device types • Investigate and evaluate mobile operating systems • Explore different hardware and its configuration • Investigate resource constraints for mobile devices and how to develop applications based on these constraints • Research current technologies and trends. • Requirement to build apps on other mobile devices such as wear, TV, and Auto.			
Mobile Application Platforms, SDK's and API's (20%) • Explore and analyse different mobile platforms, SDK's and API's • Investigate simulators and their performance compared to the mobile device • Create mobile applications (native or web app) using for example Interface Builders or DroidDraw.			
Best Practices (5%) • Interaction and Engagement • User input • User Interface • Background jobs			
Application Design and Development (30%) • Apply Mobile Information Architectures • Develop and evaluate GUI design and UI elements • Designing UI with Views • Compare and contrast different frameworks and their functionality. • Develop simple apps with new / built-in features			
Building Apps with Content Sharing (15%) • Sharing simple data • Sharing files • Sharing files with NFC			
Optimisation (10%) • Evaluate optimisation strategies to maximise application operation efficiency • Investigate strategies to benchmark mobile application performance • Research implementation techniques to increase efficiency. • Innovation and commercialisation within app			
Security (5%) • Research, explore and analyse security vulnerabilities in mobile development and communication • Develop secure mobile applications following industry best practices			
Assessment Breakdown			%
Coursework			50.00%
End of Module Assessment			50.00%
Assessments			
Full Time			
Coursework			
Assessment Type:	Continuous Assessment (0200)	% of total:	50
Assessment Date:	n/a	Outcome addressed:	2,4
Non-Marked:	No		
Assessment Description: Practical work will be conducted throughout the semester to assess the learner's evaluation skills in terms of design strategies and mobile application development. In addition, case based reflective assessment will be conducted to evaluate the learner's understanding of security related issues with mobile technologies.			
End of Module Assessment			
Assessment Type:	Terminal Exam	% of total:	50
Assessment Date:	End-of-Semester	Outcome addressed:	1,3
Non-Marked:	No		
Assessment Description: End-of-Semester Final Examination			
No Workplace Assessment			
Reassessment Requirement			
Repeat examination <i>Reassessment of this module will consist of a repeat examination. It is possible that there will also be a requirement to be reassessed in a coursework element.</i>			

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Module Workload				
Module Target Workload Hours 0 Hours				
Workload: Full Time				
Workload Type	Workload Description	Hours	Frequency	Average Weekly Learner Workload
Lecture	No Description	2	Every Week	2.00
Practical	No Description	2	Every Week	2.00
Independent Learning	No Description	17	Once per semester	1.42
Total Weekly Contact Hours				4.00
Workload: Part Time				
Workload Type	Workload Description	Hours	Frequency	Average Weekly Learner Workload
Lecture	No Description	2	Every Week	2.00
Practical	No Description	2	Every Week	2.00
Independent Learning	No Description	17	Once per semester	1.42
Total Weekly Contact Hours				4.00

Module Resources	
<i>Recommended Book Resources</i>	
Carmen Delessio, Lauren Darcey and Shane Conder. (2013), <i>Android Application Development in 24 Hours</i>, Sams Publishing. John Ray. (2014), <i>iOS 7 Application Development in 24 Hours</i>, Sams Publishing.	
<i>Supplementary Book Resources</i>	
Theresa Neil. (2012), <i>Mobile Design Pattern Gallery - UI Patterns for Mobile Applications</i>, O'Reilly Media, [ISBN: 978-1-4493-14]. Reto Meier. (2012), <i>Professional Android 4 Application Development</i>, Wrox, [ISBN: ISBN: 978-111]. Jeff McWherter and Scott Gowell. (2012), <i>Professional Mobile Application Development</i>, Wrox, [ISBN: 978-111820390]. Peter van de Put. (2013), <i>Professional iOS Programming</i>, Wrox. Zigurd Mednieks, G. Blake Meike, Laird Dornin, Zane Pan. (2013), <i>Enterprise Android: Programming Android Database Applications for the Enterprise</i>, Wrox.	
<i>This module does not have any article/paper resources</i>	
<i>Other Resources</i>	
[website], iPhone Application Development, https://developer.apple.com/ [website], Android Application Development, http://developer.android.com/index.html [website], White papers on mobile development, http://www.kony.com/resources/white-pape rs	
Discussion Note:	