

## SWRD C8033: Mobile Development

Module Details	
Module Code:	SWRD C8033
Full Title:	Mobile Development <span>APPROVED</span>
Valid From::	Semester 1 - 2019/20 ( June 2019 )
Language of Instruction:	English
Duration:	1 Semester
Credits::	5
Module Owner::	Tony McCarron
Departments:	Unknown
Module Description:	The aim of this module is to develop students' capability to design, implement and test mobile applications using current platforms and techniques, applying best practice and appropriate design patterns.

Module Learning Outcome	
On successful completion of this module the learner will be able to:	
#	Module Learning Outcome Description
MLO1	Analyse the capabilities of a range of mobile devices and the design constraints presented by such devices and their modes of use
MLO2	apply mobile device interface design principles, guidelines and patterns in the development of mobile applications, and evaluate their effectiveness
MLO3	understand the various paradigms used over a range of mobile development platforms, and have engaged in development on one or more of these platforms.
MLO4	implement network enabled mobile applications that consume web services and interact with various internet services and social networks
MLO5	discuss current research directions in mobile application development and be familiar with a range of mobile application case studies
Pre-requisite learning	
<b>Module Recommendations</b> <i>This is prior learning (or a practical skill) that is strongly recommended before enrolment in this module. You may enrol in this module if you have not acquired the recommended learning but you will have considerable difficulty in passing (i.e. achieving the learning outcomes of) the module. While the prior learning is expressed as named DkIT module(s) it also allows for learning (in another module or modules) which is equivalent to the learning specified in the named module(s).</i>	
No recommendations listed	

Module Indicative Content	
<b>Mobile Development</b> Platforms & Environments, Mobile Development Toolkits, Development Process	
<b>Design Issues</b> Limited Memory, Screen Size, Performance, Modes of Interaction	
<b>User Interface Design, GUI Components</b> Interface Design, Widgets, Layouts, Interaction Issues, Guidelines	
<b>Paradigms</b> Promises & Observables, Dependency Injection, Facade design pattern	
<b>Framework and Core APIs</b> Framework API, UI Components, Data Storage and Processing Internet access, Device (sensor) access	
<b>Research Directions &amp; Case Studies</b> Current research directions, Case Studies of Applications, Devices, and Intro to Progressive Web Apps.	
Module Assessment	
Assessment Breakdown	%
Course Work	60.00%
Final Examination	40.00%
Module Special Regulation	

## Assessments

Full Time On Campus			
Course Work			
<b>Assessment Type</b>	Continuous Assessment	<b>% of Total Mark</b>	60
<b>Marks Out Of</b>	0	<b>Pass Mark</b>	0
<b>Timing</b>	Every Second Week	<b>Learning Outcome</b>	2,3,4
<b>Duration in minutes</b>	0		
<b>Assessment Description</b> Design, develop and test a number of Mobile Applications with a networking aspect.			
No Project			
No Practical			
Final Examination			
<b>Assessment Type</b>	Formal Exam	<b>% of Total Mark</b>	40
<b>Marks Out Of</b>	0	<b>Pass Mark</b>	0
<b>Timing</b>	End-of-Semester	<b>Learning Outcome</b>	1,2,3,4,5
<b>Duration in minutes</b>	0		
<b>Assessment Description</b> n/a			
Part Time On Campus			
Course Work			
<b>Assessment Type</b>	Continuous Assessment	<b>% of Total Mark</b>	60
<b>Marks Out Of</b>	0	<b>Pass Mark</b>	0
<b>Timing</b>	Every Second Week	<b>Learning Outcome</b>	2,3,4
<b>Duration in minutes</b>	0		
<b>Assessment Description</b> Design, develop and test a number of Mobile Applications with a networking aspect.			
No Project			
No Practical			
Final Examination			
<b>Assessment Type</b>	Formal Exam	<b>% of Total Mark</b>	40
<b>Marks Out Of</b>	0	<b>Pass Mark</b>	0
<b>Timing</b>	End-of-Semester	<b>Learning Outcome</b>	1,2,3,4,5
<b>Duration in minutes</b>	0		
<b>Assessment Description</b> n/a			
Reassessment Requirement			
<b>No repeat examination</b> <i>Reassessment of this module will be offered solely on the basis of coursework and a repeat examination will not be offered.</i>			

## Module Workload

### Workload: Full Time On Campus

Workload Type	Contact Type	Workload Description	Frequency	Average Weekly Learner Workload	Hours
Practical	Contact	Delivery will normally take place in one 3-hour block per week, involving exposition of theory, practical demonstrations, active learning, and presentation and discussion sessions. Alternative delivery modes such as synchronous and asynchronous online deliver will form part of the delivery strategy.	Every Week	3.00	3
Directed Reading	Non Contact	Research and Development Work	Every Week	4.00	4
Independent Study	Non Contact	Readings	Every Week	1.00	1
				Total Weekly Learner Workload	8.00
				Total Weekly Contact Hours	3.00

### Workload: Part Time On Campus

Workload Type	Contact Type	Workload Description	Frequency	Average Weekly Learner Workload	Hours
Practical	Contact	Delivery will normally take place in one 3-hour block per week, involving exposition of theory, practical demonstrations, active learning, and presentation and discussion sessions. Alternative delivery modes such as synchronous and asynchronous online deliver will form part of the delivery strategy.	Every Week	3.00	3
Directed Reading	Non Contact	Research and Development Work	Every Week	4.00	4
Independent Study	Non Contact	No Description	Every Week	1.00	1
				Total Weekly Learner Workload	8.00
				Total Weekly Contact Hours	3.00

## Module Resources

### Supplementary Book Resources

Chris Griffith. (2017), Mobile App development with Ionic, Revised Edition, O'Reilly Media, [ISBN: 9781491998120].

Nathan Murray, Felipe Coury, Ari Lerner, Carlos Taborda. (2018), Ng-Book: The Complete Guide to Angular, CreateSpace Independent Publishing Platform,, p.626, [ISBN: 9781985170285].

Jeremy Wilken. (2015), Ionic in Action: Hybrid Mobile Apps with Ionic and AngularJS, Manning Publications,, [ISBN: 9781633430082].

### Supplementary Article/Paper Resources

Mobile/Wireless Developer Website,  
<http://mobiforge.com>

PhoneGap Website,  
<http://phonegap.com>

<https://www.smashingmagazine.com/>

*This module does not have any other resources*