University of the West of Scotland

Module Descriptor

Session: 2022/23

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Title of Module: Programming for Mobile Devices

Code: COMP08068	**SCQF Level: 8** (Scottish Credit and Qualifications Framework)	**Credit Points: 20**	**ECTS: 10** (European Credit Transfer Scheme)
School:	School of Computing, Engineering and Physical Sciences		
Module Co-ordinator:	Glenn Affleck		

Summary of Module

Programming for Mobile devices is a core module in the Web and Mobile Development programme. Students will have taken a prior programming module. However, programing with Java or C# is not assumed and an introduction to will be a part of this module. Programming principles will be covered and be tested in the class tests.

This module also covers development for mobile platforms using the following model:

- Android SDK

The core principles covered in this module are those which underpin a practical ability to write code for operating on a mobile platform – OOP for robust application design, library support for mobile web apps and native platforms, UI design for limited screen size, packaging applications, hosting, deployment and connectivity using online services.

The assessed project will also cover UI design, requirements analysis, design, implementation and testing. As part of the assessment the students will give a presentation on their project's design and implementation.

This module will work to develop a number of the key **'I am UWS' Graduate Attributes** to make those who complete this module:

Universal

- Critical Thinker
- Ethically-minded
- Research-minded

Work Ready

- Problem-Solver
- Effective Communicator
- Ambitious

Successful

- Autonomous
- Resilient
- Driven

Module Delivery Method

Face-To-Face	Blended	Fully Online	HybridC	HybridO	Work-based Learning
	✓				

Face-To-Face
Term used to describe the traditional classroom environment where the students and the lecturer meet synchronously in the same room for the

whole provision.

Blended
A mode of delivery of a module or a programme that involves online and face-to-face delivery of learning, teaching and assessment activities, student support and feedback. A programme may be considered "blended" if it includes a combination of face-to-face, online and blended modules. If an online programme has any compulsory face-to-face and campus elements it must be described as blended with clearly articulated delivery information to manage student expectations

Fully Online
Instruction that is solely delivered by web-based or internet-based technologies. This term is used to describe the previously used terms distance learning and e learning.

HybridC
Online with mandatory face-to-face learning on Campus

HybridO
Online with optional face-to-face learning on Campus

Work-based Learning
Learning activities where the main location for the learning experience is in the workplace.

Campus(es) for Module Delivery						
The module will **normally** be offered on the following campuses / or by Distance/Online Learning: (Provided viable student numbers permit)						
Paisley:	Ayr:	Dumfries:	Lanarkshire:	London:	Distance/Online Learning:	Other:
✓			✓			

Term(s) for Module Delivery					
(Provided viable student numbers permit).					
Term 1		Term 2	✓	Term 3	

Learning Outcomes: (maximum of 5 statements)

On successful completion of this module the student will be able to:

L1. The student can design small applications for deployment on one or more mobile platforms

L2. The student can implement using appropriate programming concepts and structures involved in developing a mobile app

L3. The student can formulate a test plan and test developed apps

Employability Skills and Personal Development Planning (PDP) Skills	
SCQF Headings	During completion of this module, there will be an opportunity to achieve core skills in:
Knowledge and Understanding (K and U)	SCQF Level 8. Knowledge of a range of mobile device types and suitable development tools focusing on native apps; UI design principles as applicable to mobile devices; security requirements and distribution of mobile apps
Practice: Applied Knowledge and Understanding	SCQF Level 8. Use of emulators for development and debugging; creating mobile UIs; graphics and interacting with online services
Generic Cognitive skills	SCQF Level 8. Object-oriented programming principles; design for minimal interaction
Communication, ICT and Numeracy Skills	SCQF Level 8.

	Writing reports on projects
Autonomy, Accountability and Working with others	SCQF Level 8. Team-work in specifying, designing and building products.

Pre-requisites:	Before undertaking this module the student should have undertaken the following:	
	Module Code: COMP07027	**Module Title:** Introduction to Programming
	Other:	
Co-requisites	**Module Code:**	**Module Title:**

* Indicates that module descriptor is not published.

Learning and Teaching

Students will have weekly lectures on-line and supervised laboratories. Lectures will introduce programming and mobile development concepts that will be used in the supervised labs, advancing the understanding of programming for mobile web and hybrid applications. In addition to scheduled class time, students are also expected to spend significant time on unsupervised lab work and self-study.

Learning Activities During completion of this module, the learning activities undertaken to achieve the module learning outcomes are stated below:	**Student Learning Hours** (Normally totalling 200 hours): (Note: Learning hours include both contact hours and hours spent on other learning activities)
Lecture/Core Content Delivery	20
Laboratory/Practical Demonstration/Workshop	20
Asynchronous Class Activity	8
Independent Study	142
Personal Development Plan	10
	200 Hours Total

****Indicative Resources: (eg. Core text, journals, internet access)**

The following materials form essential underpinning for the module content and ultimately for the learning outcomes:

Core text book/resources:
Google Developer -on-line resources

Development resources:
Android Studio

(**N.B. Although reading lists should include current publications, students are advised (particularly for material marked with an asterisk*) to wait until the start of session for confirmation of the most up-to-date material)

Engagement Requirements

In line with the Academic Engagement Procedure, Students are defined as academically engaged if they are regularly engaged with timetabled teaching sessions, course-related learning resources including those in the Library and on the relevant learning platform, and complete assessments and submit these on time. Please refer to the Academic Engagement Procedure at the following link: Academic engagement procedure

Where a module has Professional, Statutory or Regulatory Body requirements these will be listed here:
The students must attend all Mandatory classes.
The students must submit all assessments

Supplemental Information

Programme Board	Computing
Assessment Results (Pass/Fail)	No
Subject Panel	Business & Applied Computing
Moderator	Mark Davison
External Examiner	D Doolan
Accreditation Details	This module is accredited by BCS as part of a number of specified programmes.
Version Number	2.11

Assessment: (also refer to Assessment Outcomes Grids below)

100% Coursework, including individual class tests (50%), a practical development project (40%) and a presentation of work (10%)

(N.B. (i) **Assessment Outcomes Grids** for the module (one for each component) can be found below which clearly demonstrate how the learning outcomes of the module will be assessed.
(ii) An **indicative schedule** listing approximate times within the academic calendar when assessment is likely to feature will be provided within the Student Handbook.)

Assessment Outcome Grids (Footnote A.)

Component 1

Assessment Type (Footnote B.)	Learning Outcome (1)	Learning Outcome (2)	Learning Outcome (3)	Weighting (%) of Assessment Element	Timetabled Contact Hours
Class test (written)	✓			30	1
Portfolio of practical work	✓	✓	✓	60	0
Presentation	✓	✓	✓	10	2
		Combined Total For All Components		100%	3 hours

Footnotes
A. Referred to within Assessment Section above
B. Identified in the Learning Outcome Section above

Note(s):
1. More than one assessment method can be used to assess individual learning outcomes.
2. Schools are responsible for determining student contact hours. Please refer to University Policy on contact hours (extract contained within section 10 of the Module Descriptor guidance note).
   This will normally be variable across Schools, dependent on Programmes &/or Professional requirements.

Equality and Diversity

This module is suitable for any student. The assessment regime will be applied flexibly so that a student who can attain the practical outcomes of the module will not be disadvantaged. When a student discloses a disability, or if a tutor is concerned about a student, the tutor in consultation with the School Enabling Support coordinator will agree the appropriate adjustments to be made.
UWS Equality and Diversity Policy

(N.B. Every effort will be made by the University to accommodate any equality and diversity issues brought to the attention of the School)