

MODULE DESCRIPTOR

Module Title

Advanced Mobile Development			
Reference	CM4132	Version	1
Created	September 2023	SCQF Level	SCQF 10
Approved	April 2024	SCQF Points	15
Amended		ECTS Points	7.5

Aims of Module

To enable students to design, develop apps for traditional and modern mobile platforms, and understand the role of DevOps in managing app development and maintenance

Learning Outcomes for Module

On completion of this module, students are expected to be able to:

- 1 Justify selection of software architectural patterns with a focus on scalability, robustness, and maintainability.
- 2 Develop apps that leverage capabilities of recent and evolving mobile platforms using appropriate version control and continuous integration tools.
- 3 Test cross-platform apps using appropriate software and hardware tools.
- 4 Compose a DevOps based strategy for managing the release and long-term maintenance.

Indicative Module Content

Mobile architectural patterns, prototyping, adaptive UI design, mobile development, testing frameworks, cloud integration, DevOps processes, app management.

Module Delivery

Key concepts and introduced and illustrated through lectures, with students developing competencies in practical development during lab sessions using mobile compatible integrated development environment and associated tools.

Indicative Student Workload

	Full Time	Part Time
Contact Hours	30	N/A
Non-Contact Hours	120	N/A
Placement/Work-Based Learning Experience [Notional] Hours	N/A	N/A
TOTAL	150	N/A
<i>Actual Placement hours for professional, statutory or regulatory body</i>		

ASSESSMENT PLAN

If a major/minor model is used and box is ticked, % weightings below are indicative only.

Component 1

Type:	Coursework	Weighting:	100%	Outcomes Assessed:	1, 2, 3, 4
Description:	A coursework normally consisting of designing, development and testing of a multi-platform mobile application, and plan for post-release maintenance.				

MODULE PERFORMANCE DESCRIPTOR**Explanatory Text**

The calculation of the overall grade for this module is based on 100% weighing of C1. An overall minimum grade D is required to pass the module.

Module Grade	Minimum Requirements to achieve Module Grade:
A	The student needs to achieve an A in C1
B	The student needs to achieve a B in C1
C	The student needs to achieve a C in C1
D	The student needs to achieve a D in C1
E	The student needs to achieve an E in C1
F	The student needs to achieve an F in C1
NS	Non-submission of work by published deadline or non-attendance for examination

Module Requirements

Prerequisites for Module	CM3110 or equivalent
Corequisites for module	None.
Precluded Modules	None.

INDICATIVE BIBLIOGRAPHY

- 1 Krishna Kaiser, Abhinav. Introduction to DevOps. Springer 2018.
- 2 Sp?th, Peter ; Friesen, Jeff Learn Java for Android Development: Migrating Java SE Programming Skills to Mobile Development. Springer 2020
- 3 Randhawa, Tejinder S. Mobile Applications: Design, Development and Optimization. Springer. 2022.