

## 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:
<b>A</b>	The student needs to achieve an A in C1
<b>B</b>	The student needs to achieve a B in C1
<b>C</b>	The student needs to achieve a C in C1
<b>D</b>	The student needs to achieve a D in C1
<b>E</b>	The student needs to achieve an E in C1
<b>F</b>	The student needs to achieve an F in C1
<b>NS</b>	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.