

MODULE DESCRIPTOR

Module Title

Native Mobile Apps

Reference	CM3147	Version	1
Created	November 2023	SCQF Level	SCQF 9
Approved	May 2020	SCQF Points	15
Amended		ECTS Points	7.5

Aims of Module

To develop the student's competency using native app development tools to create apps for a specific mobile device platform.

Learning Outcomes for Module

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

- 1 Formulate the design of native apps using knowledge of app architectures and major components.
- 2 Make judgements on the selection and effective use of appropriate software tools for developing native apps.
- 3 Demonstrate the ability to create interactive apps that store, transfer, and retrieve data for a specific mobile platform.
- 4 Review security implications in native apps.

Indicative Module Content

Android app development, prototyping, mobile design, data persistence, architecture components, user interfaces, web services, JSON, app security.

Module Delivery

Key concepts and ideas are introduced in lectures. In the lab sessions, the students will develop and implement mobile applications. The labs will involve the use of modern IDE and code management tools for the development, deployment and testing of GUI applications.

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: The coursework will be an extended software design and development exercise.

MODULE PERFORMANCE DESCRIPTOR**Explanatory Text**

The calculation of the overall grade for this module is based on 100% weighting of C1. An overall minimum grade of 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 obtain an E in C1.
F	The student needs to obtain an F in C1.
NS	Non-submission of work by published deadline or non-attendance for examination

Module Requirements

Prerequisites for Module	The student should have previous experience of programming experience.
Corequisites for module	None.
Precluded Modules	None.

INDICATIVE BIBLIOGRAPHY

- 1 Randhawa, Tejinder S. Mobile Applications: Design, Development and Optimization. Springer. 2022
- 2 Mawlood-Yunis, A-R. Android for Java Programmers. Springer, 2022.
- 3 Gunasekera, S. Sndroid Apps Security: Mitigate Hacking Attacks and Security Breaches. Springer. 2020.
- 4 Allen, G. Android for Absolute Beginners: Getting Started with Mobile Apps Development Using the Android Java SDK. Springer 2021