



Module Specification

Mobile Application Development

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Contents

Module Specification	1
Part 1: Information	2
Part 2: Description	2
Part 3: Teaching and learning methods	4
Part 4: Assessment.....	5
Part 5: Contributes towards	7

Part 1: Information

Module title: Mobile Application Development

Module code: UFCE3S-30-3

Level: Level 6

For implementation from: 2024-25

UWE credit rating: 30

ECTS credit rating: 15

College: College of Arts, Technology and Environment

School: CATE School of Computing and Creative Technologies

Partner institutions: School for Higher and Professional Education

Field: Computer Science and Creative Technologies

Module type: Module

Pre-requisites: None

Excluded combinations: None

Co-requisites: None

Continuing professional development: No

Professional, statutory or regulatory body requirements: None

Part 2: Description

Overview: The Mobile Application Development module is designed to provide students with the knowledge and skills required to design, develop, and publish mobile applications.

Features: Not applicable

Educational aims: The Mobile Application Development module equips students with the knowledge and skills to design, develop, and deploy robust mobile

applications. Students will learn key concepts, explore critical topics, and gain practical experience in creating user-friendly apps for various platforms, preparing them for the rapidly-evolving mobile technology field.

Outline syllabus: Students will have the opportunity to apply the enterprise skillset in the whole app development cycle, from design to development. They will form their own app development team, much like standard industry practice. First, they will design an app, considering the user requirements, user experience, design principles and implementation feasibility. Secondly, they will develop their software development skills by organising and formatting their code for readability by implementing the platform's design framework coding standards.

Tutorials will present the basic features of mobile design and development tools, and tutors will support students' understanding of the broader applications available using the tools available. A wealth of resources is available online to support student learning, many of which will be provided to the student via a learning platform (i.e. Blackboard/Moodle).

To achieve high marks, there will be opportunities for students to conduct their own research to empower them to create more advanced mobile applications (E.g. Use of APIs and integrated frameworks). The possibilities of what you can design and create are limitless, so don't hold back; create the next great app!

Indicative syllabus:

Requirements Gathering and Mobile Apps Design:

Introduction Overview: Understanding Mobile Apps

- History of Mobile app
- Advantages/disadvantages of mobile apps
- Introduction to User Experience for Mobile Apps

Low Fidelity Prototyping

- Design process models (e.g. Double Diamond Design Model)
- Requirements gathering and feedback (user/technical)

- Paper Prototypes
- Wireframing

High Fidelity Prototyping

- Design Principles (UX/UI/Styles)
- User Interface design (tools such as Figma)
- Human Interface Guideline between platforms

Software Design

- App Software design (E.g. United Modelling model)

Mobile Application Development

Getting started

- Your first App
- Building app UIs

Mobile App Development

- The App Lifecycle specific to the chosen platforms
- Design Patterns for App development (E.g. MVC, MVVM)
- Frameworks and Standards

Beyond Mobile App Development

- Advanced Topics in Mobile Applications (E.g. Security, Use of APIs and integrated frameworks)
- Cross-platform development

Part 3: Teaching and learning methods

Teaching and learning methods: Students will learn through a combination of lectures, tutorials and practical activities in a digital media studio.

Tutorials will present the basic features of mobile design and development tools, and tutors will support students' understanding of the broader applications available using the tools available. A wealth of resources is available online to support student learning, many of which will be provided to the student via a learning platform (i.e. Blackboard/Moodle).

Students will be expected to learn independently and carry out reading and directed study beyond that available within taught classes.

Module Learning outcomes: On successful completion of this module students will achieve the following learning outcomes.

MO1 Interpret user expectations and apply these in the context of mobile applications.

MO2 Design, develop and document a working mobile application using appropriate programming language and app lifecycle management.

MO3 Apply the enterprise skillset to analyse and critically evaluate the design and development of mobile applications.

Hours to be allocated: 300

Contact hours:

Independent study/self-guided study = 228 hours

Computer-based activities = 48 hours

Total = 300

Reading list: The reading list for this module can be accessed at [readinglists.uwe.ac.uk](https://rl.talis.com/3/uwe/lists/76BB277E-74B0-6D45-1721-AD13DB3EE2B4.html) via the following link <https://rl.talis.com/3/uwe/lists/76BB277E-74B0-6D45-1721-AD13DB3EE2B4.html>

Part 4: Assessment

Assessment strategy: For the project, students will design, develop, and document a mobile application for either Android, iOS, or a cross-platform solution, showcasing their understanding of platform-specific or cross-platform development, user interface design, app lifecycle management, security, and other essential components. There are three parts to this group project:

Design Documentation:

The students will write a report that documents the strategy and design for the app

idea. This report should consider the technical and user requirements for the app. It should also demonstrate implementation of design principles.

Artefact:

Students will submit well-structured, readable, and documented source code for their application, demonstrating their proficiency in programming languages, user interface implementation, and integration of platform-specific features.

Demonstration and Reflection:

Students will evaluate the quality and effectiveness of their mobile application project, applying critical thinking, problem-solving, and collaboration skills.

Students will also discuss the testing and evaluation processes employed during their project, including performance metrics, identified issues, and proposed solutions for improvement.

To achieve high marks, there will be opportunities for students to conduct their own research to empower them to create more advanced mobile applications (E.g. Use of APIs and integrated frameworks).

For the resit, students will submit a reworking of the project, reflection and demo as required.

Assessment tasks:

Project (First Sit)

Description: The module is assessed through a group project (100%) involving the design, development, and documentation of a mobile application, with opportunities for advanced research.

Weighting: 100 %

Final assessment: Yes

Group work: Yes

Learning outcomes tested: MO1, MO2, MO3

Project (Resit)

Description: For the resit, students will submit a reworking of the project, reflection and demo as required.

Weighting: 100 %

Final assessment: Yes

Group work: No

Learning outcomes tested: MO1, MO2, MO3

Part 5: Contributes towards

This module contributes towards the following programmes of study:

Information Technology {Top-Up} [Gloscoll] BSc (Hons) 2024-25

Information Technology {Top-Up} [Frenchay] BSc (Hons) 2024-25

Information Technology {Top-Up} [Phenikaa] BSc (Hons) 2024-25

Information Technology {Top-Up} [INTUNI] BSc (Hons) 2024-25

Information Technology {Top-Up} [SHAPE] BSc (Hons) 2024-25