

Module specification

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Module Code	COM579
Module Title	Web and Mobile App Development
Level	5
Credit value	20
Faculty	FACE
HECoS Code	100960
Cost Code	GACP
Pre-requisite module	None

Programmes in which module to be offered

Programme title	Core/Optional/Standalone
BSc (Hons) Computing for Business	Core

Breakdown of module hours

Learning and teaching hours	15 hrs
Placement tutor support hours	0 hrs
Supervised learning hours e.g. practical classes, workshops	15 hrs
Project supervision hours	0 hrs
Active learning and teaching hours total	30 hrs
Placement hours	0 hrs
Guided independent study hours	170 hrs
Module duration (Total hours)	200 hrs

Module aims

This module aims to develop students' knowledge and practical skills in designing and implementing internet and mobile applications. It explores contemporary principles, methodologies, tools, and frameworks, enabling students to create robust, scalable, and user-centred applications that is fit for purpose. Students will apply industry standard programming languages, libraries, and development environments to integrate applications with networked services and databases. Emphasis is placed on usability, accessibility, and performance, while applied project work fosters the ability to evaluate development approaches, critically reflect on design decisions, and engage with emerging technologies and trends in internet and mobile computing.

Module Learning Outcomes

At the end of this module, students will be able to:

1	Evaluate the fundamental principles, architectures, and technologies underpinning internet and mobile application development
2	Evaluate the technical and non-technical factors influencing the development of various mobile applications and systems.
3	Interpret and evaluate data visualisations, examining their clarity, communicative effectiveness, and alignment with business objectives
4	Apply HCI (Human Computer Interaction) Design principles to implement effective, fit for purpose, and user-centred graphical user interfaces for multiple devices, including smartphones and tablets.

Assessment

Indicative Assessment Tasks:

The module is assessed through the development of practical applications using current internet and mobile technologies, supported by written documentation. Students will be expected to demonstrate their understanding of fundamental principles and architectures, construct small-scale client applications with appropriate tools and languages, and apply human-computer interaction design principles to create effective graphical user interfaces. Marks will be awarded for the quality of the implemented solution, the application of relevant technical and theoretical concepts, and the clarity of supporting documentation that explains both technical and non-technical considerations in the development process.

Portfolio assessments may comprise multiple pieces of work that collectively demonstrate a student's knowledge and skills developed throughout the module. These may take the form of one or two substantial tasks, or a series of smaller tasks, typically ranging from one to eight across the duration of the module.

Assessment number	Learning Outcomes to be met	Type of assessment	Duration/Word Count	Weighting (%)	Alternative assessment, if applicable
1	1, 2, 3.,4	Portfolio	4000 Words or Equivalent	100%	N/A

Derogations

N/A

Learning and Teaching Strategies

In line with the Active Learning Framework, this module will be blended digitally with both a VLE and online community. Content will be available for students to access synchronously and asynchronously and may indicatively include first and third-party tutorials and



videos, supporting files, online activities any additional content that supports their learning. As this module progresses, the strategies will change to best support a diverse learning environment. For each week, a topic will be started with tutor-led demonstrations, and practical-based sessions will be given to ensure that the students get to practice what they have been taught in relevant concepts. Sessions will be intertwined between instructional explanation and practical depending on the specific indicated syllabus necessities.

Welsh Elements

This module is designed to support Welsh-speaking students in line with the Welsh Language Standards. While the primary delivery will be in English, students will have the opportunity to submit assessments, including coursework and projects, in Welsh if preferred. Relevant module materials, such as reading lists, key texts, and guidance, will be available bilingually upon request, ensuring accessibility for all students. Additionally, where possible, guest speakers, case studies, or examples may include references to the Welsh business context, especially in areas such as data use in local industries and Welsh public sector organisations.

The department encourages students to develop bilingual digital skills by incorporating Welsh-language datasets, tools, and resources where appropriate, offering an inclusive learning environment. We also support the development of bilingual visualisation techniques, enabling students to create digital outputs that reflect the Welsh language, should they wish to do so.

Indicative Syllabus Outline

- Foundations: Principles and architectures of internet and mobile systems, client-server and cloud models, and characteristics of mobile platforms.
- Programming: Use of appropriate languages, frameworks, and libraries for cross-platform and native development; integration with web services and APIs.
- User-Centred Design: Application of HCI principles, design of effective graphical user interfaces, and considerations of usability, accessibility, and responsive design.
- Development Practices: Building small-scale client applications, managing data and persistence, and addressing security, privacy, and performance.
- Evaluation and Testing: Usability and technical evaluation methods, debugging strategies, and reflection on technical and non-technical factors.
- Emerging Trends: Current and future technologies, the role of mobile applications in business and society, and innovations such as progressive web apps, IoT integration, and AI-driven applications.

Indicative Bibliography

Please note the essential reads and other indicative reading are subject to annual review and update.

Essential Reads:

There are no essential texts; the module will use relevant online reference material.

Other indicative reading:

Android Developer Guides <https://developer.android.com/guide/index.html>

Apple Developer Documentation <https://developer.apple.com/documentation/>

Administrative Information

For office use only	
Initial approval date	29 th January 2026
With effect from date	September 2026
Date and details of revision	
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