

Module specification

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Module Code	COM574
Module Title	Full Stack Development
Level	5
Credit value	20
Faculty	FACE
HECoS Code	100956
Cost Code	GACP

Programmes in which module to be offered

Programme title	Is the module core or option for this programme
BSc (Hons) Software Engineering	Core
BSc (Hons) Software Engineering with Industry Placement	Core
Delivery as standalone or part of CPD package	Option

Pre-requisites

N/A

Breakdown of module hours

Learning and teaching hours	15 hrs
Placement tutor support	0 hrs
Supervised learning e.g. practical classes, workshops	15 hrs
Project supervision (level 6 projects and dissertation modules only)	0 hrs
Total active learning and teaching hours	30 hrs
Placement / work based learning	0 hrs
Guided independent study	170 hrs
Module duration (total hours)	200 hrs

For office use only	
Initial approval date	08/11/2023



For office use only	
With effect from date	Sept 2025
Date and details of revision	
Version number	1

Module aims

The aim of this module is to provide students with a comprehensive understanding of full stack development, enabling them to design and build dynamic web applications. Students will develop proficiency in both front-end and back-end technologies and gain practical experience in creating responsive and interactive web applications

Module Learning Outcomes - at the end of this module, students will be able to:

1	Analyse and evaluate the principles and best practices of full stack development.
2	Design and implement dynamic web applications using front-end and back-end technologies.
3	Integrate different components of a full stack application to create a cohesive and functional system.
4	Apply security measures and work effectively within a development team.

Assessment

Indicative Assessment Tasks:

This section outlines the type of assessment task the student will be expected to complete as part of the module. More details will be made available in the relevant academic year module handbook.

Students will work in groups to plan, design, and implement a full stack application. The coursework will require the integration of front-end and back-end technologies, database management, and implementation of security measures. Assessment will be based on the quality of the final application and the students' ability to work effectively

Assessment number	Learning Outcomes to be met	Type of assessment	Weighting (%)
1	1,2,3,4	Coursework	100%

Derogations

None



Learning and Teaching Strategies

The teaching and learning strategies for the module align with the WGU Active Learning Framework (ALF), emphasizing inclusive, engaging, and flexible approaches. These strategies encompass engaging lectures and presentations that incorporate multimedia resources and real-world examples. They also include hands-on coding exercises and projects to reinforce learning, interactive discussions, and workshops to foster active participation, practical demonstrations to showcase implementation, and utilization of online resources and tutorials for self-directed learning. Formative and summative assessments are employed to evaluate understanding and practical skills.

By combining these strategies, students can develop a comprehensive understanding of principles and best practices, while gaining practical skills through active and applied learning.

Indicative Syllabus Outline

The following list is indicative and may change:

- Introduction to Full Stack Development
 - Overview of full stack development
 - Software development life cycle
- Front-end development
 - Front-end technologies
 - Responsive web design
 - Web accessibility
- Back-end development
 - Back-end technologies
 - Database management and integration
 - Authentication and authorization mechanisms
- Full stack integration
 - Design and implement dynamic web applications using front-end and back-end technologies.
 - Deployment and hosting considerations for full stack applications.
 - Performance optimization techniques
- Security and scalability
 - Common security threats and vulnerabilities in web applications.
 - Deployment and hosting considerations for full stack applications.
 - Performance optimization techniques

Indicative Bibliography:

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

Essential Reads

C. Northwood, *The Full Stack Developer: Your Essential Guide to the Everyday Skills Expected of a Modern Full Stack Web Developer*. Apress, 2018.

Other indicative reading

P. Ackermann, *Full Stack Web Development: The Comprehensive Guide*. SAP Press, 2023.

R. Ahmed, *Full Stack Web Development For Beginners: Learn Ecommerce Web Development Using HTML5, CSS3, Bootstrap, JavaScript, MySQL, and PHP*. Independently published, 2021.

R. Nixon, *Learning PHP, MySQL & JavaScript: A Step-by-Step Guide to Creating Dynamic Websites (Learning PHP, MYSQL, JavaScript, CSS & HTML5)*. O'Reilly Media, 2021.