



## MODULE SPECIFICATION

Part 1: Information			
Module Title	Advanced Web Development and Platforms		
Module Code	UFCFSC-30-3	Level	Level 6
For implementation from	2022-23		
UWE Credit Rating	30	ECTS Credit Rating	15
Faculty	Faculty of Environment & Technology	Field	Computer Science and Creative Technologies
Department	FET Dept of Computer Sci & Creative Tech		
Module type:	Standard		
Pre-requisites	None		
Excluded Combinations	None		
Co- requisites	None		
Module Entry requirements	None		

Part 2: Description
<p><b>Overview:</b> This industry-derived module aims to develop upon the skills developed in prior modules provides you with an in-depth appreciation of advanced web tools, frameworks and platforms used to design and develop your advanced web solutions to meet industry expectations.</p> <p>You will be able to cultivate independent technical judgement in the use of frameworks and architecture associated with web platforms. As well as being able to develop the ability to think conceptually and translate concepts into reality, you will go beyond programming web applications, and develop skills in security, testing and user experience.</p> <p><b>Educational Aims:</b> To plan, design, develop and test a secure web application to meet a business requirement or case study with attention to modern website design and UX and professional coding.</p> <p>To complete a website project using either advanced frameworks to create a database driven content managed application or using a suitably selected CMS. It is recommended that PHP and a SQL-based database is used, however alternatives may be prescribed if appropriate and industry relevant.</p> <p>To use Content Management Platforms covered in this module could include</p>

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To install, configure and deploy a completed Website to a suitable publicly-accessible website hosting platform ensuring best practice security and performance optimisation.

To identify and manage key legislation impacting the publication of web applications, eg Data Governance (IPO, GDPR, Data Protection), privacy policies, use of data etc.

**Outline Syllabus:** Modern web programming architecture, key technologies, legal and accessibility implications to implementing these technologies.

Advanced Web Frameworks (MVCs and frameworks eg Laravel, CodeIgniter, Symfony etc)

Web Development Platforms (Developing themes, modules and plugins for use in a chosen CMS)

Accessibility concerns and appreciation of key challenges facing web application developers in ensuring applications are accessible to all users and devices.

Hardware and software configuration for Web Platforms (Eg Load balancing, traffic management, distributed platforms, effective use of caching, factors affecting website performance)

Performance benchmarking and optimisation of website hosting solutions.

Legal implications and effective cyber security in relation to web technologies and platforms.

**Teaching and Learning Methods:** Introductory lectures covering the fundamentals and technical underpinning of the module for the first assessment before progressing onto practical delivery through a series of lessons, workshops and practical tasks in the classroom to develop the tools and techniques required to complete the practical assessment for this module. Students are also provided with access to a suitable hosting platform to support the delivery and testing of this assessment.

### Part 3: Assessment

This module is assessed via a presentation and an advanced web project.

The individual presentation will assess students technical understanding of advanced web frameworks and platforms used in industry. The presentation will offer students the opportunity to demonstrate their understanding, as well provide a platform for technical questioning and justification.

Students will then be required to develop a project to a brief using suitably selected frameworks or platforms. Where possible, this assessment should have an industry/employer input to ensure the module is aligned to industry expectations.

Tutor-lead formative feedback will be available throughout the module.

First Sit Components	Final Assessment	Element weighting	Description
Presentation - Component A		25 %	Presentation (15 mins)
Portfolio - Component B	✓	75 %	Practical Portfolio

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Resit Components	Final Assessment	Element weighting	Description
Presentation - Component A		25 %	Presentation (15 mins)
Portfolio - Component B	✓	75 %	Practical Portfolio

### Part 4: Teaching and Learning Methods

Learning Outcomes	On successful completion of this module students will achieve the following learning outcomes:	
	<b>Module Learning Outcomes</b>	<b>Reference</b>
	Evaluate and communicate a range of tools, techniques and frameworks used in the planning and design of secure web solutions.	MO1
	Evaluate the impact of regulation and legislation on web solutions	MO2
	Select appropriate web frameworks and/or Content Management Systems in order to plan, develop and test a secure web solution.	MO3
	Configure a complex website hosting environment and deploy and benchmark a successful project.	MO4
Contact Hours	<b>Independent Study Hours:</b>	
	Independent study/self-guided study	192
	<b>Total Independent Study Hours:</b>	192
	<b>Scheduled Learning and Teaching Hours:</b>	
	Face-to-face learning	108
	<b>Total Scheduled Learning and Teaching Hours:</b>	108
	<b>Hours to be allocated</b>	300
	<b>Allocated Hours</b>	300
	Reading List	<p>The reading list for this module can be accessed via the following link:</p> <p><a href="https://rl.talis.com/3/uwe/lists/C59032EE-44AA-FB21-8D5E-F79779F1B03A.html">https://rl.talis.com/3/uwe/lists/C59032EE-44AA-FB21-8D5E-F79779F1B03A.html</a></p>

### Part 5: Contributes Towards

This module contributes towards the following programmes of study:

Applied Computing[Sep][FT][UCW][3yrs] BSc (Hons) 2020-21