STUDENT AND ACADEMIC SERVICES

UWE Bristol | University of the West of England

MODULE SPECIFICATION

Part 1: Information			
Module Title	Webapp Development		
Module Code	UFCF8R-30-2	Level	Level 5
For implementation from	2020-21		
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
Overview: Advancements in web platforms, portability, scalability and highly interactive web application experiences have resulted in Web Applications replacing many traditionally installed applications in business.   In this module you will explore the legislate, technical and security challenges facing developers in creating and publishing applications to meet a defined business need. cultivate independent technical judgement in the use of techniques and tools associated with web technologies. 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, penetration testing and user experience.   **Educational Aims:** Be able to use a range of professional tools and techniques in all phases of web application development.   To design and implement effective, legal and secure web applications.   To be able to test security of web applications.   **Outline Syllabus:** Overview of planning, developing and testing a WebApp to meet a predefined business solution.

Client and server side scripting languages. Languages for example:
Client-side; e.g. HTML5, CSS3, JavaScript, jQuery
Server-side; e.g. PHP, ASP, Ruby/Rails, Node, .net
Frameworks; e.g. jQuery, AngularJS, React, Laravel, APIs, SOAP, REST, JSON

Performance-optimised databases and their use in WebApp production.
Database engines in WebApps e.g. SQL/NoSQL.

User interfaces.
WebApp deployment, management and testing.

Identifying suitable professional webserver or hosting platform
for public availability.

Common Webapp vulnerabilities and common security mitigation techniques e.g. SQL/code
injection, data sanitisation, LFI/RFI, XSS, DDoS, brute force attacks.

Functional and security testing of a platform/WebApp.

Penetration testing is and its contribution to information assurance.

Key legalisation impacting the publication of Web Accessible Applications, eg Data Governance
(IPO, GDPR, Data Protection), Privacy policies, use of data, terms of use/service.

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

The WebApp Development module is assessed using a combination of a technical examination and WebApp practical portfolio.

The examination will contain a combination of multiple choice questions focusing on the technical understanding of web app development, key protocols and legislative concerns.

The practical portfolio will require students to develop, publish, and test a WebApp solution. The site should be database driven and utilise Server-Side scripting to create a complex solution that must be published and tested on a live web hosting environment.

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

First Sit Components	Final Assessment	Element weighting	Description
Examination - Component A		30 %	Examination (2 Hours)
Portfolio - Component B	✓	70 %	Portfolio -design, build, publish and test a business WebApp
Resit Components	Final Assessment	Element weighting	Description
Examination - Component A		30 %	Examination (2 Hours)
Portfolio - Component B	✓	70 %	Portfolio -design, build, publish and test a business WebApp

Part 4: Teaching and Learning Methods		3
Learning Outcomes	On successful completion of this module students will achieve the following learning outcomes:	

Module Learning Outcomes	Reference
Evaluate potential security risks present when building and publishing public facing web applications.	MO1
Evaluate the contribution that particular security tools and techniques make to information and/or security assurance .	MO2
Identify and explain the impact of key legalisation on the publication of Web Accessible Applications.	MO3
Plan, design, implement and test a secure WebApp.	MO4
Manage and deploy a WebApp into an enterprise hosting environment.	MO5

Contact Hours	**Independent Study Hours:**	
	Independent study/self-guided study	192
	Total Independent Study Hours:	192
	Scheduled Learning and Teaching Hours:	
	Face-to-face learning	108
	Total Scheduled Learning and Teaching Hours:	108
	Hours to be allocated	300
	Allocated Hours	300
Reading List	*The reading list for this module can be accessed via the following link:* https://rl.talis.com/3/uwe/lists/63EB8ED9-A3C2-2077-6FE1-31A17B726878.html	

Part 5: Contributes Towards
This module contributes towards the following programmes of study: Applied Computing [Sep][FT][UCW][2yrs] FdSc 2019-20