Module Specification

Advanced Web Development and Platforms

Version: 2023-24, v2.0, 16 Mar 2023

Contents

Part 1: Information

Module title: Advanced Web Development and Platforms

Module code: UFCFSC-30-3

Level: Level 6

For implementation from: 2023-24

UWE credit rating: 30

ECTS credit rating: 15

Faculty: Faculty of Environment & Technology

Department: FET Dept of Computer Sci & Creative Tech

Partner institutions: None

Delivery locations: Not in use for Modules

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: 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.

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.

Features: Not applicable

Educational aims: 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.

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.

To use Content Management Platforms covered in this module could include

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.

Part 3: Teaching and learning methods

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.

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

MO1 Evaluate and communicate a range of tools, techniques and frameworks used in the planning and design of secure web solutions.

MO2 Evaluate the impact of regulation and legislation on web solutions

MO3 Select appropriate web frameworks and/or Content Management Systems in order to plan, develop and test a secure web solution.

MO4 Configure a complex website hosting environment and deploy and benchmark a successful project.

Hours to be allocated: 300

Contact hours:

Independent study/self-guided study = 192 hours

Face-to-face learning = 108 hours

Total = 300

Reading list: The reading list for this module can be accessed at readinglists.uwe.ac.uk via the following link https://rl.talis.com/3/uwe/lists/C59032EE-44AA-FB21-8D5E-F79779F1B03A.html

Part 4: Assessment

Assessment strategy: 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.

Assessment components:

Portfolio (First Sit)
Description: Practical Portfolio
Weighting: 75 %
Final assessment: Yes
Group work: No
Learning outcomes tested: MO3, MO4

Presentation (First Sit)
Description: Presentation (15 mins)

Weighting: 25 %

Final assessment: No

Group work: No

Learning outcomes tested: MO1, MO2

Portfolio (Resit)

Description: Practical Portfolio

Weighting: 75 %

Final assessment: Yes

Group work: No

Learning outcomes tested: MO3, MO4

Presentation (Resit)

Description: Presentation (15 mins)

Weighting: 25 %

Final assessment: No

Group work: No

Learning outcomes tested: MO1, MO2

Part 5: Contributes towards

This module contributes towards the following programmes of study:

Applied Computing[Sep][FT][UCW][3yrs] BSc (Hons) 2021-22