



## MODULE SPECIFICATION

Part 1: Information			
Module Title	Advanced Topics in Web Development I		
Module Code	UFCFX3-15-3	Level	Level 6
For implementation from	2020-21		
UWE Credit Rating	15	ECTS Credit Rating	7.5
Faculty	Faculty of Environment & Technology	Field	Computer Science and Creative Technologies
Department	FET Dept of Computer Sci & Creative Tech		
Module type:	Standard		
Pre-requisites	Web Programming 2020-21		
Excluded Combinations	None		
Co- requisites	None		
Module Entry requirements	None		

Part 2: Description
<p><b>Overview:</b> Pre-requisites: students must take one out of UFCFR3-30-1 Information Technology or UFCFS5-30-1 Introduction to Web Platforms or UFCF8L-30-1 Introduction to Creative Coding or UFCFC3-30-1 Introduction to OO Systems Development or UFCFB3-30-1 Web Programming or UFCFWA-30-1 C++ Programming</p> <p><b>Educational Aims:</b> See Learning Outcomes</p> <p>In addition to the Learning Outcomes the educational experience may explore, develop, and practise but not formally discretely assess the following:</p> <p>Self-study of programming languages and techniques using a range of web development languages.</p> <p><b>Outline Syllabus:</b> The syllabus will combine compulsory web oriented and programming principles and an optional set of technology topics selected by students with tutor guidance</p> <p>Compulsory coverage will include:</p> <p>Web and service-oriented architectures Software architectures</p>

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Object-oriented programming for the web  
An introduction to software design patterns  
An overview of web programming practices (model- and test-driven design, version control, load testing)

Optional topics will vary but may include:

JavaScript libraries, tools and techniques

Advanced CSS techniques  
Utilising Canvas, SVG or WebGL  
MVC demonstrators in Ruby, Python, JavaScript or PHP  
NoSQL databases

**Teaching and Learning Methods:** Lectures will cover the compulsory topics with illustrations of topics in PHP and JavaScript. Tutorials will consist of practical programming exercises in PHP and JavaScript, with further time dedicated to development of topics connected to the coursework and presentation. Students will be given time to select a key topic and develop their prototype.

Toward the end of the module, students will describe and present their work.

There will be two contact hours per week consisting of a one-hour lecture and a one-hour lab-based practical session.

Contact time: 3 hours per week

Activity (hrs)  
Contact time (36)  
Assimilation and development of knowledge (70)  
Exam preparation (20)  
Coursework preparation (24)  
Total study time (150)

### Part 3: Assessment

Assessment is divided between an exam to test both theoretical and analytical skills and a coursework assignment.

The examination (A component) will typically consist of a compulsory section focusing on core technical knowledge and a selective section testing more specialized in-depth knowledge.

Answers will be assessed for completeness, technical correctness and the application of sound design principles. Thorough answers that show evidence of wider reading and independent learning will score highly.

Support for examination preparation through preparatory questions and worked answers will be provided.

The coursework assignment (B component) will normally be marked as an individual task supported by tutor and group based work during laboratory sessions.

The coursework will be assessed for the sound understanding and application of web technologies, programming standards and adequate documentation.

Weekly material presented in lectures and tutorial worksheets will provide the technical basis for the coursework assignment.

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First Sit Components	Final Assessment	Element weighting	Description
Project - Component B		50 %	Research and build a prototype implementation.
Examination (Online) - Component A	✓	50 %	Online Examination (3 hours) 24-hour window
Resit Components	Final Assessment	Element weighting	Description
Project - Component B		50 %	Individual design and implementation task
Examination (Online) - Component A	✓	50 %	Online Examination (3 hours) 24-hour window

### Part 4: Teaching and Learning Methods

Learning Outcomes	On successful completion of this module students will achieve the following learning outcomes:															
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Reading List	<p><i>The reading list for this module can be accessed via the following link:</i></p> <p><a href="https://uwe.rl.talis.com/modules/ufcfx3-15-3.html">https://uwe.rl.talis.com/modules/ufcfx3-15-3.html</a></p>
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### Part 5: Contributes Towards

This module contributes towards the following programmes of study:

Digital Media [Sep][FT][Frenchay][3yrs] BSc (Hons) 2018-19

Business Computing [Sep][FT][Frenchay][3yrs] BSc (Hons) 2019-20

Business Computing [Sep][SW][Frenchay][4yrs] BSc (Hons) 2019-20

Software Engineering for Business [Sep][FT][Frenchay][3yrs] BSc (Hons) 2018-19

Information Technology Management for Business [Sep][FT][Frenchay][3yrs] BSc (Hons) 2018-19

Digital Media [Sep][FT][Frenchay][3yrs] BSc (Hons) 2018-19

Computing [Sep][FT][Frenchay][3yrs] BSc (Hons) 2018-19

Digital Media [Sep][FT][SHAPE][3yrs] BSc (Hons) 2018-19

Digital Media [Sep][FT][SHAPE][3yrs] BSc (Hons) 2018-19

Business Computing {Foundation} [Sep][SW][Frenchay][5yrs] BSc (Hons) 2018-19

Business Computing {Foundation} [Sep][FT][Frenchay][4yrs] BSc (Hons) 2018-19