Module code: MOD002619	**Version:** 6 **Date Amended:** 24/Feb/2020

1. Module Title

Web Programming

2a. Module Leader

Nigel Edwards

2b. School

School of Computing and Information Sciences

2c. Faculty

Faculty of Science and Engineering

3a. Level

5

3b. Module Type

Standard (fine graded)

4a. Credits

15

4b. Study Hours

150

5. Restrictions

Type	Module Code	Module Name	Condition
Pre-requisites:	None		
Co-requisites:	None		
Exclusions:	None		
Courses to which this module is restricted:	None		

LEARNING, TEACHING AND ASSESSMENT INFORMATION

6a. Module Description

Through a mixture of both classroom-based lecturing and practical sessions you will be introduced to the fundamental concepts and technologies that are required for the development of web-based applications. You will explore programming at the client side using technologies such as HTML, CSS and JavaScript and server side using the most popular and adopted programming and scripting languages such as Java, Python, PHP and Ruby on Rails.

An important part of developing dynamic web-applications is the interaction with databases thus simple database connectivity will also be introduced and this will cover both SQL and NoSQL type databases.

On successful completion of this module you will be equipped with a deep understanding of the relationships between user requirements and system specification. You will be proficient in developing robust web applications by using modern development stacks. This will make you attractive to employers in the fields of dynamic web application development and equip you with the technical skills needed if you wish to enter into self-entrepreneurship.

6b. Outline Content

- User requirements, System specifications, Web server implementation - Server side programing and/or scripting. - Client side programming and/or scripting, including using latest version of HTML, CSS and most up-to-date responsive design. - Database design and implementation. Database queries using SQL. - Software testing and debugging

6c. Key Texts/Literature

The reading list to support this module is available at: https://readinglists.aru.ac.uk/

6d. Specialist Learning Resources

·   Client-side web site creation using tools such as HTML and CSS

·   The Document Object Model (DOM)

·   Client-side scripting using technologies such as JavaScript and jQuery

·   Front-end HTML, CSS and JavaScript frameworks such as Bootstrap

·   Server-side scripting and database connections

·   Full stack web frameworks such as Django

·   Web development security issues

7. Learning Outcomes (threshold standards)

No.	Type	On successful completion of this module the student will be expected to be able to:
1	Knowledge and Understanding	Plan a web based application appropriate to meet the user requirements.
2	Intellectual, practical, affective and transferrable skills	Demonstrate the ability to implement a web based application involving both client and server side programming.
3	Intellectual, practical, affective and transferrable skills	Demonstrate a working knowledge of software development environments designed for developing Internet applications.

8a. Module Occurrence to which this MDF Refers

Year	Occurrence	Period	Location	Mode of Delivery
2025/6	ZZF	Template For Face To Face Learning Delivery		Face to Face

8b. Learning Activities for the above Module Occurrence

Learning Activities	Hours	Learning Outcomes	Details of Duration, frequency and other comments
Lectures	12	1,2,3	1 hour lecture and 2 hour seminar each week
Other teacher managed learning	24	1,2,3	1 hour lecture and 2 hour seminar each week
Student managed learning	114	1,2,3	Use of on-line learning resources, lecture notes, practical exercises, Web-links etc.
TOTAL:	150		

9. Assessment for the above Module Occurrence

Assessment No.	Assessment Method	Learning Outcomes	Weighting (%)	Fine Grade or Pass/Fail	Qualifying Mark (%)
010	Coursework	1-3	100 (%)	Fine Grade	30 (%)

The module is assessed by coursework assignment, which will test student's application of knowledge and skills through their ability to design, implement and test a dynamic Web-based solution comprising both development and production environments. (equivalent to 3000 words).

In order to pass this module, students are required to achieve an overall mark of 40% (for modules at levels 3, 4, 5 and 6) or 50% (for modules at level 7*).

In addition, students are required to:
(a) achieve the qualifying mark for each element of fine graded assessment as specified above
(b) pass any pass/fail elements

[* the pass mark of 50% applies for all module occurrences from the academic year 2024/25 – see Section 3a of this MDF to check the level of the module and Section 8a of this MDF to check the academic year]