

# Prifysgol Wreccsam Wrexham University

## Module specification

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Module Code	CONL713
Module Title	Software Development for the Web
Level	7
Credit value	15
Faculty	FACE
HECoS Code	100374
Cost Code	GACP

## Programmes in which module to be offered

Programme title	Is the module core or option for this programme
MSc Computer Science (online)	Core
MSc Computer Science with Software Engineering	Core
MSc Computer Science with User Experience	Core

## Pre-requisites

None

## Breakdown of module hours

Learning and teaching hours	15 hrs
Placement tutor support	0 hrs
Supervised learning e.g. practical classes, workshops	0 hrs
Project supervision (level 6 projects and dissertation modules only)	0 hrs
<b>Total active learning and teaching hours</b>	<b>15 hrs</b>
Placement / work based learning	0 hrs
Guided independent study	135 hrs
<b>Module duration (total hours)</b>	<b>150 hrs</b>

<b>For office use only</b>	
Initial approval date	04/09/2019
With effect from date	01/01/2020
Date and details of revision	27/06/2024 Programme revalidation



<b>For office use only</b>	
Version number	2

## Module aims

This module will introduce students to online software development with modern languages and platforms such as HTML5, CSS3, Javascript, PHP and MySQL. Through a series of practical exercises, students will learn how to design, build and deploy their own website project.

## Module Learning Outcomes - at the end of this module, students will be able to:

1	Select and explain the various tools, technologies, and programming languages available for creating online web systems. Demonstrate a comprehensive understanding of the strengths and limitations of each tool and technology, and their suitability for different types of web projects.
2	Critically evaluate the business-related issues, contextual roles, and architecture of web-based information systems.
3	Evaluate and justify the choice of programming languages and platforms for developing a website.
4	Identify and develop personal technical skills through the hands-on building of a website using modern web technologies.
5	Evaluate, justify, and reflect upon the implementation of online systems to meet organizational requirements.

## Assessment

This section outlines the type of assessment task the student will be expected to complete as part of the module. More details will be made available in the relevant academic year module handbook.

Indicative Assessment Tasks:

Assessment 1 will require students to design and develop a web application as a working prototype using web systems technologies for example, HTML5, PHP, Javascript and CSS3. Assessment 2 will require students to demonstrate their knowledge of web systems technologies, development, history and architectures through an in-class test with an indicative length of 90 minutes.

Assessment number	Learning Outcomes to be met	Type of assessment	Weighting (%)
1	3,4,5	Practical	70%
2	1,2	In-class test	30%

## Derogations

None

## Learning and Teaching Strategies

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The overall learning and teaching strategy is one of guided independent study requiring ongoing student engagement. Online material will provide the foundation of the learning resources, requiring the students to log in and engage regularly throughout the eight weeks of the module. There will be a mix of suggested readings, discussions and interactive content containing embedded digital media and self-checks for students to complete as they work through the material and undertake the assessment tasks. A range of digital tools via the virtual learning environment and additional sources of reading will also be utilised to accommodate learning styles. There is access to a helpline for additional support and chat facilities through Canvas for messaging and responding.

## Indicative Syllabus Outline

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- Introduction to online software development, the dynamic web and HTML5
- PHP server-side programming
- PHP arrays and objects
- Forms and authentication
- JavaScript client-side programming
- CSS3
- HTML5 advanced features

## Indicative Bibliography:

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Please note the essential reads and other indicative reading are subject to annual review and update.

### Essential Reads

R.Nixon, *Learning PHP, MySQL & JavaScript*. 5<sup>th</sup> ed. Sebastopol, CA: O'Reilly Media, 2018.

### Other indicative reading

J. Dean, *Web Programming with HTML5, CSS and JavaScript*. Burlington, MA: Jones & Bartlett Learning, 2019.

T. Felke-Morris, *Web Development and Design Foundations with HTML5*, 9th ed. Upper Saddle River, NJ: Pearson Education, 2018.

J. Robbins, *Learning Web Design: A Beginner's Guide to HTML, CSS, JavaScript and Web Graphics*, 5th ed. Cambridge, U.K.: O'Reilly, 2018.

P. Scobey and P. Lingras, *Web Programming and Internet Technologies*, 2nd ed. Burlington, MA: Jones & Bartlett Learning, 2016.

*The World Wide Web Consortium (n.d.) W3Schools. Available at:*  
<https://www.w3schools.com/>

A. W. West and S. Prettyman, *Practical PHP 7, MySQL 8, and MariaDB Website Databases*, 2nd ed. New York, NY: Apress, 2019.