

Module specification

When printed this becomes an uncontrolled document. Please access the **Module Directory** for the most up to date version by clicking on the following link: **[Module directory](#)**

Module code	COM440
Module title	Web Design and Development
Level	4
Credit value	20
Faculty	FAST
Module Leader	Julie Mayers
HECoS Code	100373
Cost Code	GACP

Programmes in which module to be offered

Programme title	Is the module core or option for this programme
BSc (Hons) Computer Science	Core
BSc (Hons) Computer Science (with Industrial Placement)	Core
BSc (Hons) Computer Networks and Security	Core
BSc (Hons) Computer Networks and Security (with Industrial Placement)	Core
BSc (Hons) Computing	Core
BSc (Hons) Computing (with Industrial Placement)	Core
BSc (Hons) Applied Software Engineering	Core

Pre-requisites

None

Breakdown of module hours

Learning and teaching hours	36 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
Total active learning and teaching hours	36 hrs
Placement / work based learning	0 hrs
Guided independent study	164 hrs
Module duration (total hours)	200 hrs

For office use only	
Initial approval date	30/08/2018
With effect from date	01/09/2018
Date and details of revision	04/03/19 APSC revision to programmes in which module is offered and slight rewording of learning outcomes 2 and 4. 12/11/2021 template update
Version number	3

Module aims

The aim of this module is to describe structures, procedures, protocols and principles of Web Development. Give a broad overview of Web Technologies and various issues (security, ethical etc). Give practical exposure and theoretical understanding of the tools, technologies and techniques used to design and create a website. The module also covers the basics of programming using HTML, CSS, JavaScript, such as syntax and basic statements (for, while, if, functions, arrays, objects), the core DOM (Document Object Model) and events.

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

1	Develop an understanding of the technology and protocols underlying World Wide Web and construct a responsive web sites using HTML, CSS and JavaScript
2	Demonstrate the principles of Web usability, HCI and design strategies including considerations of the user experience
3	Illustrate the importance of website validation and develop code which is reliable and responsive across a range of browsers.
4	Recognise and understand the legal and ethical constraints on web development.

Assessment

Indicative Assessment Tasks:

The assessment will be based around the design and creation of a dynamic, responsive web-site that will allow the student to gain practical skills. Where practical the assessment will be related/carried out in the workplace.

Assignment 1 will incorporate the design elements, while Assignment 2 will look towards the development side of the website.

Formative assessment will be carried out through laboratory exercises, making use of relevant tasks and scenarios.

Assessment number	Learning Outcomes to be met	Type of assessment	Weighting (%)
1	2, 4	Presentation	40%
2	1, 3	Coursework	60%

Derogations

None

Learning and Teaching Strategies

This module has an emphasis in the practical issues related to Web protocols and technologies and it will be delivered using a combination of formal lecturers, tutorials, practical demonstrations and lab sessions. Lectures will present the main concepts, while lab sessions will combine in-lab instruction and demonstrations with supervised exercises. These will be supported with additional materials, links to useful resources on the Web reinforcement exercises, peer support and tutor support in the VLE

Indicative Syllabus Outline

- Understand the structure of the Internet and the role of the main network protocols including: ISO model; basic network architecture; routing; domain names; email; ftp; telnet; HTTP
- Identify key concepts within the analysis and design stage
 - Initiate the use of storyboards, sitemaps, HCI principals within the design of the website
 - Visualise the design and usability of websites, eg understanding the selection of fonts, colours, navigation, graphics, social media icons, etc
- Using a structured language ie HTML5, CSS3, JavaScript, to develop a responsive Web site that will be accessible on a variety of browsers and devices.
 - Writing Scripts and DOM manipulation (using getElementById, getElementsByClassName and other methods)
 - Understand the key concepts of stylesheets, and their impact of web pages o
Identify and demonstrate the importance of validating code
- Understand some of the legal and ethical constraints on web development

Indicative Bibliography:

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

Essential Reads

Felke-Morris, T. (2018), *Web Development and Design Foundations with HTML 5*. 9th ed. Upper Saddle River, NJ: Pearson Education.

Other indicative reading

Dean, J. (2019), *Web Programming with HTML5, CSS and JavaScript*, Jones & Bartlett Learning.

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

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

The World Wide Web Consortium. (2018). W3C [Online] Available at <http://www.w3.org/>

The World Wide Web Consortium, 2018. w3schools.com. [Online] Available at: <https://www.w3schools.com/>

Employability skills – the Glyndŵr Graduate

Each module and programme is designed to cover core Glyndŵr Graduate Attributes with the aim that each Graduate will leave Glyndŵr having achieved key employability skills as part of their study. The following attributes will be covered within this module either through the content or as part of the assessment. The programme is designed to cover all attributes and each module may cover different areas.

Core Attributes

Engage
Enterprising
Creative
Ethical

Key Attitudes

Commitment
Curiosity
Resilience
Confidence
Adaptability

Practical Skillsets

Digital Fluency
Organisation
Critical Thinking
Emotional Intelligence
Communication