University of the West of Scotland

Module Descriptor

Session: 2024/25

Title of Module: Internet Scripting			
Code: COMP09020	SCQF Level: 9 (Scottish Credit and Qualifications Framework)	Credit Points: 20	ECTS: 10 (European Credit Transfer Scheme)
School:	School of Computing, Engineering and Physical Sciences		
Module Co-ordinator:	Frances McCormick		

Summary of Module
The module aims to equip students with the practical skills to be able to design and develop dynamic web applications for small businesses and organisations.   This module begins by introducing all the core technologies it covers, and then walks you through the installation of a web development server. You will then be ready to work through the many examples and exercises given in this module.   You will gain a grounding in the C# programming language, covering the basics of syntax, arrays, functions, and object-oriented programming. Then, with C# under your belt, you will move on to the SQLite database system, where you will learn everything from how SQLite databases are structured to how to generate complex queries.   After that, you will learn how you can combine C# and SQLite to create your own dynamic web applications. You will learn how build websites and services using ASP.NET Core 5, how to use Entity Framework Core to query and manipulate data using LINQ, and how to build rich web experiences using the Blazor framework.   Along the way, you'll find plenty of advice on good programming practices and tips that can help you find and solve hard-to-detect programming errors. There are also plenty of links to websites containing further details on the topics covered.   This module will work to develop a number of the key 'I am UWS' Graduate Attributes to make those who complete this module. Universal: Critical Thinker; Ethically-minded; and Research-minded. Work Ready: Problem-Solver; Effective Communicator; and Ambitious. Successful: Autonomous; Resilient; and Driven.

Module Delivery Method					
Face-To-Face	Blended	Fully Online	HybridC	Hybrid 0	Work-Based Learning
☒	☒	☐	☐	☐	☐
See Guidance Note for details.					

If this module is delivered within the BSc (Hons) IT Software Development Programme the 'Blended' module delivery method applies.

Campus(es) for Module Delivery

The module will **normally** be offered on the following campuses / or by Distance/Online Learning: (Provided viable student numbers permit) (tick as appropriate)

Paisley:	Ayr:	Dumfries:	Lanarkshire:	London:	Distance/Online Learning:	Other:
☒	☐	☒	☒	☐	☐	New College Lanarkshire

Term(s) for Module Delivery

(Provided viable student numbers permit).

Term 1	☒	Term 2	☒	Term 3	☐

Learning Outcomes: (maximum of 5 statements)
These should take cognisance of the SCQF level descriptors and be at the appropriate level for the module.
At the end of this module the student will be able to:

L1	Demonstrate a critical understanding of the technologies and tools available for developing dynamic web applications.
L2	Make informed judgements in selecting a range of technologies and tools for developing a dynamic web application, and to communicate the rationale for the judgements arrived at
L3	Apply knowledge, skill and understanding in planning and developing a dynamic web application

Employability Skills and Personal Development Planning (PDP) Skills

SCQF Headings	During completion of this module, there will be an opportunity to achieve core skills in:
Knowledge and Understanding (K and U)	SCQF Level **9** Demonstrate a critical understanding of the capabilities and limitations of dynamic web technologies.
Practice: Applied Knowledge and Understanding	SCQF Level **9** Provide dynamic web solutions at a professional level in areas that may include a degree of novelty.

Generic Cognitive skills	SCQF Level **9** Identify problems, analyse results and interpret common error messages to solve problems in a logical manner.	
Communication, ICT and Numeracy Skills	SCQF Level **9** This subject area is entirely computer based so ICT skills feature heavily in the practice of the subject area.	
Autonomy, Accountability and Working with others	SCQF Level **9** Exercise autonomy and initiative to independently implement ASP.NET at a professional level.	
Pre-requisites:	Before undertaking this module the student should have undertaken the following:	
	Module Code:	**Module Title:**
	Other:	
Co-requisites	**Module Code:**	**Module Title:**

*Indicates that module descriptor is not published.

Learning and Teaching	
In line with current learning and teaching principles, a 20-credit module includes 200 learning hours, normally including a minimum of 36 contact hours and maximum of 48 contact hours. The module will be delivered through a combination of lectures, which will develop the theoretical underpinning for the module content, and lab exercises and workshops which will enable you to develop the appropriate practical and analytical skills. In the lab, practical exercises will equip you with the core skills required to specify web solutions. All lecture, workshop and laboratory exercises will be published on the module's VLE.	
Learning Activities During completion of this module, the learning activities undertaken to achieve the module learning outcomes are stated below:	**Student Learning Hours** (Normally totalling 200 hours): (Note: Learning hours include both contact hours and hours spent on other learning activities)
Lecture/Core Content Delivery	12
Laboratory/Practical Demonstration/Workshop	36
Independent Study	152
	200 Hours Total

**Indicative Resources: (eg. Core text, journals, internet access)

The following materials form essential underpinning for the module content and ultimately for the learning outcomes:

You must have access to a computer with Internet access

You must have access to an Integrated Development Environment such as Visual Studio

Recommended Reading
Pro ASP.NET Core: Develop Cloud-Ready Web Applications Using MVC, Blazor, and Razor Pages by Adam Freeman
Beginning Database Programming Using ASP.NET Core: With MVC, Razor Pages, Web API, jQuery, Angular, SQL Server, and NoSQL by Bipin Joshi
Visual Studio Code Distilled: Evolved Code Editing for Windows, macOS, and Linux by Alessandro Del Sole (2019)

(**N.B. Although reading lists should include current publications, students are advised (particularly for material marked with an asterisk*) to wait until the start of session for confirmation of the most up-to-date material)

Attendance and Engagement Requirements

In line with the Student Attendance and Engagement Procedure: Students are academically engaged if they are regularly attending and participating in timetabled on-campus and online teaching sessions, asynchronous online learning activities, course-related learning resources, and complete assessments and submit these on time.

Equality and Diversity

The University's Equality, Diversity and Human Rights Procedure can be accessed at the following link: UWS Equality, Diversity and Human Rights Code.

Please ensure any specific requirements are detailed in this section. Module Co-ordinators should consider the accessibility of their module for groups with protected characteristics..

(N.B. Every effort will be made by the University to accommodate any equality and diversity issues brought to the attention of the School)

Supplemental Information

Divisional Programme Board	Computing
Assessment Results (Pass/Fail)	Yes ☐ No ☒
School Assessment Board	Business and Applied Computing

Moderator	Graeme McRobbie
External Examiner	A Jindal
Accreditation Details	This module is accredited by BCS as part of a number of specified programmes.
Changes/Version Number	2.1

Assessment: (also refer to Assessment Outcomes Grids below)
Assessment 1 - A class test (practical) under strict examination conditions. The class test (practical) is intended to assess the student's understanding of the principles underpinning the technologies and frameworks studied in the module. The class test (practical) is worth 40% of the overall mark.
Assessment 2 - A portfolio of practical work demonstrating the practical application of web development technologies and frameworks in producing a web-based solution to a problem. The portfolio of practical work is worth 60% of the overall mark.
(N.B. (i) **Assessment Outcomes Grids** for the module (one for each component) can be found below which clearly demonstrate how the learning outcomes of the module will be assessed. (ii) An **indicative schedule** listing approximate times within the academic calendar when assessment is likely to feature will be provided within the Student Module Handbook.)

Assessment Outcome Grids (See Guidance Note)

Component 1

Assessment Type (Footnote B.)	Learning Outcome (1)	Learning Outcome (2)	Learning Outcome (3)	Learning Outcome (4)	Learning Outcome (5)	Weighting (%) of Assessment Element	Timetabled Contact Hours
Class test	✓					40	2

Component 2

Assessment Type (Footnote B.)	Learning Outcome (1)	Learning Outcome (2)	Learning Outcome (3)	Learning Outcome (4)	Learning Outcome (5)	Weighting (%) of Assessment Element	Timetabled Contact Hours
Portfolio of practical work		✓	✓			60	0
Combined Total for All Components						**100%**	**2 hours**