

University of the West of Scotland

Module Descriptor

Session: 2024/25

Title of Module: Internet Technologies			
Code: COMP10020	SCQF Level: 10 (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:	Derek Turner		
Summary of Module			
<p>Honours graduates should be familiar with a range of technologies from frameworks to cloud services and be able to choose an appropriate technical approach for a given scenario.</p> <p>This module will provide an opportunity for students to specify construct and deploy a web app using a popular technology stack and also to review and experiment with competing technologies.</p> <p>Before taking this module, students should have a working knowledge of the internet, an ability to develop web pages, and a familiarity with client and server scripting, databases, and some programming experience. That prior knowledge will be used in the module to provide a basis on which to build an understanding of the technologies presented and explored in the module.</p> <p>Code examples and notes will be provided via GitHub pages and code will be available to download. Class discussions and presentations will present the background to support the coded materials. The module materials will enable students to pass the module. To get the highest classifications, students will need to go beyond this material, using links and resources provided as a starting point.</p> <p>In 2024 the technology stack presented will include React, MongoDB, Remix and Node. Code will be developed using Docker development environments. Students are encouraged to use Docker linked to GitHub, but this is not a requirement of the assessment.</p> <ul style="list-style-type: none"> • Internet Technologies evolve all the time, and Honours graduates should ensure their skills are up to date. Students on this module will become familiar with both client and server code for a web application. • Students will consider the use of frameworks to facilitate the adaptation of web applications towards native mobile applications. • In employment Honours graduates are expected to be able to contribute usefully to a discussion about designing a solution and be able to implement some parts of the solution. So, students will be expected to contribute to the knowledge base of the module through their own research. • This module embeds the key "I am UWS" graduate attributes and in particular: Universal (Analytical, collaborative, research-minded), Work Ready (digitally literate, effective communicator) and Successful (creative) 			

Module Delivery Method					
Face-To-Face	Blended	Fully Online	HybridC	Hybrid 0	Work-Based Learning
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
See Guidance Note for details.					

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:
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Add name

Term(s) for Module Delivery					
(Provided viable student numbers permit).					
Term 1	Term 2	Term 3	Term 4	Term 5	Term 6
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

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	Understand and work with a range of current internet technologies to specify, create and deploy web apps using appropriate services.
L2	Demonstrate independent learning around advanced topics related to internet technologies.
L3	Present and report upon group investigations of internet technologies.
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 10. the process of developing internet standards and other enabling infrastructure, the nature of toolkits and specifications, and the ability to use, analyse and critically compare different technical approaches; the trade-offs involved in developing technologies (or components that embody them); the conventions and approaches that are currently regarded as standard.

Practice: Applied Knowledge and Understanding	SCQF Level 10 a range of (about 10) contemporary tools and technologies from competing platforms, in enough detail to see how they could be applied in a realistic scenario (achieved in practical sessions and personal research)	
Generic Cognitive skills	SCQF Level 10 critically identify, define, conceptualise and analyse application of internet technologies in specific problem situations; offer professional insights and judgments as to cost-effectiveness, practicality and safety; demonstrate some originality and creativity in dealing with a realistic scenario	
Communication, ICT and Numeracy Skills	SCQF Level 10 critically identify, define, conceptualise and analyse application of internet technologies in specific problem situations; offer professional insights and judgments as to cost-effectiveness, practicality and safety; summarise the result of research	
Autonomy, Accountability and Working with others	SCQF Level 10 Work in small groups to achieve the above objectives	
Pre-requisites:	Before undertaking this module the student should have undertaken the following:	
	Module Code: COMP09006 COMP09023	Module Title: Web Site Development Web Server Technology
	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 presented using live face to face laboratory sessions with online notes and code resources. Students will be expected to progress from guided exercises on to their own projects. Students will also be required to conduct independent investigations of internet technologies and present their findings during timetabled classes.	
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
Tutorial/Synchronous Support Activity	12
Laboratory/Practical Demonstration/Workshop	24
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:

Development environment comprising:

Windows subsystem for Linux.

Docker desktop (for containerised development environment featuring Vite development server, Nodejs and typescript)

GitHub desktop as a convenient interface between local PC and cloud repository.

Visual Studio Code as a code editor (IDE)

Visual Studio Code extensions:

- Prettier as a code formatter
- Remote development which incorporates:
 - WSL
 - Dev Containers: allowing local code to be run and edited in a container
 - Remote SSH
 - Remote Tunnels
- Live server for website development

GIT to facilitate VSC connection to code repository.

Internet resources as indicated on the VLE including:

react.dev. (n.d.). *React Reference*. [online] Available at:

<https://react.dev/reference/react>.

Remix. (n.d.). *Remix Docs Home*. [online] Available at:

<https://remix.run/docs/en/main>.

Reference to books may also be useful including:

Landgraf, A. (2023). *Full Stack Web Development with Remix: Enhance the User Experience and Build Better React Apps by Utilizing the Web Platform*. Packt Publishing.

Please ensure the list is kept short and current. Essential resources should be included, broader resources should be kept for module handbooks / Aula VLE.

Resources should be listed in Right Harvard referencing style or agreed professional body deviation and in alphabetical order.

(**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.

For the purposes of this module, academic engagement equates to the following:

Students must actively participate in their groupwork contributing to the preparation and presentation of their research as a live group presentation with accompanying documentation. Students must submit a final coursework assignment in the form of documentation and deployed web application.

Students are expected to engage with lab exercises and attend 75% of scheduled sessions (in face to face or online format as appropriate).

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](#).

The University policies on equality and diversity will apply to this module: the content and assessment are based on the ability to communicate in English but are otherwise culture-neutral.

Internet technologies are designed for accessibility and internationalisation.

Appropriate adjustments will be made for students with additional support requirements in consultation with the module coordinator.

Further guidance available from Student Services, School Disability Co-ordinators or the University's Equality and Diversity Co-ordinator.

(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 <input type="checkbox"/> No <input checked="" type="checkbox"/>
School Assessment Board	Business & Applied Computing
Moderator	Pablo Salva Garcia
External Examiner	A Jindal
Accreditation Details	This module is accredited by BCS as part of a number of specified programmes.
Changes/Version Number	Minor update to wording in the summary of the module to include Remix framework. Normal delivery method set to face-to-face. Updated indicative resources. Minor wording change to assessment 2

Assessment: (also refer to Assessment Outcomes Grids below)

This section should make transparent what assessment categories form part of this module (stating what % contributes to the final mark).

Maximum of 3 main assessment categories can be identified (which may comprise smaller elements of assessment).

NB: The 30% aggregate regulation (Reg. 3.9) (40% for PG) for each main category must be taken into account. When using PSMD, if all assessments are recorded in the one box, only one assessment grid will show and the 30% (40% at PG) aggregate regulation will not stand. For the aggregate regulation to stand, each component of assessment must be captured in a separate box.

Please provide brief information about the overall approach to assessment that is taken within the module. In order to be flexible with assessment delivery, be brief, but do state assessment type (e.g. written assignment rather than "essay" / presentation, etc) and keep the detail for the module handbook. [Click or tap here to enter text.](#)

Assessment 1

Coursework assignment contributing 50%

Working in small groups student will research an aspect of internet technologies which is not covered in the main presentation of a module in the current year of their programme. Students will be expected to provide simple examples which demonstrate interaction with the technology, show how the technology relates to other elements, describe a scenario where its

use would be appropriate and give a critical assessment of its relative merits. Students may select from a list of suggested technologies which might include frameworks and cloud services or they may put forward their own suggestions for approval. The group will make a live presentation to the class and support this with a GitHub page featuring presentation notes and a tutorial.

Assessment 2

Coursework assignment contributing 50%

The coursework assignment is normally done as pairs (but students may opt to work individually) and involves specification and design of a web application to meet a scenario brief. The specification document will be supported by a proof-of-concept site based on a suitable technology stack. The assignment is set in week 2 and must be completed by week 14. Students are expected to present their site and documentation as work in progress to staff prior to submission.

Assessment 3

(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
		✓	✓			50	0.5

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
	✓	✓				50	0.5

Component 3							
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
Combined Total for All Components						100%	1 hours

Change Control:

What	When	Who

Version Number: MD Template 1 (2023-24)