

## University of the West of Scotland

### Module Descriptor

**Session: 2024/25**

Last modified: 15/02/2024 12:20:00

<b>Title of Module: Server Side Systems</b>			
<b>Code: COMP10015</b>	<b>SCQF Level: 10</b> (Scottish Credit and Qualifications Framework)	<b>Credit Points: 20</b>	<b>ECTS: 10</b> (European Credit Transfer Scheme)
<b>School:</b>	School of Computing, Engineering and Physical Sciences		
<b>Module Co-ordinator:</b>	Pablo Salva-Garcia		
<b>Summary of Module</b>			
<p>The module is built around the stages of practical work identified below.</p> <p>Apache web server configuration. Discussion of Object-Oriented PHP followed by development and deployment of secure database driven web applications with a PHP MVC (Model-View-Controller) framework.</p> <p>These are specific examples of the fundamental server systems used almost all large (any many small scale) web applications for commercial, non-profit, educational, or governmental organisations. In the process of working with these specific systems students gain fundamental understanding of the techniques that underpin high profile social networking, ecommerce, news, and auction web sites regardless of the technologies these sites use.</p> <p>The practical work of the module takes place in timetabled computer laboratories. Formal lectures are used prior to the practical work to introduce the specific systems or technologies in the context of fundamental concepts and competing or alternative technologies.</p> <p>Guests such as company directors of digital agencies and UWS graduate technical experts are invited. After their presentations and a Q&amp;A session they are usually available to view student work and speak to individual students. The invited guests develop student awareness of web/mobile business perspectives, technologies, careers, desirable graduate attributes and professional standards of work. These are often employers of UWS graduates. This module will work to develop a number of the key 'I am UWS' Graduate Attributes to make those who complete this module:</p> <p><b>Universal:</b> 1) Critical Thinker, 2) Ethically minded. 3) Research-minded.  <b>Work Ready:</b> 1) Problem-Solver, 2) Effective Communicator, 3) Ambitious.  <b>Successful:</b> 1) Autonomous 2) Resilient, 3) Driven.</p>			

Module Delivery Method					
Face-To-Face	Blended	Fully Online	HybridC	HybridO	Work-Based Learning
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<p><b>Face-To-Face</b> Term used to describe the traditional classroom environment where the students and the lecturer meet synchronously in the same room for the whole provision.</p> <p><b>Blended</b> A mode of delivery of a module or a programme that involves online and face-to-face delivery of learning, teaching and assessment activities, student support and feedback. A programme may be considered “blended” if it includes a combination of face-to-face, online, and blended modules. If an online programme has any compulsory face-to-face and campus elements it must be described as blended with clearly articulated delivery information to manage student expectations</p> <p><b>Fully Online</b> Instruction that is solely delivered by web-based or internet-based technologies. This term is used to describe the previously used terms distance learning and e learning.</p> <p><b>HybridC</b> Online with mandatory face-to-face learning on Campus</p> <p><b>HybridO</b> Online with optional face-to-face learning on Campus</p> <p><b>Work-based Learning</b> Learning activities where the main location for the learning experience is in the workplace.</p>					

Campus(es) for Module Delivery						
The module will <b>normally</b> 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	<input checked="" type="checkbox"/>	Term 2	<input type="checkbox"/>	Term 3	<input type="checkbox"/>

<b>Learning Outcomes:</b> (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 knowledge of the principal web site techniques for server side processing, database access
L2	Identify and analyse the requirements defined by a specific database driven web application. Apply knowledge and understanding to configure a system with web server software and implement a web site with dynamic (database driven) pages.

<b>Employability Skills and Personal Development Planning (PDP) Skills</b>			
<b>SCQF Headings</b>	During completion of this module, there will be an opportunity to achieve core skills in:		
Knowledge and Understanding (K and U)	SCQF Level <b>10</b> Demonstrate a critical understanding of the principal concepts and selected specific technologies of user, data and database driven web sites with LAMP technology stack and container deployment.		
Practice: Applied Knowledge and Understanding	SCQF Level <b>10</b> Execute a defined project of development identifying the requirements and completing an implementation using the specific technologies covered by the module.		
Generic Cognitive skills	SCQF Level <b>10</b> Demonstrate some creativity and originality to produce professional level deliverables.		
Communication, ICT and Numeracy Skills	SCQF Level <b>10</b> 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 <b>10</b> Exercise autonomy and initiative when working with a range of server-side systems.		
<b>Pre-requisites:</b>	Before undertaking this module the student should have undertaken the following:		
	<table border="1"> <tr> <td><b>Module Code:</b> COMP09006 COMP09023</td> <td><b>Module Title:</b> Web Site Development Web Server Technology</td> </tr> </table>	<b>Module Code:</b> COMP09006 COMP09023	<b>Module Title:</b> Web Site Development Web Server Technology
	<b>Module Code:</b> COMP09006 COMP09023	<b>Module Title:</b> Web Site Development Web Server Technology	
<b>Other:</b>			
<b>Co-requisites</b>	<table border="1"> <tr> <td><b>Module Code:</b></td> <td><b>Module Title:</b></td> </tr> </table>	<b>Module Code:</b>	<b>Module Title:</b>
<b>Module Code:</b>	<b>Module Title:</b>		

\*Indicates that module descriptor is not published.

<b>Learning and Teaching</b>	
<p><b>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.</b></p> <p>This module is based around a series of practical labs complemented by lectures. The purpose of the lectures is to discuss the selected detailed topics within a context of wider technological, commercial, legal, and other issues.</p> <p>In the practical labs students install and configure a web server with scripting and database server to use as a development environment. The students then build up server scripting skills that demonstrate the underlying technology and techniques of content rich, community or data driven and commercial web sites. During these labs the role of staff is to use their technical expertise to offer guidance, assistance, and clarification so that students can learn in a responsive environment.</p> <p>Guests such as company directors of digital agencies and UWS graduate technical experts are invited. After their presentations and a Q&amp;A session they are usually available to view student work and speak to individual students. The invited guests develop student awareness of web/mobile business perspectives, technologies, careers, desirable graduate attributes and professional standards of work. The guests are often employers of UWS graduates.</p> <p>Time allocated for guest speakers is recorded as "Tutorial/Synchronous Support Activity" in the Learning Activities.</p>	
<p><b>Learning Activities</b> During completion of this module, the learning activities undertaken to achieve the module learning outcomes are stated below:</p>	<p><b>Student Learning Hours</b> (Normally totalling 200 hours): (Note: Learning hours include both contact hours and hours spent on other learning activities)</p>
Lecture/Core Content Delivery	10
Laboratory/Practical Demonstration/Workshop	33
Tutorial/Synchronous Support Activity	2
Independent Study	155
	200 Hours Total

**\*\*Indicative Resources: (e.g. Core text, journals, internet access)**

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

Lecture notes and lab sheets reside on a virtual learning environment in the form of static resources but more advanced and interactive elements such as working demonstrations require the Linux Apache web server with Python, PHP and MySQL etc located on Aula.

In the timetabled computer laboratories, each student requires access to an allocated networked windows computer with administrative rights on which they can configure and install software to build up their work week by week without interfering with the work of other students.

WiFi access to student work (mainly web servers) hosted on lab machines on lab network for testing with mobile devices.

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.

**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

<b>Divisional Programme Board</b>	Computing
<b>Assessment Results (Pass/Fail)</b>	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
<b>School Assessment Board</b>	Business & Applied Computing
<b>Moderator</b>	Graeme McRobbie
<b>External Examiner</b>	R Khusainov
<b>Accreditation Details</b>	This module is accredited by BCS as part of a number of specified programmes.
<b>Changes/Version Number</b>	2.10

**Assessment: (also refer to Assessment Outcomes Grids below)**

Two electronically submitted assignments, the **first is worth 40%** and the **second is worth 60%** of the module assessment.

Both assessments assess practical work (20% & 30% respectively for assessments 1 & 2) and the reporting/analysis/understanding of practical work (assignment, 20% & 30% respectively for assessments 1 & 2. The practical (20% + 30%) and assignment (20% + 30%) learning outcomes are both correctly shown with equal 50% weighting in the assessment grid.

Formative assessment - students have the opportunity of having their work reviewed in advance of formal assessment.

(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 (Footnote A.)**

<b>Component 1</b>				
<b>Assessment Type (Footnote B.)</b>	<b>Learning Outcome (1)</b>	<b>Learning Outcome (2)</b>	<b>Weighting (%) of Assessment Element</b>	<b>Timetabled Contact Hours</b>
Laboratory/ Clinical/ Field notebook	✓	✓	50	0
Portfolio of practical work	✓	✓	50	0
<b>Combined Total for All Components</b>			100	0 Hours

## Footnotes

A. Referred to within Assessment Section above.

B. Identified in the Learning Outcome Section above.

## Note(s):

1. More than one assessment method can be used to assess individual learning outcomes.
2. Schools are responsible for determining student contact hours. Please refer to University Policy on contact hours (extract contained within section 10 of the Module Descriptor guidance note). This will normally be variable across Schools, dependent on Programmes &/or Professional requirements.

**Change Control:**

<b>What</b>	<b>When</b>	<b>Who</b>
Updated layout, Module coordinator and Moderator.	15/02/2024	P Salva-Garcia
Module delivery Term updated to T1	15/02/2024	P Salva-Garcia

**Version Number: MD Version 2.10 (2023-24)**