

## University of the West of Scotland

## Module Descriptor

Session: 2024/25

<b>Title of Module: Serious Games</b>			
<b>Code: COMP10010</b>	<b>SCQF Level: 10 (Scottish Credit and Qualifications Framework)</b>	<b>Credit Points: 20</b>	<b>ECTS: 10 (European Credit Transfer Scheme)</b>
<b>School:</b>	School of Computing, Engineering and Physical Sciences		
<b>Module Co-ordinator:</b>	Thomas Hainey		
<b>Summary of Module</b>			
<p>Serious Games has captured the interest of educationalists and industrialists as it is perceived as a potentially highly motivational approach for teaching, learning and training. Serious Games are not a new concept and have been documented since the 1970's but due to the rapid technological advancement of Computer Games Development Technology the are now easier than ever before to construct. The global Serious Game market size is expected to gain market growth in the forecast period of 2020 to 2025, with a CAGR of 10.4% in the forecast period of 2020 to 2025 and will expected to reach 5313.8 million by 2025, from 3574.7 million in 2019. Many graduates have gone on to postgraduate study in Serious Games and found employment within local Serious Games companies which are becoming more frequent and fruitful. Industrialists and educational institutions are constantly striving to enhance traditional teaching approaches with innovative solutions and Serious Games have become an area of great focus. This module will adhere to the UWS Curriculum framework by being student centered, flexible and hybrid and providing authentic assessment by allowing learners to develop their own serious games in any subject they believe that they will be applicable within ethical boundaries. This will include documenting, designing, implementing, and packaging a serious game for use. Class sessions will cover interactive topics associated with the History of Serious Games, Design Principles, Psychology of Play, Gamification, Integrating Learning Content and Assessment.</p> <ul style="list-style-type: none"> <li>• This module embeds the key “I am UWS” graduate attributes and in particular: Work Ready(Digitally Literate, Problem-solver, Creative, Imaginary, Resilient), Successful(Autonomous, Creative, Imaginative), Universal(Collaborative, Research-minded, Culturally aware)</li> <li>• The module will be flexible and hybrid by covering all conceivable student circumstances: remote, online, on-campus. As a result class sessions will be recorded, live and optional on-campus sessions will be provided. Current</li> </ul>			

games development technologies will be utilised to allow learners to develop a serious game as they have an entertainment game.

- The module will foster the enhancement of soft skills by allowing students to work as part of a team and present their serious games for peer assessment.
- The module will cover the History of Serious Games in some depth as well as Serious Games in a number of areas including: Business, Computing, Science, Mathematics, Military Applications, Biology and Geography. These will be covered from an educational and training perspective.

### 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"/>
<b>See Guidance Note for details.</b>					

### 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	<input checked="" type="checkbox"/>	Term 2	<input type="checkbox"/>	Term 3	<input type="checkbox"/>
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### 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	Produce a Design Document for a Serious Game considering learning content for a particular subject or training area.
L2	Implement the serious game in relation to learning outcomes, content and assessment.

L3	Present the serious game for peer assessment and complete interactive tests on Serious Game History.	
<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)	<p><b>SCQF Level 10</b></p> <p>Knowledge and understanding of current and emerging developments in serious games including the application in various contexts as well as an in depth knowledge of the History of Serious Games.</p>	
Practice: Applied Knowledge and Understanding	<p><b>SCQF Level 10</b></p> <p>Be able to design and develop a prototype serious game for a selected topic.</p>	
Generic Cognitive skills	<p><b>SCQF Level 10</b></p> <p>Identify and critically assess factors influencing developments in serious games and utilise this knowledge in a practical sense to design and implement a serious game.</p>	
Communication, ICT and Numeracy Skills	<p><b>SCQF Level 10</b></p> <p>To ideally be part of a group presentation to effectively communicate and convey the designed and developed serious game for peer feedback.</p>	
Autonomy, Accountability and Working with others	<p><b>SCQF Level 10</b></p> <p>Work independently or as part of a team on a range of problems.</p>	
<b>Pre-requisites:</b>	Before undertaking this module the student should have undertaken the following:	
	<b>Module Code:</b> COMP08035	<b>Module Title:</b> Computer Games Design
	<b>Other:</b>	
<b>Co-requisites</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>The module provides a forum for the discussion of a range of issues surrounding the design and development of serious games.</p> <p>A range of learning situations is used from class-based activities including tutorials and lab work in which the students can apply knowledge and skills to a set of defined tasks.</p> <p>The module mainly uses individual work to develop individual knowledge but group discussions will also be used to develop team-work skills.</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	20
Tutorial/Synchronous Support Activity	28
Independent Study	152
	Hours Total 200
<b>**Indicative Resources: (eg. Core text, journals, internet access)</b>	
<p>The following materials form essential underpinning for the module content and ultimately for the learning outcomes:</p> <p>Boyle, E.A., Hainey, T., Connolly, T.M., Gray, G., Earp, J., Ott, M., Lim, T., Ninaus, M., Ribeiro, C., &amp; Pereira, J.A. (2016). An update to the systematic literature review of empirical evidence of the impacts and outcomes of computer games and serious games. <i>Computers &amp; Education.</i>, 94, 178-192.</p> <p>Connolly, T. M., Boyle, E. A., MacArthur, E., Hainey, T., &amp; Boyle, J. M. (2012). A systematic literature review of empirical evidence on computer games and serious games. <i>Computers &amp; Education</i>, 59(2), 661–686.</p> <p>Hainey, T., Connolly, T. M., Stansfield, M. H., &amp; Boyle, E. A. (2011). Evaluation of a game to teach requirements collection and analysis in software engineering at tertiary education level. <i>Computers &amp; Education</i>, 56(1), 21–35.</p>	

(\*\*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 are expected to access class materials through the VLE, complete tutorial exercises and lab exercises and meet submission deadlines, failure to do so will be regarded as an indicator of disengagement with the module. Disengagement from the module is defined as not having interacted within a 4 week period. If this happens then contact will be attempted for conversation about circumstances.

### 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>	Creative Computing
<b>Moderator</b>	Gavin Baxter
<b>External Examiner</b>	N Whitton
<b>Accreditation Details</b>	e.g. ACCA <a href="#">Click or tap here to enter text.</a>

<b>Changes/Version Number</b>	<p>The key factors have been altered to take into account the UWS Curriculum Framework.</p> <p>Components of assessment have been altered to remove evaluation and statistical analysis from the descriptor.</p> <p>Component 1 is now 40% for design, Component 2 is 40% for implementation and Component 3 is 20% for a group presentation and showreel.</p>
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<b>Assessment: (also refer to Assessment Outcomes Grids below)</b>	
<p>The assessment will involve the design, implementation, and planned evaluation of a serious games. It will also involve the production of a showreel for a portfolio or presentation of the game to peers.</p> <ul style="list-style-type: none"> <li>-The design and evaluation will be a written assignment worth 40%.</li> <li>-The implementation will be in any games engine or language that the learner(s) choose and will be a creative product worth 40%.</li> <li>-The showreel will be a creative portfolio piece worth 20%.</li> </ul>	
<p>Assessment 1 – Produce a Serious Games Design Document for a Serious Game in a particular chosen area and plan an evaluation of that game.</p>	
<p>Assessment 2 – Develop a prototype of the Serious Game utilising current Computer Games Development Technologies.</p>	
<p>Assessment 3 – Present the developed Serious Game at a class session for peer review and complete a showreel demonstration and placing it on LinkedIn for Portfolio Development,</p>	
<p>(N.B. (i) <b>Assessment Outcomes Grids</b> for the module (one for each component) can be found below which clearly demonstrate how the learning outcomes of the module will be assessed.</p> <p>(ii) An <b>indicative schedule</b> listing approximate times within the academic calendar when assessment is likely to feature will be provided within the Student Module Handbook.)</p>	

## 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
Portfolio of Practical Work	✓					40	

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		✓				40	

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
Presentation/Showreel			✓			20	
<b>Combined Total for All Components</b>						<b>100%</b>	<b>XX hours</b>