

<b>Named Award Title:</b>	<b>BSc (Hons) Computer Games Development (Sandwich Available) Single</b>
<b>Award Title for Each Award:</b>	<b>BSc (Hons) Computer Games Development (Sandwich Avail) BSc Computer Games Development Dip HE Computer Games Development Cert HE Computer Games Development</b>
<b>Awarding Institution/Body:</b>	University of the West of Scotland
<b>Language of Instruction &amp; Examination:</b>	English
<b>Award Accredited By:</b>	<b>TIGA</b>
<b>Maximum Period of Registration:</b>	Normally 7 years full time, 8 years with a sandwich and 11 years part-time
<b>Mode of Study:</b>	Full Time Part Time
<b>Campus:</b>	Paisley
<b>School:</b>	School of Computing, Engineering and Physical Sciences
<b>Programme Leader:</b>	Dr. Thomas Hainey

### *Admission Criteria*

Candidates must be able to satisfy the general admission requirements of the University of the West of Scotland as specified in Chapter 2 of the University Regulatory Framework together with the following programme requirements:

#### **SQA National Qualifications**

Year 1: SQA Highers: BBBC (102 UCAS Tariff points)

Year 2 - SQA Advanced Highers: CCD including Computing or evidence of programming (112 UCAS Tariff points)

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#### **or GCE**

Year 1: GCE A Levels: CC (64 UCAS Tariff points)

Year 2: GCE A-Levels: BCC including Computing or evidence of programming

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#### **or SQA National Qualifications/Edexcel Foundation**

Year 1: HNC/BTEC L4 HNC in relevant discipline (such as computing, software development or games development)

Year 2: HND/BTEC L5/Foundation degree in relevant discipline (such as computing, software development or games development)

Year 3: HND/BTEC L5/Foundation degree in relevant discipline (such as computing, software development or games development) - Grade A in integrated unit required

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#### **Other Required Qualifications/Experience**

Applicants may also be considered with other academic, vocational or professional qualifications deemed to be equivalent.

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#### **Further desirable skills pre-application**

Knowledge of computer games and the games industry.

### *General Overview*

The programme has the following general educational aims:

- To develop the students' intellectual, analytical and critical evaluation powers; their understanding and judgement; their problem-solving skills; their ability to communicate; and to evaluate technology within the games context.
- To heighten the students' awareness of the benefits and the impact of computer systems and their associated technologies
- To develop students who can build creative interactive programs for a wide range of marketplaces using a range of development approaches, and to critically evaluate these products
- To stimulate an enquiring, analytical and creative approach, encouraging independent judgement and critical self-awareness.
- For the Honours programme, to provide an environment for the student to carry out a significant piece of independent and original work related to the specific course aims.

Course specific aims cover the development to the level required of a body of knowledge and skills appropriate to the field of study and reflecting academic developments in the field.

The course specific aims are as follows:

- To develop in the students the skills needed in order to create a wide range of games for the indie (independent) and casual games marketplace with a focus on web and mobile games. There will also be a particular focus on utilisation of Game Engines including Game Maker, Unreal Engine and Unity
- To encourage students to create products that work across a range of developing personal technologies
- To create a working understanding of the interface between code, imagery and sound in a games or other creative product
- To develop an understanding of the different people and skills required to create a successful video game product

Students may develop the areas of study relevant to computer games development, and be assisted in their personal development towards a career in computer games. Although the primary output will be as a games programmer, the students will also become suitable for employment in the wider software industry.

In the process of making games students will learn about the software development process (planning, design, implementation, testing and documentation) which will be relevant in the wider software industry.

It is expected that the BSc (Honours) graduates should be capable of independent work of an advanced nature. This does not necessarily imply that the graduates should be advanced in terms of computing science skills. It implies that the graduates should be capable of working in conjunction with other specialists – marketers, the press, the public, etc - so that effective cooperation is established with those outside the development studio

#### **Teaching:**

Formal contact with students is via lectures, tutorials and laboratory work. Classes are divided into smaller groups for laboratory work and tutorials.

Seminars and group work are used where appropriate. The teaching of programming is largely based on practice, where students learn through problem solving, developing algorithms and writing and testing code to produce working solutions to common requirements in computer games. In modules throughout the programme, students work in groups and learn how to manage the team working experience. This includes project management, written and verbal communication and presenting their work for criticism by their peers and tutors.

**Learning:**

The programme views the student as being at the centre of the learning process and students are expected to take responsibility for their own learning and to construct knowledge through active engagement with learning resources supported and guided by teaching staff. Students are expected to undertake independent study both to supplement and consolidate what is being taught and to broaden their individual knowledge and understanding of the subject.

**Assessment:**

The assessment methods used are specified in the individual module descriptors and are identified against specific module learning outcomes. The modules each have either one or two assessment categories and there is a high emphasis on in-course assessments. None of the core modules of the programme are assessed by end-of-term formal examinations, though these are used in some of the recommended options which have a high emphasis on theory. There are extended pieces of assessed project work in both the third and final years of the programme. Modules in which artefacts are developed often ask for a sequence of assessed deliverables, rather than a single overall submission at the end of the module, to allow for feedback on earlier implementation phases before later phases are completed. Class tests are widely used to allow feedback on the students' grasp of concepts and principles in the modules during the term.

**Sandwich Placement**

With the skills and knowledge they have acquired in the first two (or three) years of the programme, students may if they wish proceed to a paid placement position, of a minimum duration of 36 weeks, in an games company or games-related setting which may be based in the UK or abroad. This provides an opportunity to experience the practice of computer games professionals in solving real-world problems and addressing business and organisational requirements. Support in finding a placement, and in the academic supervision of it, is provided by the School's Placement Officer and the University Employability Link. While the programme facilitates placements it is the responsibility of the students and not staff members to find these placements and prepare themselves academically and industrially for such a placement.

**Summary**

Students will have strong software development skills and will be well qualified to pursue a career or further studies in software engineering related fields, as well as being able to offer services to companies developing games for the casual and Indie markets.

The entire programme with all component modules should compass all "I am UWS" graduate attributes and in particular Universal(Critical Thinker, Analytical,

Ethically-minded, Collaborative, Research-minded), Work Ready(Knowledgeable, Digitally Literate, Problem-solver, Effective communicator, Motivated, Enterprising), Successful(Autonomous, Innovative, Creative, Imaginative, Resilient, Driven).

### *Graduate Attributes, Employability & Personal Development Planning*

Students receive an introduction to Personal Development Planning (PDP) in the first term of first year in the modules COMP07071 The Creative Computing Professional.

From term 2 of year 1 onwards PDP is embedded in the taught modules of the programme, rather than as a separate subject. Students develop their PDP through module assessments that are intended to contribute to the student's engagement with personal development planning and the development of skills related to employability in their specialist area.

As students progress through the programme they are typically required to produce reflective and critical evaluation of the work that they have created within an individual or group context. Feedback on this work will be given by teaching staff and supplemented by guidance on the e-portfolio by personal tutors.

PDP and employability skills culminate in the Honours project which gives students the opportunity to display the high-level skills they have developed through the programme and to produce an important component of their e-portfolio

Sandwich Year (either after 2nd year or after 3rd year)

The employability skills and attributes which Students will gain experience in developing, applying and reflecting upon during the sandwich placement will be those identified by The Council For Industry and Higher Education (CIHE) (2006) as the key competencies which employers value as defined below:

Cognitive skills (attention to detail, analysis and judgment)

Demonstrate the use of their knowledge, understanding and skills, in both identifying and analysing problems and issues and formulating, evaluating and applying evidence-based solutions and arguments.

Undertake critical analysis, evaluation and/or synthesis of ideas, concepts information and issues

Identify and analyse routine professional problems and issues

Draw on a range of sources in making judgments.

Generic competencies (planning & organisation, influencing, written communication, questioning, listening, teamworking, interpersonal sensitivity, organisational sensitivity and lifelong learning and development)

Well developed skills for the gathering, evaluation, analysis and presentation of information, ideas, concepts and quantitative and/or qualitative data, drawing on a wide range of current sources. This will include the use of ICT as appropriate to

the subject(s).

Communication of the results of their own and other work accurately and reliably in a range of different contexts using the main specialist concepts, constructs and techniques of the subject(s);

Identifying and addressing their own learning needs including being able to draw on a range of current research, development and professional materials;

Interpreting, using and evaluating numerical and graphical data to achieve goals targets

Making formal and informal presentations on standard/mainstream topics in the subject/discipline to a range of audiences

Work under guidance with qualified practitioners

Practice in ways which take account of own and others' roles and responsibilities

Take some responsibility for the work or others and for a range of resources

Personal capabilities (creativity, decisiveness, initiative, adaptability/flexibility, achievement orientation, tolerance for stress and leadership)

Application of their subject and transferable skills to contexts where criteria for decisions and the scope of the task may be well defined but where personal responsibility, initiative and decision-making is also required.

Exercising autonomy and initiative in some activities at a professional level

Technical ability (knowledge of key trends in modern technology and experience of using modern technology)

Use of a range of IT applications to support and enhance work

Practical and professional elements (professional expertise, process operation and image)

Show familiarity and competence in the use of routine materials, practices and skills and of a few that are more specialised, advanced and complex.

Practise in a range of professional level contexts which include a degree of unpredictability;

Deal with ethical and professional issues in accordance with current professional and/or ethical codes or practices, seeking guidance where appropriate

These personal, practical and technical abilities reflect the "UWS I am" graduate attributes.

### *Work Based Learning/Placement Details*

The sandwich placement is designed for students to gain and reflect on work experience attained during their time in the workplace. The experience may also contribute towards meeting the membership requirements of a Professional body. Students undertaking a sandwich placement are required to undertake PDP and maintain a portfolio from which they will be required to produce a comprehensive learning log report charting their development during placement. This is assessed on a pass /fail basis only with the majority of ongoing assessment being formative in nature. On successful completion of the placement, the learner will be more employable as a result of having developed their ability to integrate essential generic skills and attributes with subject/discipline related knowledge. Finding of sandwich placements are the responsibility of the student who wishes to undertake one. While the University

offers links with industry, the student must approach a company and prepare for work in that particular company based on their requirements.

The placement will be governed by a tripartite learning agreement (signed by all parties) between the student, placement provider and the University which defines the learning outcomes and confirms elements of support and commitment from all parties.

#### Learning Outcomes

At the end of the placement the student will be able to:

- L1. Critically relate elements of the placement work experience to the main themes and issues of academic study of [subject discipline] relevant within the workplace and be confident in articulating this to others
- L2. Analyse organisational cultures and structures with particular relevance to the current workplace and exhibit the ability to critically evaluate employee roles in an applied setting.
- L3. Recognise, critically assess and be able to clearly demonstrate to others the personal development and application of essential employability skills and attributes within a real work situation.

#### Assessment

Assessment will be based on pass/fail only and all assessment elements must be passed for progression as part of the Sandwich programme. Assignments will be open to external examination in accordance with University regulations.

In order to submit for assessment students need to:

- Attend the workplace(s) in which they have been placed for a minimum total of 36 weeks (180 full working days) and have their employer(s) confirm their attendance
- Receive a satisfactory assessment of work performance from their workplace supervisor(s) and academic tutor (based on two interviews and other evidence as required)
- Maintain a PDP portfolio and use this to submit a satisfactory learning log report reflecting on the placement experience (minimum 2,000 words)
- Successfully complete a subject related project (minimum 3,000 words or equivalent)

Where a student's sandwich placement is made up of two separate planned periods of work experience (i.e. a "Thin Sandwich"), the PDP portfolio report and subject related report will normally be submitted and assessed during the second period of placement. Assessment of the first period of placement will relate to satisfactory performance in the workplace.

Mitigating circumstances will be taken into consideration in accordance with University regulations.

#### Reassessment

- Minimum period in work: It is essential that the student completes at least 36 weeks (180 working days) in employment. If the student does not meet this minimum requirement then they cannot pass the placement.
- Catch up: Where through no fault of their own a student has been unable to attain at least 36 weeks placement experience they will be entitled to secure the additional work experience required through a suitable additional period of work

experience provided this is agreed in advance with the Programme Team.

- **Retake of Placement:** a repeat or alternative placement will only be considered on health or other mitigating grounds or where the placement is terminated due to no fault of the student. In such cases the student will receive counselling from the placement tutor on how best to proceed.
  - **Satisfactory Performance:** The first interview will be used to assess the student's progress. If it is considered that the student's performance is less than expected at that stage, the student will be advised of this and of the elements of their performance that need to improve. If the student's performance is assessed as unsatisfactory at the second interview then the student will be given further advice on the steps they need to take to achieve a satisfactory assessment and will be reassessed through a third interview at the end of their placement period. Interviews will normally be conducted within the workplace unless a suitable alternative method is agreed by all parties.
  - **Reflective Report from PDP:** If the reflective report is unsatisfactory, the student will be given the opportunity to resubmit in line with University regulations
  - **Subject related report:** If the subject related report is unsatisfactory the student will be given the opportunity to resubmit in line with University regulations
- Progression/Award
- Placement students will be assigned to a specific Subject and Programme Panel.
  - The relevant Programme Panel will consider the performance of each sandwich placement student enrolled on that Programme and decide eligibility for reassessment, progression and awards in accordance with University Regulations, in particular Regulation 1.68, 1.69 and 1.70.
  - A student who fails the sandwich placement after reassessment will no longer be eligible for a "with sandwich" award. They will either progress to level 9 or 10 (as appropriate) of a non-sandwich equivalent programme or exit with an equivalent non-sandwich award.

### *Engagement*

In line with the [Academic Engagement Procedure](#), Students are defined as academically engaged if they are regularly engaged with timetabled teaching sessions, course-related learning resources including those in the Library and on the relevant learning platform, and complete assessments and submit these on time.

Where a programme has Professional, Statutory or Regulatory Body requirements these will be listed here:

Engagement for the Programme requires the students to meet the individual engagement requirements of core modules, to attend required lab sessions and submit the required assessments.



### *Equality and Diversity*

The University's Equality, Diversity and Human Rights Procedure can be accessed at the following link: [UWS Equality and Diversity Policy](#)

Games and creative content cover topics that are sufficiently versatile and customisable to allow individuals to work within their cultural format and identity. Examples may be inspected in terms of Historical games that may be culturally non-inclusive, however these are examples for the purposes of progression, inclusivity, diversity and individuality of all groups of individuals.

*Programme structures and requirements, SCQF level, term, module name and code, credits and awards ( [Chapter 1, Regulatory Framework](#) )*

*A. Learning Outcomes (Maximum of 5 per heading)*

Outcomes should incorporate those applicable in the relevant QAA Benchmark statements

<i>Knowledge and Understanding</i>	
<b>A1</b>	Demonstrate an understanding of the computer games industry and the roles and relationships of games developers and publishers.
<b>A2</b>	Demonstrate an understanding of design issues in computer games.
<b>A3</b>	Demonstrate an understanding of computing as an evolving discipline.
<b>A4</b>	Demonstrate an understanding of how data is represented and processed on computer systems.
<b>A5</b>	Demonstrate an understanding of object-based software development.
<i>Practice - Applied Knowledge and Understanding</i>	
<b>B1</b>	Apply programming principles and techniques in the development of simple applications.
<b>B2</b>	Use a modern program development environment and demonstrate familiarity with the tools it provides to compile, execute, debug and document the software.

<b>B3</b>	Be able to create 2D animation suitable for the Web
<b>B4</b>	Be able to create simple 3D models and animate them within a 3D scene
<i>Communication, ICT and Numeracy Skills</i>	
<b>C1</b>	Use a variety of models and notations to communicate a problem situation and/or its solution.
<b>C2</b>	Produce a reflective account of their learning and personal development planning.
<i>Generic Cognitive Skills - Problem Solving, Analysis, Evaluation</i>	
<b>D1</b>	Use standard programming constructs in an approach to solving routine computing problems.
<b>D2</b>	Evaluate system requirements in a well-understood problem domain.
<i>Autonomy, Accountability and Working With Others</i>	
<b>E1</b>	Work as a member of a pair programming team and take shared responsibility for the deliverables produced.
<b>E2</b>	Demonstrate in their work, and be able to give an account of, the responsibilities of computer professionals and their accountability to their clients, the community, and society at large.

#### Core Modules

SCQF Level	Module Code	Module Name	Credit	Term			Footnotes
				1	2	3	
7	COMP07070	Programming with Objects	30	✓	✓		
7	COMP07028	Intro to Games Development	20	✓			
7	COMP07071	The Creative Computing Professional	10	✓			

7	COMP07010	Introduction to Computer Animation	20	✓			
7	COMP07061	Computing Systems	20		✓		

\* Indicates that module descriptor is not published.

Footnotes

No changes to core modules.

COMP07028 Intro to Games Development has been moved to Term 2

COMP07061 Computing Systems has been moved to Term 1.

Optional Modules

SCQF Level	Module Code	Module Name	Credit	Term			Footnotes
				1	2	3	
7	COMP07081	Retro-Games Archaeology	20		✓		Added from Level 8
7	COMP07013	Design for Interaction	20		✓		
7	COMP07011	2D Computer Animation	20		✓		

\* Indicates that module descriptor is not published.

Footnotes

COMP07011 2D Computer Animation is only available as an option for students who have an appropriate drawing background. This must be discussed with your personal tutor prior to selection.

Level 7 of programme will only run at the Paisley campus.

COMP07081 Retro-Games Archaeology has been added from level 8 as an option in Level 7.

Criteria for Progression and Award

To progress from SCQF 7 to SCQF 8, students are normally required to obtain 120 credits and pass all core modules.

Refer to Regulation 3.13 regarding progression with credit deficit. All pre-requisite modules must be passed before progression is allowed.

Students obtaining 120 credits at SCQF 7 or above, with 100 from the programme specification are eligible for the award of CertHE Computer Games Development.

Students obtaining 120 credits at SCQF 7 or above, where core module credit includes supplementary credit from other modules in the computing division in the School of

CEPS are eligible for the award of CertHE Information Technology.

Students obtaining 120 credits at SCQF 7 or above, where core module credit includes supplementary credit from other modules outside of the computing division in the School of CEPS are eligible for the award of CertHE Combined Studies.

*B. Learning Outcomes (Maximum of 5 per heading)*

Outcomes should incorporate those applicable in the relevant QAA Benchmark statements

<i>Knowledge and Understanding</i>	
<b>A1</b>	Demonstrate an understanding of programming principles and tools employed in the development of applications for mobile devices and the web.
<b>A2</b>	Demonstrate knowledge of software issues related to programming for interactivity.
<b>A3</b>	Demonstrate a broad understanding of industry standard techniques for games design.
<b>A4</b>	Demonstrate knowledge of appropriate software, design and delivery requirements within a game development environment.
<b>A5</b>	Demonstrate knowledge and understanding of good game design principles within a game development environment
<i>Practice - Applied Knowledge and Understanding</i>	
<b>B1</b>	Make effective use of software tools in developing a design model of a computer game.
<b>B2</b>	Create dynamic data structures using a programming language.
<b>B3</b>	Deploy applications on mobile platforms.
<b>B4</b>	Create a well structured and documented game within a game development environment.

<b>B5</b>	Work in a team context to develop an initial idea into a game design concept.
<i>Communication, ICT and Numeracy Skills</i>	
<b>C1</b>	Work in a team context to document a detailed design in the form of a Game Design Document
<b>C2</b>	Create a well structured and documented game within a game development environment
<i>Generic Cognitive Skills - Problem Solving, Analysis, Evaluation</i>	
<b>D1</b>	Develop a model of an application for the purposes of comprehension, communication, prediction and the understanding of trade-offs.
<b>D2</b>	Analyse the extent to which a proposed or existing computer-based application meets the criteria defined for its intended use.
<i>Autonomy, Accountability and Working With Others</i>	
<b>E1</b>	Work as a member of a team, taking account of own and others' roles, responsibilities and contributions in carrying out and evaluating tasks.
<b>E2</b>	Work autonomously to deliver a product incorporating interactive elements.

#### Core Modules

SCQF Level	Module Code	Module Name	Credit	Term			Footnotes
				1	2	3	
8	COMP08013	3D Asset Production 1	20	✓			
8	COMP08099	Applied Maths for Games and User Research	20	✓			
8	COMP08035	Computer Games Design	20	✓			
8	COMP08079	Game Engine 1	20		✓		

8	COMP08091	Software Development for Games	20		✓		
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\* Indicates that module descriptor is not published.

Footnotes

- COMP08091 Software development for games has been moved from Term 1 to Term 2.
- COMP08013 3D Asset Production 1 has been moved to Core instead of Optional due to being a pre-requisite for Digital Asset Development.
- COMP08092 Level Design has been removed as a core and moved to optional.

Optional Modules

SCQF Level	Module Code	Module Name	Credit	Term			Footnotes
				1	2	3	
8	COMP08059	3D Computer Animation	20		✓		
8	COMP08092	Level Design	20		✓		
8	COMP08077	Digital Asset Development	20		✓		

\* Indicates that module descriptor is not published.

Footnotes

- 3D Asset Production 1 has been removed as an optional module and reinstated as a core module.
- COMP08092 Level Design has been moved to Optional instead of Core.
- COMP 08096 Retro Games Archaeology has been moved from Level 8 to Level 7 and has been removed from this level.
- 3D Computer Animation has been added as an optional module in Term 2.

Criteria for Progression and Award

To progress from SCQF 8 to SCQF 9, students are normally required to obtain 240 credits and pass all core modules.

Refer to Regulation 3.13 regarding progression with credit deficit. All pre-requisite modules must be passed before progression is allowed.

Students obtaining 240 credits at SCQF 8 or above, with 100 from level 8 of the programme specification are eligible for the award of DipHE Computer Games Development.

Students obtaining 240 credits at SCQF 8 or above, where core module credit includes supplementary credit from other modules in the computing division in the School of CEPS are eligible for the award of DipHE Information Technology.

Students obtaining 240 credits at SCQF 8 or above, where core module credit includes

supplementary credit from other modules outside of the computing division in the School of CEPS are eligible for the award of DipHE Combined Studies.

*C. Learning Outcomes (Maximum of 5 per heading)*

Outcomes should incorporate those applicable in the relevant QAA Benchmark statements

<i>Knowledge and Understanding</i>	
<b>A1</b>	Demonstrate a broad and integrated understanding of the scope and main body of knowledge of the computing technologies employed in computer games.
<b>A2</b>	Demonstrate an understanding of a range of management techniques used to plan and monitor games development projects
<b>A3</b>	Demonstrate knowledge and understanding of the requirements for a game or animation application.
<b>A4</b>	Demonstrate an advanced understanding of the principles of game design for different platforms such as tablets and mobile phones.
<i>Practice - Applied Knowledge and Understanding</i>	
<b>B1</b>	Create a game portfolio implementation show reel piece either individually or as part of a team.
<b>B2</b>	Contribute as a team member to the production of a play and games design document.
<b>B3</b>	Design and develop an online game using HTML5, JavaScript and relevant frameworks.
<b>B4</b>	Use project management techniques to control and monitor a games development software project.
<b>B5</b>	Demonstrate knowledge of concepts of software engineering in relation to the games development life cycle.

<i>Communication, ICT and Numeracy Skills</i>	
<b>C1</b>	Use appropriate software tools to support development techniques and project management.
<b>C2</b>	Produce a web games design document.
<i>Generic Cognitive Skills - Problem Solving, Analysis, Evaluation</i>	
<b>D1</b>	Understand and apply a range of analytical and problem solving concepts, principles and practices in the context of the design and implementation of games software, exercising judgement in evaluating and selecting tools and techniques.
<b>D2</b>	Make an effective contribution in the design and implementation of a computer game.
<b>D3</b>	Apply appropriate criteria in assessing the play-worthiness of a video game
<b>D4</b>	Select appropriate frameworks and technologies to develop a game or animation application.
<b>D5</b>	Personally reflect upon the processes involved in game design
<i>Autonomy, Accountability and Working With Others</i>	
<b>E1</b>	Demonstrate awareness of current professional issues in games production and development.
<b>E2</b>	Exercise autonomy and initiative within a team.

#### Core Modules

SCQF Level	Module Code	Module Name	Credit	Term			Footnotes
				1	2	3	
9	COMP09105	Game Engine 2	20	✓			
9	COMP09113	Game User Research	20		✓		



9	COMP09114	Games Development Portfolio Project	30	✓	✓		
9	COMP09090	JavaScript Games: Programming Fundamentals	20	✓			
9	COMP09096	Creative Technologies Professionalism	10	✓			

\* Indicates that module descriptor is not published.

Footnotes

-COMP09090 Web Games Development 1 has been changes to COMP09090 JavaScript Games Programming Fundamentals.

Optional Modules

SCQF Level	Module Code	Module Name	Credit	Term			Footnotes
				1	2	3	
9	COMP09027	3D Asset Production 2	20		✓		
9	COMP09041	AI Programming for Games	20		✓		
9	COMP09025	Computer Animation Techniques	20		✓		

\* Indicates that module descriptor is not published.

Footnotes

-COMP09041 Computer Game AI has been changed to COMP09041 AI Programming for Games.

Criteria for Progression and Award

To progress from SCQF 9 to SCQF 10, students are normally required to obtain 360 credits and pass all core modules.

Progression with credit deficit from SCQF 9 to SCQF 10 is not normally allowed.

Students obtaining 360 credits at SCQF 9 or above, with 100 from Level 9 of the programme specification are eligible for the award of BSc Computer Games Development.

Students obtaining 360 credits at SCQF 9 or above, where core module credit includes supplementary credit from other modules in the computing division in the School of CEPS are eligible for the award of BSc Information Technology.

Students obtaining 360 credits at SCQF 9 or above, where core module credit includes supplementary credit from other modules outside of the computing division in the School of CEPS are eligible for the award of Combined Studies.

The award of distinction can be made to a student obtaining a pass degree as stated in the University Regulations.

*D. Learning Outcomes (Maximum of 5 per heading)*

Outcomes should incorporate those applicable in the relevant QAA Benchmark statements

<i>Knowledge and Understanding</i>	
<b>A1</b>	Demonstrate a critical understanding of the ways in which knowledge in computing is advanced, including established methods of enquiry in the discipline
<b>A2</b>	Demonstrate knowledge of current and emerging developments in serious games.
<b>A3</b>	Demonstrate a detailed knowledge of collaborative digital technologies, their uses, their practical limitations and ethical issues arising.
<b>A4</b>	Demonstrate knowledge that covers and integrates many of the principal areas, features, boundaries, terminology and conventions of interactive digital media development.
<i>Practice - Applied Knowledge and Understanding</i>	
<b>B1</b>	Execute a defined games-related project to produce industry standard software along with design and test documentation.
<b>B2</b>	Carry out a programme of research relating to games development.
<b>B3</b>	Design and develop solutions for advanced serious games
<b>B4</b>	Identify and critically assess the factors influencing developments in games development.

<b>B5</b>	Use a range of collaborative technologies in the creation of a practical immersive online collaborative project.
<i>Communication, ICT and Numeracy Skills</i>	
<b>C1</b>	Prepare and deliver comprehensive and critical reports of research studies undertaken in both written and verbal format to an informed audience.
<b>C2</b>	Deliver a coherent and reflective presentation of an extended piece of project work.
<i>Generic Cognitive Skills - Problem Solving, Analysis, Evaluation</i>	
<b>D1</b>	Critically review and evaluate contributions to the research literature of computing and computer games.
<b>D2</b>	Produce a critical and evaluative written report of a games-related development project.
<i>Autonomy, Accountability and Working With Others</i>	
<b>E1</b>	Critically evaluate and review their own work and the work of others.
<b>E2</b>	Deal with complex ethical and professional issues in accordance with professional codes of conduct.

#### Core Modules

SCQF Level	Module Code	Module Name	Credit	Term			Footnotes
				1	2	3	
10	COMP10079	Computer Games Honours Project	40	✓	✓		
10	COMP10080	Immersive Experiences Design	20	✓			
10	COMP10010	Serious Games	20		✓		Moved from

							Term1 to Term 2.
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\* Indicates that module descriptor is not published.

Footnotes

- COMP 10010 Serious Games has been moved from Term1 to Term 2.
- COMP 10080 Immersive Technologies has changed names to Immersive Experiences Design, has been moved to Term 1 and has become core rather than optional.
- COMP10057 Web Games Development 2 has been changed in name to COMP10057 JavaScript Games Programming Design
- COMP10057 JavaScript Games Programming Design has been moved from Core to Optional.

Optional Modules

SCQF Level	Module Code	Module Name	Credit	Term			Footnotes
				1	2	3	
10	COMP10037	Games Console Programming	20	✓			Moved from Term 2 to Term 1
10	COMP10066	HCI & User Experience Design (UXD)	20		✓		
10	COMP10083	Immersive Experiences Implementation	20		✓		
10	COMP10057	JavaScript Games: Programming Design	20	✓			Moved from core to optional
10	COMP10067	Professional Portfolio Production	20		✓		

\* Indicates that module descriptor is not published.

Footnotes

- COMP10037 Games Console Programming has been moved from Term 2 to Term 1.
- All optional modules are only available at the Paisley campus
- A new optional module has been created in Term 2 called Immersive Experiences Implementation to adhere conform to the structure of the new integrated Masters

MCOMP Computer Games Development.

-COMP 10080 Immersive Experiences Design has become core and is no longer optional.

-COMP10057 Web Games Development 2 has been changed in name to COMP10057 JavaScript Games Programming Design

-COMP10057 JavaScript Games Programming Design has been moved from Core to Optional.

Criteria for Award

Award:

BSc (Hons) Computer Games Development

BSc (Hons) Computer Games Development with Sandwich

Note that for the award of the Honours Sandwich degree the student must successfully have completed a sandwich placement as described in section 29 of this specification.

### *Regulations of Assessment*

Candidates will be bound by the general assessment regulations of the University as specified in the [University Regulatory Framework](#).

An overview of the assessment details is provided in the Student Handbook and the assessment criteria for each module is provided in the module descriptor which forms part of the module pack issued to students. For further details on assessment please refer to Chapter 3 of the Regulatory Framework.

To qualify for an award of the University, students must complete all the programme requirements and must meet the credit minima detailed in Chapter 1 of the Regulatory Framework.

### *Combined Studies*

There may be instances where a student has been unsuccessful in meeting the award criteria for the named award and for other more generic named awards existing within the School. Provided that they have met the credit requirements in line with the SCQF credit minima (please see Regulation 1.21), they will be eligible for an exit award of CertHE / DipHE or BA / BSc in Combined Studies.

For students studying BA, BAcc, or BD awards the award will be BA Combined Studies.

For students studying BEng or BSc awards, the award will be BSc Combined Studies.