PROGRAMME SPECIFICATON

(NOTE: This programme specification is applicable to cohorts taking this programme from September 2018 onwards)

1	**Awarding body**
	Glyndŵr University
2	**Teaching institution**
	Glyndŵr University
3	**Award title**
	BSc (Hons) Computer Game Design & Enterprise
4	**Final awards available**
	BSc (Ord) Computer Game Design & Enterprise Dip HE Computer Game Design & Enterprise Cert HE Computer Game Design & Enterprise
5	**Professional, Statutory or Regulatory Body (PSRB) accreditation**
	N/A
	Please list any PSRBs associated with the proposal
	None.
	Accreditation available
	N/A
	Please add details of any conditions that may affect accreditation (eg is it dependent on choices made by a student?)
	N/A
6	JACS3 **code**
	I620 : Computer Games Design
7	UCAS **code**
	BSc (Hons) Computer Game Design & Enterprise GE17 BSc (Hons) Computer Game Design & Enterprise (with Foundation Year) GEFY
8	**Relevant QAA subject benchmark statement/s**
	Computing (Feb 2016) Business & Management (Feb 2015)
9	**Other external and internal reference points used to inform the programme outcomes**
	Creative Skillset accreditation guideline descriptors BCS Guidelines on course accreditation
10	**Mode of study**
	Full time
11	**Language of study**
	English

Office use only

Date of validation event:	27 January 2017
Date of approval by Academic Board:	21 February 2017
Date of revision:	03 April 2019 APSC approved retrospective module change BUS446 replaced with BUS457 for Sept 18-19
Date of revision:	

12 Criteria for admission to the programme

Standard entry criteria

Applicants for undergraduate bachelor Degrees require 112+ UCAS Tariff Points

Foundation Year / Kickstart:

This programme will also be offered as a four year kick-start degree (an introductory foundation year plus this three year degree programme). The kick-start will be offered where an applicant does not meet the entry requirements for the three year honours degree or where the department / applicants feel they would benefit from an additional year to gain some additional experience before progression to the full three year degree. Upon successful completion of foundation year the student will automatically progress to the BSc (Hons) Computer Game Design and Enterprise degree course. Entrance requirements for the four year kick start programmes are 48 UCAS points or equivalent. In addition passes at GCSE in Maths and English/Welsh Language at grade C or above are normally expected. Entry to the four year kickstart programme will be conditional on interview and review of applications to confirm that students are able to satisfactorily complete the programme. Therefore, this route is aimed at:

- Those who do not meet the entry requirements for a full degree.
- Those who have been out of education for a while and feel they would benefit from the extra year of preparation.
- Those looking to undertake a degree in an entirely new subject area and do not have the subject specific experience necessary to go straight to a degree.

Applicants who are unsure if they meet the criteria should contact Admissions.

International entry qualifications

Qualifications outlined on the National Academic Recognition and Information Centre (NARIC) as equivalent to the above UK entry qualification.

Programme specific requirements

In addition to the UCAS requirements, Five GCSE passes at grades A, B or C including Mathematics and English/Welsh. All applicants will be invited to attend an admission interview. If appropriate, applicants may also be asked to provide evidence of prior work examples in the form of a portfolio or equivalent presentation format.

Non-standard entry criteria
(e.g. industry experience)

Applicants with significant industry or professional experience will be treated on a case-by-case basis and invited for a discussion/interview with a member of the programme team.

English language requirements

The University's English language requirements are set out at http://www.glyndwr.ac.uk/en/Howtoapply/Readytoapply/

✓ **Undergraduate**

In addition to the academic entry requirements, all applicants whose first language is not English or Welsh must demonstrate English language proficiency.

European students are able to provide this evidence in a number of ways (please see http://www.glyndwr.ac.uk/en/Europeanstudents/entryrequirements/ for details), including IELTS, with an overall score of 6.0 and no component below 5.5.

International students require a UKVI Approved Secure English Language Test (SELT), achieving an overall score of 6.0 with no component below 5.5 (please see http://www.glyndwr.ac.uk/en/Internationalstudents/EntryandEnglishLanguageRequirements/ for details). If arranging a test, applicants must ensure they book an 'IELTS for UKVI' test. For further information see: http://takeielts.britishcouncil.org/ielts-ukvi/book-ielts-ukvi. Applicants are asked to note that only an *IELTS for UKVI* test result will be accepted.

13 Recognition of Prior (Experiential) Learning

Applicants may enter the programme at various points with Recognition of Prior Learning (RPL) or Recognition of Prior Experiential learning (RPEL) in accordance with the University General Regulations. Any programme specific restrictions are outlined below.

Programme specific requirements

N/A

14 Aims of the programme

The BSc (Hons) Computer Game Design & Enterprise is designed to be a hybrid course that balances project management, production and entrepreneurship, with that of industry practice and technical design and development skills.

The programme will provide students with hands-on experience of multidisciplinary project management within the context of both moderate and large-scale game development projects.

This, in combination with knowledge of business start-up processes, innovation and commercialisation of products alongside current digital distribution and crowdfunding technologies, students will be empowered to develop game applications and assets with a view to encapsulating them within a business and marketing strategy. Such a model has the potential to grow and support the local and regional games and media industry through the creation of new businesses and support for entrepreneurial activity.

Specifically, the programme aims to provide students with the following:

- Provide students with knowledge and understanding of the fundamental principles and technologies which underpin game design and development.

- Develop capability in the exploration, critical analysis and evaluation of technical and business issues and concepts including an awareness of the ethical and legal issues pertaining to the games industry.
- Provide students with an awareness of the roles and responsibilities of a professional working within the game development, and wider computing profession.
- Provide the skills necessary to work in and manage diverse and multidisciplinary development teams and the tools and technology that support them.
- Provide a rigorous and scientifically-based course of study, informed by research and industry practise, which successfully balances practical vocational skills with theoretical understanding.
- Equip students with independent learning skills, prepare students for employment and entrepreneurial activity or to prepare students for continued study at an advanced level, either in formal postgraduate study or as continued professional development.
- Produce versatile and resourceful practitioners fostering innovation, enterprise and enthusiasm for excellence in the discipline of game design and development.
- Develop competence, adaptability, self-confidence and critical self-reflection through critical enquiry and independent judgement.

The module diet of the programme has been designed in conjunction with the North Wales Business School to provide a vehicle for these aims and intentions to be met and will equip students with a mixture of theoretical and practical abilities that will allow them to development a rich skillset within the field. In addition to the specialist content, students will develop transferable skills in working multidisciplinary teams with industry standard tools and technologies.

15 Distinctive features of the programme

The proposed programme is designed to build upon the strong foundation of the successful BSc (Hons) Computer Game Development programme based within the department of Computing, which enjoys the benefits of close industry engagement with regular visits and guest speakers as part of an integrated programme of presentations, discussion groups and social events. The existing programme has an excellent track record for graduate employment is the only games programme in the UK to have a final year student prize sponsored by BAFTA (Cymru).

The proposed programme will make innovative use of agile project management methodologies in conjunction with cloud based management tools. Use of these platforms will be mandatory for all students undertaking substantial projects and will require the statistical tracking of all direct study hours completed meaning that students will be trained to manage their time effectively, and provide a detailed statistical analysis of their performance.

The wealth of existing programme team relationships with organisations such as Games Wales, BAFTA Cymru and the British Computing Society will ensure that our students always have access to cutting edge industry related training and knowledge. This knowledge, expertise and industry partnerships will be featured heavily in the newly proposed programme.

Regular internal events along with external events and field trips are made available and as when they are appropriate and practicable, although attendance at internal

activities will be expected. These modes of contact provide students with the ability to develop and practice the range of learning outcomes associated with the programme, ranging from the theoretical to the practical. Some example activities include:

Global Game Jam 2016
The Global Game Jam (GGJ) is the world's largest game jam event (game creation) taking place around the world simultaneously at physical locations. It is effectively a time constrained hackathon focused on game development. The GGJ philosophy is the growth of an idea that in today's heavily connected world, people can come together, be creative, share experiences and express themselves in a multitude of ways using game technology. Glyndŵr University registered with the GGJ as an official event site in 2011 as part of extra-curricular activities within the games development course. In doing so, we became the first (and only) Welsh representative, and that would continue to be the case for a further 3 years. In 2016, the GGJ had 632 sites around the world, spread across 93 different countries. There were 30,102 registered participants. At our own event site in 2016, a team of 58 participants were able to design and develop 18 individual games within the 48 hour period. We remain the oldest, and largest Welsh representatives in GGJ.

Games Wales
Games Wales is a non-profit industry group made up of Welsh games developers, educational institutions, media partners and industry bodies with a shared interest in growing and promoting the games industry in Wales. It is responsible for organising and running the annual Wales Games Development Show based in Cardiff and the promotion of games related activities across the country.

Games Wales North (GWN) was formed in 2013 by a group of industry professionals based in the region along with the Glyndŵr University game development programme leader (Richard Hebblewhite). Since that time GWN has been delivering a series of regular social and educational events on the 11th of each calendar month, and programme team have been instrumental in establishing the GWN group's core principles:

- to champion Wales as a place to make games
- to grow the North Wales and wider Welsh games industry
- to represent the industry's interests, and act as an advocate on behalf of the Welsh industry
- to introduce students and aspiring entrepreneurs to industry experience and best practice

The GWN now forms a critical part of the student experience and allows them to engage professionally and socially with experienced members of the industry on a regular basis.

InitGame(); Conference
Devised by the Glyndŵr University game development programme leader, and running for the first time in October 2014, the conference is part of our continuing strategy to energise the games and creative industry in North Wales, along with helping students and young people to learn more about the career opportunities and technologies available to them. The event provides a series of inspirational and technical talks designed to give some insight as to the workings of small, medium and large game studios and the challenges and opportunities they embrace.

The third annual conference took place on Saturday October 22nd, 2016 and was supported by Games Wales North, BAFTA Cymru and the British Computing Society. Thanks to the BAFTA partnership, the keynote speech featured the winner of the 2016

BAFTA award for Best Game, Rantmedia Games. Some notable speakers over the last three years are:

Ian Thomas – Programmer & Writer at Frictional Games
Anton Faulconbridge – Director of Rantmedia Games
Rick Vanner - Development Director at The Game Creators
Chris Payne – CEO of Quantum Soup Studios
Ralph Ferneyhough – Lead Engine Programmer at TT Games
Steffen Gronning - CEO of BetaDwarf
Dan Harris – Media Manage at Atticus Digital
Llio Wyn - Event Manager at BAFTA Cymru
Claire Heat – Awards & Events Manager at BAFTA Cymru
Murty Schofield – Freelance Artist & Writer on the Tomb Raider franchise
Carl Dalton – CEO at Brain In A Jar
Ella Romanos – Commercial Director at Strike Game Labs

The proposed BSc (Hons) programme brings together a range of modules that will equip students to build a strong set of core skills that will enable them to develop well designed game applications and assets, facilitated by the acquisition and application of theory through practical sessions and problem-based learning. In the first year of the new programme, students will be introduced to the fundamentals of game and media design, graphical rendering, agile methods and the workings of cutting-edge gaming hardware and software technology. They will also be introduced to business practise and the processes involved in starting a company.

As the degree progresses, students will be presented with opportunities to apply industry standard management techniques such as the scrum methodology in relation to live development projects within a multidisciplinary team. They will also further develop their games and media design skills by working with industry standard 3D design tools along with a variety of other supporting technologies and tools.

A key element of the course is its emphasis on blending advanced technical design with strong management and business skills. The business modules on the programme aim to focus on the practical application of business start-up, management and growth, empowering students to directly apply their business knowledge in support of the work produced in other modules on the programme. In addition, the programme itself will be supported by our unique Business Accelerator initiative, which will allow students to gain valuable experience of business planning and finance along with the potential creation and management of a game studio.

The Accelerator programme is a new scheme for 16/17 that has been integrated into the existing undergraduate programme at levels 5 and 6 respectively. The scheme is a joint initiative between the department of computing and the North Wales Business School. It is designed to combine business and computer game development students together to further encapsulate the technical development work done in projects with a professional business strategy.

The proposed programme will also feature this initiative with a view to further increasing the number of successful start-up companies within the university incubation centre called the Enterprise Lounge (there are 3 active undergraduate Accelerator groups in16/17). The spin out studios are also supported by the university Zone enterprise centre with a view to seeking and applying for potential investment, business mentoring and a range of other associated facilities.

It is widely recognised that many start-up companies fail within the first year due to a lack of management, business and financial stability. This scheme aims to fill that gap by addressing these such issues and exposing students to real world problems and development issues.

The programme team believe that this particular blend of creative technical skills and entrepreneurship is fairly unique within the context of UK undergraduate games courses and will further help to grow the local industry by way of spin out projects and social enterprise.

Finally, throughout the course, students develop a number of practical skills which are useful in any field of business or working environment such as self-motivation, time management, problem solving and the application of management methodologies, personal development and critical reflection. In addition, other critical skills including research, analysis and presentation will be developed along with knowledge of specialised software skills.

It is anticipated the graduates will go into careers in the games and media sectors, but also within mainstream computing and technology fields of: technical design and artistry, user experience evaluation, scrum certification, software development, or continuing study as master's level. Additionally, it is expected that the programme will lead to the creation of local SMEs within the field of game development, software and media design.

16 Programme structure narrative

The programme consists of three full years of study, each consisting of 120 credits of taught modules. The Certificate of Higher Education in Computer Game Design & Enterprise is an exit award available for a student who has completed 120 credits at level 4 or above who is either unable, or chooses not to continue on the programme.

The Diploma of Higher Education in Computer Game Design & Enterprise is an exit award available for a student who has completed 240 credits of which 120 credits were studied at level 5 or above and who is unable or chooses not to continue on the programme. The Ordinary Degree in Computer Game Design & Enterprise is an exit award available for a student who has completed 300 credits, of which 120 credits were studied at level 5 or above and a further 60 credits at level 6.

Finally, the full Honours Degree in Computer Game Design & Enterprise is an award available for a student who has completed 360 credits, of which 120 credits were studied at levels 4, 5 and 6 respectively, including a 40 credit project module.

Overall, only 3 of the programmes 17 modules have been newly developed, with a further 3 modules made up of pre-existing modules from within the North Wales Business School. All remaining 11 modules are shared between this programme and the University's other Computing courses (including BSc (Hons) Computer Game Development), which makes the delivery more efficient and provides students with the opportunity to engage with a wider, more diverse, peer group. Indeed, the multidisciplinary nature of the programme is one of its key strengths.

The programme is to be offered in the full-time mode of attendance only. Students will typically be expected to attend the University for three or four days a week in addition to studying in their own time.

Full-time students will pursue each level of the programme over the two main teaching semesters of each academic year, with the potential of completing referral work over the following summer period if necessary. At level 4, students will typically study 60 credits per semester, with 40 of those credits being delivered “long and thin” i.e. over the course of the both taught semesters, and the remaining 80 credits being delivered in each consecutive semester only. This structure falls in line with the delivery pattern adopted by the wider computing department.

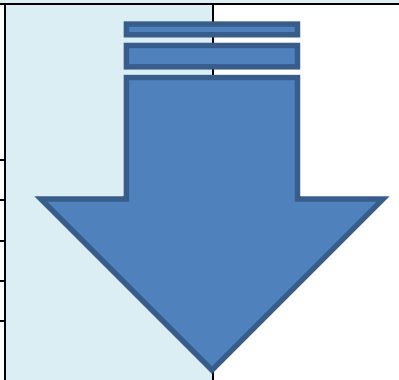
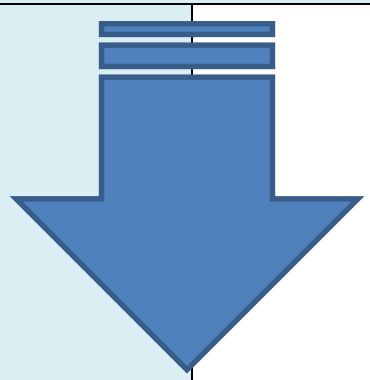
At level 5, the programme returns to a more standard delivery pattern of 60 taught credits per semester. At level 6, students will study 80 credits in semester one, with the 40 credit project module being delivered “long and thin”, alongside 3 conventionally taught subjects. The second semester of level 6 sees the introduction of a final 20 credit module along with the continuation of the project.

At a glance, the structure of level 6 may appear to be congested, particularly in semester one, however, in reality this delivery mode has proven very popular with students with the existing BSc (Hons) Computer Game Development programme enjoying some of the highest NSS ratings across the UK for several years, along with retention and completion statistics of over 90%.

Finally, all students, having successfully completed the taught components at each level, will then progress to the next level of the programme.

17 Programme structure diagram

Full-time Mode Level 4:

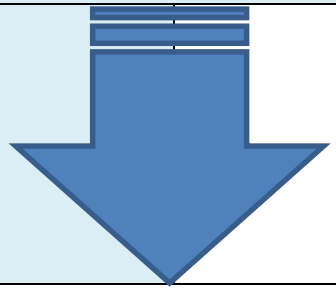
	Level 4							
Semester 1	Mod title	Interactive Design	Mod title	Computer Systems	Mod title	Professional Development in Computing	Mod title	Agile Production Methodologies
	Mod code	COM419	Mod code	COM424	Mod code	COM427	Mod code	COM433
	New/Existing	Existing	New/Existing	Existing	New/Existing	Existing	New/Existing	New
	Credit value	20	Credit value	20	Credit value	20	Credit value	20
	Core/Option	Core	Core/Option	Core	Core/Option	Core	Core/Option	Core
	Mod leader	Richard Hebblewhite	Mod leader	Stuart Cunningham	Mod leader	Denise Oram	Mod leader	Nathan Roberts
Semester 2	Mod title	Digital Media Principles	Mod title	Business Finance & Tech Management				
	Mod code	COM405	Mod code	BUS457				
	New/Existing	Existing	New/Existing	Existing				
	Credit value	20	Credit value	20				
	Core/Option	Core	Core/Option	Core				
	Mod leader	Nathan Roberts	Mod leader	tbc				

Note: “Professional Development in Computing” and “Agile Production Methodologies” are delivered in semesters 1 & 2.

Full-time Mode Level 5:

	Level 5					
Semester 1	Mod title	Digital Distribution Technology	Mod title	3D Modelling & Animation	Mod title	Innovation Commercialisation
	Mod code	COM535	Mod code	COM505	Mod code	BUS569
	New/Existing	New	New/Existing	Existing	New/Existing	Existing
	Credit value	20	Credit value	20	Credit value	20
	Core/Option	Core	Core/Option	Core	Core/Option	Core
	Mod leader	Richard Hebblewhite	Mod leader	Nathan Roberts	Mod leader	Anna Sung
Semester 2	Mod title	Group Project Design	Mod title	Group Project Implementation	Mod title	Serious Games Technology
	Mod code	COM529	Mod code	COM530	Mod code	COM522
	New/Existing	Existing	New/Existing	Existing	New/Existing	Existing
	Credit value	20	Credit value	20	Credit value	20
	Core/Option	Core	Core/Option	Core	Core/Option	Core
	Mod leader	John Worden	Mod leader	John Worden	Mod leader	Nathan Roberts

Full-time Mode Level 6:

	Level 6							
Semester 1	Mod title	Digital Marketing & Monetisation Technology	Mod title	Advanced 3D Modelling & Animation	Mod title	Business Sustainability & Growth	Mod title	Project
	Mod code	COM639	Mod code	COM632	Mod code	BUS639	Mod code	COM625
	New/Existing	New	New/Existing	Existing	New/Existing	Existing	New/Existing	Existing
	Credit value	20	Credit value	20	Credit value	20	Credit value	40
	Core/Option	Core	Core/Option	Core	Core/Option	Core	Core/Option	Core
	Mod leader	Richard Hebblewhite	Mod leader	Nathan Roberts	Mod leader	Anna Sung	Mod leader	Vic Grout
	Mod title	21st Century Computing	Mod title					
	Mod code	COM623	Mod code					
	New/Existing	Existing	New/Existing					
	Credit value	20	Credit value					
	Core/Option	Core	Core/Option					
	Mod leader	Vic Grout	Mod leader					

Note: “Project” is delivered in semesters 1 & 2.

18 Intended learning outcomes of the programme

	Knowledge and understanding				
		Level 4 (L4)	Level 5 (L5)	Level 6 (L6)	Level 6 Hons Degree (L6)
A1	A critical appreciation of the facts, concepts, principles and theories relating to enterprise, computing and computer game applications.	Demonstrate a working understanding of some essential facts, concepts, principles and theories relating to computing, game development, computer game applications and business practise. Shows competence in basic IT and communication skills, workshop practice and laboratory investigations.	Demonstrate a widening appreciation of the significance of key concepts, principles, theories and practices that underpin computing and game development as an academic discipline. Explore the extent and boundaries of game design and business through practical work, design exercises and case studies.	Show a confident familiarity with the broad areas of the knowledge bases of the discipline of computing and business, including the management and an appreciation of the principles, theories and practices that underpin game design and development as an academic discipline. Reveal a working understanding of current technology and of its limits.	Demonstrate confidence and reveal a clear understanding of the boundaries of existing and emerging technology and the limits of its application, and of the range of conventional design methods and the types of judgement employed by computing, game development and business professionals.
A2	Knowledge and understanding of the range of tools necessary to develop computational and business solutions.	Evaluate the appropriateness of a range of development tools for the creation of software applications.	Demonstrate an ability to apply a range of development tools and techniques in new contexts from that in which they were first studied at level 4, in the design of applications for games and business.	Select and deploy accurately established techniques and tools to develop applications for selected game design and business problems, and choose appropriate theory for analysis, with only general guidance.	Demonstrate increasingly independent, confidence and flexibility in applying a range of development tools for the creation of applications for selected game design and business problems, and in the application of knowledge and skills appropriate to their solution.
A3	Knowledge and understanding of industry standards for game development, operation and testing.	Demonstrate a working knowledge of some of the tools, practices and methodologies used in the specification, design,	Demonstrate a widening appreciation of of some of the tools, practices and methodologies used in the	Select and deploy accurately established techniques and methods used in defining and assessing criteria for measuring the extent to	Demonstrate increasingly independent, confidence and flexibility in applying a range of methods used in defining and assessing

	Knowledge and understanding				
		Level 4 (L4)	Level 5 (L5)	Level 6 (L6)	Level 6 Hons Degree (L6)
		implementation and testing of computer game systems; understand some of the risks of software implementation.	specification, design, implementation and testing of game systems; understand the risks of software design and implementation. Demonstrate a working knowledge of the general rules and best practices adopted in game and software testing techniques.	which a game system is appropriate for its current deployment; understand the risks of game design implementation and apply risk-based strategies and policies for game and software testing.	criteria for measuring the extent to which a computer game system is appropriate for its current deployment and future evolution; understand the risks of game and software implementation, and apply risk-based strategies and policies for game and software testing.
A4	Recognition of the appropriate professional, ethical and legal practices relating to business practise, and the design and development of computer game systems.	Demonstrate a basic knowledge and understanding of the professional, economic, social, moral and ethical issues involved in the exploitation of computing and computer game technology.	Demonstrate knowledge and deeper understanding of professional, economic, social, moral and ethical issues involved in the exploitation of computing and computer game technology.	Demonstrate knowledge and a comprehensive understanding of the legal, professional, economic, social, moral and ethical issues involved in the sustainable exploitation of computing and computer game technology.	Demonstrate confidence and reveal a comprehensive understanding of the legal, professional, economic, social, moral and ethical issues involved in the sustainable exploitation of computing and computer game technology.

	Intellectual skills				
		Level 4 (L4)	Level 5 (L5)	Level 6 (L6)	Level 6 Hons Degree (L6)
B1	Identify, select and apply appropriate business and computational system development models and processes.	Demonstrate some ability to apply basic concepts, principles and theories when analysing case study examples relating to game development and business	Demonstrate increasing ability to apply the key concepts, principles, theories and practices to game development and associated business	Recognise familiar ideas or principles in new contexts or situations; apply the key concepts, principles, theories and practices, systematically and effectively with minimal guidance.	Identify and classify principles and ideas in new contexts and situations; creatively apply the key concepts, principles, theories and practices, systematically,

	Intellectual skills				
		Level 4 (L4)	Level 5 (L5)	Level 6 (L6)	Level 6 Hons Degree (L6)
		with the help of guidance from tutors.	situations, still with some guidance provided.		effectively and critically, working autonomously.
B2	Develop cognitive skills of critical thinking, analysis and synthesis.	Using the tutor as a facilitator, begin to analyse basic problems, identify requirements and propose alternative solutions for computing, computer game development and business systems.	Develop an understanding of the limits of their knowledge, and how this influences analysis and interpretations based on that knowledge; identify requirements and propose and compare alternative solutions for computing, computer game development and business systems.	Develop self-reliance and confidence in the analysis of problems, identify requirements and propose and critically evaluate alternative solutions for computing, computer game development and business systems.	Integrate learned theory and techniques with practical experience to analyse problems, identify requirements and propose and critically evaluate alternative solutions for computing, computer game development and business systems with informed understanding.
B3	Select and apply suitable software development models and business processes.	Carry out the rote application of basic computing and game development principles and procedures to standard, simple situations, with considerable guidance provided by tutors.	Apply standard computing and game development principles and procedures to somewhat more demanding situations, still with some guidance provided.	Demonstrate the ability to select and use principles and procedures appropriate to the situation or problem in hand, with minimal guidance provided.	Carry out the confident and accurate selection and application of principles and procedures to the solution of a range of computing, business and game development situations and problems, working autonomously.
B4	Apply industrial standards to software performance, interoperability and evaluation.	Start to form own value judgements of software development etc., based on criteria provided, albeit very reliant on tutors' evaluative opinions.	Start to develop own criteria and ability to form independent judgements, although still dependent on guidance from tutors.	Identify a range of valid alternative solutions; begin to discriminate and evaluate in a reasoned, systematic and increasingly independent way.	Integrate theory with good computing and game development practice; autonomously evaluate theory, process, solutions and outcomes critically and effectively.

Subject skills					
		Level 4 (L4)	Level 5 (L5)	Level 6 (L6)	Level 6 Hons Degree (L6)
C1	Utilise appropriate research methods for presentation, analysis and interpretation of both qualitative and quantitative data, relevant to business practise and game design & development.	Systematically relate a limited number of facts/ideas/elements in an imitative manner, with considerable guidance provided by tutors.	Demonstrate appreciation of need for the relating and collecting of a range of facts/ideas/elements in an argued case; produce new ideas in closely-defined situations with some guidance provided as appropriate.	Demonstrate the ability to apply research methods to relate and collect facts/ ideas/ elements in an argued case; produce new ideas in a wider range of situations, with minimal guidance.	Demonstrate the ability to apply appropriate research methods to collate facts/ ideas/ elements in support of a well-structured argument; design solutions to problems and evolve new concepts, working autonomously.
C2	Working in collaborative teams, partnerships and industry networks.	The ability to work effectively with tutors and fellow students; participate in clearly defined group situations.	Demonstrate more improved interaction and group skills, including effective participation with others on a common task or group project in accordance with a methodology.	Demonstrate advanced interaction and group skills, and the ability to work effectively with others on a common task; demonstrate basic negotiation and management skills in line with team objectives and overarching methodology.	Demonstrate advanced interaction and group skills, and the ability to work effectively with others on a common task; take actions which respect the needs and contributions of others; contribute to and accept consensus; negotiate to achieve the objectives of the team; analyse the effectiveness of a methodology when applied utilised within a game development team.
C3	Critically appraise the game design & development sector, and the wider IT industry, identifying opportunities and threats.	Develop the ability to explore and recognise the risks and opportunities that may be involved in game development and the wider IT industry in relation to professional, business, legal, moral, social and	Use a range of established techniques within tutorials, for example, using experiential learning exercises, to explore and recognise the relevance of selected professional, business, legal, moral,	Demonstrate industry technology acumen, with minimum supervision, recognise the relevance of legal, professional, moral, social and ethical issues in the work place and the wider environment. Able to inform	Demonstrate effective self-management in terms of time; ability to conduct research independently or as a team, into legal, professional, moral, social, ethical and business issues. Able to inform and

Subject skills					
		Level 4 (L4)	Level 5 (L5)	Level 6 (L6)	Level 6 Hons Degree (L6)
		ethical issues; communicate the results of work accurately and reliably, and with structured and coherent arguments.	social and ethical issues; communicate the results of work/studies accurately and reliably, and with structured and coherent arguments.	and adapt work to satisfy these issues in relation to game design, development and related business processes.	adapt work to satisfy these issues. Demonstrate an ability to carry out research and critical thinking.
C4	Develop and apply theoretical and technical game design, implementation and agile management skills.	Demonstrate basic skills that underpin good practice in the field of computing and game design and development; design and create of simple game applications, interfaces and business ideas. Demonstrate a basic understanding of hardware issues, including interfacing, graphical rendering, and their impact on the overall design and performance of computer games. Demonstrate a basic awareness and understanding of the concepts, techniques, and processes involved within an agile methodology; apply these techniques to a small development project.	Demonstrate more advanced skills that underpin good practice and elements of professionalism in the field of computing and game design and development. Work as part of a team to design and develop moderately sized game applications, interfaces and business ideas. Co-operate in an effective manner with colleagues and other professionals through the development of interpersonal and communication skills, within in a project and business context using a recognised agile methodology and support tool. Develop and maintain a detailed set of production	Demonstrate an advanced understanding of appropriate practice and professionalism in the field of computing and game design and development. Design and implement interactive game systems that utilise a variety of media types to a professional standard. Design and implement intricate 3D models and animation techniques that incorporate sophisticated production pipelines. Compare and contrast current industry trends and identify potential opportunities for the design and deployment of collaborative technology.	Demonstrate professional use of investigative and design strategies, and integrate them within the utilisation of tools and agile methodologies. Analyse and critically appraise current and emerging technologies within the field of game development and IT. Propose, plan, undertake and report a self-directed individual programme of investigation, design and implementation which will enable the effective use of self-directed investigative, design, business and other technical skills to be demonstrated through the management and development of a large team project.

	Subject skills				
		Level 4 (L4)	Level 5 (L5)	Level 6 (L6)	Level 6 Hons Degree (L6)
			documentation that includes design, technical, testing and business rationale. Demonstrate good practice in the development, management and utilisation of 3D models and animation techniques using industry standard software tools.	Demonstrate an in depth understanding of the characteristics, processes and limitations of modern games and media distribution technology.	Demonstrate knowledge and understanding of agile project management techniques and the ability to analyse their effectiveness in line with a business strategy. Work within a team to design and develop effective and efficient game applications and systems that utilise and integrate a variety of media technologies and conform to a specific target market and business plan.

	Practical, professional and employability skills				
		Level 4 (L4)	Level 5 (L5)	Level 6 (L6)	Level 6 Hons Degree (L6)
D1	Written communication skills: Research, analyse and interpret information from a variety of sources and synthesise and communicate ideas effectively both orally and in writing.	Communicate in a clear and concise way in writing and orally, in relatively informal and limited-length pieces of work. In particular, demonstrate competence in technical reporting.	Communicate in a clear, systematic and concise way, in writing and orally, in more formal academic and professional styles, and in longer pieces of work of a technical nature.	Engage effectively in a variety of roles and debates; produce clear, well-structured technical reports and other extended pieces of work; deliver clear, subject-specific presentations in a variety of contexts.	Engage effectively in independent roles and debates in a professional manner; produce detailed critiques and coherent technical and project reports; deliver confident oral and other presentations in a wide range of contexts.

D2	Numeracy	Demonstrate basic numeracy and algebraic competence; ability to manipulate data related to simple business problems.	Demonstrate more advanced standard numerical/mathematical skills as appropriate to game design, development and associated business practise.	Apply a range of more specialist numerical/ mathematical skills as appropriate to game design, development and associated business practise.	Confidently apply a range of specialist numerical/ mathematical skills as appropriate to game design, development and associated business practise.
D3	Multidisciplinary teamwork skills.	Interact effectively with tutors and fellow students; participates in clearly defined group situations alongside students from different academic programmes.	Demonstrate more advanced interactive and multidisciplinary group skills, including effective participation in more demanding group tasks, including a group project.	Interact effectively within a multidisciplinary group, including a work-simulated environment; demonstrate basic negotiation, leadership and group-support skills.	Interact effectively and professionally within a multidisciplinary group; demonstrate appropriate negotiation, leadership, management and group-support skills to an advanced level.
D4	Information and communications technology skills.	Select under guidance and use relevant sources of information to identify potential computing resources for a specific purpose; demonstrate basic skill in using the Internet, digital image manipulation, designing interfaces collation of electronic data.	Demonstrate more advanced IT skills; demonstrate competent use and application of business databases, additional specialist subject packages and produce reports to business standard; demonstrate use of online databases effectively to gain information; demonstrate use of appropriate tools to plan and manage workloads.	Demonstrate, utilise and access a limited selection of more specialist IT skills related to subject specific software; conduct effective searches for information to identify potential computing resources for a specific purpose and critically evaluate their merit; demonstrate advanced use of management, presentation and business software.	Utilise and access a limited selection of more specialist IT skills related to subject specific software for analysing technical and business data; Conduct large scale, detailed searches for information to identify potential computing resources for a specific purpose and critically evaluate their merit; demonstrate advanced use of data management, presentation, business software.

D5	Cognitive skills: Critically assess the relevance and importance of ideas of others.	Show an understanding of the opinions of other people; flexibility in considering alternatives and opinions.	Demonstrate the ability to take the perspective of others; identify the similarities and differences between two approaches to the solution of a given problem.	Demonstrate the ability to take the perspective of others; comparing the strengths and weaknesses of alternative interpretations determining the credibility of a source of information.	Demonstrate the ability to take the perspective of others; articulate the strengths and weaknesses of the suggestions of arguments posed; recognize the underlying agendas and motivations of individuals and groups involved in a given situation.
D6	Managing own learning: evaluate own performance, working standards and continuing professional development; develop lifelong learning skills.	Study in a systematic, directed way with the aid of appropriate tutor guidance.	Learn in an increasingly effective and purposeful way, with the beginning of development as an autonomous learner.	Adopt a broad-ranging and flexible approach to study; identify learning needs; pursue activities designed to meet these needs in increasingly autonomous ways.	With minimal guidance, manage own learning using a wide range of resources appropriate to the IT profession; seek and make effective use of feedback; self-reflection and criticality including self -awareness, openness and sensitivity to diversity in terms of people, cultures, business, management and marketing issues.

19 Curriculum matrix

On successful completion of Level Four, students will achieve the following learning outcomes:

	Module Title	*Core or option?*	***A1***	***A2***	***A3***	***A4***	***B1***	***B2***	***B3***	***B4***	***C1***	***C2***	***C3***	***C4***	***D1***	***D2***	***D3***	***D4***	***D5***	***D6***
Level 4	COM419 Interactive Design	Core	■	■	■	□	□	■	■	■	■	■	■	■	■	■	■	■	□	■
	COM405 Digital Media Principles	Core	■	■	■	□	□	■	■	■	□	■	□	■	■	■	■	■	□	■
	COM427 Professional Development in Computing	Core	■	□	■	■	■	■	□	■	■	□	■	■	■	□	■	■	■	■
	COM424 Computer Systems	Core	■	□	■	□	■	■	□	□	■	□	□	■	■	■	□	■	■	■
	BUS457 Business Finance & Technology Management	Core	■	■	□	■	■	■	■	□	■	□	■	□	■	■	□	■	■	■
	COM433 Agile Production Methodologies	Core	■	□	■	■	■	■	■	□	■	■	□	■	■	■	□	■	□	■

On successful completion of Levels Four and Five, students will achieve the following learning outcomes:

	Module Title	*Core or option?*	***A1***	***A2***	***A3***	***A4***	***B1***	***B2***	***B3***	***B4***	***C1***	***C2***	***C3***	***C4***	***D1***	***D2***	***D3***	***D4***	***D5***	***D6***
Level 4	COM419 Interactive Design	Core	■	■	■	□	□	■	■	■	■	■	■	■	■	■	■	■	□	■
	COM405 Digital Media Principles	Core	■	■	■	□	□	■	■	■	□	■	□	■	■	■	■	■	□	■
	COM427 Professional Development in Computing	Core	■	□	■	■	■	■	□	■	■	□	■	■	■	□	■	■	■	■
	COM424 Computer Systems	Core	■	□	■	□	■	■	□	□	■	□	□	■	■	■	□	■	■	■
	BUS457 Business Finance & Technology Management	Core	■	■	□	■	■	■	■	□	■	□	■	□	■	■	□	■	■	■
	COM433 Agile Production Methodologies	Core	■	□	■	■	■	■	■	□	■	■	□	■	■	■	□	■	□	■
Level 5	COM530 Group Project Implementation	Core	■	■	■	□	■	■	■	■	■	■	■	■	■	■	■	■	■	■
	COM529 Group Project Design	Core	■	□	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
	COM522 Serious Games Technology	Core	■	■	■	□	■	■	■	■	■	■	□	■	■	■	■	■	■	■
	COM505 3D Modelling & Animation	Core	■	■	■	□	■	□	■	□	■	□	□	■	■	■	□	■	□	■
	BUS569 Innovation Commercialisation	Core	■	■	□	■	■	■	■	□	■	□	■	□	■	■	□	■	□	■
	COM535 Digital Distribution Technology	Core	■	■	■	■	■	■	□	■	■	□	■	□	■	□	□	■	■	■

On successful completion of BSc (Hons) Computer Game Design & Enterprise, students will achieve the following learning outcomes:

Note: For successful completion of a BSc (Ord), students will complete any 60 credits at level 6.

	Module Title	*Core or option?*	***A1***	***A2***	***A3***	***A4***	***B1***	***B2***	***B3***	***B4***	***C1***	***C2***	***C3***	***C4***	***D1***	***D2***	***D3***	***D4***	***D5***	***D6***
Level 4	COM419 Interactive Design	Core	■	■	■	□	□	■	■	■	■	■	■	■	■	■	■	■	□	■
	COM405 Digital Media Principles	Core	■	■	■	□	□	■	■	■	□	■	□	■	■	■	■	■	□	■
	COM427 Professional Development in Computing	Core	■	□	■	■	■	■	□	■	■	□	■	■	■	□	■	■	■	■
	COM424 Computer Systems	Core	■	□	■	□	■	■	□	□	■	□	□	■	■	■	□	■	■	■
	BUS457 Business Finance & Technology Management	Core	■	■	□	■	■	■	■	□	■	□	■	□	■	■	□	■	■	■
	COM433 Agile Production Methodologies	Core	■	□	■	■	■	■	■	□	■	■	■	■	■	■	□	■	□	■
Level 5	COM530 Group Project Implementation	Core	■	■	■	□	■	■	■	■	■	■	■	■	■	■	■	■	■	■
	COM529 Group Project Design	Core	■	□	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
	COM522 Serious Games Technology	Core	■	■	■	□	■	■	■	■	■	■	□	■	■	■	■	■	■	■
	COM505 3D Modelling & Animation	Core	■	■	■	□	■	□	■	□	■	□	□	■	■	■	□	■	□	■
	BUS569 Innovation Commercialisation	Core	■	■	□	■	■	■	■	□	■	□	■	□	■	■	□	■	□	■
	COM535 Digital Distribution Technology	Core	■	■	■	■	■	■	□	■	■	□	■	□	■	□	□	■	■	■

	Module Title	*Core or option?*	***A1***	***A2***	***A3***	***A4***	***B1***	***B2***	***B3***	***B4***	***C1***	***C2***	***C3***	***C4***	***D1***	***D2***	***D3***	***D4***	***D5***	***D6***
Level 6	COM632 Advanced 3D Modelling & Animation	Core	■	■	■	□	■	□	■	□	■	□	□	■	■	■	□	■	□	■
	COM623 21st Century Computing	Core	■	□	■	■	■	■	□	■	■	□	■	□	■	□	■	■	■	■
	COM639 Digital Marketing & Monetisation Technology	Core	■	■	■	■	■	■	□	■	■	□	■	□	■	□	□	■	■	■
	BUS639 Business Sustainability and Growth	Core	■	■	□	■	■	■	■	□	■	□	■	■	■	■	□	■	■	■
	COM625 Project	Core	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■

20 Learning and teaching strategy

The BSc (Hons) Computer Game Design & Enterprise will adopt the Computing subject area Learning, Teaching and Assessment strategy. It seeks to assist the student to become an independent learner while still supporting the students in their transition to postgraduate education. The curriculum is designed to encourage an appreciation for learning. Learning is enriched by appropriate underpinnings, current research, industrial applications and the development of transferable skills.

Students on the programme will gain theoretical and practical experience of working with a range of game development tools and environments in building and managing game applications & assets. Students will also learn about the fast-evolving fields of digital content distribution, marketing and business processes.

The majority of scheduled learning and teaching activities is through attendance at lectures, guest talks, tutorials, and labs.

The course provides students with knowledge in several subject disciplines that support the design, development, and management of computer game applications, assets and projects. The course modules cover the practical skills of computing, necessary to design, develop and manage game applications in conjunction with multidisciplinary teams, supported by learning the theories, investigation techniques, and research skills that allow them to work successfully with emerging technologies and devise solutions that are fit for purpose, and encapsulated within a business strategy.

Subject to cohort size, modules that are delivered by the North Wales Business School will be timetabled exclusively for the proposed programme, for all lecture and tutorial hours. However, if cohort sizes are smaller, then lecture hours for such modules will be timetabled as part of the North Wales Business Schools programmes, but tutorial hours will be timetabled and delivered exclusively for games students only to ensure subject specific knowledge. Regardless of the timetabled format, the assessment strategy for these modules will always conform to the module specifications provided.

The majority of Computing provision is located on the Wrexham campus, including teaching rooms, lecture theatres, staff offices, and specialist labs. There are a number of specialist computer labs on the Wrexham campus, including general purpose computing laboratories that support the teaching. These specialist labs offer access to a range of software that is utilised within the modules defined in the programme. Staff in Computing operate an Open Door policy in relation to students, ensuring flexibility and responsiveness in dealing with queries and questions that occur outside of the scheduled teaching hours.

The pace of delivery and range of syllabus content to be covered at each level of the programme requires a combination of teaching and learning strategies to be adopted in most areas of study. Modules are in the main divided into 2 types: technical and general. Technical modules cover the specialised subject areas and expertise pertaining to game development, while the more general modules cover other areas of business management, professional development and production methodologies.

Technical modules in level 4 total 80 credits of the academic year and are Interactive Design, Digital Media Principles, Computer Systems and Agile Production Methodologies. These modules provide students with the theoretical and practical skills to design, build and manage the production of simple game applications and assets.

General modules in level 4 total 40 credits of the academic year and are Professional Development in Computing and Introduction to Management and Organisation. These modules aim to develop critical thinking skills, basic research capability, information handling, ethical awareness, and business skills.

Technical modules in level 5 total 100 credits of the academic year and are Digital Distribution Technology, 3D Modelling & Animation, Serious Games Technology, Group Project Design and Group Project Implementation. These modules provide students with the theoretical and practical skills to work in multidisciplinary teams to design and develop moderately complex game applications and assets along with an understanding of the technology used to distribute them.

There is one general module at level 5 totalling 20 credits of the academic year and it is called Innovation & Commercialisation. This module aims to develop an awareness of processes and frameworks necessary to commercialise a product idea successfully.

Technical modules in level 6 total 80 credits of the academic year and are Advanced 3D Modelling & Animation, Digital Marketing & Monetisation Technology, and the project. These modules provide students with the theoretical and practical skills to work in larger multidisciplinary teams to design and develop advanced game applications and assets along with an understanding of the technology used monetise and market them.

General modules in level 6 total 40 credits of the academic year and are 21st Century Computing and Business Sustainability & Growth. These modules aim to develop a critical awareness of current, emerging future games technology along with the business skills required to sustain and grow a working company.

In the early stages of each module, problems will be well defined and limited in scope and scale. At later stages, problems will become less structured (to encourage reflection on problem issues) and open-ended (to give scope to propose and evaluate alternative solution strategies). Case studies are used when appropriate to integrate study topics and to underline vocational relevance. Coursework assignments are important throughout.

As the programme progresses, students are expected to demonstrate increasing proficiency in use of IT tools and techniques to support production of technical documentation, to enhance oral and written presentations, and to aid organisation of personal study material.

All of the modules in semester 2 at level 5 of the programme are assessed synoptically as part of an integrated set of group development modules. The modules are core to both the newly proposed BSc (Hons) Computer Game Design & Enterprise and BSc (Hons) Computer Game Development. The module delivery and assessment is closely coordinated by the appropriate module leaders, and the final assessment for all 3 modules is carried out by a panel made up of module leaders and members of the wider programme team.

The level 6 project module on the BSc (Hons) Computer Game Design & Enterprise programme is designed to be group oriented and is driven by a compulsory 4 hour session on the weekly timetable throughout the year. The module is supported by all members of the programme team, and is coordinated and driven by the module leader. This weekly session is broken down into clear two parts:

1) A formal lecture/talk aimed delivering all relevant information and subject specific content relating to the project module. The very first session of the year involves the introduction of the specific module outcomes and procedures, followed by the formal organisation and building of project teams. From there, each week is devoted to another aspect of the project such as PEGI ethical analysis, advanced agile management training and supporting platforms, research skills, report writing, data analysis and critical evaluation etc.

2) A supervised project workshop where, in the early part of the module schedule, students are guided through specific weekly activities such as brainstorming, team building, and initial work on the project proposal document. As the module progresses, the workshop session switches focus to the next relevant stage of work submission and greater support for management data preparation, refinement and team organisation.

In the final stages of the project, the workshop class hours are dedicated to providing supervised technical and methodology management support for students as they to work towards their final Level Up Expo demonstration and product submission.

The project module is designed to emulate industry standard development and management practices with production data analysis forming a key part of the assessment and general project coordination. Students are guided by their supervisor from the initial proposal phase, with the selection of a suitable team role and appropriate personal research hypothesis, through the several phases of assessment and submission.

Students are also required to encapsulate their project within a business framework with a view to managing their group as a formal enterprise supported by our Business Accelerator programme. However, participation in the accelerator programme itself is optional.

Extensive use is made of the University's Virtual Learning Environment (VLE), Moodle, to provide students with access to a range of delivery, and supporting, materials related to each of the modules featured on the programme. In addition to the materials used during the taught sessions, the VLE is used to provide students with additional content such as quizzes, videos, audio recordings, external links, technical reports, research papers, and so forth. The VLE also provides students with the ability to communicate using discussion forums and is the platform primarily used in the issuing, submission, marking, and feedback of student assessment.

21 Work based/placement learning statement

A work placement is not offered on this programme.

22 Welsh medium provision

The programme will be delivered through the medium of English. Students are entitled to submit assessments in the medium of Welsh.

There is currently no opportunity for any part of the programme to be delivered through the medium of Welsh. It is the responsibility of students who wish to be assessed through the Welsh medium to ensure that they inform the programme team of their intentions. Where a qualified tutor is available, students will then be allocated to a tutor who is able to assess the work in Welsh. At present, the School does not have enough bilingual tutors or full-time academic staff capable of assessing through the medium of Welsh. If no appropriate Welsh speaking tutor/assessor is available, the University's qualified translators will translate the written assessment into English. Due to the technical nature of this programme many of the terms in Welsh are very similar to those in English.

23 Assessment strategy

The methods of assessment used on the programme are designed to prepare students for entry into the industry and as such, primarily revolve around coursework and portfolio development.

Where modules focus on group work, there are strict controls in place to guide students in terms of assessment requirements and management of personal workloads. In addition, online tracking tools play a critical role in ascertaining a student's individual contribution to the collective effort due to the accurate logging of work hours and supporting evidence. This helps to ensure that students are assessed in a fair and transparent way.

Assessment is co-ordinated between modules to ensure diversity and a range of assessment submission dates where possible. This coordination effort also includes staff members from the North Wales Business School to ensure consistency of the student experience. Specific assessment tasks are incorporated into each module guide and relate to specific learning outcomes across all areas of programme assessment.

The number of module assessment elements and their individual assessment word counts are consistent with other programmes across both the department and the school at the same level.

Module code & title	Assessment type and weighting	Assessment loading	Indicative submission date
COM419 Interactive Design	50% Group Project 50% Portfolio	2000 Words 2000 Words	Middle Sem 1 End of Sem 1
COM405 Digital Media Principles	100% Portfolio	4000 Words	End of Sem 2
COM427 Professional Development in Computing	100% Portfolio (Over 2 semesters)	3000 Words	End of Sem 1 End of Sem 2
COM424 Computer Systems	50% Coursework 50% Class Test	3000 Words 1.5 Hours	End of Sem 1 End of Sem 1
BUS457 Business Finance & Technology Management	50% Essay 50% Case Study	1500 Words 1500 Words	Middle Sem 1 End of Sem 1
COM433 Agile Production Methodologies	100% Portfolio (Over 2 semesters)	4000 Words	End of Sem 1 End of Sem 2
COM530 Group Project Implementation	100% Group Project	4000 Words	End of Sem 2
COM529 Group Project Design	100% Group Project	4000 Words	End of Sem 2
COM522 Serious Games Technology	50% Coursework 50% Coursework	2000 Words 2000 Words	Middle Sem 2 End of Sem 2
COM505 3D Modelling & Animation	100% Coursework	4000 Words	End of Sem 1
BUS569 Innovation Commercialisation	50% Report 50% Report	2000 Words 2000 Words	Middle Sem 1 End of Sem 1
COM535 Digital Distribution Technology	50% Coursework 50% Coursework	2000 Words 2000 Words	Middle Sem 1 End of Sem 1
COM632 Advanced 3D Modelling & Animation	100% Coursework	4000 Words	End of Sem 1
COM623 21st Century Computing	70% Report 30% Presentation	3000-3500 Words 30-40 Minutes	End of Sem 2 End of Sem 2
COM639 Digital Marketing & Monetisation Technology	50% Coursework 50% Coursework	2000 Words 2000 Words	Middle Sem 1 End of Sem 1
BUS639 Business Sustainability and Growth	50% Essay 50% Report	2000 Words 2000 Words	Middle Sem 1 End of Sem 1
COM625 Project	100% Project	12,000 Words	End of Sem 2

24 Assessment regulations

Regulations for Bachelor Degrees, Diplomas, Certificates and Foundation Degree.

Derogations

None.

Non-credit bearing assessment

None.

Borderline classifications (for undergraduate programmes only)

Borderline classifications will be considered in line with current University regulations. In this case, Regulations for Bachelor Degrees, section 14, “Honours Degree and the Determination Of Awards”.
In considering borderline cases the Assessment Board shall raise the classification to the next level if all of the following criteria are met:

- At least 50% of the credits at level 6 fall within the higher classification
- All level 6 modules must have been passed at the first attempt;
- Deciding module is COM625 -– Project, which is a 40 credit module at level 6. This should fall within the higher classification.

25 Programme Management

Programme leader

Richard Hebblewhite

Programme team

Dr. Stuart Cunningham
Prof. Vic Grout
Nathan Roberts
Dr. Kelvin Leong
Anna Sung
Denise Oram

Supporting team

John Worden
Dr Nigel Houlden
Dr Paul Comerford
Prof. Richard Picking
Bindu Jose
Julie Mayers
Stephen Caulder
Jason Matthews

Quality management

The programme will be managed under the auspices of the School of Applied Science, Computing and Engineering and the programme will develop and operate within the terms of the overall management of curriculum within the School.

However, there will be a designated BSc (Hons) Programme Leader for Computer Game Design & Enterprise who will be responsible for the day-to-day running of the programme, including the following:

- The management and development of curriculum and the course portfolio
- Student tracking and student records
- Collation of assessment data and presentation of data at assessment boards

- Management/co-ordination of overall assessment activities across the programme
- Liaison with external bodies and agencies,
- Quality assurance and annual monitoring, including compilation of the Annual Monitoring Report
- Co-ordination of admissions activities and other recruitment activities, including relevant publicity activities

At module level there is devolved responsibility for the following:

- The maintenance and development of teaching and learning materials for all students enrolled on the module,
- The publishing and updating of module timetables, which shall include a weekly schedule of module sessions and required reading, to be distributed to students at the start of all modules
- The setting, marking and collation of marks for all module assessments and examination papers, including resit assessments, and submission of student results to the Programme Leader
- Tutorial support for students taking the module which they are responsible
- Quality monitoring, including processing of annual student feedback questionnaires and, where appropriate, feedback for individual modules
- Liaison with part-time members of staff involved in module teaching

Student Feedback

The University has procedures for the regular review of its educational provision, including the annual review of modules and programmes, which draw on feedback from such sources as external examiner reports, student evaluation, student achievement, and progression data. In addition, programmes are subject to a programme periodic review (PPR) and re-validation in year 5 that includes external input.

Feedback from students plays a critical part in informing the School's strategic thinking. It also allows the School to evaluate how its service provision is viewed by its most important group of stakeholders, its students.

Students can provide feedback in a number of ways:

Student Voice Forum (SVF): Chaired by a member of academic staff from outside the programme, will be held at least once per trimester. The Chair will minute student feedback for action/response by the Programme Leader. Minutes of the SVFs and the response from the Programme Leader will be posted on the programme pages of Moodle. The BSc (Hons) Computer Game Design & Enterprise programme will have representatives on the Computing Student Voice Forum from all levels of the course.

Student Evaluation of Modules (SEM): Module Leaders will distribute SEMs at the end of each module. A summary of the analysis of the SEMs, along with any other feedback (e.g. from the student suggestion box), will be passed to the Programme Leader for action/response.

Students submit work in a number of different ways depending on the module being studied. Wherever possible Moodle is used for electronic submission and Turnitin to check the similarity score and tutors give feedback via this interface within 3 weeks.

Practical work is developed and assessed by having students to demonstrate their work and take part in a form interview process, again immediate feedback is given. At the end of a module, overall feedback is provided along with a clear indication of what area the student needs, if necessary, to resubmit or particular areas were of good quality or be improved upon.

Research and scholarship activity

The programme is taught and assessed by active researchers in the field, who all belong to the University's ARClab (http://arclabnet.weebly.com/) group, which is based within the School of Applied Science, Computing and Engineering Research Centre, or the University's Research Centre for Management. In the 2014 Research Excellence Framework (REF 2014), the School's submission to the Computer Science and Informatics category received a grade point average of 2.04, with over two-thirds of all research scoring 2* or higher. In particular, the taught modules within the programme are drawn from the research specialisms and significant industry engagement of each member of the programme team. For instance:

Module Leader & Role	**Module(s)**
Dr. Stuart Cunningham *Reader in Audio and Affective Computing*	Computer Systems
Prof. Vic Grout *Professor of Computing Futures*	21st Century Computing
TBC	Business Finance & Technology Management
Richard Hebblewhite *Co-Chair Games Wales (North), BAFTA Cymru*	Interactive Design Group Project Implementation Digital Distribution Technology Digital Marketing & Monetisation Technology Project
Nathan Roberts *Senior Lecturer in Computing*	Agile Production Methodologies Digital Media Principles 3D Modelling & Animation Group Project Design Serious Games Technology Advanced 3D Modelling & Animation
Denise Oram *Senior Lecturer in Computing*	Professional Development in Computing
Anna Sung *Senior Lecturer in Accounting & Finance*	Innovation & Commercialisation Business Sustainability & Growth

ARClab's research encompasses the broader Computing subject and is concentrated in the following areas:

- IOT, Networking and Cybersercurity
- Audio and Affective Computing
- Health and Assisted Living Technologies
- HCI, Augmented and Virtual Reality
- CAD/Engineering software
- MIS/Business
- Ethics/professionalism
- Robotics/AI

ARClab has taken over from the previous Computing research groups of Creative and Applied Research for the Digital Society (CARDS) and the Centre for Applied Internet Research (CAIR), which built up their activities very impressively over the past ten years. The commitment and enthusiasm of the staff is very evident and significant outputs have been achieved over a whole range of activities, covering publications, grant winning, conference organisation, industrial engagement etc.

Significant achievements during the recent past include the very professional organisation of a conference to the highest international standards; the development of a large-scale EU-funded research project, the steady production of conference publications, in addition to a sound proportion of academic journal publications; the setting up of a usability laboratory - a relatively unique facility in Wales; the importing of a substantial new base of specialism in wireless technologies and a success in a radio frequency identification tagging (RFID) project, which is intended to be rapidly grown into an additional research theme. In addition, the emergence of virtual reality and augmented reality systems has given rise to a number of live industry projects that are in some cases, embedded within module assessment or run as extra-curricular activities for students to engage with.

26 Learning support

Institutional level support for students

The University has a range of departments that offer the support for students as:

- Zone Enterprise hub
- Enterprise Lounge (Start-up incubation centre)
- Principles House (post-start-up incubation centre)
- Library & IT Resources
- The Assessment Centre
- DisAbility Support Team
- Irlen Centre
- Careers Centre and Job Shop
- Chaplaincy
- Counselling & Wellbeing
- Student Funding and Welfare
- International Welfare
- Student Programmes Centre
- Glyndŵr Students' Union

School support for students

Every student is allocated a personal tutor in the first weeks of the programme. The personal tutor is someone students can contact to discuss any problems of a non-academic nature. These may relate to special needs or personal problems that may affect the student's academic performance. In Computing, the academic staff have been successfully been piloting the use of a virtual personal tutoring space, enabled using the Moodle VLE, to provide students with the opportunity for peer support and for less urgent issues.

Another forum for discussion is the Student Voice Forum. Student representatives, who are elected by the students, meet lecturing staff on the programme once a trimester to

exchange ideas about the programme. This allows students to communicate their shared concerns and for the staff to react and respond speedily to address their concerns.

Programme specific support for students

Students on the programme will receive the following forms of student support and guidance:

- Admissions. All students on the programme will have the opportunity to discuss their application with staff, and receive appropriate advice and guidance prior to admission. This will include a review of expectations of the programme and clarification of workload and requirements.
- Induction. New students on the programme will undergo an induction programme that will provide them with a full introduction to the programme, and will include elements of work on study skills and professional development.
- Student Handbook. All students on the programme will receive a Student Handbook which will contain details and guidance on all aspects of the programme and forms of student support and guidance, programme-based, and School-based.
- Open Door Policy. Computing operates an Open Door policy, meaning that academic staff are readily and easily accessible and approachable for students outside of scheduled learning and teaching hours. Staff can be approached without the need for a formal appointment to be made.
- Progress Review and Attendance Monitoring. Student attendance will be subject to regular monitoring through registers, and this will be a means of addressing issues of student support. There will also be regular reviews for each student with personal tutors.

Additional support for International students:

There is a network of support that is available at many different levels within the University and these combine to provide a supportive framework for the international students.

Specifically, this includes two main activities:

- The University offers English language classes alongside studies that improve not only spoken and written English but also academic English. Classes take place weekly and are delivered by the University's English language tutors. They also help students to integrate into the life of the local community as well as helping them develop transferable skills such as practical, research and report-writing skills.
- An induction / orientation course that precedes the start of formal teaching and that allows the international students to become familiar with the University and studying at the University while at the same time outlining some of the cultural differences that exist between their country of origin and the UK.

27 Equality and Diversity

Glyndŵr University is committed to providing access to all students and promotes equal opportunities in compliance with the Equality Act 2010 legislation. This programme complies fully with the University's Equal Opportunities Policy

(http://www.glyndwr.ac.uk/en/AboutGlyndwrUniversity/Governance/TheFile,64499,en.pdf), ensuring that everyone who has the potential to achieve in higher education is given the chance to do so.