



## Course Information Form

This Course Information Form provides the definitive record of the designated course

### General Course Information

Course Title	Computer Games Development Computer Games Development (with Professional Practice Year)
Qualification	BSc (Hons)
FHEQ Level	6
Intermediate Qualification(s)	n/a (Certificate of Higher Education, Diploma of Higher Education as exit awards)
Awarding Institution	University of Bedfordshire
Location of Delivery	AA – University Square Campus
Mode(s) of Study and Duration	Full-time over 3 years Full-time with Professional Practice Year over 4 years
Professional, Statutory or Regulatory Body (PSRB) accreditation or endorsement	N/a
UCAS Course Code	G453
External Benchmarking	<p><i>QAA Subject Benchmark Statement Computing:</i>  <a href="http://www.qaa.ac.uk/en/Publications/Documents/Subject-benchmark-statement-Computing.aspx.pdf">http://www.qaa.ac.uk/en/Publications/Documents/Subject-benchmark-statement-Computing.aspx.pdf</a></p> <p><i>QAA FHEQ level descriptors:</i>  <a href="http://www.qaa.ac.uk/en/Publications/Documents/Framework-Higher-Education-Qualifications-08.pdf">http://www.qaa.ac.uk/en/Publications/Documents/Framework-Higher-Education-Qualifications-08.pdf</a></p>
Entry Month(s)	October

### Why study this course

The course will help you develop skills in designing and developing computer games for a variety of platforms including mobile and web-based applications. The main emphasis will be on programming but you will also learn to develop assets such as 3d models and characters and interactive scenes.

## Educational Aims

The BSc Computer Games Development course will help you develop the skills needed to design and develop games for a range of current and emerging platforms. You will be exposed to tools, concepts and processes that are used within the industry.

Early on in the course you will analyse job roles and the expectations of employers and be guided in preparing a personal action plan to help you develop your skills.

The course is designed around a series of group based development projects that are modelled along industry lines. We often include a pitch stage in which you and your group will present your concept to a panel which in some cases may include external clients. Typically the next stage is a pre-production phase in which the objective is to clarify and fine tune the game concept and mechanics. The main development phase follows, and this is usually supported by a source control system. Team members may take on specialist roles such as programmer or artist during this process. The projects usually finish with a beta submission and period of fine tuning and quality assurance. In the final year there is an increased focus on polishing the games to a high standard in order that they should become part of your personal portfolio. The aim is that each student will have contributed to a large body of work which they can use to evidence their skills and employability.

The emphasis in the first year is to develop skills in the fundamental activities such as programming, asset creation, documenting and presenting ideas and working productively in teams. These core skills are developed and applied to a widening series of application areas during the second year.

In the final year you will be given more freedom to choose the direction of your study. The final year project is a sustained piece of individual work that will help you develop both confidence and expertise. It will develop your research and problem solving skills and provide you with a specialism that can be useful when looking for employment. You will also investigate and report on emerging topics within the field to help ensure that your knowledge is both current and industry relevant.

## Course Structure

The Units which make up the course (including the Professional Practice Year as applicable) are:

Unit Code	Level	Credits	Unit Name	Core or option
CIS085-1	4	30	Fundamentals of Creative Technologies	core
CIS019-1	4	30	Content Creation and Design	core
CIS020-1	4	30	Introduction to Software Development	core
CIS021-1	4	30	Programming for Interactive Media	core
CIS100-2	5	30	Animation and Graphics Technology	core
CIS003-2	5	30	Computer Games Programming	core
CIS099-2	5	30	Mobile Applications Development	core

CIS016-2	5	30	Object Oriented Programming	core
CIS097-2	-	0	Professional Practice Year (Computer Science and Technology)	option
CIS002-3	6	30	Advanced Computer Games Technologies	core
CIS013-3	6	30	Research Methodologies and Emerging Technologies	core
CIS015-3	6	30	Social and Professional Project Management	core
CIS017-3	6	30	Undergraduate Project	core

### Course-Specific Regulations

None

### Additional Course Costs

None

### Entry requirements

University of Bedfordshire standard entry requirements apply.

### Graduate Impact Statements

The course has been designed to develop graduates who are able to:

- Exhibit an advanced understanding of methods, concepts and tools used in the implementation of computer games
- Contribute productively to game development projects
- Learn and use new ideas and techniques as they appear within an evolving industry.

### Course Learning Outcomes

Upon successful completion of this course, you should be able to:

LO1: Demonstrate a thorough understanding of the main tools, techniques and concepts used in computer games development

LO2: Critically apply and reflect upon game development techniques, in the context of industry relevant scenarios

LO3: Professionally conduct a major project, using problem-solving and evaluation skills relevant to games development that addresses all aspects of a software development cycle including design, implementation and documentation in a coherent and consistent way.

LO4: Demonstrate transferable skills and an ability to work under guidance and as a team member.

LO5: Demonstrate a knowledge of the different job roles within the industry and the skills requirements and other expectations of relevant employers

In order to qualify for the award of BSc (Hons) Computer Games (with Professional Practice year) students will need to meet all of the outcomes above and:

LO6: Demonstrate knowledge and analytical understanding of professional practice by successfully completing an approved period of approved work place practice.

### **PSRB details**

N/A

### **Learning and Teaching**

The course will use a mixture of different approaches to teaching including lectures, seminars, practicals and case studies. There will be a strong practical focus so the teaching will often take place in computer laboratories. Students will be expected to use materials provided on the Virtual Learning Environment and to do significant amounts of work either at home or during open access periods within the computer laboratories.

There will be a mixture of assessment types requiring both individual and group effort. Most of the assessments as pictured above are practical, some include a presentation, and most include a written element, whilst specific topics have longer written work, and some units have final written exams. In this course particularly this is more evenly balanced.

As fitting the nature of digital creative technologies, the course has a mixture of technology and creative content, which makes it unique and interesting. You will have a chance to develop creative skills by learning through digital media tools such as 3D modelling and digital compositing, and work on the more technical side of computer animation through key computing practices such as and scripting. Much of the teaching is practical, as are the assignments (see above) – typically developing projects that engage or experiment with certain platforms.

This combines under the banner of Computer Animation and Visual effects and the course aims to show the potential for employment and entrepreneurship for its graduates as producers or developers for the Digital Creative Industries. Hence we collect it in the group of Creative Technologies. This area is also about experimentation, and an exploratory process, and you will learn and practice methods from design that will help to support the way you think about and create applications of technology for people, by using sketching, scenarios and prototyping, both with software and hardware devices, or without it. This is called user-centred design and is another key approach in Creative Technologies.

In summary, the assessment methods deployed in this course embrace a number of different approaches ranging from oral to written and time-constraint tasks.

### **Assessment**

Students are assessed in a variety of ways. The majority of units are assessed through coursework, group and individual projects, portfolios, essays, presentations or exams. Presentations are usually given and assessed in the context of a group seminar. You will also produce software artefacts in the area of your specialism. Constant feedback and advice from a supervisory or unit team will be provided to support you in your work.

At level 4 you are assessed on your understanding of the fundamental concepts of computing and digital technologies and their application. You are required to comprehend the basic range of intellectual concepts which form the foundations of the subject and application area, and will be assessed on your ability to articulate such concepts in a coherent manner, in a variety of

project-based briefs. For example, you will learn about digital design and content creation for animation as well as introductory programming, and interactive development.

At level 5 you are assessed on your ability to apply the basic concepts of the disciplines introduced in level 4 through further study and development on industry-standard computer animation and visual effects tools. You should also be able to demonstrate the inter-relationships between technical development and design. For example, you might be asked to make a prototype of a new application or service based on a client briefing, and carry this process out according to a user-centered design process.

At level 6 you will be required to demonstrate independent thinking and initiative. This may be in the form of analysing and criticising current practice and theory in the fields of computer animation and visual effects. In all cases, you will be expected to show an awareness of the major theories and practices of the discipline. You will progress from well-defined briefs to more open-ended and challenging assessments, which culminate in your major project – the honours project – where you will individually develop a project with supervision from an appointed mentor, usually a lecturer from the course team.

The Initial Assessment is in the unit Fundamentals of Creative Technologies CIS085-1, following which several units allow students to use work and feedback from the first assessment to perform best in the second.

All units benefit from weekly practical sessions or supervisor meetings that provide a constant learner-teacher interaction process which also serves to reflect on learning styles.

The CIS013-3 Research Methodologies and Emerging Technologies unit in the final year features a 'Reflective Report' as Assessment 1 which is formative in nature and provides an opportunity of structured feedback on the approach taken by the students for their honours project.

**Assessment Map – BSc (Hons) Computer Games Development**

Unit Code	C/O	Semester 1												Semester 2																	
		4	5	6	7	8	9	10	11	12	13	14	15	4	5	6	7	8	9	10	11	12	13	14	15						
CIS085-1	C			WR-I									CW-Jour+WR-I																		
CIS020-1	C			CW-ePort									WR-GR																		
CIS019-1	C															PO+RE											GR+PR+AR				
CIS021-1	C																											CW-Port			
CIS016-2	C				WR-I								EX																		
CIS099-2	C	WR-I											CW-ePort																		
CIS100-2	C																	PJ-Art and PJ-Proj									PJ-Art and PJ-Proj				
CIS003-2	C																											PJ-Art			
CIS097-2	O	Post completion of work experience																													
CIS013-3	C	CW-RW												WR-I																	
CIS002-3	C						CW-LR + PR-Oral																								
CIS015-3	C																										PR-Oral	WR-I			
CIS017-3	C																												WR-I		

## Developing your employability

Employability is understood widely as encompassing knowledge, skills and a professional attitude which your tutors expect you to display in all your units. All University of Bedfordshire courses aim to help you to be prepared for the world of work. The Careers Service is there to support you throughout the three years of your study. Our curriculum gives you skills that are valuable for a career within Creative Technologies but it is also relevant for a much wider range of applications.

The final year unit 'Social and Professional Project Management' in particular requires you to work in a team so as to apply a current project management methodology that embraces all of these knowledge areas in an integrated way while going through the stages of planning, execution and project control; you will work as part of a team, take responsibility and make autonomous decisions that impact on the project team performance.

In addition and somewhat complementary the honours project fosters independent and autonomous study: you learn to take up the responsibility of conducting your project, typically derived from your own ideas, in collaboration with a dedicated member of the teaching staff as project supervisor.

Students who register for the degree with professional practice year will additionally attend a series of workshops and activities related to securing a suitable placement and compulsory briefings at the end of year 2 to ensure that all legal requirements for health and safety, safeguarding etc. training have been met,. This will be explained more fully in your professional practice handbook once you have registered with the Careers and Employability Service's Student Development and Awards Team in your first year. If you will be working with children and/or vulnerable people you will be required to have a DBS check and undertake Safeguarding and Prevent training.

## After Graduation

The critical, theoretical, analytical and practical skills of this degree will prepare you for a range of careers. The most common destination will be in industries dealing with digital entertainment products such as games and apps. You may also work for companies in a more general field of IT, software development or computing.

Further academic options may include a taught MSc in Creative Technologies, or the beginnings of a research career by further study for an MSc by Research, MPhil or PhD.

## Additional Information

This course makes intensive use of computing equipment (desktop or laptop computers) and so if you have difficulty accessing these you should discuss this with the Disability Advice Team in conjunction with the course team at the outset to ensure that appropriate support is in place.

The University of Bedfordshire is committed to ensuring that curricula across all courses are inclusive to all students. The Disability Advice Team which is associated with the Student Information Desk is available to discuss any issues students may have and can provide services such as dedicated accessibility software, sign language interpreters, note takers, dyslexia screening/tuition and support with mobility on campus. They offer confidential advice and information about academic and personal issues, adjustments in examinations, applying for the Disabled Students' Allowances (DSA) and buying suitable equipment. The Disability Advice Team communicates regularly with unit and course co-ordinators to ensure the needs of students are covered.

All students concerned that their studies may be affected by disability are encouraged to contact either their Portfolio leader, Course co-ordinator or Personal Tutor for advice at whatever point in their course the need to do so becomes apparent.

## Student Support during the course

At institutional level, the university has in place a range of easily accessible support structures for new and existing students.

The Student Information Desk (SiD, <http://beds.ac.uk/sid>) offers confidential advice on all aspects of academic study. It provides information about other areas of university-wide student support such as extenuating circumstances, housing, health, counselling, study

support, special needs and disability advice, and careers service. The Study Hub provides workshops and one to one support for academic skills.

The university chaplaincy runs regular meetings, social events and trips. The Student Union provides additional support and activities.

Course specific support is also in place. First year students receive a comprehensive induction in the week prior to the commencement of the academic year. In addition to this, course coordinators will meet with their student groups to explain the course structure and other issues relating to the student experience. These introductions will give you outlines of your course and units, a description of the ways you will be encouraged to develop your knowledge and skills, and signpost resources and materials to assist the process of your learning and success. An important part of this induction is the training to use BREO (Bedfordshire Resources for Education Online). BREO is your personalized virtual learning environment that contains lecture notes, links for online assignment submissions, staff contact details, links to central student services and much more. We expect that you use BREO regularly, and that you use your university email where we send you updates about all aspects of your course which need your attention.

All students will be allocated a personal tutor when they join the course. This academic will be responsible of monitoring your academic progress throughout your first year and beyond, and will help you with any academic or personal issues that might come up. The personal tutor is your consistent point of contact for support and guidance, but will on occasion refer you to other university staff for specific issues.

Further support is provided by lecturers who have office hours and by the course administration team.

Students may be required, at the discretion of the course coordinator, to undergo diagnostic testing for academic English language abilities, and may further be required, at the course coordinator's discretion, to participate in academic English support workshops or classes laid on by the University.

Our PAL (Peer Assisted Learning) scheme will provide additional support to new students from students at levels 5 and 6.

### Additional Course costs

None

### Course Equality Impact Assessment

Question	Y/N	Anticipatory adjustments/actions
The promotion of the course is open and inclusive in terms of language, images and location?	Y	
Are there any aspects of the curriculum that might present difficulties for disabled students? For example, skills and practical tests, use of equipment, use of e-learning, placements, field trips etc.	N	
Are there any elements of the content of the course that might have an adverse impact on any of the other groups with protected characteristics <sup>1</sup> ?	N	
If the admission process involves interviews, performances or portfolios indicate how you	N/A	No interviews, performances, or portfolios

<sup>1</sup> Age, Gender reassignment, Marriage and civil partnership, Pregnancy and maternity, Race, Religion and belief, Sex, Sexual orientation

demonstrate fairness and avoid practices that could lead to unlawful discrimination?		
Confirm that you have considered that the course learning outcomes and Graduate Impact Statements are framed in a non-discriminatory way.	Y	
Confirm that the course handbook makes appropriate reference to the support of disabled students.	Y	

<b>Administrative Information – Faculty completion</b>	
<b>Faculty</b>	Creative Arts, Technologies and Science
<b>Portfolio</b>	Undergraduate
<b>Department/School</b>	Computer Science and Technology
<b>Course Coordinator</b>	Jim Wood
<b>Trimester pattern of operation</b>	Oct (Trimester 1), Feb (Trimester 2)
<b>PSRB renewal date (where recognised)</b>	N/a
<b>Version number</b>	1/17
<b>Approved by (c.f. Quality Handbook ch.2)</b>	Periodic Review Panel
<b>Date of approval (dd/mm/yyyy)</b>	9th February 2017
<b>Implementation start-date of this version (plus any identified end-date)</b>	September 2017
<b>Study model type (e.g. study centre)</b>	

Form completed by:

Name: .....Jim Wood.....Date: .....

Authorisation on behalf of the Faculty Teaching Quality and Standards Committee (FTQSC)

Chair: .....  
.....

Date:

<b>Course Updates</b>
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Date (dd/mm/yyyy)	Nature of Update	FTQSC Minute Ref:

<b>Administrative Information – Academic Registry completion</b>	
Route code (post approval)	
JACS / HECoS code (KIS)	
SLC code (post approval)	
Qualification aim (based on HESA coding framework)	





### Annex C: Course mapping to FHEQ level descriptor, subject benchmark(s) and professional body or other external reference points

One set of mapping tables to be produced for the course and each named intermediate qualification

<b>Course (or intermediate) qualification and title</b>	<b>BSc (Hons) Computer Animation and Visual Effects</b>
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FHEQ Descriptor for a higher education qualification	Level 6: Bachelor's degree with honours	Course Learning Outcome(s)							
		1	2	3	4	5	6		
A systematic understanding of key aspects of their field of study, including acquisition of coherent and detailed knowledge, at least some of which is at, or informed by, the forefront of defined aspects of a discipline		*	*	*					
An ability to deploy accurately established techniques of analysis and enquiry within a discipline			*		*	*			
Conceptual understanding that enables the student: to devise and sustain arguments, and/or to solve problems, using ideas and techniques, some of which are at the forefront of a discipline				*		*	*		
An appreciation of the uncertainty, ambiguity and limits of knowledge				*					
The ability to manage their own learning, and to make use of scholarly reviews and primary sources (for example, refereed research articles and/or original materials appropriate to the discipline)				*	*	*			
Apply the methods and techniques that they have learned to review, consolidate, extend and apply their knowledge and understanding, and to initiate and carry out projects			*						
Critically evaluate arguments, assumptions, abstract concepts and data (that may be incomplete), to make judgements, and to frame appropriate questions to achieve a solution - or identify a range of solutions - to a problem					*				
Communicate information, ideas, problems and solutions to both specialist and non-specialist audiences.		*				*			
The qualities and transferable skills necessary for employment requiring:									
the exercise of initiative and personal responsibility				*					
decision-making in complex and unpredictable contexts				*					
the learning ability needed to undertake appropriate further training of a professional or equivalent nature		*							

Subject Benchmark Statement(s)	<i>Computing, 2008</i>	Evidence and/or Course Learning Outcome(s) <i>How the course takes account of relevant subject benchmark statements</i>
On graduating with an honours degree in computing, students should be able to:		
<ul style="list-style-type: none"> <li>demonstrate a systematic understanding of the main areas of the body of knowledge within their programme of study, with an ability to exercise critical judgement across a range of issues</li> </ul>		LO1: Demonstrate a thorough understanding of the main tools, techniques and concepts used in computer games development
<ul style="list-style-type: none"> <li>critically analyse and apply a range of concepts, principles and practice of the subject in an appropriate manner in the context of loosely defined scenarios, showing effective judgement in the selection and use of tools and techniques</li> </ul>		LO2: Critically apply and reflect upon game development techniques, in the context of industry relevant scenarios
<ul style="list-style-type: none"> <li>produce work involving problem identification, the analysis, the design or the development of a system, with accompanying documentation, recognising the important relationships between these. The work will show problem-solving and evaluation skills, draw upon supporting evidence and demonstrate a good understanding of the need for quality</li> </ul>		LO3: Professionally conduct a major project, using problem-solving and evaluation skills relevant to games development that addresses all aspects of a software development cycle including design, implementation and documentation in a coherent and consistent way.
<ul style="list-style-type: none"> <li>demonstrate transferable skills with an ability to show organised work as an individual and as a team member and with minimum guidance</li> </ul>		LO4: Demonstrate transferable skills and an ability to work under guidance and as a team member
<ul style="list-style-type: none"> <li>apply appropriate practices within a professional, legal and ethical framework and identify mechanisms for continuing professional development and lifelong learning</li> </ul>		LO5: Demonstrate a knowledge of the different job roles within the industry and the skills requirements and other expectations of relevant employers
<ul style="list-style-type: none"> <li>Explain a wide range of applications based upon the body of knowledge.</li> </ul>		LO3: Professionally conduct a major project, using problem-solving and evaluation skills relevant to games development that addresses all aspects of a software development cycle including design, implementation and documentation in a coherent and consistent way.  LO5: Demonstrate a knowledge of the different job roles within the industry and the skills requirements and other expectations of relevant employers