

HECoS code(s)	101020
UCAS Course Code	G453

Course Aims	<p>This course meets the increase in demand for skilled professionals with technical expertise for the range of specialisms within the computer games development industry.</p> <p>The course will help students to develop the skills needed to program, design and visualise games for a range of current and emerging platforms through their choice from three specialisms; Programming, Design or Graphics for games.</p> <p>In the first year students will largely work in mixed groups that will give the foundations to aspects of these three specialisms, and the concepts and processes that are used within the industry. Early on in the course you will analyse job roles and be guided in preparing a personal action plan to help you develop your skills and to confirm your choice of specialism. The course is designed around both group-based development projects that are modelled along industry lines, and individual portfolio development. By the end of the first year of study you will have confirmed your specialist option choice and the units you take in the second and third year will be structured based on these specialisms:</p> <p>The programming specialism focusses on learning a variety of Industry standard programming techniques and languages (including C# and C++), enabling you to develop the ability to take designed gameplay and realise it into a playable form. The course will cover working with existing game engines as well as programming the underlying systems required to develop game engines tailored to the emerging needs of the projects. Students will learn how to manage a game development project both individually and part of an interdisciplinary team, including use of source control to work collaboratively. They will be able develop game code for a variety of platforms and to experiment with emerging technologies to enhance your skills and employability.</p> <p>The design specialism brings together theory and practice from computer science, psychology, affective computing studies, Human-Computer Interaction (HCI), User Experience (UX) design and Ludology (“the study of games and play”). This broad knowledge base will enable students to develop innovative and deeply engaging and enjoyable interactive experiences through the creation of level, system and mechanic designs and build the vocabulary and understanding to critique and improve their own game designs and those of others. Students will learn to create test plans for evaluating the playability, immersion and quality of user experience their games provide via application of expert evaluation techniques including data analytics and play testing and to apply the findings to revise designs further.</p> <p>The graphics specialism brings together theory and practice from computer graphics, visual arts, and animation. However, the emphasis is on assets that are related to the games development process. Technologies relating to emergent platforms such as VR, AR and MR are also explored, such as 180 and 360 images and video, holographic images, real-time animations and motion graphics.</p> <p>Final year students are given freedom to choose the direction of study typically based on their specialist option. The final year project is a sustained piece of individual work that will help to develop both confidence and expertise. It will develop research and</p>
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**Course Learning
Outcomes**

problem solving skills with the outcome of a specialised project or portfolio piece that can be useful when approaching employment. Final year students also investigate emerging topics and trends within the field, that will help ensure that they leave with an insight into cutting edge technologies and development opportunities.

All students build up portfolios of work and projects that will be demonstrated and critiqued through the course and lead to a final major project that demonstrates skills in a specialised research and development area.

Upon successful completion of your course you should meet the appropriate learning outcomes for your award shown in the table

Teaching, learning and assessment strategies

As fitting the specialisms of Computer Games Development, 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 development tools such as Games Engines, Prototyping tools, 3D modelling and digital animation, and work on both the technical and creative aspects according to the chosen option. Much of the teaching is practical, as are the assignments (see above) – typically developing projects that engage or experiment with certain platforms.

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

Students are assessed in a variety of ways. The majority of units are assessed through coursework, group and individual projects, portfolios, essays and presentations. 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 will be specialising in your chosen option subject, and 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 games development tools. You should also be able to demonstrate the inter-relationships between technical development and design.

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 games development. 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 undergraduate project unit – where you will individually develop a project with supervision from an appointed mentor, usually a lecturer from the Subject cluster team.

The Initial Assessment is in the unit Fundamentals of Creative Technologies, 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.

Learning support

The University'

Section C: Assessment Plan

The course is assessed as follows :

BSCGDAAF- Computer Games Development

Unit Code	Level	Period	Core/Option	Ass 1 Type code	Ass 1 Submit wk	Ass 2 Type code	Ass 2 Submit wk	Ass 3 Type code	Ass 3 Submit wk	Ass 4 Type code	Ass 4 Submit wk
CIS085-1	4	SEM 1	Core	WR-I	6	CW-EPO	13				
CIS098-1	4	SEM 1	Core	PR-OR	8	PJ-ART	13				
CIS099-1	4	SEM 2	Core	PJ-ART	13	CW-RW	13				
CIS100-1	4	SEM 2	Option	PJ-ART	13						
CIS101-1	4	SEM 2	Option	CW-EPO	13		13				
CIS099-2	5	SEM 1	Option	WR-I	6	CW-EPO	13				
CIS116-2	5	SEM 1	Option	PJ-ART	7	EX	13				
CIS120-2	5	SEM 1	Option	WR-I	6	PR-OR	13				
CIS126-2	5	SEM 1	Option	PJ-ART	6	PJ-ART	13				
CIS127-2	5	SEM 1	Core	PR-OR	5	CW-EPO	13				
CIS051-2	5	SEM 2	Option	CW-CS	8	PJ-ART	13				
CIS095-2	5	SEM 2	Option	CW-EPO	6	PJ-ART	13				
CIS128-2	5	SEM 2	Core	PR-OR	5	PJ-ART	13				

CIS129-2	5	SEM 2	Option	CW-LR	8	WR-PR	13				
CIS130-2	5	SEM 2	Option	PJ-ART	7	PJ-ART	13				
CIS058-3	6	SEM 1	Core	CW-EPO	13	WR-I	13				
CIS060-3	6	SEM 2	Option	PJ-ART	13	WR-I	13				
CIS061-3	6	SEM 2	Option	WR-I	8	PJ-ART	13				
CIS062-3	6	SEM 2	Option	PJ-ART	13	PR-OR	13				
CIS013-3	6	SEM1	Core	CW-RW	6	WR-I	12				
CIS017-3	6	SEM2	Core	WR-I	8	PR-VIV	12				

Glossary of Terms for Assessment Type Codes

CW-CS	Coursework - Case Study
CW-EPO	Coursework - e-Portfolio
CW-LR	Coursework - Literature Review
CW-RW	Coursework - Reflective Writing
EX	Exam (Invigilated)
PJ-ART	Coursework - Artefact
PR-OR	Practical - Oral Presentation
PR-VIV	Practical - Viva
WR-I	Coursework - Individual Report
WR-PR	Coursework - Problem Based Report

Administrative Information

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School	School of Computer Science and Technology
Head of School/Department	Edward Braund
Course Coordinator	Marcia Gibson