University of Bedfordshire

Course Information Form

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

General Course Information

Course Title	Interactive Digital Technologies Interactive Digital Technologies (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	M88R
External Benchmarking	*QAA Subject Benchmark Statement Computing:* http://www.qaa.ac.uk/en/Publications/Documents/Subject-benchmark-statement-Computing.aspx.pdf *QAA FHEQ level descriptors:* http://www.qaa.ac.uk/en/Publications/Documents/Framework-Higher-Education-Qualifications-08.pdf
Entry Month(s)	October

Why study this course

This course is part of the portfolio of courses within the Department of Computer Science and Technologies, and central to the subject grouping of Creative Technologies including co-teaching with BSc Computer Games Development and BSc Computer Animation and Visual Effects. Students have the opportunity to expand their knowledge by interaction with their peers

in cognate courses in the department, which provides activities and interfaces where this interaction can happen.

Educational Aims

In recent years we have seen a large expansion in the digital economy and creative industries. The course Interactive Digital Technologies defines the technologies and tools that support the digital creative industries in the creative process from idea conception to production. It involves a range of disciplines from computer science to digital design. Game development features significantly in this field but interactive digital technologies also cover a range of interactive artefacts created for other platforms ranging from mobile applications to physical computing prototyping, smart devices and web-based systems.

At the core of these emerging platforms is the internet; in contemporary terms evidenced by the growth in social networking, smart applications and recently the internet of things. Students will produce digital applications for entertainment, education and promotional purposes using industry standard tools. Graduates from the course will gain the knowledge and skills for a wide range of careers - including web design and development, digital marketing, mobile applications, games development, programming for data visualisation and emerging creative technology platforms. Students will work in an up-to-date and hi-tech software environment. All our laboratories and specialist teaching spaces are specifically for use by undergraduate and postgraduate students in the Department.

This course aims to enable students to establish a conceptual framework of the area gaining an understanding of the fundamental principles of interactive technologies by becoming competent at using interactive, games-related and web-related software platforms. You will be expected to integrate the knowledge, skills and experience gained into a substantial body of original work through minor and major projects that will enhance your transferable skills of communication, problem solving and team enabling you to develop a professional approach to the workplace. This will enhance your prospects for employability and provide you with a suitable level of expertise in computing for the creative industries.

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
CIS020-1	4	30	Introduction to Software Development	core
CIS019-1	4	30	Content Creation and Design	core
CIS021-1	4	30	Programming for Interactive Media	core
CIS100-2	5	30	Animation and Graphic Technologies	core
CIS099-2	5	30	Mobile Application Development	core

CIS050-2	5	30	Digital Design Development	core
CIS051-2	5	30	Web Technologies	core
CIS023-3	6	30	Advanced Interactive 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:

- Use an advanced understanding the principles of interactive digital technologies to design content across current and emerging platforms and apply high-level design and development skills to support the technical development needs of the digital creative industries, in areas such as web technologies, mobile application development and computer generated imagery (CGI).

- Contribute specialist expertise productively to a multi-specialist development team working on an emerging product or concept, by applying the strong commercial potential of digital interactive technologies in a broad range of creative industry areas such as digital media, computer games, and visual effects which have a major presence in the UK and generate significant global income.

- Learn and use new ideas and techniques as they appear within an evolving industry, with a substantial knowledge of software programming for the development of the Internet and interactive platforms, with related studies in platforms such as games, mobile devices and social media technologies.

Course Learning Outcomes

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

- LO1: demonstrate a sound knowledge of the principles underlying interactive digital technologies, for internet, mobile or gaming platforms.
- LO2: develop interactive applications with graphics in 2d or 3d, generated using commercial software, or relevant programming languages for creative technology applications.
- LO3: analyse the requirements of a particular need and identify suitable technology (hardware and software), develop prototypes through engagement with a user-centered design process.
- LO4: critically evaluate concepts with relevant design processes and methodologies to inform the design and development of interactive technologies
- LO5: formulate advanced and innovative solutions to the specification and development of applications and services for web-based or interactive digital platforms
- LO6: communicate your ideas both in writing, visually, and orally according to appropriate academic or professional standards and in an ethical manner.

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

- LO7: 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, practical sessions 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 technical skills by learning key computing practices such as programming and scripting, and work on the more creative side of computing through digital media tools such as 3D modelling and game design software. 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 Interactive Digital Technologies and the course aims to show the potential for employment and entrepreneurship for its graduates as developers or designers 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) Interactive Digital Technologies

		Semester 1												Semester 2											
Unit Code	C/O	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									PJ-Art
CIS099-2	C	WR-I										CW-ePort													
CIS050-2	C				PO+RE								GR+PR+AR												
CIS100-2	C																	PJ-Art and PJ-Proj							PJ-Art and PJ-Proj
CIS051-2	C																	AR + RE							PR +RE
CIS097-2	O	Post completion of work experience																							
CIS013-3	C	CW-RW										WR-I													
CIS023-3	C						CW-LR + PR-Oral						PJ-Art + PJ-Proj													
CIS015-3	C																			PR-Oral	WR-I				
CIS017-3	C																	WR-I					PJ-Proj & PR-viva		

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

Graduates of the program may look to employment within the digital creative industries related to internet services or data science, digital media or computer games. The skills acquired from the course will also allow the students to embark on careers in other areas, such as computer graphics programming, 3D modelling, or mobile application development. Employment options may include:

- Creative Technologist or Technical Developer for the Creative Industries.
- Web Developer for Internet applications or social media networks.
- Mobile content developer/programmer.
- Digital Information/Data Architect.
- Digital Design developer.

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 co-ordinators 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	N	If so indicate the anticipatory adjustments and arrangements here

equipment, use of e-learning, placements, field trips etc.		
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[1]?	N	If so then indicate the anticipatory adjustments and arrangements here
If the admission process involves interviews, performances or portfolios indicate how you demonstrate fairness and avoid practices that could lead to unlawful discrimination?	N/A	No interviews, performances, or portfolios
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	

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

Form completed by:

[1] Age, Gender reassignment, Marriage and civil partnership, Pregnancy and maternity, Race, Religion and belief, Sex, Sexual orientation

Name: ……Jim Wood…… Date: …..……

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

Chair: …… Date: …..……

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

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

University of Bedfordshire

Annexes to the Course Information Form

*These annexes will be used as part of the approval and review process and **peer academics** are the target audience.*

General course information

Course Title	**Interactive Digital Technologies**
Qualification	BSc (Hons)
Route Code (SITS)	BSCAVAAF
Faculty	Creative Arts, Technologies and Science
Department/School/Division	Computer Science and Technology
Version Number	*1.16*

Annex A: Course mapping of unit learning outcomes to course learning outcomes

Unit code	**CIS085-1**	**CIS020-1**	**CIS019-1**	**CIS021-1**	**CIS100-2**	**CIS099-2**	**CIS050-2**	**CIS096-2**	**CIS023-3**	**CIS013-3**	**CIS015-3**	**CIS023-3**
Level	4	4	4	4	5	5	5	5	6	6	6	6
Credits	30	30	30	30	30	30	30	30	30	30	30	30
Core or option	Core	Core	Core	Core	Core	Core	Core	Core	Core	Core	Core	Core
Course Learning Outcome *(number)*	*Insert LO1 and/or LO2 for each unit into cell corresponding to the course learning outcome*											
1	**LO1**	**LO1 LO2**	**LO1 LO2**	**LO1 LO2**	**LO1 LO2**	**LO1 LO2**	**LO1 LO2**	**LO1 LO2**	**LO1**	**LO1 LO2**		**LO2**
2	**LO2**	**LO2**	**LO2**	**LO2**	**LO2**	**LO2**	**LO2**	**LO2**	**LO2**			**LO2**
3	**LO1 LO2**	**LO2**	**LO2**	**LO2**	**LO2**	**LO2**	**LO2**	**LO1 LO2**	**LO1 LO2**			**LO1 LO2**
4					**LO2**	**LO2**	**LO2**	**LO2**	**LO1 LO2**	**LO1 LO2**	**LO1 LO2**	**LO1 LO2**
5	**-**								**LO1 LO2**	**LO1 LO2**	**LO1 LO2**	**LO1 LO2**
6	**LO2**	**LO1**	**LO1**	**LO1**	**LO1**	**LO1**	**LO1**	**LO1**	**LO1 LO2**	**LO1 LO2**	**LO1 LO2**	**LO1 LO2**

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

Course (or intermediate) qualification and title	**BSc (Hons) Interactive Digital Technologies**

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)	*Computing, 2008*	**Evidence and/or Course Learning Outcome(s)** *How the course takes account of relevant subject benchmark statements*
On graduating with an honours degree in computing, students should be able to:		
• 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		LO1: demonstrate a sound knowledge of the principles underlying computer animation and visual effects technologies, for animation, video or gaming platforms LO2: develop computer animation sequences with graphics in 2d or 3d, generated using commercial software, or relevant scripting languages for creative technology applications.
• 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		LO3: analyse the requirements of a particular need and identify suitable technology (hardware and software), develop prototypes through engagement with a user-centered design process LO4: critically evaluate concepts with relevant design processes and methodologies to inform the design and development of computer animation and visual effects
• 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		LO3: analyse the requirements of a particular need and identify suitable technology (hardware and software), develop prototypes through engagement with a user-centered design process LO5: formulate advanced and innovative solutions to the specification and development of applications and services for visual effects digital platforms
• demonstrate transferable skills with an ability to show organised work as an individual and as a team member and with minimum guidance		LO2: develop computer animation sequences with graphics in 2d or 3d, generated using commercial software, or relevant scripting languages for creative technology applications. LO3: analyse the requirements of a particular need and identify suitable technology (hardware and software), develop prototypes through engagement with a user-centered design process
• apply appropriate practices within a professional, legal and ethical framework and identify mechanisms for continuing professional development and lifelong learning		LO6: communicate your ideas both in writing, visually, and orally according to appropriate academic or professional standards and in an ethical manner.
• Explain a wide range of applications based upon the body of knowledge.		LO3: analyse the requirements of a particular need and identify suitable technology (hardware and software), develop prototypes through engagement with a user-centered design process