BSc (Hons) Games Technology

Bournemouth University

The School of Design, Engineering & Computing

The student experience on this degree is enhanced by:

- Emphasis on practical hands-on activities which bring the theoretical content to life;
- Coverage of a wide range of leading game technologies.
- Development of games using the technologies.

Duration:
4 years including a 40 week placement

UCAS:
G601

Entry Requirements:

For 2012 entry: 300 points typically from 3 A-levels or equivalent.
A minimum of DMM from a BTEC 18-unit Diploma.

We look at individual applications and make an offer based on your academic achievements, personal statement and relevant selection criteria. Offers may be subject and grade specific.

Preferred subjects:
Computing, IT, Maths, Physics, Science/Technology

Recommended GCSEs:
4 at grade C minimum including Maths and English

International Baccalaureate
31 points (including 5 points from each of the 3 Higher Level subjects).

If English is not your first language:
IELTS (Academic) 6.0 or equivalent

Contact askBU Enquiries:
Tel: 08456 501501 (BU does not profit from this service)
Tel: +44 (0) 1202 961916 (UK and International/EU alternative number)
Email: askBUenquiries@bournemouth.ac.uk

Open Days:
Log on to: www.bournemouth.ac.uk/opendays

For more course information:
www.bournemouth.ac.uk/courses/BSGTS

Overview

As a student on this course you will develop knowledge and skills in the technological aspects of media and games programming. This will enable you to use appropriate tools and techniques to integrate music, audio, graphics, animation and games for distributed applications. The focus of the course is on the principles of games technology and games programming, emphasising well-founded technical principles in the development of games system components.

Particular emphasis is placed on the tools and techniques used for the development of games, animation and graphics. Throughout the course you will gain a broad understanding of video, audio, computers and an in-depth understanding of 3D modelling, graphics, animation and games programming.
On top of this you will also be equipped with the relevant knowledge and skills to apply studio techniques for the production and recording of entertainment material. As music and audio are such important elements in games systems, there will be coverage of music and audio as part of this programme. The course looks at game development on the latest game platforms such as for example, XBox 360, and also addresses the growing area of mobile phone game development.

The subject of entrepreneurship is highlighted through learning in the area of business development, including company creation and business planning. The optional 12-month placement will give you the opportunity to put the skills and knowledge acquired during the first and second years of the course into practise and will help you make an informed decision about your future career.

Course content:

Year 1 – Level C

Creative Technology Fundamentals
The unit has two principal aims, namely to provide the generic scientific knowledge and skills required by employers in the creative technology industries and secondly to provide understanding and practical skills in interfacing and configuring creative technology hardware.

Games Production Techniques 1
This double weighted unit will introduce you to a number of different areas of games development focused on beginner's level, aiming to cultivate an understanding of contemporary game creation for the rest of the course.

This unit will explore the history of computer games across the last few decades and the fundamentals of game hardware and software.

You will look at the development of games software, games design and specific game content/asset creation on a variety of platforms and the use of different software/middleware.

Change & Opportunity
You will become aware of the particular issues affecting market and client-led design in the development of multimedia products and services. You will also develop professionally and interpersonally in preparation for the placement search and for the challenges of working in a rapidly changing technical industry.

Media Device Architecture & Networks
You will learn the basic mechanisms and operation of computer architectures as applied to audio and video media devices. In addition you will learn the fundamentals of networking techniques used in integration of audio and video equipment and delivery of multimedia content across networks.

Software Programming
You will develop an understanding of the fundamentals of programming principles and practices involved in the planning, designing and implementing of computer programs for audio and media applications.

Year 2 – Level I

Programming for Graphics, Animation & Games
You will gain knowledge and skills in animation, computer graphics and gaming with a particular emphasis on the underlying technical theory and software. You will also develop graphics, animation and game applications for deployment using the latest software tools.

Mobile Games & Embedded Intelligence
You will develop the principles and embedded intelligence strategies that underpin the application of graphics, sound and software algorithms to the creation of mobile games. You will also develop single and multi player based games that run on mobile devices.

Games Production Techniques 2
The creation of computer software and content for entertainment is rapidly growing. This unit will develop on knowledge and skills in a variety of fields related to games creation areas, such as level design, 3D modelling, animation, games programming, game design theory, novel gaming interaction techniques and others.

Technical areas such as physics and mathematics used in a variety of gaming mechanics will also be covered. All of those sub-areas will be explored in an intermediate level during the course of the unit.

Analysis, Design & Application for Themes
The aim of this unit is to give you the knowledge and skills required to design and explore solutions appropriate to Games Technology. You will also explore how theme specific approaches fit into the wider context of the Creative Technologies industry as a whole.

Innovation & Developing Solutions
You will develop the ability to analyse business situations, identifying potential opportunities for innovative solutions. You will work in teams on simulated business projects to provide innovative technical solutions to clients.

Multimodal Interactions
You will develop a wide-ranging knowledge of current and emerging approaches by exploration of contemporary and state of the art HCI paradigms. You will learn to critically assess alternatives for human-computer interactions and acquire theory and practical skills to build and evaluate contemporary multimedia and multimodal interaction.

Year 3 – Level P
Industrial Placement (minimum 40 weeks)

The placement provides an excellent opportunity for students to gain first-hand industry experience.

Experience gained on the placement is invaluable in helping you to make informed decisions about your future career path, as well as enhancing employment prospects upon graduation.

A dedicated Placements Office will help you with finding a placement. You will also receive support throughout the placement experience. Interview techniques and advice are also provided to help with obtaining a placement

Year 4 - Level H

Games Programming
You will gain skills in computer games programming with a particular emphasis on the underlying technical theory and software needed for developing computer games for deployment on today's real-world entertainment systems.

Modelling & Game Design
You will develop knowledge and skills in 3D modelling and game design. There will be a particular emphasis on the theory and software tools used for produce 3D models and the techniques required to design and develop interactive computer games.

Management Strategies & Entrepreneurship
You will develop appropriate knowledge, skills and attributes together with sensitivity to different cultures and leadership styles to meet the challenges of the technical development environment.

Individual Project
The individual project will give you the opportunity to apply the knowledge and skills you have acquired on the course, in a scientific manner to enable the development of multimedia, network and business systems. You will develop strategies allowing you to understand and practice problem solving with regards to research, synthesis, realisation and evaluation.

You will present project requirements, analysis and design solutions using oral, written and modelling techniques to a professional standard. This challenge will develop and demonstrate your ability to apply and synthesize the knowledge and skills established throughout the course.

The Nature of the Course
The aim of this degree route is to develop competent technologists with sound knowledge of game technology and the ability to apply appropriate tools and techniques to support the creation of game systems.

This course will look at game development on the latest game platforms for example Xbox 360 and will also address the growing area of mobile phone game development. It should be emphasised that music and audio are key parts of most game systems. It is therefore important that graduates of this course also have sufficient knowledge and skills of music and audio technology.

The main learning is that of the well established principles of game technology and games programming, emphasising well founded technical principles in the development of game system components with particular emphasis on the tools and techniques used for the development of games, animation and graphics. The importance of legal and ethical aspects in respect of the creative technology and the Intellectual Property Rights (IPR) law is paramount to protect creative content and influences company creation and viable business models. These aspects which are covered throughout the course will be further emphasised in the final year. Entrepreneurship is highly emphasised with learning in the area of business development, including company creation and business planning. The extended 60 credit project in the final year will allow you to explore and demonstrate their ability to develop a high quality game technology artefact such as a game design and development implementation.

Course Provision
There are individual and group-based development activities, and seminar-based discussions. All assessments are on an individual basis. The emphasis throughout the delivery of the units is on the application of theory to relevant practical applications. Each unit is assessed either by coursework only or via a combination of coursework and an examination.

Industry Links
This course is a member of TIGA, the trade association representing the UK's games industry. TIGA members include independent games developers, developer-publishers, in-house publisher-owned developers, outsourcing companies, technology businesses and Universities. TIGA's vision is to make the UK the best place in the world to do games business.

Interviews
Applicants for this course are required to attend an informal interview.

Entry Requirements
For 2012 entry: 300 points.

We look at individual applications and make an offer based on your academic achievements, personal statement and relevant selection criteria. Offers may be subject and grade specific.

GCSEs
This course requires a minimum of 4 GCSEs or equivalent at grades A* to C, including English and Maths.

Numeracy and literacy
In order for you to contribute fully to your course and enjoy your learning experience with us, you'll need to have the right skills to study with us. For that reason, we need to be sure that you can express yourself in written English, have basic numeracy skills, and have an understanding of the subject area. We usually use Level 2 of the National Qualifications Framework as a demonstration of these skills. Level 2 includes GCSEs and Key Skills Level 2.

If you are a mature candidate who does not have formal qualifications to this level, we may still be able to consider your application – please contact the askBU enquiry service to find out more.

Advanced/Progression Diplomas
The Advanced diploma is broadly equivalent to three and a half A levels and the progression diploma to two and a half A levels. The diplomas are available in just a few subject areas and only some of these are suitable to gain entry onto this course, please see the individual course entry on our website for further details.

BTEC National Diplomas
This course requires a Distinction, Merit, Merit from the 18 unit diploma.

Access to Higher Education
BU welcomes Access to HE students. This course requires Access to HE in ICT/Science normally with 24 Level 3 credits achieved at Merit, and 12 Level 3 credits achieved at Distinction

Excluded Subjects
General Studies is not normally accepted by BU as one of your A or AS levels. The grade achieved for Critical Thinking however, may be taken into account when considering whether or not to accept a candidate who has marginally failed to meet the conditions of their offer.

Other qualifications
If you are studying a qualification that is not listed please contact us it may be that we can still consider it.

International Students
International students are very welcome at BU – we think that a bustling, cosmopolitan mix of students enhances the learning experience for everybody.

To find out more about how your qualifications relate to those in the UK, take a look at the NARIC website www.naric.org.uk. Your application will be processed by our dedicated International Admissions Team that is familiar with a wide range of international qualifications. We look at your entire application to see how you would benefit from the course, and how able you are to complete it successfully.

You will find our country-specific information www.bournemouth.ac.uk/international gives you clear advice about the entry requirements from a particular country. If your country is not listed, then contact our askBU Enquiry Service for further information.

Please note:
The University reserves the right to introduce changes to the information given, including the addition, withdrawal, re-location or restructuring of courses.

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