

BSc (Hons)

This programme is no longer recruiting. Please refer to the programme specification for BSc (Hons) Computer Game Development.

Final award	BSc (Hons)
Intermediate awards available	Cert HE, Dip HE
UCAS code	G453
Details of professional body accreditation	N/A
Relevant QAA Benchmark statements	Computing, Art and Design
Date specification last up-dated	July 2012

Profile

The summary - UCAS programme profile

BANNER BOX:

Interested in the development of the next generation of computer games? Then study a degree in Computer Games Technology at the University of East London and realise your ambition!

ENTRY REQUIREMENTS

- Typical offer is 240 UCAS tariff points (including two GCE or VCE A-levels or a VCE Double Award)
- Equivalent overseas qualifications
- Relevant Access programme
- Mature students, without appropriate academic qualifications but with relevant work experience, attend for interview and aptitude test.

Students may be admitted through Accreditation of Experiential Learning (AEL) or Accreditation of Certificated Learning (ACL) processes. In the case of applicants whose first language is not English, then IELTS 6.0 (or equivalent) is required. International qualifications will be checked for appropriate matriculation to UK Higher Education undergraduate programmes.

ABOUT THE PROGRAMME

What is Computer Games Technologies?

The computer games industry is a global industry worth billions of dollars and games software has become a major source of entertainment for millions of people. Computer games programmes are designed to equip graduates with the necessary skills and knowledge to develop games software all the way from an initial concept to the final implementation and distribution to market.

Computer Games Technologies at UEL

The Computer Games Technologies programme offers students the opportunity to study the games development process and theories underpinning the design and development of computer games with a focus on acquiring games programming skills and knowledge.

As part of the program you will be required to produce games design documentation, as well as plan and manage implementation of games prototypes, both individually and as part of a multidisciplinary development team. The programme gives you a foundation in the entire games development process and allows you to acquire skills in 2D/3D graphics production, player/user/market analysis and targeted design, games-specific object oriented programming, and makes use of industry standard programming and games development environments to allow for both rapid prototyping and games development. Our games programmes are unique in focusing on the skills and understanding between design and development and will equip you with essential skills for the growing games industry.

Programme structure

The Computer Games Technologies programme lasts three years full time. In the first year introduces you to the basics of games analysis, theory and design, introductory graphics and prototyping production techniques and introductory object oriented software development skills

- The principles and practice of graphic production including vector and raster based image manipulation
- Fundamentals of games theory, analysis, design, development and production
- Player/audience analysis
- Fundamentals of software development and object oriented games programming
- Skills for success in HE

During the second year, you will focus on

- 3D Graphics production
- Level Design/Implementation
- Managing a live client project as part of an interdisciplinary design and development team
- Gameplay programming in 2D and 3D environments
- Games AI programming
- New Media Hardware

The final year allows you to examine current issues in games markets, undertake large scale research and games design and development projects and develop more advanced technical skills including:

- Analysis of games markets and targeted design for a specific market
- Dynamic Computer Games Environments
- Double weighted individual dissertation/project that allows you to choose your own research question and develop and test a prototype as part of your primary research
- Double weighted team-based project where you work as part of a large multidisciplinary team to design and implement a fully working game, from initial concept generation to final implementation

Learning environment

Learning takes place through lectures, seminars and practical workshops, presentations, crits and invited speakers from industry. Tutorial sessions are also available, as well as personal one-to-one supervision of final year projects and dissertations. Dedicated games design and development labs equipped with specialist games hardware and software are used for the teaching of computer games Technologies. Students also have access to the Internet and to a full range of standard desktop software applications. At UEL, we make extensive use of virtual learning environments to give extra support to our students and allow easy communication between students and staff.

Assessment

A variety of assessment methods are used. Most modules are assessed entirely by coursework, although some modules contain a combination of coursework and examination. Coursework assessment can take a number of different forms including group and individual presentations, software demonstrations, research-based assignments, practical development and theoretical work and group and individual project coursework.

Work experience/placement opportunities

There is the opportunity to work in small interdisciplinary teams on live client briefs with in both the 2nd year of this degree programme.

Project work

Students are expected to undertake project work at all levels of study, culminating in their third year double project module. One third of the final year is made up of project work - this counts as almost a quarter of the total mark for the degree. This, and other areas of study, allows students to develop their own ideas, work in groups and/or research specific topics.

Added value

The programme offers a range of extracurricular games design and development activities, including Games Workshop, Games Club and the UEL SU Computer Games Society which run a number of events throughout the year. Games Workshops and Games Club sessions give students from all levels of study an opportunity to meet, both for technical or coursework assistance, planning, discussion and implementation and playtesting of non-assessed projects. In Games Club students play a wide-range of paper-based role-playing, board and card games as well as playtest paper-based prototypes of assessed work as well as non-assessed design projects. The games teaching team attend and support these sessions.

IS THIS THE PROGRAMME FOR ME?

If you are interested in...

- Playing and analysing computer Games
- Designing and developing computer games
- Understanding what makes compelling gameplay
- The application of object-oriented programming skills to games development

If you enjoy...

- 2D and 3D image creation and manipulation
- Working in multidisciplinary teams with clients and external agents
- Researching developments in computer games design and development
- Applying practical skills and theoretical knowledge to real-world design and development challenges

If you want...

- To acquire or enhance a range of practical and theoretical skills relevant to a career in computer game design and development.
- To develop study and research skills essential for exploring the field of games design and development, including analytical reading and note-taking, essay planning and writing, reports, independent thinking, problem solving and coherent reasoning.
- To have the foundation necessary to extend study at the MA level.

Your future career

There are a number of potential careers in games design, development, production or management within the games, computing and new media industries. The programme will also equip students with the knowledge and skills necessary to pursue further education at Masters degree level.

How we support you

Each student is allocated a personal tutor to guide them through their studies. There is also a programme tutor, who is responsible for your degree and can also offer help and advice. Additional academic support is provided by the School's dedicated Student Support Office. The university also offers support in the following areas: residential; student finance advice; careers advice; study skills development; IT/learning resources

Bonus factors

- Extracurricular activities including Games Workshop, Games Club and the UEL SU Computer Games Society Events.
- Knowledge Dock based at the Docklands Campus provides a natural channel between business and higher education and also provides a variety of opportunities including placements to our students.
- Guest lecturers from games industry professionals

Outcomes

Programme aims and learning outcomes

What is this programme designed to achieve?

This programme is designed to give you the opportunity to:

- Develop software programming and development skills as related to computer games
- Develop the skills in computer games design and development practice – iterative targeted design, planning, development and communication and management skills
- Develop an understanding of and skills in critical practice in the games industry - not solely vocational 'how-to' skills but also the ability to think critically about 'why' and 'with what effect'
- Develop the ability to work both independently and as part of a design and development team

What will you learn?

Knowledge and understanding

On completion of this programme you will be able to demonstrate knowledge in the field of

- Engineering methods for software design as related to games development
- Advanced techniques for computer game design and development
- Multidisciplinary team/group management
- Operating computer games design and development related ICTs and assessing their advantages and disadvantages

'Thinking' skills

You will be able to:

- Use theoretical concepts and perspectives to explain the development of computer games in and commercial settings
- Evaluate the relationship between theory and creative practice in the field of computer game design and development
- Gather, analyse and comment critically on ideas associated with computer game design and development using both traditional and modern sources
- Analyse the legal and cultural factors which shape the development and implementation of computer games design
- Understand and apply principles of computer game design, development, production management and group work to project work
- Critically evaluate various approaches to computer games design and development

Subject-Based Practical skills

You will be able to:

- Use engineering design techniques to build computer games
- Design and create computer games and prototypes of computer games for a using industry standard design and development tools
- Learn to use professional-level application software with a minimum of direct instructions
- Identify the elements which are likely to make for effective computer games

Skills for life and work

- Critically evaluate the experience of developing a project report
- Understand and utilise different research approaches
- Work and research independently

- Work in a group and solve problems associated with group activities
- Create and deliver presentation
- Write technical reports and academic papers
- Use computers and application software effectively

Structure

The programme structure

Introduction

All programmes are credit-rated to help you to understand the amount and level of study that is needed.

One credit is equal to 10 hours of directed study time (this includes everything you do e.g. lecture, seminar and private study).

Credits are assigned to one of 5 levels:

- 0 - equivalent in standard to GCE 'A' level and is intended to prepare students for year one of an undergraduate degree programme
- 1 - equivalent in standard to the first year of a full-time undergraduate degree programme
- 2 - equivalent in standard to the second year of a full-time undergraduate degree programme
- 3 - equivalent in standard to the third year of a full-time undergraduate degree programme
- M - equivalent in standard to a Masters degree

Credit rating

The overall credit-rating of this programme is 360 credits.

Typical duration

The expected duration of this programme is 3 years when attended in full-time mode or 5 years in part-time mode. It is possible to move from a full-time mode of study to a part-time mode of study and vice-versa, to accommodate any external factors such as financial constraints or domestic commitments. Many of our students make use of this flexibility and this may impact on the overall duration of their study period.

How the teaching year is divided

The teaching year begins in September and ends in June. A student, normally registering for 6 modules in one year (3 modules in each Semester) would do so in a full-time attendance mode of study and a student registering for up to 4 modules in one year (2 modules in each Semester) would do so in part-time attendance mode of study.

What you will study when

This programme is part of a modular degree scheme. A student registered in a full-time attendance mode will take six 20 credit modules per year. An honours degree student will complete six modules at level one, six at level 2 and six at level 3.

It is possible to bring together modules from one field with modules from another to produce a combined programme. Subjects are offered in a variety of combinations:

Single - 120 credits at levels one, two and three

Major - 80 credits at levels one, two and three

Joint - 60 credits at levels one, two and three

Minor - 40 credits at levels one, two and three.

Modules are defined as:

Core - Must be taken

Option - Select from a range of identified module within the field

University Wide Option - Select from a wide range of university wide options

The following are the core and optional requirements for the single, major, joint and minor routes for this programme.

LEVEL	UEL Module Code	TITLE	SKILLS MODULES (Insert Y where appropriate)	CREDITS	STATUS SINGLE
1	MS1301	Visual Design		20	Core
1	MS1307	Introduction to Software Development for Games		20	Core
1	MS1308	Introduction to Games Programming		20	Core
1	MS1300	Games Analysis	Y	20	Core
1	MS1303	Introduction to Computer Games Theory and Design		20	Core
1	MS1306	Introduction to Computer Games Development		20	Core
2	MS2307	Programming Gameplay		20	Core
2	MS2301	3D Computer Graphics		20	Core
2	MS2308	Games Programming: AI		20	Core
2	MS2303	Live Team Project	Y	20	Core
2	MS2309	New Media Hardware		20	Core
2	MS2302	Level Design		20	Core Wide
3	MS3303	Games Markets: Analysis, Regulation & Targeted Design		20	Core

3	MS3302 Dynamic Computer Games Environments		20	Core
3	MS3306 Professional Games Practice		40	Core
3	MS3300 Research Practice	Y	40	Core

Requirements for gaining an award

In order to gain an honours degree you will need to obtain 360 credits including:

- A minimum of 120 credits at level one or higher
- A minimum of 120 credits at level two or higher
- A minimum of 120 credits at level three or higher

In order to gain an ordinary degree you will need to obtain a minimum of 300 credits including:

- A minimum of 120 credits at level one or higher
- A minimum of 120 credits at level two or higher
- A minimum of 60 credits at level three or higher

In order to gain a Diploma of Higher Education you will need to obtain at least 240 credits including a minimum of 120 credits at level one or higher and 120 credits at level two or higher

In order to gain a Certificate of Higher Education you will need to obtain 120 credits at level one or higher

In order to gain an Associate Certificate you will need to obtain a minimum of 20 credits at level one or higher

Degree Classification

Where a student is eligible for an Honours degree, and has gained a minimum of 240 UEL credits at level 2 or level 3 on the programme, including a minimum of 120 UEL credits at level 3, the award classification is determined by calculating:

$$\frac{\text{The arithmetic mean of the best 100 credits at level 3}}{\times 2/3} + \frac{\text{The arithmetic mean of the next best 100 credits at levels 2 and/or 3}}{\times 1/3}$$

and applying the mark obtained as a percentage, with all decimal points rounded up to the nearest whole number, to the following classification

70% - 100% First Class Honours

60% - 69% Second Class Honours, First Division

50% - 59% Second Class Honours, Second Division

40% - 49% Third Class Honours

0% - 39% Not passed

Assessment

Teaching, learning and assessment

Teaching and learning

The teaching and learning strategy will be based on a range of methods including an emphasis on a student centred approach. The traditional lecture will be used to present information, general principles, applications and methods. Lectures will be enhanced by support activities including tutorials, problem solving, laboratories, group work and projects.

Knowledge and understanding is developed through

- Student centred tasks
- Lectures
- Support classes such as seminars, tutorials, and laboratories.
- Individual and group Project Work
- Reading
- Problem solving

'Thinking' skills are developed through

- Seminars
- Student centred tasks
- Individual and group Project Work
- Problem Solving

Practical skills are developed through

- Laboratory classes
- Student centred tasks
- Individual and group Project Work

General skills are developed through

- Individual and group Project Work (group work skills; self study skills)
- Problem Solving (analysis, design and implementation skills)

Assessment

Knowledge is assessed by

- Coursework essays, reports, evaluations, reviews, reflections and presentations
- Exercises and discussions undertaken in seminar and workshop sessions

Thinking skills are assessed by

- Coursework essays, reports, evaluations, reviews, reflections and presentations
- Exercises and discussions undertaken in seminar and workshop sessions

Practical skills are assessed by

- Practical projects and reflections on production process
- Assignments demonstrating the ability to use software and hardware to produce and end product
- Demonstrating competency in workshops

Skills for life and work (general skills) are assessed by

- Involvement in and contribution to seminar/workshop sessions
- Ability to understand and meet requirements of module specification
- Quality of written work in assignments
- Strict assignment deadlines
- Involvement in and contribution to group project work

Quality

How we assure the quality of this programme

Before this programme started

Before the programme started, the following was checked:

- there would be enough qualified staff to teach the programme;
- adequate resources would be in place;
- the overall aims and objectives were appropriate;
- the content of the programme met national benchmark requirements;
- the programme met any professional/statutory body requirements;
- the proposal met other internal quality criteria covering a range of issues such as admissions policy, teaching, learning and assessment strategy and student support mechanisms.

This is done through a process of programme approval which involves consulting academic experts including some subject specialists from other institutions

How we monitor the quality of this programme

The quality of this programme is monitored each year through evaluating:

- external examiner reports (considering quality and standards);
- statistical information (considering issues such as the pass rate);
- student feedback.

Drawing on this and other information programme teams undertake the annual Review and Enhancement Process which is co-ordinated at School level and includes student participation. The process is monitored by the University's Quality Standing Committee. Once every six years an in-depth review of the whole field is undertaken by a panel that includes at least two external subject specialists. The panel considers documents, looks at student work, speaks to current and former students and speaks to staff before drawing its conclusions. The result is a report highlighting good practice and identifying areas where action is needed.

The role of the programme committee

This programme has a programme committee comprising all relevant teaching staff, student representatives and others who make a contribution towards the effective operation of the programme (e.g. library/technician staff). The committee has responsibilities for the quality of the programme. It provides input into the operation of the Review and Enhancement Process and proposes changes to improve quality. The programme committee plays a critical role in the University's quality assurance procedures.

The role of external examiners

The standard of this programme is monitored by at least one external examiner. External examiners have two primary responsibilities:

- To ensure the standard of the programme
- To ensure that justice is done to individual students

External examiners fulfil these responsibilities in a variety of ways including:

- Approving exam papers/assignments
- Attending assessment boards
- Reviewing samples of student work and moderating marks
- Ensuring that regulations are followed
- Providing feedback through an annual report that enables us to make improvements for the future

Listening to the views of students

The following methods for gaining student feedback are used on this programme:

- Module evaluations
- Staff/Student representation on programme committees (meeting 2 times year)
- Field feedback information analysis for programme and module evaluation

Students are notified of the action taken through:

- Circulating the Minutes of the programme committee
- Providing details on the programme notice board

Listening to the views of others

The following methods are used for gaining the views of other interested parties:

- Annual student satisfaction questionnaire
- Questionnaires to former students
- Industrial clients and associated staff

Further Information

Alternative locations for studying this programme

Location Which elements?	Taught by UEL staff	Taught by local staff	Method of Delivery
-	-	-	-

Where you can find further information

Further information about this programme is available from:

- The UEL web site
- The student handbook
- The programme website <http://uelgames.or>
- UEL Manual of Regulations and Policies <http://www.uel.ac.uk/qa/>
- UEL Quality Manual <http://www.uel.ac.uk/qa/>
- Regulations for the Academic Framework <http://www.uel.ac.uk/academicframework/>
- School Web site
- Visit our gallery of student work
here: <http://www.uel.ac.uk/adi/showcase/studentwork/>