

A 3D architectural rendering of a university building. The central focus is a large dome structure, which is shown with a green wireframe overlay, suggesting a digital or computer-generated model. The building is constructed from light-colored stone or concrete blocks, with multiple windows and classical architectural details. The scene is set in a courtyard or plaza area, with other parts of the building visible in the background. The overall aesthetic is clean and modern, with a focus on geometric forms and digital representation.

BSc(Hons) Computer Graphics Technology

Faculty of Science

a world of
possibilities



Kingston University London



BSc(Hons) Computer Graphics Technology

Our programme

Over recent years there has been an enormous growth in the use of computer graphics technology in many industries. This is most visible in film and television. Across the entire spectrum of genres, from high-budget Hollywood movies to low-budget TV productions, some form of computer graphics or digital image manipulation is used.

The rapid uptake in broadband communications has created opportunities for developing evermore sophisticated 2D and 3D animated media for the World Wide Web.

The power of computer hardware is increasing, together with the increasing sophistication of software and a reduction in costs. This is making computer graphics tools available to a larger user-base and so has increased the demand for suitably qualified personnel.

Work in these industries requires both technical and artistic skills. This course aims to produce graduates with a balance of technical, artistic, practical and theoretical skills to work in television and film, multimedia, internet and computer games production.

Course features

This course places a high importance on the development of practical skills that will be of use to graduates when they enter industry. In both the taught and project modules, you will be using professional software in our dedicated media studio.

You will be taught the skills of computer graphics and will also be taught how to produce live-action film work. It is only by developing an understanding of real film, including lighting, composition, framing of shots and movement of cameras, that you can truly use computer graphics software to simulate the real world.

You will be taught the principles behind computer graphics, and that includes the science, mathematics and technology. This knowledge will enable you to become a problem solver with the potential to work at the highest level in computer graphics and visual effects.

This is an interdisciplinary course, with teaching coming from the three separate faculties of Science; Computing Information Systems and Mathematics, and Art, Design & Architecture.

Careers

The course has been developed as a response to the demand for graduates with a broad range of both technical and creative skills, who have the ability to use industry standard tools. Graduates from this course will acquire skills appropriate for working within the visual effects, computer animation, computer games or multimedia industries as technical directors, modellers, lighters, riggers, technical animators, effects animators, shader writers, environment artists, texture artists, composers or graphics programmers. These skills can also be applied to the fields of scientific visualisation, forensic reconstruction and animation, and mobile telephone gaming. Graduates will acquire transferable computing skills that can be applied to a wide range of industries.

Teaching and assessment

You will be taught through lectures, workshops and practical sessions. Some of the modules will include seminars, and project modules will include critique sessions.

Your work will be assessed by a mixture of assignments, tests and examinations. For the majority of the modules, assessment is weighted more towards coursework assignments than examinations. A small number of modules have an examination to assignment weighting of 50:50. Project modules will be assessed entirely by assignment; the film studies module will be assessed by essay.

During the course you will be encouraged to develop a portfolio of computer graphic work, which will demonstrate your skills.

Why study Computer Graphics Technology at Kingston University?

- We offer a good balance of practical skills mixed with technical programming skills.
- We are close to the centre of the British film, television and post-production industries.
- We take our lead from industry professionals through our active industrial liaison committee, and are constantly striving to keep our course content current and provide our graduates with the skills that industry requires.
- You will use industry-standard software.
- We offer dedicated computer studio space and widespread general computer access.

What you study

Year 1

The first year of the course aims to ensure that all students receive a strong foundation in science, mathematics, design and information technology principles. This year provides skills necessary to enable students to work independently on project and assignment work later in the course.

Concepts of still and moving image manipulation are introduced together with computer programming concepts, practical and theoretical art and design concepts, and the basics of the science that governs the motion and illumination of objects.

Modules

- Visual Thinking
- Visual Structures
- Numerical and Mathematical Techniques
- Introductory Physical Science
- Fundamentals of Computer Imagery
- Introductory Film Production
- Programming Essentials
- Options from:
 - Instrumentation Principles for Media Technology
 - Practical Programming

Year 2

The second year develops your technical expertise and creative design skills. The themes introduced in Year 1 are developed further, with new themes such as 3D computer graphics and animation, multimedia and motion graphics being introduced. You will also be involved in contextual studies, to develop critical analysis and writing skills.

You will be introduced to the fundamental building blocks of 3D computer graphics technology, becoming familiar with such terminology as polygons, NURBS, shaders and rendering. At this stage you will be given the opportunity to work on individual self-directed small projects, preparing you for your major project.

Modules

- Computer Generated Imagery
- Computer Animation
- Introduction to Multimedia Design
- Graphics Software Embedded Language Programming
- Project Design and Investigation Skills
- Film and Television Studies
- Digital Moving Images OR
- Advanced Programming Concepts

Year 3

In the third year, you will learn advanced computer graphics techniques such as character rigging, dynamics, particle systems and 2D digital compositing. Additionally there are options for specialising in areas such as computer programming, multimedia and digital imaging.

The skills acquired over all stages of the course can be applied to the major project, which extends over two semesters and culminates with the production of a computer graphics product. The project provides the main mechanism for you to develop self-management, progress monitoring, presentation and reporting skills.

Modules

- Advanced Computer Generated Imagery
- Technical Direction in Computer Graphics
- Digital Media Editing and Compositing
- Media Dissertation
- Major Project
- Two options from:
 - Computer Graphics and Image Processing
 - Applications of Digital Imaging
 - Computer Graphics
 - Advanced Multimedia Design
 - Advanced Games Programming
 - Scientific C++



Want to know more?
[www.kingston.ac.uk/
computergraphicstechnology](http://www.kingston.ac.uk/computergraphicstechnology)

Further information

Entry requirements

Typical offer

Points: 200–260, to include two A levels or equivalent with one award in Mathematics, IT, Physics, Art or Design.

GCSE: Five GCSEs, with grade C or above in English, Science and Mathematics (B or above preferred for Mathematics). Preferably candidates should have a GCSE in an art-related subject or be able to demonstrate an interest in visual arts.

Contact details

Course and admissions enquiries

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Course Director

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Accommodation

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Student Funding Service

T: +44 (0)20 8417 3560
www.kingston.ac.uk/studentfunding

Disability and Dyslexia Support Services

T: +44 (0)20 8417 4284/4252
Minicom: +44 (0)20 8417 4447
F: +44 (0)20 8417 4443
www.kingston.ac.uk/disability-and-dyslexia

International Office

T: +44 (0)20 8417 3411
www.kingston.ac.uk/international

Open days

Several open days are held each year. Please contact the admissions office or visit the University website for more details.
www.kingston.ac.uk/opendays

UCAS codes

Computer graphics technology

G452 – 3 years full-time
G451 – 4 years sandwich
G453 – 4/5 years full-time including foundation year

T: +44 (0)8448 552177
E: admissions-info@kingston.ac.uk
www.kingston.ac.uk



Want to know more?
[www.kingston.ac.uk/
computergraphics
technology](http://www.kingston.ac.uk/computergraphics/technology)

