COMPUTER GRAPHICS, VISION AND IMAGING MSc / 2019/20 ENTRY

www.ucl.ac.uk/graduate/
The fields of graphics, vision and imaging increasingly rely on one another. This unique and timely MSc provides training in computer graphics, geometry processing, virtual reality, machine vision and imaging technology from world-leading experts, enabling students to specialise in any of these areas and gain a grounding in the others.

**Degree summary**

Graduates will understand the basic mathematical principles underlying the development and application of new techniques in computer graphics and computer vision and will be aware of the range of algorithms and approaches available, and be able to design, develop and evaluate algorithms and methods for new problems, emerging technologies and applications.

- UCL Computer Science contains some of the world's leading researchers in computer graphics, geometry processing, computer vision and virtual environments.
- Research activities include geometric acquisition and 3D fabrication, real-time photo-realistic rendering, mixed and augmented reality, face recognition, content-based image-database search, video-texture modelling, depth perception in stereo vision, colour imaging for industrial inspection, mapping brain function and connectivity and tracking for SLAM (simultaneous localisation and mapping).

The programme is delivered through a combination of lectures and tutorials. Lectures are often supported by laboratory work with help from demonstrators. Student performance is assessed by unseen written examinations, coursework and a substantial individual project.

**Degree structure**

Mode: Full-time: 1 year
Location: London, Bloomsbury
This programme is offered full-time only
Students undertake modules to the value of 180 credits. The programme consists of four core modules (60 credits), four optional modules (60 credits) and a research project (60 credits).
Please note that the list of modules given here is indicative. This information is published a long time in advance of enrolment and module content and availability is subject to change.

**COMPULSORY MODULES**
- Computer Graphics (15 credits)
- Image Processing (15 credits)
- Mathematical Methods, Algorithmics and Implementations (15 credits)
- Research Methods and Reading (15 credits)

**OPTIONAL MODULES**
- Students must choose a minimum of 15 and a maximum of 30 credits from Group One options. Students must choose a minimum of 30 and a maximum of 45 credits from Group Two options.

**Group One Options (15 to 30 credits)**
- Machine Vision (15 credits)
- Virtual Environments (15 credits)

**Group Two Options (30 to 45 credits)**
- Acquisition and Processing of 3D Geometry (15 credits)
- Computational Modelling for Biomedical Imaging (15 credits)
- Computational Photography and Capture (15 credits)
- Information Processing in Medical Imaging (15 credits)
- Introduction to Deep Learning (15 credits)
- Introduction to Machine Learning (15 credits)
- Inverse Problems in Imaging (15 credits)
- Robotic Sensing, Manipulation and Interaction (15 credits)
- Robotic Vision and Navigation (15 credits)

Please note: the availability and delivery of optional modules may vary, depending on your selection.

**DISSERTATION/REPORT**
- All students undertake an independent research project related to a problem of industrial interest or on a topic near the leading edge of research, which culminates in a 60-80 page dissertation.
Your career

Graduates are ready for employment in a wide range of high-technology companies and will be able to contribute to maintaining and enhancing the UK’s position in these important and expanding areas. The MSc provides graduates with the up-to-date technical skills required to support a wealth of research and development opportunities in broad areas of computer science and engineering, such as multimedia applications, medicine, architecture, film animation and computer games. Our market research shows that the leading companies in these areas demand the deep technical knowledge that this programme provides. Graduates have found positions at global companies such as Disney, Sony and Siemens. Others have gone on to PhD programmes at leading universities worldwide.

Employability

UCL received the highest percentage (96%) for quality of research in Computer Science and Informatics in the UK’s most recent Research Excellence Framework (REF2014).

Our graduates have some of the highest employment rates of any university in the UK. This degree programme also provides a foundation for further PhD study or industrial research.
Entry requirements

A minimum of an upper second-class UK Bachelor's degree in a relevant discipline, or an overseas qualification of an equivalent standard in computer science, mathematics, electrical engineering or the physical sciences is usually required. Candidates are expected to have suitable mathematics and computer programming skills. Relevant work experience may also be taken into account.

English language proficiency level

If your education has not been conducted in the English language, you will be expected to demonstrate evidence of an adequate level of English proficiency.

The level of English language proficiency for this programme is: Good.

Information about the evidence required, acceptable qualifications and test providers is provided at: www.ucl.ac.uk/graduate/english-requirements

Your application

Students are advised to apply as early as possible due to competition for places. Those applying for scholarship funding (particularly overseas applicants) should take note of application deadlines.

When we assess your application we would like to learn:

- why you want to study Computer Graphics, Vision and Imaging at graduate level
- why you want to study Computer Graphics, Vision and Imaging at UCL
- what particularly attracts you to this programme
- how your academic and professional background meets the demands of this programme
- what programming experience you have
- where you would like to go professionally with your degree

Together with essential academic requirements, the personal statement is your opportunity to illustrate whether your reasons for applying to this programme match what the programme will deliver.

There is an application processing fee for this programme of £75 for online applications and £100 for paper applications. Further information can be found at: www.ucl.ac.uk/prospective-students/graduate/taught/application.

FEES AND FUNDING 2019/20 ENTRY

- UK: £12,750 (FT)
- EU: £12,750 (FT)
- Overseas: £27,040 (FT)

The tuition fees shown are for the year indicated above. Fees for subsequent years may increase or otherwise vary. Further information on fee status, fee increases and the fee schedule can be viewed on the UCL Students website.

All full time students are required to pay a fee deposit of £2,000 for this programme. All part-time students are required to pay a fee deposit of £1,000.

Four MSc Scholarships, worth £4000 each, are made available by the Department of Computer Science to UK/EU offer-holders with a record of excellent academic achievement. The closing date is 30 June 2019. For more information, please see the department pages.

Full details of funding opportunities can be found on the UCL Scholarships website: www.ucl.ac.uk/scholarships

APPLICATION DEADLINE

All applicants: 14 June 2019

Details on how to apply are available on the website at: www.ucl.ac.uk/graduate/apply

CONTACT

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EU referendum

For up-to-date information relating to specific key questions following the UK’s decision to leave the EU, please refer to www.ucl.ac.uk/brexit