SOFTWARE SYSTEMS ENGINEERING MSc
2019/20 ENTRY

www.ucl.ac.uk/graduate/
Our Software Systems Engineering (SSE) MSc provides an ideal foundation for PhD study. The programme is underpinned by a Software Engineering Research group that is regularly ranked among the top ten of its kind in the world (CSRankings.org); its work is used by leading global companies including Google, Facebook and Amazon. You will be taught by those who are setting the international agenda, and our research has been repeatedly rated as world-class.

**Degree summary**

Students are trained in the principles and techniques of engineering large, complex software systems and gain the opportunity to apply these techniques in a realistic group project setting. The programme analyses current practice in software systems engineering, looking at the most significant trends, problems and results in complex software systems.

* UCL Computer Science is recognised as a world-leader in teaching and research. 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 Master’s programmes have some of the highest employment rates and starting salaries, with graduates entering a wide variety of industries from entertainment to finance.
* We take an experimental approach to our subject and place a high value on our extensive range of industrial collaborations. In the recent past, students have worked on projects and coursework in collaboration with Microsoft, IBM, JP Morgan, Citigroup and BNP Paribas.

The programme is delivered through a combination of lectures, written and laboratory exercises, and group project supervision. Student performance is assessed through written exercises with modelling notations, laboratory exercises with tools and environments, unseen examination papers, and a significant, comprehensive group project.

**Degree structure**

Mode: Full-time: 1 year

Location: London, Bloomsbury

Students undertake modules to the value of 180 credits. The programme consists of six core modules (90 credits), and either a group project (60 credits) or research project (60 credits). Students will be able to select two modules (30 credits) from electives.

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**

- Professional Practice (15 credits)
- Requirements Engineering and Software Architecture (15 credits)
- Research Methods in Software Engineering (15 credits)
- Software Abstractions and Systems Integration (15 credits)
- Tools and Environments (15 credits)
- Validation and Verification (15 credits)

**OPTIONAL MODULES**

Students must select either the Group Project in Software Systems Engineering (60 credits) or Research Project in Software Engineering (60 credits) in addition to two elective modules (30 credits).

- Optional modules
- Group Project in Software Systems Engineering (60 credits)
- Research Project in Software Engineering (60 credits)
- Electives
- Elective modules
- Complex Networks and Web (15 credits)
- Computer Security I (15 credits)
- Distributed Systems and Security (15 credits)
- Information Retrieval and Data Mining (15 credits)
- Language Based Security (15 credits)
- Malware (15 credits)
- Multi-agent Artificial Intelligence (15 credits)
- Networked Systems (15 credits)
- People and Security (15 credits)

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

**DISSERTATION/REPORT**

Most students participate in a group industrial project, generally in close collaboration with one of our industrial partners.

Other students undertake either an individual or small-group research project, under the supervision of academics in UCL’s Software Systems Engineering group.
Your career
This professionally oriented programme provides an ideal foundation for graduates who wish to pursue a career as a software architect or leader of software development organisations. It also provides an excellent introduction for those who want to pursue research in software systems engineering.

Graduates from UCL are keenly sought after by the world’s leading organisations, and many progress in their careers to secure senior and influential positions. UCL Computer Science (UCL-CS) graduates are particularly valued as a result of the department’s strong international reputation, strong links with industry, and ideal location close to the City of London.

Graduates have found positions at global companies such as Barclays and RBS.

Employability
There is, throughout the world, a strong demand for software engineers with solid foundations covering not only the programming aspects of software development, but also aspects related to requirements engineering, software architectures, system integration, and testing.

Following graduation, our students are generally hired as software engineers or software architects, sometimes by companies they have engaged with in the context of their MSc project.
Entry requirements

A minimum of an upper second-class UK Bachelor’s degree in computer science, computing, computer engineering or software engineering, or an overseas qualification of an equivalent standard. 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 Software Systems Engineering at graduate level
// why you want to study Software Systems Engineering 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.

The department typically does not hire postgraduate students on research or teaching assistantships because the students need to work full-time on their studies for the programme.

Four MSc Scholarships, worth £4000 each, are made available by UCL 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