



# Computational and Software Techniques in Engineering

## MSc

Engineering software development is one of the key areas in the information technology sector. It is a fast moving subject of crucial importance to industry and forms the basis for a wide and ever growing variety of applications.

This course with its blend of skills-based and subject specific material, has the fundamental objective of equipping you with the generic hands-on skills and up-to-date knowledge adaptable to the wide variety of applications that this field addresses. Choose from four specialist options: Computational Engineering Design, Computational Intelligence for Data Analytics\*, Computer and Machine Vision, and Software Engineering for Technical Computing.

### Course structure

You will complete compulsory modules that are standard across all of the MSc options followed by specialist modules from your selected option. In addition to the taught component, you will complete a group project and an individual research project.

### Individual project

The individual research project allows you to delve deeper into an area of specific interest. It is very common for industrial partners to put forward real world problems or areas of development as potential research thesis topics. For part-time students it is common that their research thesis is undertaken in collaboration with their place of work.

### Group project

This aims to provide you with invaluable experience of delivering a project within an industry structured team. The project allows you to develop a range of skills including learning how to establish team member roles and responsibilities, project management, delivering technical presentations and working with members who have a variety of backgrounds and experience.

### Future career

There is a strong industry demand for talented individuals with expertise in engineering software development and technical programming skills in industry standard languages and tools. In this environment, where demand for the high calibre skills provided by this programme is outstripping supply, our graduates are in demand, internationally and across multiple industries and sectors. We receive many enquiries from engineering IT businesses during the programme, seeking to recruit our students on completion.

### Example modules

You will study compulsory modules followed by specialist modules from your selected MSc option.

#### Compulsory:

- C++ Programming,
- Management for Technology.

#### Duration:

MSc: Full-time - one year, part-time - up to three years.

#### Start date:

September.

#### Location:

Cranfield Campus.

#### Entry requirements:

A first or second class UK Honours degree (or equivalent), in applied mathematics, aeronautical, mechanical or electrical engineering or computer science or be applying as part of a recognised double-degree programme with their home EU institution. Applications from candidates with lesser qualifications but with considerable relevant work experience will be considered.

Applicants who do not fulfil the standard entry requirements can apply for the Pre-master's course successful completion of which will qualify them for entry to this course for a second year of study.

#### ATAS Certificate:

Students requiring a visa to study in the UK may need to apply for an ATAS certificate to study this course.

### Contact details

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For further information please visit

[www.cranfield.ac.uk/CompSWTechEng](http://www.cranfield.ac.uk/CompSWTechEng)

\* subject to University approval.