



Computational and Software Techniques in Engineering – Option in Computer and Machine Vision

MSc

This specialist option of the MSc Computational and Software Techniques in Engineering has been developed to deliver qualified engineers to the highest standard into the emerging field of digital signal and image processing who are capable of contributing significantly to this increased demand for both real-time and off-line systems operating over a range of mobile, embedded and workstation platforms.

Course structure

The course consists of core modules, including a group design project, plus an individual research project.

Individual project

The individual research allows you to develop specialist skills by taking the theory from the taught modules and combining it with practical application. The research project gives you the opportunity to produce a detailed piece of work either in close collaboration with industry, or on a particular topic which you are passionate about.

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

Modules are delivered via a combination of lectures, tutorial sessions and computer-based workshops.

Compulsory:

- Computational Methods,
- Computer Vision,
- C++ Programming,
- Digital Signal Processing,
- Image Processing and Analysis,
- Machine Learning (for Computer Vision),
- Management for Technology,
- Signal Analysis,
- Visualisation.

Duration:

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

Start date:

September.

Location:

Cranfield Campus.

Entry requirements:

Applicants are required to either have a minimum of a UK second class Honours degree or its 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.

Entry level C Programming experience is highly advisable but not essential.

Applicants who do not fulfil the standard entry requirements can apply for the Pre-Master's in Engineering programme. 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/CompAndMachineVision