The Department of Automatic Control & Systems Engineering

The Department was established in 1968 in response to the growing importance of Automatic Control and Systems Engineering to all branches of industry world-wide. We have since grown to become the largest Control and Systems Engineering Department in Europe. Our growth has been due to both the increasing demand for education in the area and the effects of rapid changes in engineering, computing and technology.

“Advanced Control and Systems Engineering is a very interesting course as it touches a lot of important fields like Artificial intelligence, Robotics, Process Engineering and Computer Science. The course has a nice blend of theoretical, practical and lab based work - taught by experts in their respective fields.”

- Vishanth Vijayakumar, ACSE Alumni - MSc in Advanced Control and Systems Engineering

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Don’t just be the job, Engineer the job.

MSc in Advanced Control & Systems Engineering

www.sheffield.ac.uk/acse
Course Structure

Control and systems lie at the heart of engineering. Whether you are developing the flight control system for the latest aircraft, controlling a chemical plant or developing automation for the latest manufacturing system, our flagship MSc in Advanced Control and Systems Engineering is the ideal start to a very exciting career in engineering.

This course is suitable for graduates from a variety of scientific and engineering disciplines. It's structured to support students as they gain a solid grounding in systems and control engineering, whilst teaching them about the latest developments and future expansion in this field.

There is a strong focus on the generality of these concepts ensuring that you will be equally prepared for careers in a variety of disciplines that rely on control and systems engineering. An emphasis will also be placed on the development of your practical and transferable skills, through the practice of laboratory work, working with advanced control and systems software packages and project work.

Each student on the course will work with their own 'take-home kit'. This is a portable piece of equipment that enables you to work with meaningful hardware in a time and place of your choosing, thus removing many of the limitations of traditional lab based teaching.

A third of your assessment will be a major project, which will be comprised of a mix of theoretical, practical, and industry-related work. The project is an ideal opportunity for you to focus on an area of particular interest to you.

All students will take the following core modules:

- Foundations of Control Systems
- State-Space, Non-Linear and Optimal Control
- Signal Processing and Estimation
- Embedded Systems and Rapid Control Prototyping
- Control Systems Project and Dissertation
- Advanced Industrial Control

Students can select two of the following optional modules:

- Intelligent and Vision Systems or Nonlinear and Hybrid Systems
- Robotics and Autonomous Systems or Multisensor and Decision Systems

Careers and Further Study

Our flagship MSc has been running for over 40 years. During this time our graduates have achieved stellar positions, world-wide, in both industry and academia.

ACSE graduates are well placed to pursue a career in a variety of engineering fields, such as manufacturing, power generation, sustainable energy and science and commerce. You could go on to work for a large international organisation or company such as: British Airways, IBM, Rolls-Royce and Unilever.