



Advanced Chemical Engineering MSc

www.cranfield.ac.uk/ace



Learn from net-zero chemical engineering experts who are decarbonising industry one reaction at a time

Do you see yourself as a future chemical engineer making a positive impact to climate change? Join our Advanced Chemical Engineering MSc and work alongside world-leading chemical engineering experts who are actively engaged in researching and developing the innovative materials and processes essential for net-zero energy transition.

Whilst studying with us, you will experience our applied approach to learning. Using our world-class campus pilot plant facilities and benefiting from Cranfield's strong industry links, you will gain the essential skills and experience to develop a successful career in a thriving discipline with its high demand for postgraduate-level engineers. You will also benefit from professional development, career mentoring and teamwork to transform you into an engineering leader who will solve global challenges.

Who is it for?

A distinguishing feature of this course is that it is not exclusively designed for chemical engineering graduates. Suitable for all engineering and applied science graduates, this MSc will provide you with the skill sets that employers actively seek in highly-desirable engineering graduates, enabling you to embark on a successful career as a chemical engineering professional in industry, government or research.

Your career

The Advanced Chemical Engineering MSc has been developed based on Cranfield's industry-driven research, which makes our graduates some of the most desirable in the world by companies competing in a range of industries, including conventional and clean energy, materials, environments, biorefining, biochemicals, petrochemicals, waste management and consultancy and management.

Overview

Start date

Full-time: October. Part-time: October

Duration

One year full-time, two-three years part-time

Qualification

MSc, PgDip, PgCert

Study type

Full-time / Part-time

Structure

Taught modules 80 credits/800 hours, Group projects 40 credits/400 hours, Individual project 60 credits/600 hours

Campus

Cranfield campus

Entry requirements

We welcome applications from talented individuals of all backgrounds and each application is considered on its individual merit. Usually applicants must hold:

A UK lower second-class (2:2) undergraduate degree with honours, as a minimum, or equivalent international qualification.

Ideally, applicants will have studied in a related engineering or applied science discipline.

Find information about equivalent qualifications in your country on our International entry requirements page.

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 clearance

This course requires Academic Technology Approval Scheme (ATAS) clearance.

ATAS is run by the UK Government's Foreign, Commonwealth and Development Office (FCDO) and applies to international students, except exempt nationalities, who need a visa to study in the UK. Further information can be found in our Application guide.

Fees

Please see www.cranfield.ac.uk/fees for detailed information about fee status, full-time and part-time fees as well as deposit requirements and bursary and scholarship information.

Course details

The taught programme is delivered from October to February and is comprised of eight modules.

The modules are taught mainly over two weeks, with the assignment completed during that period. The first week is mainly allocated to structured teaching, with the following week largely free of structured teaching to allow time for more independent learning, reflection, and completion of assignments.

Modules

Keeping our courses up-to-date and current requires constant innovation and change. The modules we offer reflect the needs of business and industry and the research interests of our staff. As a result, they may change or be withdrawn due to research developments, legislation changes or for a variety of other reasons. Changes may also be designed to improve the student learning experience or to respond to feedback from students, external examiners, accreditation bodies and industrial advisory panels.

To give you a taster, we have listed below the compulsory and elective (where applicable) modules which are currently affiliated with this course. All modules are indicative only, and may be subject to change for your year of entry

Compulsory modules

All the modules in the following list need to be taken as part of this course.

Advanced Reaction Kinetics for Energy

Research Methods

Separation and Purification Design

Biofuels and Biorefining

Energy from Waste Operations

Engineering Design and Project Management

Elective modules

Select one from the list below

Thermal Systems Operation and Design

Process Instrumentation and Control Engineering

"During a module we learned about the combustion process of coal and other biomass feedstocks, and were able to carry out a pilot-scale test in the laboratory. Then we visited the biomass power plant at Cranfield to see the system that provides heating for our campus, to really see theory in practice."

Siqi Wang

Research Fellow in Chemical Engineering, Cranfield University, Advanced Chemical Engineering MSc, 2019

Accreditation

The MSc of this course is accredited by The Energy Institute.



Class profile 2023/24

Gender:

Male: 60% Female: 30% Not available: 10%

Age range:

20 - 44 years

Nationality:

International: 100%

Class size:

10

For more information contact our Admissions Team:
T: +44 (0)1234 758082

Visit campus for yourself and meet current students and our academics at our next Open Day:
www.cranfield.ac.uk/oparday

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Every effort is made to ensure that the information provided here is correct at the time it is published. Please check our website for the latest information.