



Automotive Engineering

MSc

Established for over 50 years with excellent industrial links and an outstanding record for the employment of its graduates, this course has been developed to provide the industry with high calibre engineers that are equipped with the necessary skills to advance vehicle technology to meet the demands of the future.

The MSc in Automotive Engineering is suitable for graduates in engineering, physics or mathematics, and will prepare you for a career in this exciting field, from engine design to hybrid and electric vehicles, chassis and braking operations, and much more. This course aims to provide graduates with the technical qualities, transferable skills and independent learning ability to make them effective in organisations that design and develop automotive products.

Our strategic links with industry ensure that all of the course material is relevant, timely and meets the needs of organisations competing within the automotive sector. This industry-led education makes Cranfield graduates some of the most desirable in the world for automotive companies to recruit. We offer students the opportunity to study in a postgraduate only environment where Masters' graduates can go onto secure positions in full-time employment in their chosen field, or undertake academic research.

Course structure

This course is composed of compulsory taught modules, a group project and an individual research project.

Individual project

The individual research project is the largest single component of the course taking place between April and August. It allows you to develop specialist skills in an area of your choice by taking the theory from the taught modules and joining it with practical application, usually involving a design feasibility assessment, systems analysis or facility development.

Group project

You will undertake a substantial group project between October and March, which focuses on designing and optimising a particular vehicle system/assembly. This is designed to prepare you for the project-based working environment within the majority of the automotive industry.

Future career

This course provides you with the necessary skills for a career in the automotive industry. Our automotive graduates have an excellent employment record and currently occupy positions of high responsibility in industry, such as managers of research establishments, chief engineers, and engine or vehicle programme managers. Companies that have recently recruited our graduates include Jaguar Land Rover, Nissan Technical Centre Europe, Bentley Motors, Rational Motion GmbH, Renault Sport F1 and Caterpillar Inc. Graduate roles include Control Systems Engineer, R&D Engineer, and Calibration Engineer.

Example modules

Modules form only part of the course, with the project(s) and theses making up the balance. Please see the course structure for details.

The list below shows the modules offered in the 2019-20 academic year, to give you an idea of course content. To keep our courses relevant and up-to-date, modules are subject to change – please see the webpage for the latest information.

Compulsory:

- Automotive Control and Simulation,
- Automotive Engineering Introduction,
- Engine Design and Performance,
- Vehicle Design Powertrain and Performance,
- Vehicle Dynamics,
- Vehicle Electrification and Hybridisation,
- Vehicle Structures and Manufacturing.

Duration:

MSc: Full-time - one year.

Start date:

October.

Location:

Cranfield Campus.

Entry requirements:

A first or second class UK Honours degree in a relevant subject or an equivalent international qualification or relevant work experience.

Please visit www.cranfield.ac.uk/entryrequirements for more information. Alternatively, you may be eligible for our Pre-Master's Engineering programme.

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/automotiveengineering