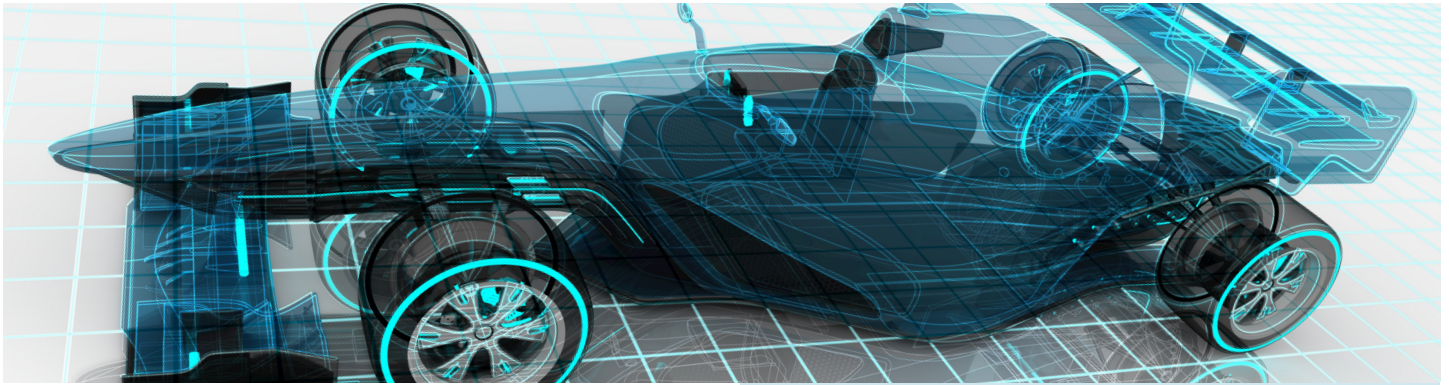




Advanced Motorsport Mechatronics MSc

www.cranfield.ac.uk/motorsportmech



Mechatronics in motorsports plays an increasingly important role in achieving competitive advantage within this sport. By enhancing the integration of a vehicle's mechanical and electronic systems, you will be able to create intelligent systems capable of adapting to the rapidly-changing conditions within the racing environment.

The Advanced Motorsports Mechatronics MSc aims to provide students with a sound understanding of the fundamental scientific, engineering and managerial principles involved in motorsport. The focus is on the “mechatronics” aspect of the discipline, involving the engineering of advanced control systems, multi-domain computer modelling, in-vehicle communication networks, electromechanical and embedded systems, hardware-in-the-loop validation and systems integration.

Who is it for?

This course aims to provide students with a sound understanding of the fundamental scientific, engineering and managerial principles involved in motorsport. A combination of mechanics, electronics and computer systems, this postgraduate programme prepares graduates for a career in motorsport or high-performance engineering.

For those students wishing to apply with a pure science or pure mathematics background or those with limited motorsport experience, we strongly recommend our Introduction to Motorsport Engineering short course as a primer for the MSc programme.

Your career

Motorsport is a highly-competitive sector. Studying at Cranfield will immerse you in a highly-focused motorsport engineering learning experience, providing you with access to motorsport companies and practitioners. Our selectivity at course entry combined with world-class teaching, facilities and industry networking, means that the great majority of our graduates go into motorsports roles upon course completion. In some instances, job offers are made even in the final months of the course.

Past graduates have taken roles such as:

- Braking Calibration Engineer,
- Race Engineer,
- Motor Control Specialist,
- Electrical and Controls Engineer,
- CFD Engineer,
- Systems Engineer,
- Vehicle Dynamics Engineer.

Overview

Start date
September

Duration
One year full-time

Qualification
MSc

Study type
Full-time

Structure
Taught modules 40%, Group project 20%, Individual project 40%

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 engineering, including electronics, a relevant STEM discipline such as engineering, aerodynamics, physics or applied mathematics subjects. Additionally, applicants must have UK A-Level's in mathematics and physics, or their international equivalent.

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

Interviews

Selected applicants may be expected to attend a formal interview. If you are based in the UK, this will likely be at Cranfield. If you are based outside of the UK, interviews will be held by video call or over the phone.

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 MSc course consists of nine one-week taught modules, a motorsport mechatronics group design project and an individual research project.

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.

Motorsport Introduction

Motorsport Powertrains

Motorsport Electronics and Data Acquisition

Motorsport Vehicle Dynamics

The Business of Motorsport

Mechatronics Modelling for Vehicle Systems

Advanced Control and Optimisation

Embedded Vehicle Control Systems

Vehicle Control Applications

"I had always heard good things about the courses on offer at Cranfield, especially the motorsport programmes, so I had high expectations. The course and the staff have exceeded all of these, and with Cranfield's strong links to industry I feel like I am a part of the industry itself, not just a student."

Tom Webster

current student, Advanced Motorsport Mechatronics MSc

Accreditation

The Advanced Motorsport Mechatronics MSc is accredited by The Institution of Mechanical Engineers (IMechE) and Institution of Engineering and Technology (IET) on behalf of the Engineering Council as meeting the requirements for further learning for registration as a Chartered Engineer (CEng).



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/openday

February 2025

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.