



Advanced Motorsport Engineering

MSc

Motorsport is an exacting world that requires total commitment from its engineers. Without their skills and expertise competitors don't even get to race. This course will hone your skills and expertise in relation to motorsport and high performance engineering through a rigorous combination of teaching and motorsport related project work. It aims to provide you with a sound understanding of the fundamental scientific, engineering and managerial principles involved in motorsport, and their implementation within a high performance technology context. You will cover design, construction and operation of competition vehicles, and related aspects of materials science, aerodynamics, structural analysis, vehicle systems, and management techniques related to motorsport. You will be taught the skills required for the planning, execution and reporting of motorsport projects and to prepare you for a variety of roles in motorsport. Our influential network of alumni is testament to the quality of the course. The University has undertaken research and testing for the motorsport sector since the 1970s. We are home to the FIA approved Cranfield Impact Centre and Cranfield Motorsport Simulation, which work closely with F1 and leading motorsport companies.

Course structure

The Advanced Motorsport Engineering programme is made up of three components: a formal taught component (40%), Group Project (20%) and Individual Thesis Project (40%).

Individual project

The four-month individual research project can be carried out within industry or academia. This part of the course allows you to apply the research skills acquired during the taught phase to a practical problem relating to advanced motorsport engineering.

Group project

The group design project provides teams of students with experience of working on a project associated with a motorsport organisation. Students submit a detailed report and at the end of the project, they present their work to an invited audience. The experience is highly valued by both students and prospective employers.

Future 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. Securing employment is ultimately down to the student who completes the job applications and attends the interviews. Successful students go on to be part of a network of engineers. You will find Cranfield alumni working across motorsport and the high performance engineering sector.

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:

- Composite Structures for Motorsport,
- Computational Fluid Dynamics (CFD) for Motorsport,
- Introduction to Motorsport,
- Motorsport Aerodynamics,
- Motorsport Electronics and Data Acquisition,
- Motorsport Powertrain Design,
- Motorsport Structural Analysis,
- Motorsport Vehicle Dynamics,
- The Business of Motorsport.

Duration:

MSc: Full-time - one year.

Start date:

September.

Location:

Cranfield Campus.

Entry requirements:

Minimum requirements: UK first or second class Honours degree in a relevant subject; an equivalent international qualification; relevant work experience with a degree below second class Honours.

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.

Please contact us if you do not meet our formal entry requirements. More information can be found at www.cranfield.ac.uk/entryrequirements.

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/motorsport