Aerospace Manufacturing

MSc/PgDip/PgCert

The specialist skills of aerospace production systems are vital to drive productivity improvements. You will gain the sought-after capability to manage major improvement programmes in the aerospace manufacturing industry or instigate intervention that delivers improvements to the performance of their businesses. This course develops future aerospace manufacturing engineers and managers who will be able to manage major improvement programmes or instigate intervention that delivers improvements to the performance of their aerospace manufacturing businesses. The course receives strong support from the global aerospace industry, both the Original Equipment Manufacturers (OEM) such as Airbus and Rolls-Royce, as well as their tiers of supplier. There is a strong emphasis on applying knowledge in the industrial environment and all teaching is in the context of industrial application. Many features of this course are shared with the Engineering and Management of Manufacturing Systems MSc, but this course specifically prepares graduates to embark on a career in aerospace manufacturing. Students benefit from our wide range of equipment, analysis tools and specialist software packages.

Course structure

The Aerospace Manufacturing course is made up of three components: a formal taught component (40%), Group Project (20%) and Individual Thesis Project (40%).

Individual project

The individual thesis project, usually in collaboration with industry, offers students the opportunity to develop their research capability, depth of understanding and ability to provide solutions to real problems in aerospace manufacturing production systems.

Group project

The group project experience is highly valued by both students and prospective employers. Teams of students work to solve an industrial problem. The project applies technical knowledge and provides training in teamwork and the opportunity to develop non-technical aspects of the taught programme. Part-time students can prepare a dissertation on an agreed topic in place of the group project.

Future career

This qualification takes you on to a wide range of aerospace manufacturing roles such as management, operations, logistics and technology-related functions within global aerospace manufacturing organisations. Many graduates find employment with one of their project sponsors.

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:
- Aircraft Assembly,
- Manufacturing Strategy,
- Manufacturing Systems Engineering,
- Operations Management,
- Supply Chain Managemen.

Elective (choose two):
- Additive and Subtractive Manufacturing Technologies,
- Advanced Welding Processes,
- Composites Manufacturing for High Performance Structures,
- Failure of Materials and Structures,
- Operations Analysis.

Duration:
MSc: Full-time - one year, Part-time - up to three years,
PgDip: Full-time - up to one year, Part-time - two years,
PgCert: Full-time - up to one year, Part-time - two years.

Start date:
Full-time: October. Part-time: throughout the year.

Location:
Cranfield Campus.

Entry requirements:
A first or second class UK Honours degree or equivalent in a relevant discipline. Other relevant qualifications, together with significant experience, may be considered.

Please visit www.cranfield.ac.uk/entryrequirements for more information. 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 you 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/AerospaceManufacturing