



Airworthiness

MSc/PgDip/PgCert

Airworthiness is at the forefront of aviation development. It is vital that staff have sufficient knowledge and skill to apply principles in design, manufacture, operation and maintenance of aircraft to both develop and maintain airworthiness.

The Airworthiness Master's course is highly flexible and designed to meet the needs of individuals who are balancing work commitments with study. It is especially relevant to engineers and technologists working in the airworthiness field of aviation safety, either in a regulatory authority or in the industry.

The format is especially suitable for those who wish to enhance and focus their knowledge in a structured but flexible part-time format while continuing to work. It offers a wide range of technical knowledge in the context of related regulatory and safety issues, a background that managers in today's aerospace industry need to possess. We appreciate that students will be balancing employment with study which is why we aim to minimise the number of visits required to Cranfield University and offer modules in one-week blocks. Students undertaking the full MSc programme would be expected to come to Cranfield ten times in the 2-3 year period.

Course structure

The course consists of a taught modules, an individual research project and course portfolio.

Individual project

The individual research project is completed by students who wish to complete the MSc qualification of the Airworthiness course. The project is normally undertaken in the final year and brings together the learning from the taught components to consolidate learning.

Future career

Many of our students are already in employment with aerospace/defence companies and choose to pursue an internationally recognised qualification with Cranfield to enhance their career. Destinations of our students vary as many remain with their sponsoring company, often being promoted upon completion of the course. Some companies have used the Airworthiness programme as pre-employment training securing permanent positions for the attendees or students who have been able to use the qualification to obtain employment abroad.

Contact details

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Example modules

Modules form only part of the course, with the project(s) and these 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:

- Airworthiness Fundamentals,
- Safety Assessment of Aircraft Systems,
- Air Transport Engineering - Maintenance Operations,
- Aircraft Fatigue and Damage Tolerance,
- Gas Turbine Fundamentals,
- Aviation Safety Management,
- Airframe Systems,
- Safety Assessment of Aircraft Systems.

Elective:

- Mechanical Integrity of Gas Turbines,
- Practical Reliability,
- Aircraft Accident Investigation and Response,
- Fundamentals of Aircraft Engine Control,
- Fundamentals of Aerodynamics,
- Manufacturing,
- Design, Durability and Integrity of Composite Aircraft Structures,
- Introduction to Avionics,
- Human Factors in Aviation Maintenance,
- Flight Experimental Methods (Airworthiness),
- Detail Stressing,
- Introduction to Aircraft Structural Crashworthiness.

Duration:

MSc: Part-time - up to three years,

PgDip: Part time - two years,

PgCert: Part-time - two years.

Start date:

September.

Location:

Cranfield Campus.

Entry requirements:

A first or second class UK Honours degree or equivalent in a relevant discipline. Other relevant qualifications, together with considerable experience, will be considered.

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.

For further information please visit

www.cranfield.ac.uk/airworthiness