



Military Aerospace and Airworthiness

MSc/PgDip/PgCert

This course has been designed to address the needs of employees in the MoD, the Armed Forces and the international defence industry. It provides practicing engineers with the knowledge and skills to enable them to work more effectively in aerospace engineering, airworthiness, and safety. The course draws students from the UK and Western Europe giving an eclectic mix to the classroom environment. Maximum number of places: 25 per year. The course structure allows students to continue in full-time employment whilst they are studying. Today's military aviation platforms are complex systems and it is essential, therefore, that they are deployed and maintained in such a way as to ensure their continued airworthiness and the safety of the crew operating them. To achieve this requires engineers to be cognisant of a broad range of aerospace engineering, airworthiness and safety disciplines. The MSc distinguishes itself from similar courses offered by leading UK Universities by offering one focused specifically on the Military context and offers unique subject areas unavailable elsewhere. You will be taught by staff, primarily from Cranfield Defence and Security and the School of Aerospace, Transport and Manufacturing, many of them world leaders in their field. Visiting lecturers also include experts from industry, research establishments, and the MoD.

Course structure

The course is delivered on a part-time basis and contains five compulsory modules. Students choose one further module to complete the PgCert or a further seven modules to complete the PgDip (MSc taught phase). MSc students will also complete a researchbased project.

Individual project

The individual research project will focus on a topical subject covered by the taught phase of the course. The subject can be chosen to match the research needs of the sponsor and/or the interests of the individual student. Students are encouraged to utilise their employment resources to place the project in context. Lecturing staff on both campuses will undertake supervision of the projects.

Future career

The course creates opportunities to develop your career at a more senior level and in achieving Incorporated or Chartered Engineer status.

Accreditation

The MSc of this course has been accredited by the Royal Aeronautical Society under licence from the UK regulator, the Engineering Council.

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:

- Airworthiness of Military Aircraft,
- Aviation of Safety Management,
- Fixed-wing Aeromechanics,
- Propulsion Systems,
- Safety Assessment of Aircraft Systems.

Elective:

- Air Transport Engineering – Maintenance Operations,
- Aircraft Accident Investigation and Response,
- Aircraft Fatigue and Damage Tolerance,
- Aircraft Survivability,
- Design Durability and Integrity of Composite Aircraft Structures,
- Fundamentals of Aircraft Engine Control,
- Guided Weapons,
- Human Factors in Aircraft Maintenance,
- Introduction to Aircraft Structural Crashworthiness,
- Introduction to Human Factors,
- Mechanical Integrity of Gas Turbines,
- Military Aircraft Systems,
- Military Avionics – Surveillance and Target Acquisition, Communications and Navigation,
- Practical Reliability,
- Rotary-wing Aeromechanics.

Duration:

PgCert: up to three years part-time,
PgDip: up to four years part-time,
MSc: up to five years part-time.

Start date:

September and January.

Location:

Shrivenham.

Entry requirements:

A first or second Honours degree in a relevant mathematics, science or engineering discipline; additionally an IELTS score of 7.0 is required by students for whom English is not a first language.

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

T: +44 (0)1793 785220

E: cdsadmissionsoffice@cranfield.ac.uk

For further information please visit

www.cranfield.ac.uk/maa