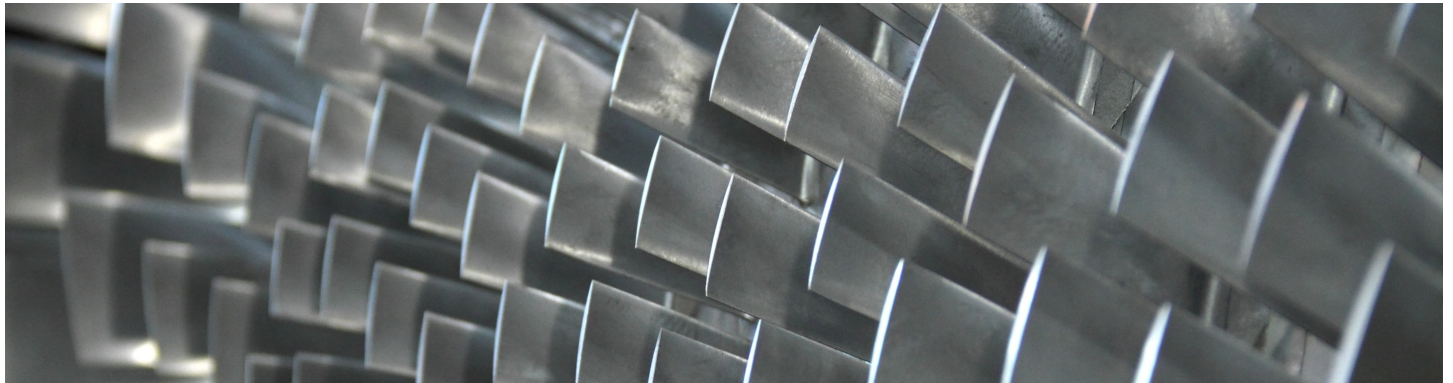




Aerospace Materials MSc

www.cranfield.ac.uk/aerospacematerials



The 2050 climate change agenda for sustainable aviation and 'race to space' requires specialist engineers supporting the drive towards a more sustainable aerospace industry. There is a need for talented employees with materials expertise, to support moving to sustainable aviation fuels, disruptive aircraft and spacecraft designs and transitioning from a carbon-based to a hydrogen-based economy and a broad range of technical skills.

The Aerospace Materials MSc develops specialist skills to enhance and design new materials for next-generation aircraft and spacecraft. You will play a major role in addressing environmental impact and sustainability within the sector and gain access to teaching and research geared towards decarbonising aviation. The course will develop knowledge-based skills to open innovation and entrepreneurship opportunities pivotal for long term career prospects and developing clean technology and societal benefit.

Who is it for?

We welcome students from a range of engineering and science backgrounds, including students who have previously graduated in materials sciences, aerospace engineering, mechanical engineering and more. Typically, students on the MSc are have a keen interest in aerospace. We also welcome professionals with industry experience, for example with aerospace engineering backgrounds or aircraft technicians.

Your career

This qualification takes you on to professional occupations in wide range of aerospace or aerospace-related companies, research and development, at forefront of innovative engineering and materials manufacturing technology. Some go into senior engineering positions in the aerospace industry whereas other pursue exciting careers in emerging fields or sustainability start-ups. Many graduates find employment with one of their project sponsors.

On completion of this MSc, graduates have a broader network of global contacts, increased opportunities for individual specialism and a wide range of career options involving materials with responsibilities in research, development, design, engineering, consultancy and management.

Our graduates find careers with global industries alongside innovative start-ups and SMEs which have included Airbus, Rolls-Royce, Safran, GKN Aerospace, Assystem UK, GE Aviation, Jaguar Land Rover and Mercedes.

Overview

Start date

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

Duration

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

Qualification

MSc, PgDip, PgCert

Study type

Full-time / Part-time

Structure

Taught modules 40%, group project 20% (dissertation for part-time students), 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 a relevant discipline.

Applicants who do not fulfil the standard entry requirements can apply for the Pre-master's course, successful completion of which will qualify them for entry to this course for a second year of study.

ATAS clearance

This course requires Academic Technology Approval Scheme (ATAS) clearance.

ATAS is run by the UK Government's Foreign, Commonwealth and Development Office (FCDO) and applies to international students, except exempt nationalities, who need a visa to study in the UK. Further information can be found in our Application guide.

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 modules include lectures, workshops, case studies, tutorials and company visits.

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.

Introduction to Materials Engineering

Sustainable Aerospace

Failure of Engineered Assets

Materials Selection and Design

Functional Materials for Aerospace Sustainability

Composites Manufacturing for High Performance Structures

Surface Engineering and Coating Systems Design

Elective modules

Select one from the list below

Finite Element Analysis

Modelling Engineering Materials

"There aren't many universities that offer programmes about materials and processes used for the aerospace industry. Cranfield's reputation with industry links and having access to an on-site airport is incomparable compared to other universities."

Alvaro Leal Soria

Assembly Specialist, Airbus, (Aerospace Materials MSc 2022)

Accreditation

The Aerospace Materials MSc is accredited by the Institution of Mechanical Engineers (IMechE), the Royal Aeronautical Society (RAeS), Institute of Materials, Minerals & Mining (IOM3) and Institution of Engineering & Technology (IET) on behalf of the Engineering Council as meeting the requirements for further learning for registration as a Chartered Engineer (CEng). Cranfield Manufacturing and Materials is proud to have continuous accreditation with the Institute of Materials, Minerals and Mining (IOM3) for over 20 years.

Candidates must hold a CEng accredited BEng/BSc (Hons) undergraduate first degree to show that they have satisfied the educational base for CEng registration.

Please note accreditation applies to the MSc award, PgDip and PgCert (if offered) do not meet in full the further learning requirements for registration as a Chartered Engineer.

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/opensday

January 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.