



# Thermal Power - Power, Propulsion and the Environment option

## MSc/PgDip

This course covers all aspects of the gas turbine and other industrial prime movers. It aims to provide you with a thorough knowledge of, and the ability to, assess anthropogenic emissions. Power, Propulsion and the Environment is a specialist option of the MSc in Thermal Power.

This course is suitable for graduates seeking a challenging and rewarding career in a growing international industry. Graduates are provided with the skills that allow them to deliver immediate benefits in a very demanding and rewarding workplace and therefore are in great demand. The MSc option in Power, Propulsion and the Environment is structured to enable you to pursue your own specific interests and career aspirations. You may choose from a wide range of elective modules and select an appropriate research project. An intensive two-week industrial management course is offered which assists in achieving exemptions from some engineering council requirements. You will receive a thorough grounding in the operation of different types of rotating machinery for aeronautical, marine and industrial applications plus environmental management. We have been at the forefront of postgraduate education in thermal power and gas turbine technology at Cranfield since 1946. We have a global reputation for our advanced postgraduate education, extensive research and applied continuing professional development.

### Course structure

The course consists of taught modules and an individual research project. There is also an opportunity to choose from an extensive choice of optional modules to match specific interests.

### Individual project

You are required to submit a written thesis describing an individual research project carried out during the course. Many individual research projects have been carried out with industrial sponsorship, and have often resulted in publication in international journals and symposium papers.

### Future career

Many of our graduates are employed in the following industries:

- Gas turbine engine manufacturers,
- Airframe manufacturers,
- Airline operators,
- Regulatory bodies,
- Power production industries/agencies,
- Power production industries,
- Academia: doctoral studies.

### Example modules

The taught programme consists of compulsory and elective modules.

#### Compulsory:

- Combustors,
- Engine Systems,
- Gas Turbine Performance Simulation and Diagnostics,
- Turbomachinery and Blade Cooling,
- Management for Technology,
- Gas Turbine Operations and Rotating Machines.

#### Elective:

- Computational Fluid Dynamics for Gas Turbines,
- Fatigue and Fracture,
- Jet Engine Control,
- Mechanical Design of Turbomachinery,
- Propulsion Systems Performance and Integration.

#### Duration:

MSc: Full-time - one year,  
PgDip: Full-time - up to one year.

#### Start date:

March or October.

#### Location:

Cranfield Campus.

#### Entry requirements:

A first or second class UK honours degree (or its equivalent) in engineering, mathematics, physics or an applied science.

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.

### Contact details

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For further information please visit

[www.cranfield.ac.uk/propulsionandenvironment](http://www.cranfield.ac.uk/propulsionandenvironment)