



# Manufacturing Technology and Management

## MSc/PgDip/PgCert

This course, developed by industry, addresses the high quality skills required by manufacturers with competence in problem solving, commercial awareness and leadership together with technical specialism. Technical pathways with elective modules enable students to create a personalised package of learning. Suitable for manufacturing engineers who are keen to develop their skills and knowledge in the development and application of disruptive technologies needed to address the Government's High Value Manufacturing agenda. The MSc in Manufacturing Technology and Management develops professionals with the ability to transform knowledge into action, providing students with the breadth of both technical and business skills to make a real impact in their chosen career

### Course structure

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

### Individual project

The individual thesis project offers students the opportunity to develop their research capability, depth of understanding and ability to provide world-class technical and business engineering service solutions to real problems in manufacturing.

### 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

Students have the opportunity to consider leadership roles across a range of sectors that are required to drive UK high value manufacturing forward.

### Course modules

The taught programme consists of compulsory and Elective modules.

#### Compulsory:

- Introduction to Manufacturing and Research Techniques,
- Introduction to Materials Engineering,
- General Management,
- Lean Product Development.

#### Elective:

- Composites Manufacturing,
- Finite Element Analysis,
- Advanced Welding Processes,
- Nanotechnology,
- Surface Science and Engineering,
- Nano and Micro Scale Rapid Prototyping Manufacture,
- Functional Coatings and Thin Films,
- Introduction to Metrology,
- Failure of Materials and Structures,
- Manufacturing,
- Smart Materials.

#### 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 in a relevant subject or an equivalent international qualification or relevant work experience.

Please visit [www.cranfield.ac.uk/entryrequirements](http://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/courses/taught/manufacturing-technology-and-management](http://www.cranfield.ac.uk/courses/taught/manufacturing-technology-and-management)