



Metal Additive Manufacturing

MSc/ PgDip/ PgCert

This course provides students with the latest knowledge and skills for metal Additive Manufacturing (AM) providing a great foundation for a future career. This includes AM processes and their capabilities, designing AM systems, qualification, modelling and materials. Practical experience will be gained through assignments and group and individual projects in close collaboration with leading industrial end users.

Course structure

The Metal Additive Manufacturing MSc is made up of three components: a formal taught component (40%), Group Project (20%) and Individual Thesis Project (40%).

Individual project

Students select the individual project in consultation with the Course Director. The individual project provides students with the opportunity to demonstrate their ability to carry out independent research, think and work in an original way, contribute to knowledge, and overcome genuine problems.

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

As metal AM becomes more and more mature as a technology, the demand for skilled workforce is increasing accordingly. Experts are needed in all fields, whether it's design, or processes, or simulation, which is why we are covering all these aspects.

This qualification takes you on to a wide range of careers involving metal additive manufacturing processes, with experts needed in all fields from design, processes or simulation. Responsibilities include research, development, design, engineering, consultancy and management across a broad range of industrial sectors.

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:

- Additive Manufacturing System Design,
- Finite Element Analysis,
- General Management,
- Management of Manufacturing Quality,
- Metal Additive Manufacturing Metallurgy,
- Metal Additive Manufacturing Processes,
- Net-shape Manufacturing,
- Post processing for Additive Manufacturing.

Duration:

MSc: Full-time - one year, Part-time - up to three years.

Start date:

Full-time: October.

Location:

Cranfield Campus.

Entry requirements:

Candidates must possess, or be expected to achieve, a first or second class UK Honours degree or equivalent in a relevant science, engineering or related discipline. Other relevant qualifications, together with significant experience, may be considered.

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 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/mam

*Subject to University approval

Every effort is made to ensure the information on this sheet is correct at the time it was produced in October 2019. Please check the web pages for the latest information.