MSc Advanced Engineering Materials

A Masters course providing the foundation for 21st century technologies - from fuel cells to aeroengines.

With a focus on composites, advanced alloys and functional and engineering ceramics, this MSc will enable you to:

- Develop a detailed knowledge of state-of-the-art materials systems
- Find out how 21st century materials perform and survive in hostile conditions
- Learn how their structure is engineered from the nanoscale upwards
- Discover the technologies used in their manufacture and processing
- Develop skills in materials selection and engineering design

The masters course in Advanced Engineering Materials provides you with an in-depth understanding of the key factors that govern the design and selection of materials for use in advanced engineering applications, as well as their processing, properties and stability.

For an informal discussion about your study options, call +44 (0)161 306 4826 or email pg-materials@manchester.ac.uk

The School of Materials at The University of Manchester is the largest school of Materials Engineering in Europe and offers an unrivalled breadth of taught and research programmes in Materials Science.

www.manchester.ac.uk/materials/postgraduate
Aims of the Programme
The programme aims to convey detailed knowledge of current, state of the art materials systems, with a focus on composites, advanced alloys and functional and engineering ceramics; explore the technologies used in the manufacture and processing of advanced materials; provide an understanding of the relationships between composition, microstructure, processing and performance; explore how materials perform in service and survive in hostile conditions; train students in the essential skills needed to select and design the next generation of high performance engineering materials, and provide a sure foundation for a future career in industry or research.

Programme Content and Delivery
The programme consists of discrete taught units, followed by a dissertation project (MSc) or short project report (Diploma). Postgraduate qualifications are awarded at Masters, PG Diploma and PG Certificate levels.

The taught units cover the structure and design of advanced engineering materials and provide graduates with an increased depth and breadth of knowledge of materials science, technology and engineering. There is particular emphasis on introducing, and extending, basic materials concepts that govern the control of a materials structure and performance, through the study of advanced alloys, ceramics and composite systems and their comparison to more traditional materials. In addition, the course will provide an insight into state of the art materials processing techniques, as well as more novel materials, such as metal matrix composites and functional ceramics. Students will also receive training in engineering communication, materials selection and advanced techniques of materials characterisation.

Who is this programme for?
Students from a strong materials background who wish to gain more specialised knowledge of the principles, structure, processing and design of advanced engineering materials.

Graduates from engineering and science backgrounds who wish to specialise in materials.

Entry requirements
2.2 UK Honours degree or equivalent, or an approved combination of educational qualifications and industrial experience.

English Language
IELTS 6.5 with no subscore below 5.5 or equivalent. The University offers three, five and ten-week pre-sessional English language courses for students who need to improve their English to meet the minimum requirements.

Careers
The majority of graduates of this programme go on to fill key posts as materials scientists, engineers, managers and consultants in academia, industry and research and development. Some advance to PhD degrees within the School.

How to apply
You can apply online now at www.manchester.ac.uk/postgraduate/howtoapply

Contact us
For further information, you can email or call us: pgmaterials@manchester.ac.uk or +44 (0)161 306 4826

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