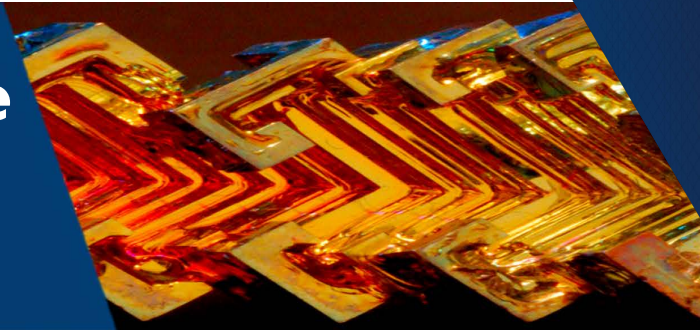




MEngSc Materials Science & Engineering

One Year Full Time (September start)



Introduction

Materials Science and Engineering is an interdisciplinary field investigating the relationship between the structure of materials at atomic or molecular scales and their macroscopic properties. Materials Scientists and Engineers are at the centre of virtually every area of technology from optoelectronics to space materials and from automotive and automotive manufacturing to biomedical devices.

The core knowledge in this field is essential in currently evolving advanced technologies such as additive manufacturing (also known as 3D printing) and nanotechnology. Graduates will gain expertise in fundamental materials science and real-world engineering application of materials, including metals, ceramics, composites and semiconductors.

Course Highlight

This programme is delivered by a School with a long history of innovation, establishing its first spin-out company more than 40 years ago, attracting more than €5 million in research funding annually, and leading SF1's national centre for advanced manufacturing.

Course Content and Structure

- 90 credits taught masters
- 60 credits taught modules
- 30 credits dissertation

Core modules include:

- Materials Science & Engineering II
- Technical Ceramics
- Research Skills and Techniques
- Advanced Metals Processing
- Materials Thermodynamics and Kinetics
- Advanced Polymer Engineering

Option modules include:

- Chemistry of Materials
- Solid-State Electronics I
- Computational Continuum Mechanics
- Fracture Mechanics
- Energy Systems & Climate Change
- Energy Systems Integration
- Nanomaterials Chemistry
- Advanced Characterisation Tech
- Professional Eng. (Finance)
- Professional Engineering (Mgt)
- Technical Communication
- Biomaterials
- Physics of Nanomaterials
- Medical Device Design

Why study at UCD?



Graduate education

12,800 graduate students; 17% graduate research students; structured PhDs



Global community

9,500 international students and a 300,000 alumni network across 165 countries



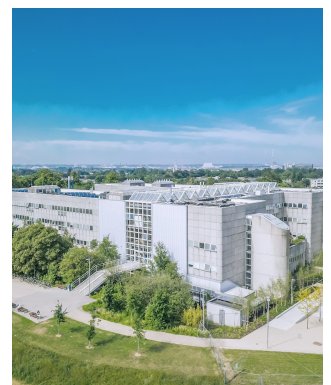
Global Profile

UCD is ranked in the top 1% of higher education institutions worldwide



Global careers

Dedicated careers support; 2-year stayback visa to work in Ireland





Career Opportunities

If you are a graduate of the MEngSc Materials Science & Engineering programme you can look forward to limitless employment opportunities in a substantive array of industries. Most companies worldwide employ materials professionals and examples where UCD materials graduates now work are: General Electric or Rolls Royce (Aerospace), Astrium (Space), Boston Scientific or Stryker (Biomedical) or Siemens (Energy).

Graduate Profile

Susan Nace
PhD Candidate



This programme offered me a chance to study a wide variety of engineering materials used worldwide, such that after finishing the programme, I would be able to use my new knowledge anywhere, not just in jobs or academia in Ireland or the US. The programme required both module and research credits, which allowed me to gain a specialisation in the materials field of mechanical engineering, as well as jumpstart my desired research career. After completing my degree at UCD, I received an Irish Research Council Employment-based Postgraduate Programme doctoral fellowship with a UCD engineering professor and a non-profit based in Dublin, and I am currently in my second year of that PhD programme. I believe that UCD was key to my academic journey and that the university is continuing to help me establish myself in the engineering research field.

Applicant Profile

- Applicants must hold a bachelor's degree with a minimum upper second class honours (NFQ level 8) or international equivalent in a relevant Engineering, Science or Technology programme.
- Applicants whose first language is not English must also demonstrate English language proficiency of IELTS 6.5 (no band less than 6.0 in each element), or equivalent.
- Students who do not meet the IELTS requirement may wish to consider taking the Pre-Sessional or Pre-Masters Pathway. Full details <https://www.ucd.ie/alc/programmes/pathways/>

International Fees and Scholarships

Tuition fee information is available on www.ucd.ie/fees. Please note that UCD offers a number of graduate scholarships for full-time, self-funding international students, holding an offer of a place on a UCD masters programme. Please see www.ucd.ie/global/scholarships/ for further information.

Related Masters Programmes of Interest

- ME Biosystems & Food Engineering
- ME Management (Food Engineering) PT

CONTACT US

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W: www.ucd.ie/global

APPLY NOW

This programme receives significant interest so please apply early online at www.ucd.ie/apply