With a growing world population, there is increasing need for scientific experts and entrepreneurs who can develop novel materials with advanced properties - addressing critical issues from energy to healthcare - and take scientific discoveries to the commercial world. This degree combines frontline research-based teaching from across UCL to train the next generation of materials scientists.

Degree summary

The programme aims to equip students with advanced, comprehensive knowledge of materials science and related state-of-the-art technologies, an understanding of the structure, properties and applications of materials, scientific research skills, and the insight and capability to be an entrepreneur in the field. In addition, students will engage in a literature project and a six-month cutting-edge research project.

Advanced Materials Science MSc relates scientific theories to research and applications of advanced materials, encourages innovation and creative thinking, and contextualises scientific innovation within the global market and entrepreneurship.

The programme aims to deliver innovative teaching; from the group design projects where students are challenged to design the next advanced material to the module, Mastering Entrepreneurship, where students learn how to apply research in the commercial world.

Students on this interdisciplinary programme benefit from UCL’s emphasis on research-based learning and teaching and research input from departments across UCL in mathematical and physical sciences, and in engineering.

Teaching is delivered by lectures, interactive tutorials, case discussions, and modelling projects. Assessment is by a combination of ongoing coursework, presentations, a group project and/or a written examination, a dissertation and a viva voce.

Degree structure

Mode: Full-time: 1 year
Location: London, Bloomsbury

Students undertake modules to the value of 180 credits. The programme consists of five core modules (75 credits), two optional modules (30 credits), a literature project (15 credits) and a research project/dissertation (60 credits).

<table>
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<tr>
<th>CORE MODULES</th>
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<tbody>
<tr>
<td>Advanced Materials Characterisation</td>
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<td>Advanced Materials Processing and Manufacturing</td>
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<tr>
<td>Materials Design, Selection and Discovery</td>
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<tr>
<td>Microstructural Control in Materials Science</td>
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<td>Research Methodology</td>
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<tr>
<th>OPTIONAL MODULES</th>
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<tr>
<td>Students choose one or two optional modules to a total value of 30 credits from the following:</td>
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<tr>
<td>Advanced Topics in Energy Science and Materials (15 credits)</td>
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<td>Biomaterials Applications (15 credits)</td>
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<tr>
<td>Mastering Entrepreneurship (15 credits)</td>
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<tr>
<td>Materials and Fatigue/Fracture Analysis (15 credits)</td>
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<tr>
<td>Nanoscale Processing and Characterisation for Advanced Devices (15 credits)</td>
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<tr>
<td>Simulation Methods in Materials Chemistry (30 credits)</td>
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<th>DISSERTATION/REPORT</th>
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<td>All students undertake a literature project and a research project an independent research project which culminates in a 20-minute oral presentation and a dissertation of 10,000 to 12,000 words.</td>
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</table>
Your career

On graduation students will be equipped for a future career as a materials scientist or engineer in academia or industry, or as an entrepreneur.

Employability

In addition to the specific skills and knowledge students acquire by taking this programme, they also develop managerial and entrepreneurship skills, and transferable skills in areas including literature search, design of experiments, materials research, critical data analysis, teamwork and effective communication skills using real-life case scenarios and student-led group projects.
Entry requirements

A minimum of a second-class Bachelor's degree from a UK university or an overseas qualification of an equivalent standard.

English language proficiency level

If your education has not been conducted in the English language, you will be expected to demonstrate evidence of an adequate level of English proficiency.

The level of English language proficiency for this programme is: Good.

Information about the evidence required, acceptable qualifications and test providers is provided at:
www.ucl.ac.uk/graduate/english-requirements

Your application

Students are advised to apply as early as possible due to competition for places. Those applying for scholarship funding (particularly overseas applicants) should take note of application deadlines.

When we access your application we would like to learn:

// why you want to study Advanced Materials Science at graduate level
// why you want to study Advanced Materials Science at UCL
// what particularly attracts you to the chosen programme
// how your academic and professional background meets the demands of this challenging programme
// where you would like to go professionally with your degree

Together with essential academic requirements, the personal statement is your opportunity to illustrate whether your reasons for applying to this programme match what the programme will deliver. Applicants who have a portfolio are strongly recommended to submit it when they apply.

FEES AND FUNDING 2017/18 ENTRY

// UK: £9,290 (FT)
// EU: £9,290 (FT)
// Overseas: £25,890 (FT)

The tuition fees shown are for the year indicated above. Fees for subsequent years may increase or otherwise vary. Further information on fee status, fee increases and the fee schedule can be viewed on the UCL Current Students website.

Full details of funding opportunities can be found on the UCL Scholarships website: www.ucl.ac.uk/scholarships

APPLICATION DEADLINE

All applicants: 28 July 2017

Details on how to apply are available on the website at:
www.ucl.ac.uk/graduate/apply

CONTACT

Dr Tung Chun (John) Lee, Coordinator of the MSc Programme

Email: tungchun.lee@ucl.ac.uk

Telephone: +44 (0)20 7679 1003

EU referendum

For up-to-date information relating to specific key questions following the UK's decision to leave the EU, please refer to
www.ucl.ac.uk/eu-referendum