

When we turn on a light or check the weather forecast, we are reaping the practical benefits of physics research. As well as exploring fundamental science, this MSci goes to the 'cutting edge' of technologies that affect everyday life, equipping you with the tools and imagination to address tomorrow's questions.

Degree summary

- A science degree from UCL is a strong asset across the whole range of careers where basic scientific skills are required, from accountancy to astrophysics, and computing to cryogenics.
- The programme is accredited by the Institute of Physics and includes the very latest developments and discoveries in the field, based on our highly rated research.
- Collaborative links with both industry and international research laboratories provide insight into the practical application of your studies.
- A large range of course options are available, including ones from other University of London colleges, allowing for individual preferences within your degree.

Core courses in the first year provide a firm foundation in quantum-based phenomena and condensed matter, underpinned by mathematics and a practical skills course which includes computer-based and IT skills training.

The second year includes core courses in quantum physics and its application to atoms and molecules, in statistical thermodynamics and in electromagnetic theory, along with further mathematics. The quantum and condensed matter elements of the core are completed in the third year. The second and third year also include practical laboratory and project courses, and optional courses to develop further and enhance knowledge of a range of physics topics.

The fourth year comprises a compulsory research project, and a further five 0.5 credit courses, generally chosen from subjects in the relevant degree specialty. A wide range of courses is available, including some taught by staff from other London Colleges.

Physics MSci

UCAS code: F303

www.ucl.ac.uk/prospectus/physics

Your learning

Teaching is undertaken through lectures, laboratory (and as appropriate, observatory) practical sessions, and supervised problem-solving tutorials. These tutorials are designed to deal with lecture-based questions, enlarge on topics addressed in lectures, and allow clarification and in-depth discussion of new concepts.

Assessment will normally involve end-of-year examinations, and an element of assessed coursework. For practical work you will be continuously assessed.

Your career

Your scientific training will equip you with an understanding of mathematics, and of physical principles and techniques, as well as transferable skills in analysis, rational argument and innovative problem solving. Surveys by the IOP indicate that physicists' versatility is welcomed by a wider range of professions than any other subject.

Around half our graduates choose to pursue further study for an MSc or PhD. A PhD opens up the possibility of an academic or research career in a university or research institute. Alternatively, like many of our graduates, you may consider employment in research, design, development, computing, finance, marketing and insurance industries, among others.

First destinations of recent graduates of this programme include:

- UCL: Research Degree: Physics
- University of Cambridge: Research Degree: Theoretical Physics
- JP Morgan: Business Analyst
- SSL: Lab Technician
- Bank of America: IT Applications Support



Degree structure

In each year of your degree you will take a number of individual modules, normally valued at 0.5 or 1.0 credits, adding up to a total of 4.0 credits for the year. Modules are assessed in the academic year in which they are taken. The balance of compulsory and optional modules varies from programme to programme and year to year. A 1.0 credit is considered equivalent to 15 credits in the European Credit Transfer System (ECTS).

Year One
Compulsory modules
Waves, Optics and Acoustics Thermal Physics Practical Skills 1C Practical Skills 1P Mathematical Methods 1 Mathematical Methods II Classical Mechanics Physics of the Universe
Optional modules
All first year modules are compulsory.
Year Two
Compulsory modules
Electricity and Magnetism Quantum Physics Atomic and Molecular Physics Statistical Thermodynamics Mathematical Methods III Practical Physics 2A Practical Physics 2B
Optional modules
Either: Mathematics for Physics and Astronomy Or: Environmental Physics
Year Three
Compulsory modules
Nuclear and Particle Physics Solid State Physics Quantum Mechanics Experimental Physics Group Project Electromagnetic Theory
Optional modules
You will select 1.0 credits from a wide range of Physics options.

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Final Year	
Compulsory modules	
Physics Project	
Optional modules	
You will select 2.5 credits from a wide range of options.	
Contacts	
Contact	Dr David Waters Admissions tutor
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Prospectus entry	www.ucl.ac.uk/prospectus/physics
Key facts	
RAE	60% rated 4* (world-leading) or 3* (internationally excellent)
Department	Physics and Astronomy
Faculty	Mathematical and Physical Sciences