

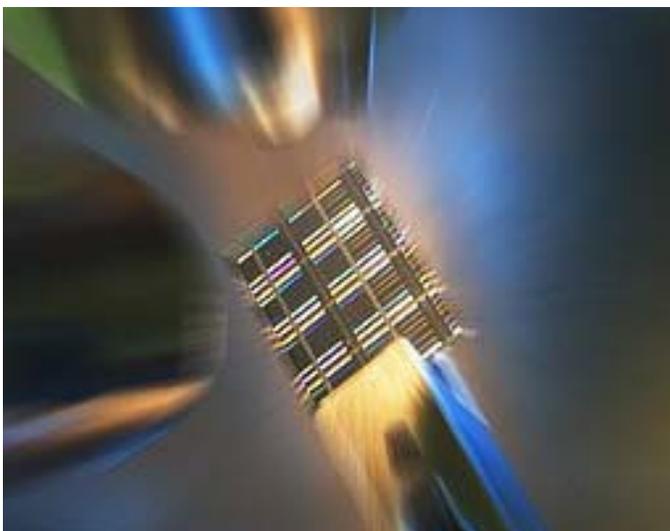


UNIVERSITY OF
OXFORD

Part-time postgraduate

Nanotechnology Programme

- Postgraduate Certificate in Nanotechnology
- Short courses in Nanotechnology
- Nanotechnology Summer School



BEGBROKE SCIENCE PARK

DEPARTMENT FOR CONTINUING EDUCATION

Nanotechnology Programme

Advanced, part-time and online study, ideal for those in full-time employment

Nanotechnology is of increasing importance to a diversity of sectors, such as the electronics, automotive, aerospace, energy, construction, and pharmaceutical industries, as well as medicine and healthcare.

Oxford's ground-breaking Nanotechnology Programme, designed in collaboration with industry, provides an in-depth knowledge of the science behind nanotechnology, an introduction to its practical applications and an examination of societal as well as ethical and regulatory issues.

Drawing on Oxford's excellence in teaching and research, the courses employ innovative learning techniques and are regularly updated.



Postgraduate Certificate in Nanotechnology

The Postgraduate Certificate is a part-time programme that consists of three modules taught online over one year, and culminates in the Residential Weekend in Oxford.

The online components include 'real-time' web-based tutorials, specially designed online course materials, discussion forums and access to Oxford's extensive electronic library. The course is accessible to professionals working anywhere in the world.

Modules

The Wider Context of Nanotechnology

This introductory online module gives an overview of the current state of nanotechnology and describes the implications of these new technologies for safety, regulation and innovation. It examines ethical issues in the use of nanotechnologies and investigates their potential societal and environmental impacts.

The Fundamental Science of Nanotechnology

This online module introduces the fundamental science behind the phenomena that result from the nanometre scale. It examines the theoretical foundations of these phenomena and their applications by exploring their mathematical description, together with common nanoscale structures, their fabrication, properties and applications, including nanoparticles, quantum dots, nanowires and carbon nanostructures.

Fundamental Characterisation for Nanotechnology

This online module surveys the range of techniques and methodologies available to determine the nature and composition of nanoparticles (both organic and inorganic), thin films and nanostructures. It gives a more detailed account of some of the most common techniques, and examines troubleshooting methods. It includes the Residential Weekend in Nanoscale Materials Characterisation.

The Residential Weekend in Nanoscale Materials

Characterisation, held at BegbrokeNano (Oxford Materials Characterisation Services), combines lectures explaining key principles of nanoparticle characterisation techniques with practical demonstrations and discussions. It introduces a variety of techniques for the analysis of nanoparticles, including particle size analysis, electron microscopy and scanning probe microscopy.



Short courses in Nanotechnology

Each online module and the Residential Weekend may also be taken individually as a stand-alone short course. We also offer an annual Summer School.

Nanotechnology Summer School

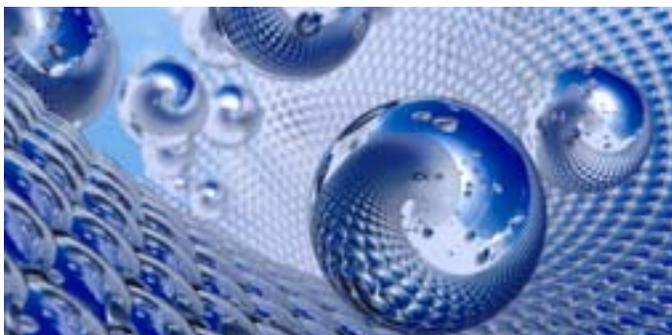
The annual Nanotechnology Summer School in Oxford focuses on a particular application of nanotechnology. Recent themes are outlined below.

Nanomedicine Summer School

- Introduction to nanomedicine: challenges and opportunities
- Nanotechnologies for regenerative medicine and tissue engineering
- Nano-diagnostics
- Nano-biosensors
- Nano-pharmaceuticals

Bionanotechnology Summer School

- Introduction to cell biology and bionanotechnology
- Introduction to bioanalytical techniques
- Applied genomics and proteomics
- Nanoparticles, nanostructures and biomimetics
- Interaction of nanomaterials with biological systems



Funding

Details of any funding opportunities, including grants, bursaries, loans and scholarships are available on the course and our sources of funding web pages:
www.conted.ox.ac.uk/students/sourcesoffunding

Nanotechnology in Oxford

The University of Oxford has a long-established and universally recognised reputation for nanotechnology research.

The Oxford Nanotechnology Programme results from the close collaboration between the University of Oxford's Begbroke Science Park and the Department for Continuing Education.

A range of research projects focusing on nanomaterials, particles, fibres, devices, and films and arrays are carried out across the University. This research is supported by the world-class characterisation equipment located in the Oxford Materials Characterisation Service (OMCS). This includes ultra-high resolution electron microscopes, scanning electron microscopes, NanoSIMS, scanning probe microscopes, particle analysis and a suite of other characterisation equipment.

Dr Christiane Nörenberg, Course Director, is the Nanotechnology HEIF Manager at Oxford University Begbroke Science Park. She received her DPhil in Materials Science from the University of Oxford in 1998 and continued with postdoctoral research. In 2001, Christiane was awarded the Royal Society Dorothy Hodgkin Fellowship for her work on the growth and characterisation of nanostructures on semiconductor surfaces. Her interests and expertise are in the areas of surface science, growth and characterisation of nanostructures on surfaces, and nanotechnology in general.

The Department for Continuing Education has a long and successful record of providing part-time professional development designed to meet the needs of industry in the technological sciences, as well as many other subject areas.



“

I really enjoyed the module; in my academic and professional career to date I have had little exposure to the ethical and social science considerations of technology and so it was the first occasion I have had the time and opportunity to focus on the other aspects of technology development. The module content gave a good overview of the social, ethical, environmental and business considerations.”

Dr Lorraine Byrne, Hewlett Packard

“

The Postgraduate Certificate in Nanotechnology most certainly helped me making a start in the field and I was even invited to write an article for the Royal Society 350th Anniversary Year incorporating aspects of nanotechnology for drug delivery applications. I would have not been able to make such a contribution to the field without the training received in the course!”

Dr Sofia Pascu, University of Bath

“

Although my background is in physics by education and electronics by career, by taking this course it has been instrumental in me obtaining a research post at the National Institute for Nanotechnology, Canada.”

Richard Hull, National Institute for Nanotechnology

“

The live weekly video conferences were a great venue for learning and staying focused. Great course – would highly recommend.”

Leigh Mack, Rockwood Labs Inc.

Other courses in technology and health sciences

We offer a range of short courses and postgraduate programmes in biosciences, electronics, experimental therapeutics, health research, surgical science, and vaccinology. Further details: www.cpd.ox.ac.uk

www.conted.ox.ac.uk/nano

nano@conted.ox.ac.uk

+44 (0)1865 286955

[@OxfordNano](https://twitter.com/OxfordNano)

