



THE UNIVERSITY
of EDINBURGH

THE UNIVERSITY
OF EDINBURGH
Chemistry
POSTGRADUATE
OPPORTUNITIES

2016 ENTRY

THE UNIVERSITY OF EDINBURGH: INFLUENCING THE WORLD SINCE 1583

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“You are now in a place where the best courses upon Earth are within your reach ... such an opportunity you will never again have.”

Thomas Jefferson, American Founding Father and President (speaking to his son-in-law, Thomas Mann Randolph, as he began his studies at Edinburgh in 1786)

The University

Our proud history and alumni ambassadors

For more than 400 years our staff and students have been making their mark on the world. They've explored space, revolutionised surgery, won Nobel Prizes, published era-defining books, run the country, paved the way for life-saving breakthroughs and laid the foundations for solving the mysteries of the universe. By choosing further study or research at Edinburgh you will be joining a community of scholars who have been at the forefront of knowledge since 1583.

We are associated with 20 Nobel Prize winners, including physicists Peter Higgs, Charles Barkla and Max Born, medical researcher Peter Doherty, economist Sir James Mirrlees and biologist Sir Paul Nurse. Our distinguished alumni include NASA astronaut Piers Sellers, former MI5 Director-General Dame Stella Rimington, Olympians Sir Chris Hoy and Katherine Grainger and historical greats such as philosopher David Hume, physicist and mathematician James Clerk Maxwell, inventor Alexander Graham Bell and Sherlock Holmes creator Sir Arthur Conan Doyle.

Teaching and research excellence

We are consistently ranked as one of the world's top 50 universities. We are 17th in the 2014/15 QS World University Rankings. As host to more than 30,000 students from some 137 countries, studying across 100 academic disciplines, the University of Edinburgh continues to attract the world's greatest minds. In the Research Excellence Framework (REF) 2014, 83 per cent of our research was judged world-leading or internationally excellent. We're ranked fourth in the UK for research power, based on the quality and breadth of our research. Our excellent teaching was also confirmed in the latest report from the Quality Assurance Agency, which awarded us the highest rating possible for the quality of the student learning experience.

Collaborations and international partnerships

As an internationally renowned centre of academic excellence, Edinburgh is the site of many world-class research collaborations. Our postgraduate students are crucial to our continued success and development and, along with our staff, they forge research links through regular travel and overseas exchanges. We take pride in our partnerships with other institutions such as the California Institute of Technology (Caltech), Stanford University, the University of Melbourne, Peking University, the University of Delhi

and the University of KwaZulu-Natal – to name but a few. We are a member of both the League of European Research Universities and the Coimbra Group, giving us strong links with leading European institutions from Barcelona to Berlin.

Linking research and commerce

Edinburgh was one of the first UK universities to actively develop commercial links with industry, government and the professions. Edinburgh Research and Innovation (ERI) has continued, for the past four decades, to develop the promotion and commercialisation of the University's research excellence. ERI assists our postgraduates in taking a first step to market, whether it is through collaborative research, licensing technology or providing consultancy services.

Enhancing your career

We're ranked 18th in the world for the employability of our graduates.* With one of the best track records for graduate employment in the Russell Group, we are committed to embedding employability into your teaching and learning experience. From offering access to volunteering schemes to providing support from our sector-leading Careers Service, the University provides myriad opportunities to develop your skills, knowledge and experience giving you the edge in a competitive job market.

An inspiring destination

Your first-class education will take place in one of Europe's most striking capital cities, a UNESCO World Heritage Site that is regularly voted one of the best places in the world to live. Edinburgh enjoys a solid reputation as a centre for innovation, whether as home to the 18th-century Scottish Enlightenment, as a modern source of pioneering science, medicine and technology, or as the host of the world's largest and longest-established arts festival. You couldn't ask for a more inspiring setting in which to further your knowledge and broaden your horizons.

Join us

Edinburgh offers unparalleled academic breadth and diversity, making it a vibrant, challenging and stimulating environment for postgraduate study. Whether you plan to change direction, enhance your existing career or develop in-depth knowledge of your area of study, the University of Edinburgh provides a world-class learning experience.

* Latest Emerging Global Employability University Rankings

WELCOME TO THE SCHOOL OF CHEMISTRY

The teaching of chemistry at Edinburgh has a long and distinguished history: 2013 marked the 300th anniversary of the establishment of the 'Chair of Physick and Chymistry'.

Today we continue that proud tradition as a leader in the field. In collaboration with the University of St Andrews, we have formed EaStCHEM, one of the largest and most successfully funded chemistry research schools in the UK. EaStCHEM was ranked second in the UK in the Research Excellence Framework (REF) 2014 power table – a combination of excellence and volume. Overall, 95 per cent of our research was classed world-leading or internationally excellent.

Our membership of ScotCHEM takes this collaborative spirit even further, providing links with all the major schools of chemistry in Scottish universities.

We can offer you a large, internationally recognised research community, and the benefits of the latest facilities, well-published and awarded academic staff, a lively graduate school environment and a broad range of study opportunities.

The best teaching

The School of Chemistry is a recent 'Best Department' winner in the Edinburgh University Students' Association Teaching Awards. We teach postgraduate students all the chemistry skills you will need to work in a modern research environment. All our programmes are accredited by the Royal Society of Chemistry. As well as the latest chemistry techniques and concepts, you'll develop valuable skills such as teamwork and problem solving that will be useful no matter what route you take after graduation.

Rewarding research

Pursuing a research degree at the School of Chemistry could be one of the best experiences of your life. In addition to gaining research skills, making friends, meeting eminent researchers and being part of the research community, a research degree will help you to develop invaluable transferable skills which you can apply to academic life or a variety of professions outside of academia.

Supporting business opportunities

As well as pursuing research for the purpose of academic advancement, we are ever alert to the commercial possibilities of our findings, and we work with business to identify and develop these opportunities. Should your research show potential for industrial applications, we have the tools available to support its development and commercial success.



Facilities and resources

Our facilities are among the best in the world, offering an outstanding range of capabilities. You'll be working in recently refurbished laboratories that meet the highest possible standards, packed with state-of-the-art equipment for both analysis and synthesis.

We offer on-site services ranging from full-time glassblowing and electronics workshops to video conferencing and computer research support.

We have close links with the Edinburgh Parallel Computing Centre, whose Europe-leading supercomputing capabilities put us at the forefront of computational chemistry.

Make it, test it

You will have access to facilities for the synthesis and characterisation at ambient and extreme conditions of organic and inorganic compounds, including those with application in homogeneous catalysis, nanotechnology, supramolecular chemistry, drug discovery and ligand design. The development of innovative synthetic and characterisation methodologies is a key feature of our work, using the latest techniques and technology.

A recently installed 1,000-tonne pressure chamber enables the synthesis of materials at high pressures and temperatures. Fluorescence spectroscopy and microscopy instruments are available within our Collaborative Optical Spectroscopy Micromanipulation & Imaging Centre (COSMIC).

We have excellent facilities for creating and analysing biomolecules, including advanced mass spectrometry, NMR stopped-flow spectrometers, electron paramagnetic resonance spectroscopy, high-performance liquid chromatography, fast protein liquid chromatography and atomic absorption spectroscopy.

High-specification hardware

For NMR in the solution and solid state, we have 10 spectrometers at field strengths from 200 MHz to 800 MHz; our mass spectrometry resource has a 12T FT-ICR mass spectrometer for routine mass analysis, and we have expertise in mass spectrometry imaging and ion mobility mass spectrometry. New combinatorial chemistry laboratories are available, equipped with a modern fermentation unit.

World-class facilities are available for small molecule and macromolecular X-ray diffraction, utilising both single crystal and powder methods. Application of diffraction methods at high pressures is a particular strength, and we enjoy strong links to central facilities for neutron, muon and synchrotron science in the UK and further afield.

Also available are instruments for magnetic and electronic characterisation of materials (SQUID), electron microscopy (SEM, TEM), force-probe microscopy, and high-resolution FT-Raman, Fourier Transform infrared, and X-ray photoelectron spectroscopy.

Collections of the University

The University's collections are unique in their depth and diversity. Managed by the Centre for Research Collections, and housed in our Main Library at the heart of our central campus, they span more than 500,000 rare books, scientific and cultural artefacts from around the world, historically significant musical instrument collections, specialist museum collections, and manuscripts.

Highlights include the world's oldest surviving Gaelic text; a page from the final draft of Charles Darwin's *On the Origin of Species*, as well as two copies of the first edition; Adam Smith's original library; Alexander Fleming's sample of mould used to make penicillin; original quartos of Shakespeare plays, with notes in the margins from 16th-century actors; the thermometer of chemist Joseph Black; and original Sir Isaac Newton diagrams in David Gregory manuscripts of 1692.

University archivists – with a broad spectrum of expertise – make it their priority to ensure these items are accessible by our students, researchers and staff.

Community

As part of our graduate school, you'll be working in a large and dynamic research environment – one of the largest in the UK.

Located on the King's Buildings campus (see page 15) in the south of Edinburgh, we form part of a thriving hub of science teaching and research, with all the amenities you'd expect from a large campus along with easy access to the city centre.

Collaboration and interaction

Ours is an extremely interdisciplinary area, and many of our researchers interact with those in physics, biology, materials science, geosciences, engineering and other disciplines. With world-leading and internationally significant research being undertaken in all these areas, you'll find having collaborative access to this calibre of expertise is a valuable asset to your studies.

We recognise the value of interaction with the wider world of chemistry, and will encourage you to broaden your perspective by attending and presenting at international conferences. Teaching can also open the way to new approaches to research: you'll have the chance to find this out for yourself through tutoring undergraduates.

Chemical bonds

The School organises regular research talks and visiting speaker symposia, as well as lecture courses on specialised techniques and safety.

Researchers can take part in the annual residential conference at Firbush Point, the University's outdoor pursuits centre on the shores of Loch Tay.

You'll be invited to join our chemistry society, ChemSoc, the oldest society of its kind in the world, established in 1785. A very active group for both students and teaching staff, ChemSoc organises a full and varied programme of lectures, and social and sporting events.



Employability and graduate attributes

With your postgraduate degree you will be perfectly placed for a successful career in the chemical or pharmaceutical industries, such as in research and development or sales and marketing, or to continue in academia. At Edinburgh you will also learn valuable skills that will open doors in areas outside chemistry.

Many of the skills that will ensure success in your postgraduate studies at the School of Chemistry will benefit your personal and professional development regardless of the direction your career may take, be it into finance, management, IT, patent law, government or other sectors.

The skills you will learn include:

- how to work independently to identify the aims of a project from the outset;
- teamwork and high-level networking skills;
- how to argue a case and offer constructive criticism;
- analytical and problem-solving skills;
- effective communication of complex information, including presentation skills.

Institute for Academic Development

All of our postgraduate students can benefit from the University's Institute for Academic Development (IAD), which provides information, events and courses to develop the skills you will need throughout your studies and in the future.

Further information is available online: www.ed.ac.uk/iad/postgraduates

For taught postgraduates, the IAD provides a growing range of tailored study-related and transferable skills workshops, plus online advice and learning resources. These are all designed to help you settle into postgraduate life, succeed during your studies, and move confidently to the next stage of your career.

The IAD also offers one of the longest-established researcher development training packages in the UK. Our experts will help you gain the skills, knowledge and confidence needed to move on to the next stage in your career, be that in academia or beyond.

The Institute provides research students with dedicated training in topics such as research management; personal effectiveness; communication skills; public engagement, networking and teamworking; leadership; and career management. You can gain expertise in information technology and presentation skills; confidence in undertaking independent and creative research; the ability to critically evaluate source materials; and the capacity to construct intellectually rigorous arguments. By developing these broader professional skills and qualities, our postgraduate students are always in high demand.

Careers Service

The University's award-winning Careers Service aims to expand the horizons of all our students, empowering you to make successful career decisions. It works closely with the University's Employability Consultancy to support students to take advantage of every opportunity to enhance your employability while studying.

The Service provides specialist support for postgraduate students to help with career planning and decision making. Its team of friendly experts can support you to explore different career options, identify your skills and what you want out of a career, think about effective job search strategies, and prepare for job applications and interviews.

The Service has a team dedicated to developing our already strong links with employers from all industries and employment sectors; from the world's top recruiters to small enterprises based here in Edinburgh. The team provides a programme of opportunities for students to meet employers on campus and virtually, and advertises a wide range of part-time and graduate jobs.

More information: www.ed.ac.uk/careers/postgrad

Connect.ed

Edinburgh encourages its alumni to stay in touch with current students who are interested in a similar career path. Connect.ed is a networking system run by the Careers Service that provides a confidential opportunity for alumni to share their occupational knowledge and experience with current students, who can contact them for advice and guidance on their future career.

More information: www.ed.ac.uk/careers/connected

Backing bright ideas

LAUNCH.ed is the University's award-winning programme for student entrepreneurs. Each year, LAUNCH.ed works with hundreds of students to assess their ideas and develop their business skills and helps many start their businesses. We have helped Edinburgh students and alumni launch almost 100 new businesses in the last three years, ranging from language tuition to robotics companies.

More information: www.LAUNCH.ed.ac.uk

Gold for equality

The School of Chemistry is one of only three UK university departments to win an Athena SWAN gold award for commitment to advancing women's careers in science. www.athenaswan.org.uk

Taught masters programmes

Our taught Master of Science (MSc) programmes last 12 months, consisting of two semesters of taught courses followed by an individual supervised research project and dissertation.

www.ed.ac.uk/pg/877



Computational Chemistry & Modelling

PgCert 1 yr FT (2 yrs PT)

Programme description

Computational chemistry is the development and practical application, through high-performance computing, of quantum and classical mechanics (and informatics) to the study of chemical processes. These range from fundamental spectroscopic events in the gas phase to the nature of protein-drug interactions.

Computational chemistry techniques are recognised as important tools in the chemical sciences where they are employed to answer questions posed by fundamental science and to resolve challenging problems faced by industry.

This programme will provide a broad knowledge and understanding of computational chemistry which can be built upon by further study for an MSc or PhD, or employed for practical applications within the many areas of chemistry and wider industry.

COMPULSORY COURSES

Electronic Structure Theory and Classical Simulation Methods; Computational Modelling of Materials; Computer-aided Drug Design.

Programme structure

You will study key areas of modern computational chemistry and its applications. This includes the theoretical background and application of quantum and classical techniques to the study of molecular systems, materials and the solid state. In addition, methods of computational chemistry applicable to the modelling of biological processes and to rational drug design are presented.

You will be taught by academic staff at the EaStCHEM Research School of Chemistry, a partnership between the Schools of Chemistry at the University of Edinburgh and the University of St Andrews. You will learn and interact with your peers through a range of state-of-the-art online distance learning technologies. You will also have access to a computing cluster, in order to learn how to perform an array of computational chemistry calculations and molecular simulations using popular computational chemistry software.

Career opportunities

Graduates from this programme will enhance their employment prospects for a range of jobs offered by the chemical and related industries, such as rational drug design in a small biotechnology company, or catalysis and materials research in a large corporation. In addition, this qualification is an ideal platform on which to base further study, such as towards an MSc or a PhD.

Minimum entry requirements

Applicants should have a UK 2:1 honours degree or its international equivalent (www.ed.ac.uk/international/country) in chemistry, physics or a closely related discipline.

English language requirements

See page 14.

Fees and funding

www.ed.ac.uk/student-funding/postgraduate
For funding information see also page 12.

EaStCHEM Research School of Chemistry
Tel +44 (0)131 650 2527
Email comp.chem@ed.ac.uk

www.ed.ac.uk/pg/448

Materials Chemistry

MSc 1 yr FT

Programme description

Materials chemistry has emerged as an important sub-discipline within chemistry. It cuts across the traditional organic/inorganic/physical boundaries of chemistry and overlaps many disciplines from engineering to the biosciences.

Materials chemists now have a leading role in areas such as microelectronics, polymer science, catalysis and nanotechnology. They also make an important contribution to areas of more traditional chemistry such as the pharmaceutical sector where understanding the physical properties of intermediates and products is now recognised as essential in optimising the synthesis and properties of pharmaceutically active ingredients in medicines.

COMPULSORY COURSES

This programme consists of advanced lecture courses such as: *Properties & Reactions of Matter; Chemistry of Functional Materials; Physical Techniques in Action; Techniques and Concepts in Inorganic Chemistry.* These are studied concurrently with a predominantly practical-based course offering an introduction to research methods. You will then proceed to a period of full-time research project work leading to the submission of your masters dissertation.

Programme structure

Lectures are given by leading researchers in the area of materials chemistry. The lecture courses are supported by tutorial sessions and assessed by examination in April/May.

The *Introduction to Research Methods* course includes an exciting, problem-solving exercise where you learn important skills such as communicating science, dealing with intellectual property and grant application writing, together with a literature survey and written report, defining the scope of the subsequent individual research project work.

Career opportunities

This programme has been designed to help you take a leading role in areas such as microelectronics, polymer science, catalysis and nanotechnology, or more traditional chemistry such as the pharmaceutical sector.

Minimum entry requirements

Applicants should have at least a UK 2:1 honours degree or its international equivalent (www.ed.ac.uk/international/country), in chemistry or a closely related discipline.

English language requirements:

See page 14.

Fees and funding

www.ed.ac.uk/student-funding/postgraduate
For funding information see also page 12.

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www.ed.ac.uk/pg/450

Medicinal and Biological Chemistry

MSc 1 yr FT

Programme description

This programme requires a thorough understanding of molecules, their structures, properties and synthesis, and a chemical understanding of the nature of biological structures, from macromolecules to cells, the design of pharmaceutical materials in the laboratory and their function in clinical settings.

The knowledge and skills acquired on this programme will leave you well equipped to compete for positions related to drug discovery in chemical, pharmaceutical or biotechnological companies.

COMPULSORY COURSES

The programme consists of advanced lecture courses in: *Synthetic Organic Chemistry; Chemical Biology; Medicinal Chemistry; Biophysical Chemistry.* These are studied concurrently with a predominantly practical based course offering an introduction to research methods. You will then proceed to a period of full-time research project work, leading to the submission of your masters dissertation.

Programme structure

Lectures are given by leading researchers in the area of medicinal and biological chemistry. The lecture courses are supported by tutorial sessions and assessed by examination in May.

The *Introduction to Research Methods* course includes an exciting, problem-solving exercise where you learn important skills such as communicating science, dealing with intellectual property and grant application writing, together with a literature survey and written report, defining the scope of the subsequent individual research project work.

Career opportunities

You will be well suited to take up roles in the chemical and pharmaceutical industries, either in research and development or sales and marketing. You will gain valuable work experience in a real-life research environment. Alternatively, a masters degree is a precursor to a PhD degree.

Our programmes teach students the valuable skills they need to move into other areas outside chemistry. Careers in IT, management or finance are possibilities after completing your degree.

Minimum entry requirements

Applicants should have at least a UK 2:1 honours degree or its international equivalent (www.ed.ac.uk/international/country), in chemistry or a closely related discipline. Your undergraduate degree should have included maths and biology.

English language requirements:

See page 14.

Fees and funding

www.ed.ac.uk/student-funding/postgraduate
For funding information see also page 12.

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Research opportunities

The School of Chemistry's research is loosely divided into four specialist disciplines. However, there is considerable overlap, and many research projects incorporate aspects of two or more areas: www.ed.ac.uk/pg/16

There are opportunities to pursue research through the following degree routes:

- PhD three years full-time (six years part-time available for UK/EU students)
- MPhil two years full-time
- MSc by Research one year full-time

PhD

As a PhD candidate you pursue a research project under continuous guidance, resulting in a thesis that makes an original contribution to knowledge. You will gain specialist background knowledge for your intended research, and develop the skills to research in that field.

Centres for Doctoral Training

The School is both leading, and involved in, many Centres for Doctoral Training funded by UK research councils, industry and the UK government. Applications for these PhD studentships often require the support of a PhD supervisor who is partnered with a particular Training Centre. Please note that in the majority of cases, eligibility is restricted to UK or EU nationals, and annual application deadlines apply.

- Criticat – Critical Resource Catalysis: www.criticat.org/apply.php
- OPTIMA – Optical Medical Imaging: www.optima-cdt.ac.uk
- Integrative Sensing & Measurement: www.gla.ac.uk/research/opportunities/isensingmeasurement

- SOFI – Soft Matter and Functional Interfaces: www.dur.ac.uk/soft.matter/soficdt
- NERC E3: www.ed.ac.uk/schools-departments/geosciences/postgraduate/phd/e3
- EastBIO: www.eastscotbiotdp.ac.uk

MPhil

The MPhil degree resembles a PhD but takes two years instead of three and does not carry the same requirement for original contribution to knowledge. You pursue your individual research project under supervision, submitting your thesis at the end of the project.

MSc by Research

An MSc by Research, which takes one year, is based on a research project tailored to your interests. The project can be a shorter alternative to an MPhil or PhD, or a precursor to either – including the option of an MSc project expanding into MPhil or doctorate work as it evolves.

The chemistry/biology interface

This is a broad area, with particular strengths in protein structure and function, mechanistic enzymology, proteomics, peptide and protein synthesis, protein folding, recombinant and synthetic DNA methodology, biologically targeted synthesis and the application of high throughput and combinatorial approaches. We also focus on biophysical chemistry,

the development and application of physicochemical techniques to biological systems. This includes mass spectrometry, advanced spectroscopy and microscopy, as applied to proteins, enzymes, DNA, membranes and biosensors.

Experimental and theoretical chemical physics

This is the fundamental study of molecular properties and processes. Areas of expertise include probing molecular structure in the gas phase, clusters and nanoparticles, the development and application of physicochemical techniques such as mass spectroscopy to molecular systems, and the EaStCHEM surface science group, whose members study complex molecules on surfaces, probing the structure-property relationships employed in heterogeneous catalysis. World-class computational facilities including teraflop capability are available through EaStCHEM Research Computing.

Synthesis

This research area encompasses the synthesis and characterisation of organic and inorganic compounds, including those with application in homogeneous catalysis, nanotechnology, coordination chemistry, ligand design and supramolecular chemistry, asymmetric catalysis, heterocyclic chemistry and the development of synthetic methods and strategies leading to the synthesis of biologically important molecules (including drug discovery). The development of

innovative synthetic and characterisation methodologies (particularly in structural chemistry) is a key feature, and we specialise in structural chemistry at extremely high pressures.

Materials chemistry

The EaStCHEM materials group is one of the largest in the UK. Areas of strength include the design, synthesis and characterisation of functional (for example magnetic, superconducting and electronic) materials; strongly correlated electronic materials, battery and fuel cell materials and devices; porous solids, fundamental and applied electrochemistry polymer microarray technologies; and technique development for materials and nanomaterials analysis.

English language requirements

See page 14.

Fees and funding

www.ed.ac.uk/student-funding/postgraduate

For funding information see also page 12.

Studentships

Explore our latest, fully funded studentships: www.chem.ed.ac.uk/studying/postgraduate-research/studentships

See also...

Closely related taught and research programmes are offered elsewhere across the University, particularly the College of Medicine & Veterinary Medicine and the Schools of Biological Sciences, Engineering, GeoSciences, and Physics & Astronomy.

www.ed.ac.uk/studying/prospectus-request



THE UNIVERSITY of EDINBURGH

Case study: Edinburgh's research with impact

Protecting the population from air pollution

Up to 30 per cent of the EU urban population is estimated to be exposed to pollutant levels greater than the EU limit. Air pollution is the environmental factor with the greatest impact on human health in the EU. Dr Mathew Heal of the EaStCHEM School of Chemistry has been leading a programme of pollution research on the three most important air pollutants – particulate matter, ozone and nitrogen dioxide – for 20 years, contributing valuable findings that are changing the way the world protects itself from the effects of pollution.

Project background

Exposure to particulate matter alone is estimated to reduce average life expectancy in the UK by six months, with estimated costs of £9bn–20bn a year. The group led by Dr Heal recognised the importance of detecting particulate matter and other airborne pollutants, and set about analysing current prescribed air quality assessment methods. As well as finding that these systems are subject to inaccuracies, they researched and defined optimal methods for new, more accurate and reliable measurements. Dr Heal's group research also showed how atmospheric models can simulate current ozone concentrations with high spatial resolution and predict future concentrations, as well as regional hospital admissions and deaths resulting from a range of future emissions and climate change scenarios.

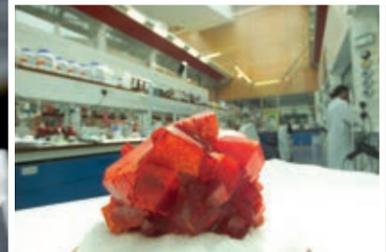
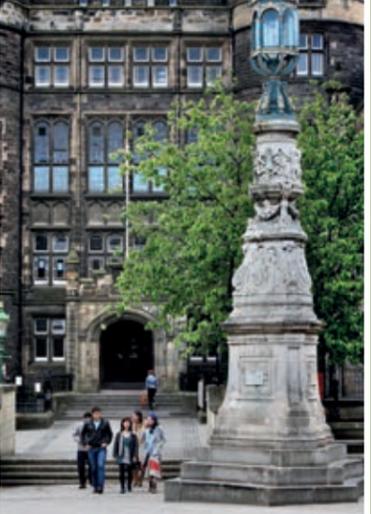
Project results

The findings from Dr Heal and his team have been groundbreaking and have contributed evidence for the formulation of government policies, informing UK national guidance and policy-evidence documents for the Department for Environment, Food and Rural Affairs (Defra), the Health Protection Agency, and the UK's environment agencies. The more accurate and reliable methods originating from the Edinburgh team are now incorporated into protocols applied to measurements of nitrogen dioxide for statutory air quality assessments in all urban areas in the UK.

The findings from Dr Heal and his team have been groundbreaking and have contributed evidence for the formulation of government policies...

See more online: www.ed.ac.uk/research/impact





Funding

A large number of scholarships, loans and other funding schemes are available for your postgraduate studies. It is only possible to show a small selection in print. To see the full range, please visit: www.ed.ac.uk/student-funding/postgraduate.

Awards are offered by the School of Chemistry, the College of Science & Engineering, the University of Edinburgh, the Scottish, UK and international governments and many funding bodies. Here we list a selection of potential sources of financial support for postgraduate students applying to the School of Chemistry.

Tuition fee discounts

We offer a 10 per cent discount on postgraduate fees for all alumni who have graduated with an undergraduate degree from the University. We also offer a 10 per cent discount for international graduates who spent at least one semester at the University of Edinburgh as a visiting undergraduate: www.ed.ac.uk/student-funding/discounts

Key

- Taught masters programmes
- Masters by Research programmes
- Research programmes

Loans available for study at the University of Edinburgh

The University of Edinburgh is a participating institution in the following loans programmes, meaning we certify your student status and can help with the application process.

• The Canada Student Loans Program ●●●

The University is eligible to certify Canadian student loan applications: www.ed.ac.uk/student-funding/canadian-loans

• The Student Awards Agency Scotland ●●

The Student Awards Agency Scotland offers eligible students postgraduate tuition fee loans for eligible programmes: www.ed.ac.uk/student-funding/pg-loan

• US Student Loans ●●●

The University is eligible to certify loan applications for US loan students. Full details on eligibility and how to apply can be found online: www.ed.ac.uk/student-funding/us-loans

Research council awards

Research councils offer awards to masters, MPhil and PhD students in most of the Schools within the University of Edinburgh. All studentship applications from the research councils must be made through the University, through your School or College office. Awards can be made for both taught and research programmes.

Normally only those UK/EU students who have been resident in the UK for the preceding three years are eligible for a full award. For some awards, candidates who are EU nationals and are resident in the UK may be eligible for a fees-only award. www.ed.ac.uk/student-funding/research-councils

University of Edinburgh scholarships

The University offers a number of scholarships in partnership with the following overseas government agencies:

- **Chile ●●●**
National Commission for Scientific and Technological Research (CONICYT): www.conicyt.cl
- **Colombia ●**
Administrative Department of Science, Technology and Innovation (Colciencias): www.colciencias.gov.co
- **Ecuador ●●●**
Secretaria Nacional de Educacion Superior, Ciencia y Tecnologia (SENESCYT): www.educacionsuperior.gob.ec
- **Iraq ●**
Ministry of Higher Education and Scientific Research: www.en.mohe.gov.iq/
- **Mexico**
National Council of Science and Technology of the United Mexican States (CONACYT): ●●● www.conacyt.mx

Banco de Mexico and the Banco de Mexico's FIDERH trust (FIDERH): ●●● www.fiderh.org.mx

Fundacion Mexicana para la Educacion, la Tecnologia y la Ciencia (FUNED): ●● www.funedx.org

Other scholarship opportunities include:

- **Chemistry Tercentenary International Masters Scholarships ●**
Up to three scholarships available to overseas applicants starting a full-time MSc programme in the School of Chemistry: www.ed.ac.uk/student-funding/tercentenary-masters
- **Chemistry Tercentenary International PhD Scholarships ●**
A minimum of 10 scholarships open to overseas research students starting full-time PhD programmes in the School of Chemistry: www.ed.ac.uk/student-funding/tercentenary-phd
- **China Scholarships Council/University of Edinburgh Scholarships (China) ●**
A number of scholarships for PhD study to candidates who are citizens and residents of China: www.ed.ac.uk/student-funding/china-council
- **Edinburgh Global Masters Scholarships ●●**
A number of scholarships are available to international students for masters study: www.ed.ac.uk/student-funding/masters
- **Edinburgh Global Research Scholarships ●**
These scholarships are designed to attract high-quality international research students to the University: www.ed.ac.uk/student-funding/global-research
- **Eric Liddell China Saltire Scholarships (China) ●●**
Ten scholarships are available to Chinese citizens who are permanent residents of mainland China who are accepted on a full-time masters degree programme: www.ed.ac.uk/student-funding/liddell
- **Highly Skilled Workforce Scholarships ●**
A number of scholarships are available to UK nationals who are permanently domiciled in Scotland, and to EU nationals domiciled either on mainland EU or in Scotland, who have been accepted on an eligible full-time or part-time masters programme. The scholarships will cover the UK/EU tuition fee: www.ed.ac.uk/student-funding/sfc-hsw
- **Julius Nyerere Masters Scholarship (Tanzania) ●●**
One scholarship is available to citizens of Tanzania who are normally resident in Tanzania who are accepted on a full-time masters degree programme: www.ed.ac.uk/student-funding/nyerere
- **School of Chemistry Research Studentships ●**
Approximately 30 research studentships available to new postgraduate research students: www.chem.ed.ac.uk/studying/postgraduate-research/studentships
- **Southern African Scholarship ●●●**
One award for masters study available to students from selected southern African countries: www.ed.ac.uk/student-funding/postgraduate/southern-africa

• UK/EU Masters Scholarships ●●

A number of scholarships for UK and EU students who have been accepted on a full-time masters degree programme: www.ed.ac.uk/student-funding/uk-masters

• University of Edinburgh PhD Scholarships ●

A number of scholarships, open to UK, EU and international PhD students: www.ed.ac.uk/student-funding/development

Other sources of funding

The following are examples of the many scholarships and support schemes available to students from particular countries who meet certain eligibility criteria.

- **Beit Trust ●●●**
Beit Trust Scholarships support postgraduate students from Malawi, Zambia and Zimbabwe, usually to undertake a masters degree: www.beittrust.org.uk
- **Chevening Scholarships ●●**
A number of partial and full funding scholarships are available to one-year masters students: www.chevening.org
- **Commonwealth Scholarships ●●●**
Scholarships available to students who are resident in any Commonwealth country, other than the UK: www.dfid.gov.uk/cscuk
- **Fulbright Scholarships (USA) ●●●**
Scholarships open to US graduate students in any subject wishing to study in the UK: www.iie.org/fulbright
- **Marshall Scholarships (USA) ●●●**
Scholarships available to outstanding US students wishing to study at any UK university for at least two years: www.marshallscholarship.org
- **Scotland's Saltire Scholarships ●●**
A number of scholarships open to students who are citizens permanently and ordinarily resident in Canada, China, India and the USA for one year of masters study: www.ed.ac.uk/student-funding/saltire
- **Silber Bequest ●●●**
Funding is available to help prospective students living in the UK who have been granted refugee status: www.ed.ac.uk/student-funding/silber

“The Scottish Government’s initiative to attract international students from Canada, China, India and the US through the Saltire Scholarship Scheme, as well as the University of Edinburgh’s help and support for international students, has helped provide me with an opportunity that I would never have conceived of prior to starting my studies at Edinburgh.”

Robert Starr, MSc High Performance Computing, Scotland’s Saltire Scholarship

How to apply

We have an online application process for all postgraduate programmes. It's a straightforward system with full instructions, including details of any supporting documentation you need to submit.

When applying, you will set up an account, which lets you save your application and continue at another time.

Full guidance on our application system is available at: www.ed.ac.uk/postgraduate/apply

General requirements

Our usual entrance requirement for postgraduate study is a UK 2:1 degree, or its international equivalent (see www.ed.ac.uk/international/country), in a subject related to your chosen programme. You will also need to meet the University's language requirements (see right).

Entry requirements for individual programmes can vary, so check the details for the specific programme you wish to apply for. Research applicants with a background not directly related to chemistry may sometimes be considered – your potential supervisor can advise you on this.

References

For applications to taught programmes, the normal requirement is one reference, although an additional reference may be requested in individual cases. For applications to research programmes, two references are required. You should check online for the exact requirements for your intended programme of study.

For general guidance on references, visit: www.ed.ac.uk/postgraduate/references

Deadlines

Some programmes have application deadlines. Please check online for details. For all other programmes, you are encouraged to apply no later than one month before the programme starts to ensure there is sufficient time to process your application. However, earlier application is recommended, particularly where there is a high demand for places or when a visa will be required. Should you wish to submit a late application, please contact us for guidance.

There are no formal deadlines for research applicants, but we strongly recommend that students interested in our projects apply as soon as they become available, as places are highly competitive.

Procedure: taught programmes

- Thoroughly explore this prospectus and our website to identify your preferred programme of study. You are welcome to contact the School to discuss your choice. See Get in touch, page 15.
- Check you meet all entry requirements. Check whether a separate application is needed for funding. Check any deadlines.
- Visit www.ed.ac.uk/pg/degrees, navigate to your chosen programme, and click on Apply. Follow the instructions within the online application system.

Procedure: research programmes

- Thoroughly explore this prospectus and our website to identify which area of our research matches your interests.
- Check you meet all entry requirements.
- Contact potential supervisors to discuss research proposals. Details of current PhD opportunities and potential supervisors are available at: www.chem.ed.ac.uk/studying/postgraduate-research/studentships
- UK students should also consider the PhD projects available through the EASTBIO Doctoral Training Partnership: www.eastscotbiodtp.ac.uk
- If you are successful in finding a suitable supervisor and research project, you may be asked to submit a two-page CV and a one-page research proposal.
- Visit www.ed.ac.uk/pg/degrees, navigate to your chosen programme, and click on Apply. Follow the instructions within the online application system.
- If you are shortlisted you will be invited for interview, which can be by telephone or video if you are unable to travel to Edinburgh.

Joining us from overseas

International applicants are advised to check the University's website to find out more about visa options and our Integrated English for Academic Purposes (IEAP) programme. For more information, visit: www.ed.ac.uk/studying/international

International agents

The University has certified representative agents in the following locations: Brunei, Canada, China, Gulf Region, Hong Kong, India, Japan, Jordan, Korea, Malaysia, Mexico, Nigeria, Norway, Russia, Saudi Arabia, Singapore, South Africa, South Korea, Taiwan, Thailand, Turkey, Zambia and Zimbabwe. International applicants can use an agent to help guide them through the application process if necessary. For more information visit: www.ed.ac.uk/international/country

English language requirements

Students whose first language is not English must show evidence of one of the qualifications below.

- IELTS Academic: total 6.5 (at least 6.0 in each module).
- TOEFL-iBT: total 92 (at least 20 in each module).
- PTE(A): total 61 (at least 56 in each of the Communicative Skills sections).
- CAE and CPE: total 176 (at least 169 in each module).

Please note:

- English language requirements can be affected by government policy so please ensure you visit our degree finder to check the latest requirements for your programme: www.ed.ac.uk/pg/degrees
- Your English language certificate must be no more than two years old at the beginning of your programme.
- We also accept recent degree-level study that was taught and assessed in English in a majority English speaking country (as defined by UK Visas & Immigration).

Abbreviations: IELTS – International English Language Testing System; TOEFL-iBT – Test of English as a Foreign Language Internet-Based Test; PTE(A) – Pearson Test of English (Academic); CPE – Certificate of Proficiency in English; CAE – Certificate in Advanced English.

www.ed.ac.uk/english-requirements/pg

Get in touch

Contact us

For more information about taught MSc programmes, please contact:

Claire Little

Tel +44 (0)131 650 4754

Email chemistry.pgt@ed.ac.uk

For more information about our doctorate programmes, please contact the Postgraduate Administrator:

Denise Wilson

Email chemistry.gradschool@ed.ac.uk

To discuss your PhD proposal, you should identify potential supervisors (see page 14). A full list of academic staff contact details can be found at: www.chem.ed.ac.uk/staff/academic-staff

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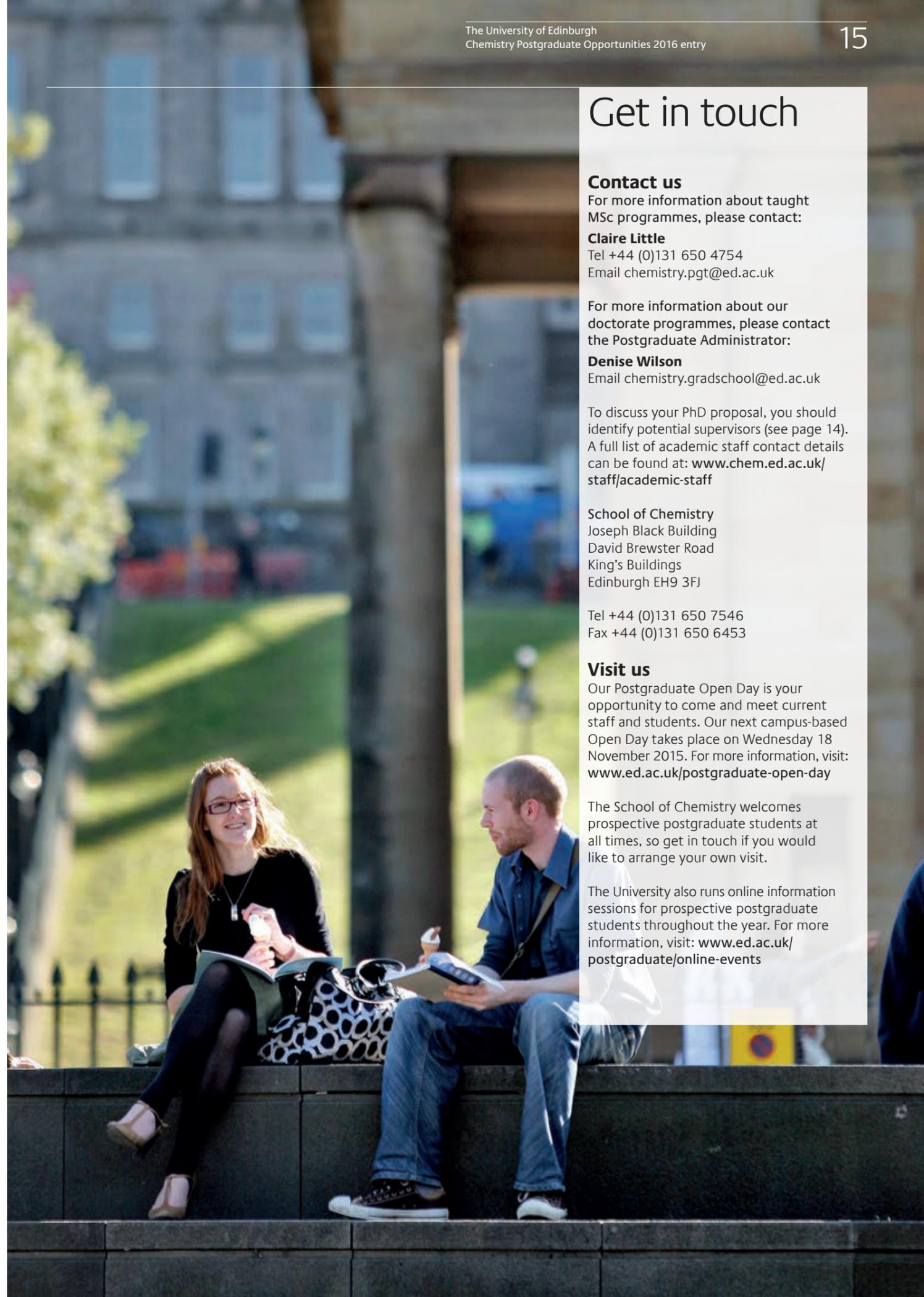
Fax +44 (0)131 650 6453

Visit us

Our Postgraduate Open Day is your opportunity to come and meet current staff and students. Our next campus-based Open Day takes place on Wednesday 18 November 2015. For more information, visit: www.ed.ac.uk/postgraduate-open-day

The School of Chemistry welcomes prospective postgraduate students at all times, so get in touch if you would like to arrange your own visit.

The University also runs online information sessions for prospective postgraduate students throughout the year. For more information, visit: www.ed.ac.uk/postgraduate/online-events



18 Nov 2015

Postgraduate Open Day

[www.ed.ac.uk/
postgraduate-open-day](http://www.ed.ac.uk/postgraduate-open-day)

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The University's standard terms and conditions will form an essential part of any contract between the University of Edinburgh and any student offered a place here. Our full terms and conditions are available online: www.ed.ac.uk/student-recruitment/terms-conditions

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