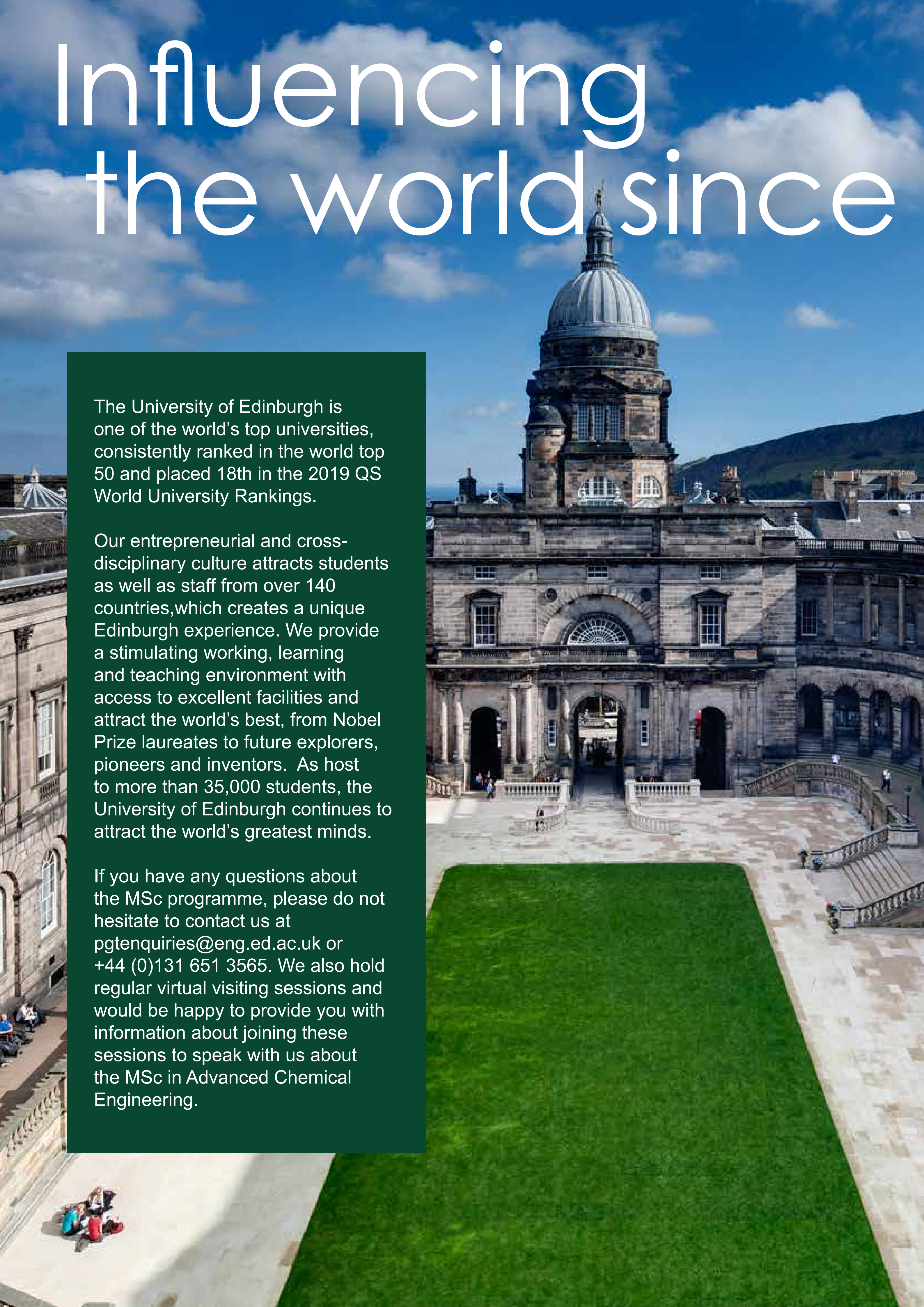
THE UNIVERSITY of EDINBURGH
School of Engineering

2019-2020

MSc Advanced Chemical Engineering

This popular degree spans a wide variety of topics, from molecular-scale fundamentals to applications and processes, with MSc dissertation projects co-advised with industrial partners.



Influencing the world since

The University of Edinburgh is one of the world's top universities, consistently ranked in the world top 50 and placed 18th in the 2019 QS World University Rankings.

Our entrepreneurial and cross-disciplinary culture attracts students as well as staff from over 140 countries,which creates a unique Edinburgh experience. We provide a stimulating working, learning and teaching environment with access to excellent facilities and attract the world's best, from Nobel Prize laureates to future explorers, pioneers and inventors. As host to more than 35,000 students, the University of Edinburgh continues to attract the world's greatest minds.

If you have any questions about the MSc programme, please do not hesitate to contact us at pgtenquiries@eng.ed.ac.uk or +44 (0)131 651 3565. We also hold regular virtual visiting sessions and would be happy to provide you with information about joining these sessions to speak with us about the MSc in Advanced Chemical Engineering.

Welcome from the MSc Programme Director

Thank you for your interest in the MSc programme in Advanced Chemical Engineering at the University of Edinburgh, the UK powerhouse in Engineering. This document provides a brief overview of the structure of the programme, its unique features, a description of the core and optional courses and links to other resources.

This one-year programme will immerse you into the most recent developments in advanced chemical engineering and will give you a unique opportunity to work on an exciting, industrially-driven project within a world-class, vibrant and international research environment. At Edinburgh, we are committed to working individually with each MSc student to understand your learning needs and career aspirations, to ensure that we effectively help you reach your full potential.

We host regular virtual visits throughout the year to provide you with more information about the programme. These virtual visits will help you prepare for your degree by giving you an opportunity to speak with academics who lecture on the programme, hear more details about course content, and learn more about the industrial partners involved with the MSc in Advanced Chemical Engineering.

If you have any queries, please do not hesitate to contact me directly.

I hope to see you in our September Welcome Week!

Dr Dimitrios Gerogiorgis
Senior Lecturer and RAEng Industrial Fellow

Introduction to Chemical Engineering

From carbon capture to sustainable water resources, from alternative energy technologies to advanced pharmaceutical processes, chemical engineers are at the frontiers of addressing the most pressing global challenges.

Chemical engineering is a rapidly evolving field, with the growing emphasis placed on multi-scale engineering approaches, computational methods, energy-efficient separations and the interface between engineering and biology. This one-year MSc programme at the University of Edinburgh will immerse you in the most current developments, associated with these themes through a combination of taught modules delivered by the key experts in the field, workshops, a research dissertation and a number of supporting activities.

Why Pursue an Advanced Chemical Engineering MSc at Edinburgh?

The University of Edinburgh is consistently ranked as one of the top universities in the world in the QS World University Rankings™. According to the most recent Research Excellence Framework (REF 2014), 94% of our research activity is rated as world-leading or internationally excellent, making Edinburgh a UK powerhouse in Engineering. In their summer research projects, our MSc students will be placed in a world-class, stimulating research environment, working on the cutting edge of the current technological developments, side by side with the leading scientists in the field here at the University of Edinburgh.

A unique feature of the programme is the strong involvement of the chemical engineering industry. The programme is advised by an Industrial Advisory Board, while summer research dissertation projects are formulated in collaboration with (and co-advised by) industrial partners, with topics ranging from computational fluid dynamics for medical applications, to carbon capture and storage, and to continuous manufacturing for the pharmaceutical industry.

A personal development plan will be laid out in close communication with you, in order to understand your training needs and empower you to fulfil your career goals.

What Does The Degree Involve?

This MSc programme logically develops from a set of core courses in the first semester, with emphasis on modern computational techniques and research methods. In the second semester 60 credits must be selected from 130 available credits, building on the themes of energy-efficient separation processes, interdisciplinary engineering and complemented by a strong component in management and economics.

The wide range of optional courses in the second semester enables you to tailor your studies to your training needs and objectives, which are assessed for you at the beginning of the MSc programme and summarised in a personal development plan. This individualized approach also guides the formulation of the study and summer dissertation projects.

"We are consistently ranked in the top 50 universities in the world

Teaching and Assessment

The programme uses a broad range of learning methods, lectures, tutorials, workshops and final exams. Assessment varies from course to course and may involve a combination of continuously assessed coursework and an examination at the end of the semester, or be based on only one of these components.

Each course has several opportunities for formative feedback. For example, within the Molecular Thermodynamics course, the detailed feedback is provided for the submitted (three) workshop reports. In another example, within the Oil and Gas Systems Engineering course, detailed oral comments are given after Q+A sessions during lectures, online materials and solutions for self-paced study are provided, and a group coursework project comprising a problem set as well as a design challenge is assigned, marked and given feedback on, in advance of the final exam. Similar arrangements exist for most courses. Each course with an exam assessment is accompanied by a detailed analysis of the exam solutions and comments on the performance of the class, provided online shortly after the exam session.

A particularly strong emphasis is placed on using virtual learning environments, including the Learn® online system for sharing lectures, videos course materials, and the digital Top Hat® interactive learning platform for real-time student engagement via laptop and smartphone devices.

Chemical Engineering Community

At Edinburgh we treat you as our extended family and we hope that you see us, the academic staff, in the same way. First and foremost, we are all part of the larger Chemical Engineering Community!

Throughout the year there are many events that bring together everyone who is associated with Chemical Engineering at Edinburgh: students, staff and industrial partners. This is an excellent opportunity to socialise with the students from other years, learn more about recent developments in chemical technologies and share your recent experience from an industrial placement or other adventure. Many of these events are organised by the students themselves through the Student Chemical Engineering Society. At the beginning of each year we will kick off the series of events with our traditional BBQ, during the first week of the semester. We hope to see you there, and to welcome you into our community.

> Every one of our departments conducts world-leading research

Links to Industry

The MSc programme in Advanced Chemical Engineering is advised by an Industrial Advisory Board, comprising of ten practicing chemical engineers from a wide variety of industrial sectors. The role of the Industrial Advisory Board is to oversee that our MSc graduates have all the necessary skills and attributes for a successful career in industry, and appropriate opportunities for professional development.

The summer MSc dissertation projects are co-formulated and co-advised by our industrial partners, with the topics of the projects reflecting both the current technological challenges and the training needs of our MSc students.

Throughout the year, we organise a multitude of networking opportunities and events oriented at introducing our MSc students to the industrial representatives, but also encouraging their engagement with the wider vibrant Edinburgh Chemical Engineering Community.

Scholarships and Bursaries

The University of Edinburgh offers several scholarships and bursaries for applicants to the MSc in Advanced Chemical Engineering. UK nationals who are permanently domiciled in Scotland, as well as EU nationals (excluding UK nationals) domiciled in the EU or Scotland but not elsewhere in the UK, can apply to the University of Edinburgh Highly Skilled Workforce Scholarships. Further information can be found at: www.ed.ac.uk/student-funding/postgraduate/uk-eu/university-scholarships/sfc-hsw. Applicants of any nationionality can apply for the prestigious Kenneth Denbigh Scholarships which are worth £1,000 each. These scholarships will be awarded to the top academic applicants to the MSc programme. For more information please visit: www.ed.ac.uk/student-funding.

We are in the top 5 for research funding in the UK

What Can I Do After My Degree?

Graduates of the Chemical Engineering programme at the University of Edinburgh enjoy diverse opportunities in the oil and gas, pharmaceutical, food and drink, consumer products, banking and consulting industries. Recent employers of our chemical engineering undergraduates include:

- BP
- P&G
- Mondelez International
- Doosan Babcock
- Atkins
- Safetec
- Xodus Group
- Cavendish Nuclear
- Diageo
- Wood Group
- GSK
- Gilead Sciences
- ExxonMobil
- Jacobs
- Halliburton

This wide range of potential employers means that our postgraduates will be exceptionally well-placed in order to secure rewarding and lucrative careers. According to the Complete University Guide (www.thecompleteuniversityguide.co.uk), the Chemical Engineering programme at the University of Edinburgh is ranked in the Top10 in terms of graduates' prospects. For more information about the support provided by the Careers Service at the University of Edinburgh, visit their web site: www.ed.ac.uk/schools-departments/careers and the chemical engineering and chemistry career blog: www.chemicalcareersedinburgh.blogspot.co.uk.

The MSc in Advanced Chemical Engineering may also lead to further studies in a PhD programme. With 94% of our research activity rated as world-leading or internationally excellent (according to the most recent Research Excellence Framework, REF 2014), Edinburgh is a UK powerhouse in Engineering. As an MSc student at Edinburgh, you will have a unique opportunity to experience this multidisciplinary research environment, and interact with PhD, MEng, MSc students and academics from Chemical Engineering, as well as other Institutes and Schools.

What is the Admissions Team Looking For?

All applicants should have at least a UK 2.1 degree or its international equivalent in Chemical Engineering. If your background is in another field outside of Chemical Engineering, please contact Dr Dimitrios Gerogiorgis (D.Gerogiorgis@ed.ac.uk), to determine if the programme is a good fit for you.

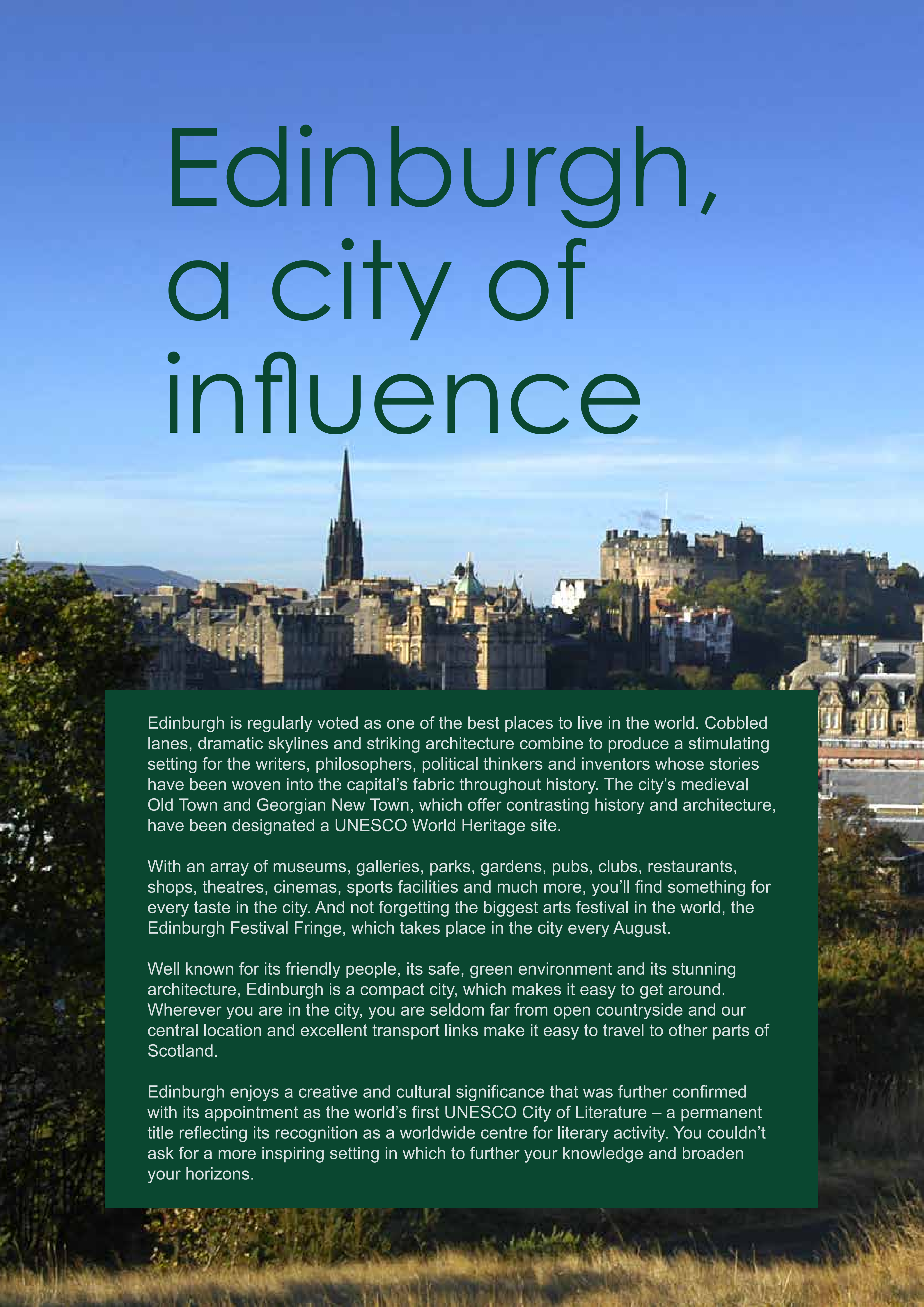
You will find our most up-to-date entry requirements on the University of Edinburgh Online Degree Finder, found here: www.ed.ac.uk/pg/913. To read further information about the application process and advice on submitting an application that will stand above the rest, please visit our Application Process webpage: https://www.ed.ac.uk/studying/postgraduate/applying.

If you receive an offer to study at the School of Engineering you will be invited to attend a virtual visit session. The sessions run regularly throughout the year and you will have an opportunity to hear more about the University of Edinburgh and the School of Engineering. Applicants and prospective students can meet with staff in an online setting, listen to presentations and chat with the them using audio or text to find our more about the School and the programmes we offer.

Where are We Located?

The School of Engineering is located in the King's Buildings campus, which is situated on the south side of Edinburgh. Getting to and from King's Buildings is easy due to its excellent public transport, walking and cycling links. The King's Buildings campus is approximately 2.5 kilometers from the Central Area and is extremely well served by the public bus system. The University provides a shuttle bus between the King's Buildings and the Central Area during term time. For more information on travel, please visit:
www.ed.ac.uk/transport/travelling-here.

At the heart of ideas and inspiration



Edinburgh, a city of influence

Edinburgh is regularly voted as one of the best places to live in the world. Cobbled lanes, dramatic skylines and striking architecture combine to produce a stimulating setting for the writers, philosophers, political thinkers and inventors whose stories have been woven into the capital's fabric throughout history. The city's medieval Old Town and Georgian New Town, which offer contrasting history and architecture, have been designated a UNESCO World Heritage site.

With an array of museums, galleries, parks, gardens, pubs, clubs, restaurants, shops, theatres, cinemas, sports facilities and much more, you'll find something for every taste in the city. And not forgetting the biggest arts festival in the world, the Edinburgh Festival Fringe, which takes place in the city every August.

Well known for its friendly people, its safe, green environment and its stunning architecture, Edinburgh is a compact city, which makes it easy to get around. Wherever you are in the city, you are seldom far from open countryside and our central location and excellent transport links make it easy to travel to other parts of Scotland.

Edinburgh enjoys a creative and cultural significance that was further confirmed with its appointment as the world's first UNESCO City of Literature – a permanent title reflecting its recognition as a worldwide centre for literary activity. You couldn't ask for a more inspiring setting in which to further your knowledge and broaden your horizons.


DUGALD
BORN NOVEMBER
DIED JUNE 11

Semester 1: September – December

Welcome Week

Semester 1: Fundamentals

The compulsory courses taken this semester are Numerical Methods for Chemical Engineers, Introduction to Research Methods, and Molecular Thermodynamics plus one or two optional courses. The optional courses are as follows: Chemical Reaction Engineering, Fire Science and Fire Dynamics, Computational Fluid Dynamics, Group Design Project in Carbon Capture, Engineering Project Management, Polymer Science and Engineering and Living Materials and their Biomaterial Replacements.

Exam Revision

Semester 1 Exam Diet

University closes for Christmas

Semester 2: January – April

University reopens after Christmas break

January Welcome Week

Semester 2: Technologies and Applications

This semester is made up of numerous optional courses. The options are: Supply Chain Management, Modern Economic Issues in Industry, Technology and Innovation Management, Separation Processes, Separation Processes for Carbon Capture, Nanotechnology, Nanomaterials in Chemical and Biomedical Engineering, Oil and Gas Systems Engineering, Particle Technology Fundamentals and Industrial Applications, Industrial Ecology and Electrochemical Engineering.

Flexible Learning Week

Semester 2 resumes

Spring Vacation

Exam Revision Week

Semester 2 Exam Diet

Semester 3, MSc Dissertation: May - August

MSc Dissertation

MSc Dissertation Submission

Course Information

Compulsory Courses

Numerical Methods for Chemical Engineers (20 credits)

20 Lectures and 20 Tutorial hours; taught in Semester 1

The course introduces students to the computational and mathematical methods for the solution of chemical engineering problems. Chemical engineers face problems in reaction engineering, unit operations, fluid mechanics and molecular simulation spanning a wide range of time and length scales which require sophisticated numerical methods to reach a solution.

This course will provide the students with a sound basis in numerical methods within the context of chemical engineering problems. The students will gain practice in applying these methods and numerical software tools to problems faced by chemical engineers.

Molecular Thermodynamics (10 credits)

20 Lecture hours, 6 hours of computing workshops (2 hours per week for 3 weeks), 6 tutorials; taught in Semester 1

Recent progress in chemical engineering sciences has been driven by newly developed abilities to manipulate matter on the microscopic level. Chemical engineering at nanoscale is becoming increasingly important. This requires a fundamental knowledge of molecular thermodynamics.

This course is an introduction to molecular thermodynamics and simulation methods, intended to equip MSc students with understanding of current methods in this field. It will address the fundamental principles of thermodynamics derived on the grounds of intermolecular interactions. In a series of accompanying workshops, the students will have a chance to apply molecular simulation tools to a range of chemical engineering problems,including simulation of CO_2 adsorption and storage in novel nanoporous materials.

Introduction to Research Methods (20 credits)

10 Lecture hours, 20 Dissertation/Project Supervision Hours, 32 Workshop hours; Full Year

This course consists of the two main components: a study project and a series of five workshops with a focus on literature survey methods; problem solving, creativity and critical thinking; technical writing and presentation; dissemination and communication. An individual study project can be a literature survey, a self-study module or an experimental or computational investigation related to a research topic. The study project may contain elements of more than one type of activity under these headings.

Advanced Chemical Engineering Dissertation (60 credits)

Core course; Dissertation/Project Supervision Hours 20, Feedback/Feedforward Hours 10, Summative Assessment Hours 60, Programme Level Learning and Teaching Hours 12; the project begins in May shortly after the spring Exam Diet

The project begins in May shortly after the spring exam diet. Each project is guided by two academic supervisors (first and second) and may be further advised by an industrial representative. Students are assigned a topic of the project according to their training needs and career aspirations, after the discussion of the available projects with the programme director.

The student is expected to formulate a research programme outline, objectives and expected outcomes by mid- June. At the end of July a poster conference is organized for all MSc students, staff and industrial representatives involved. The final thesis must be submitted by the specified deadline at the end of August.

Optional Courses: Semester 1

Chemical Reaction Engineering (10 credits)

20 Lecture hours and 10 Tutorial hours; taught in Semester 1

The course will cover 4 topics: 1) G/L reactions i.e. Absorption with reaction: kinetics and mass transfer, resistances and location of reaction, overall rate quantification, reactor choice, balance equations, reactor design. Extension for three phase reactions. 2) Non-ideal flow in reactors. Residence time distributions for reactors, diagnosing non-ideal flow from experimental RTD, quantifying conversion in non-ideal reactors, dispersion. 3) Fluid-solid reactions: Uniform conversion, shrinking core, shrinking particle models and consideration of reaction and mass transfer and controlling mechanism. Time for complete conversion calculations. Reactor design implications, including fluidised bed (FB) reactors. 4) Catalytic fluid-solid reactions: catalyst types, kinetics and LHHW models. Catalytic reactors esp packed bed, but also CSTR and FB. Intra-pellet and external heat and mass transfer. Thiele and Weisz moduli and effectiveness factors (including non-isothermal). Reactor design, especially of single or staged packed bed reactors and inter-stage heat transfer; optimum temperature profiles, reactor choices and operating choices.

Computational Fluid Dynamics (20 credits)

22 Lecture hours, 22 Supervised Practical/Workshop/Studio Hours; taught in Semester 1

This course introduces CFD by means of a set of lectures covering the background physics and mathematics, together with practical assignments that use commercial CFD software to solve flow problems. The need for error control and independent validation of results is stressed throughout. Although particular software (Star-CCM+) is used for the assignments, the underlying themes of the module are generic.

Fire Science and Fire Dynamics (10 credits)

22 Lecture hours and 11 online activity hours; taught in Semester 1

This course is intended to provide the knowledge required for quantitative fire hazard analysis. Physical and chemical behaviour of combustion systems as well as the impact of fire on structures and materials will be addressed. The student will acquire skills for quantitative estimation of the different variables of fire growth. Basic principles of fire dynamics will be used to provide analytical formulations and empirical correlations that can serve as tools for design calculations and fire reconstruction. Focus will be given to the scientific aspects of fire but some basic features of fire safety engineering will be also developed.

Engineering Project Management (10 credits)

22 Lecture hours; taught in Semester 1

Project Management is the application of management principles to deliver a project to a specified timescale, budget and quality. This course will consider the principles of the management of engineering projects with respect to the life-cyle of the project, the parties, planning, estimating, contractor selection and contract management. While there are no pre-requisites for this course it is recommended that students who enrol have a prior knowledge of engineering projects and their construction.

Polymer Science and Engineering (10 credits)

20 Lecture hours and 10 Tutorial hours; taught in Semester 1

This course gives an introduction to polymer science and engineering, covering the properties of polymers, polymer reactions and reactors, and polymer forming processes. The first 14 lectures are taught jointly with MECE10009 Polymers and Composite Materials 4, and the remainder of the course, on polymer reaction engineering, is covered by independent study guided by seminars and tutorials.

Living Materials and their Biomaterial Replacements (10 credits)

20 Lecture hours and 10 Tutorial hours; taught in Semester 1

The tissues that make up the human body display extraordinary characteristics; self-assembly, selfhealing, adaptive and sometimes actuatable. This course looks into the source of these characteristics and then considers what materials we, as engineers, can use to replace them. We will focus attention on the musculoskeletal and cardiovascular systems of the body and the biomaterials that have been developed for use as substitutes. We'll consider how the body reacts to the presence of man-made biomaterials and the impact of the need for biomaterial sterilisation. Not all replacement materials are man-made; we'll think about tissue engineering as a way to grow new tissue. Finally, we'll introduce the legal processes surrounding regulation of biomaterial use and consider the ethics of growing new body parts.

Group Design Project: Power Station with Carbon Capture and Storage (20 credits)

4 Lecture hours; taught in Semester 1

This project is intended to introduce students to multidisciplinary planning and design. The project should develop creative thinking, team skills, and an improved understanding of the other disciplines involved in delivering CCS schemes and the interactions that will be required between them within the full CCS chain. Interdisciplinary teams will arrive at a detailed design for a power plant that could use CO2 capture. The course reflects rapidly emerging trends in power plant and environmental engineering allowing students to develop their ability to tackle 'real world' problems where a broad range of, sometimes competing, design requirements must be taken into account.

Optional Courses: Semester 2

Supply Chain Management (10 credits)

20 Lecture hours and 10 Tutorial hours; taught in Semester 2

This course focuses mainly on the materials management topics of operations management. Its goal is to help students become effective managers in today's competitive, global environment. This is because many of the students who take this course will progress to become managers in manufacturing (and service) organisations in a variety of functional areas. Students should gain an understanding of what material managers do and realise that materials management is a highly complex activity and involves many business functions.

Modern Economic Issues in Industry (10 credits)

Optional course; 33 Lecture hours; taught in Semester 2

This course aims to develop an understanding of economic principles and apply them to current industrial issues. Topics covered include investment, pricing, sustainability and the EU.

Technology and Innovation Management (10 credits)

22 Lecture hours; taught in Semester 2

In an increasingly competitive and fast changing economic climate innovation represents a key route for organisations that want to survive and prosper. This course addresses the area of the management of technological innovation with a critical perspective on the key role of technology giving rise to new knowledge, products and processes. In so doing, it provides students with a clear understanding and appreciation of innovation dynamics both within and across organisational boundaries. The course draws from state of the art science, technology and innovation literatures in which Edinburgh has longstanding strengths. By making extensive use of in-depth case study materials, the course analyses opportunities and challenges related to creating, sustaining and managing innovation with a specific focus on technology-based organisations.


bollé
DELL

Gas Separations Using Membranes (10 credits)

20 Lecture hours and 10 Tutorial hours; taught in Semester 2

The course complements other courses on CO2 capture available to MSc students illustrating the role that membranes could play in the separation process. In addition to introducing transport phenomena in membranes and the different materials and properties, a brief overview of the module design will be considered. Several case studies will be illustrated to highlight the correlation between material properties and real applications.

Separation Processes (10 credits)

20 Lecture Hours; taught in Semester 2

One half of this course covers adsorption, absorption and crystallization processes. The section on adsorption process starts with concise lectures for introducing adsorption fundamentals, adsorption column dynamics and industrial cyclic adsorption processes. It then deals with how to design cyclic adsorption processes in depth. The second part on absorption processes, applies absorption to acid gas removal. The third part on crystallisation processes includes crystal phase equilibrium, mass and energy balances and the analysis of a crystalliser.

The other half of the course, on distillation, comprises a discussion of composition and temperature profiles in ideal distillation columns, followed by examples and purposes of non-standard configurations and energy integration schemes for distillation. The modelling basis for tray-by-tray simulation of distillation columns is followed by a review of how azeotrope - forming mixtures can be separated. Topics include the causes of non-ideality, extractive and azeotropic distillation and composition trajectories.

Separation Processes for Carbon Capture (10 credits)

10 Lecture Hours and 10 Tutorial hours; taught in Semester 2

The course covers the main separation processes required for carbon capture applications. These include chemical absorption using amine for post-combustion capture, physical absorption for pre-combustion capture, Solid-looping process for post-combustion capture and other advanced separation processes relating to carbon capture. The students will be given formal lectures to introduce them to the overview of various separation processes for carbon capture. The students will then be asked to develop process flowsheets for a carbon capture option and analyse this in detail as part of group project.

Oil and Gas Systems Engineering (10 credits)

20 Lecture hours; taught in Semester 2

The course introduces students to the science, technology and practice of oil and gas systems engineering, the quintessence of petroleum extraction and fossil fuel production. Onshore as well as offshore reservoir and surface phenomena, production methods and equipment are analysed quantitatively with emphasis on chemistry, geology, operations and economics and the design aspect is covered by relevant team coursework.

Nanotechnology (20 credits)

20 Lecture hours and 10 Tutorial hours; taught in Semester 2

This course will provide a broad introduction to nanotechnology. By considering the underpinning science and case studies, insight will first be provided into why the nanoscale is so important and different from all other scales that have been considered by engineers to date. This is followed by consideration of nanotechnology from the perspectives of the main engineering activities of design, manufacture and testing.

Nanomaterials in Chemical and Biomedical Engineering (10 credits)

20 Lecture hours and 10 Feedback/Feedforward hours; taught in Semester 2

This course will discuss the synthesis, characterisation and application of nanomaterials used in Chemical and Biomedical Engineering.

Particle Technology Fundamentals and Industrial Applications (10 credits)

22 Lecture Hours and 11 Tutorial hours; taught in Semester 2

The course focusses on recent advances in particle technology and its application in manufacturing and processing particulate products. It offers both fundamentals and industrial case studies. The lectures will draw from the state of the art research and industrial practice. A computational module will also be taught mainly focusing on the discrete element method.

Industrial Ecology (10 credits)

20 Lecture Hours and 12 Tutorial hours; taught in Semester 2

Industrial ecology is a transdisciplinary perspective that seeks to understand how the environment, cultural systems, and the economy can be efficiently managed and improved in order to approach and maintain sustainability. This introductory course aims to: (1) Introduce industrial ecology, providing a foundation for deeper understanding and application of key concepts and various analytical approaches, (2) Inspire students to think critically about sustainability issues using a systems perspective, beyond traditional disciplinary boundaries, (3) Develop skills in qualitative and quantitative industrial ecology concepts and methods.

Electrochemical Engineering (10 credits)

20 Lecture Hours; taught in Semester 2

This course will provide a broad introduction to Electrochemistry and electrochemical technology. The course will introduce the principles of Electrochemistry and review their application in a wide range of areas such as synthesis, energy systems, materials and surface engineering and water treatment. Special emphasis will be put on the design and engineering aspects behind electrochemical technology.

The University of Edinburgh is ranked 18th in the world by the QS World University Rankings 2019.

Contact Us

Email: pgtenquiries@eng.ed.ac.uk
Tel: +44 (0)131 651 3565

School of Engineering
The University of Edinburgh
The King's Building
Edinburgh
EH9 3FB