



Civil Engineering and the University of Strathclyde

(GRPE). The GRPE was funded to promote multidisciplinary collaboration between leading research groups in the west of Scotland and to provide world-class joint research facilities (see www.grpeng.ac.uk). Member universities include Strathclyde, Glasgow, Glasgow Caledonian University and the University of the West of Scotland. In addition, the Department hosts the David Livingstone Centre for Sustainability (DLCS) which aims to promote cross-disciplinary programmes in teaching and research in the areas of environment and sustainability across the whole University (see www.strath.ac.uk/dlcs).

The University

The University is located in the heart of Glasgow, the UK's fourth largest city. Glasgow is one of the liveliest cities you'll ever experience. It is famous for its shopping, vibrant music scene and brilliant nightlife, as well as its cultural and architectural heritage. You will be spoiled for choice with all the restaurants, museums, shops and places of interest within easy walking distance.

Just beyond the city of Glasgow lies some of Scotland's most beautiful scenery. The local area is rich in history and heritage and the Trossachs, the Highlands and the Borders are easily accessible.

The Department

Civil Engineering at Strathclyde is one of the first departments in the UK to fully embrace the importance of the environment in today's world. It is a strong and forward-looking department and the ideal choice for anyone interested in undertaking a postgraduate degree that will benefit them in the job market. Our strong links to industry and public bodies are a unique feature of the Department and are integral to our approach to research and education. These links also provide our students with valuable contacts outside the world of academia. The Department is one of the main providers of graduates in Civil Engineering and Environmental Health in Scotland.

The Department leads the Joint Research Institute in Environment, Infrastructure and Transportation, formed in 2007 under the Glasgow Research Partnership in Engineering



Department of Civil Engineering – David Livingstone Centre for Sustainability

MSc/PgDip/PgCert

ENVIRONMENTAL SCIENCE

A collaboration between the Department of Civil Engineering at Strathclyde and the Department of Chemistry at the University of Glasgow.

This MSc has a particularly strong scientific underpinning to environmental analysis, with nearly 100 hours of practical and laboratory work. Established in 1991, it combines the joint expertise of Civil Engineering from Strathclyde and Chemistry from Glasgow. Moreover, the course is delivered in collaboration with the most important environmental public sector organisation in Scotland (the Scottish Environment Protection Agency – SEPA). This ensures wide access to practitioners' knowledge and understanding of the scientific processes, procedures and policies involved in the day-to-day management of the environment. In effect, this MSc is the only truly cross-disciplinary, science-based postgraduate course of its kind in Scotland.

It is suitable for students from earth, biological and physical sciences, engineering, mathematics, environmental management, and other relevant disciplines.



How to Apply

Apply online via the postgraduate course page: www.strath.ac.uk/courses/postgraduate

Contact

Joint Course Leaders:
Dr Charles Knapp (Civil Engineering, Strathclyde)
Dr Hugh Flowers (Chemistry, Glasgow)

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For more information about the Department and our courses visit

www.strath.ac.uk/civeng/pg

The University of Strathclyde is a charitable body, registered in Scotland, number SC015263.
The University of Glasgow is a charitable body, registered in Scotland, number SC004401.

The Programme and its International Context

The course has been designed to meet the global demand for scientists trained in environmental science. It covers the fundamental scientific concepts of environmental science which will enable graduates to think and act holistically with regard to environmental and sustainability issues. One of the main strengths of this course is the collaboration of different scientific disciplines which is particularly relevant to tackling the environmental sustainability challenges of the 21st century.

The aims of the course are to provide students with the knowledge and skills to:

- describe and apply the chemical, physical, biological and mathematical theories in order to understand the nature of, and changes in, the environment
- describe and determine how the environment is influenced by human activity
- describe the basic principles and instruments of current environmental legislation and the regulatory requirements and methods of environmental appraisal and impact assessment

In addition, the course will develop:

- employability through the acquisition of specific knowledge and skills consistent with employers' expectations within the environment sector
- ability to think independently, to solve open-ended problems and to operate in a creative domain
- ability to make sound judgements in relation to environmental science and sustainability
- interpersonal and teamworking skills, as well as a range of transferable key skills in numeracy, communication and presentation, use of computer technologies, data extraction and analysis

Programme Structure

The Diploma and MSc courses run concurrently, involving a curriculum of six core modules (totalling 100 credits) and a range of optional modules (minimum of 20 credits). Each University is responsible for 60 taught credits. Each module is taught two to three hours per week over eight to 12 weeks. In addition, MSc students undertake a dissertation (60 credits). Progress to the MSc is dependent on performance in the instructional modules.

For part-time study the modules can be taken over two years (attending classes typically one or two days per week) with the dissertation completed in the second year. In addition to the dissertation topics proposed by course leaders and industrial partners, part-time students may propose topics of particular relevance to their employer.

Core Modules

University of Strathclyde – Civil Engineering:

- Air Pollution Control
- Atmospheric Pollution Impact Assessment
- Research Methodology with Environmental Monitoring & Analysis

University of Glasgow – Chemistry:

- Science of the Natural Environment: Fundamental Principles
- Science of the Natural Environment: Applications
- Water Pollution

Optional Modules

(All taught by Strathclyde – not all classes may be offered each year)

- Fundamentals of Environmental Forensics
- Ecology, Biodiversity and Sustainability
- Pollution and Rehabilitation of Degraded Ecosystems
- Principles of Sustainable Development
- Environmental Management Systems
- Environmental Impact Assessment
- Spatial Query & Analysis using GIS
- Climate Change Mitigation & Adaptation

Duration of Course

MSc: 12 months full-time; 24 months part-time
PgDip: 9 months full-time; 18 months part-time
PgCert: 6 months full-time; 12 months part-time

Entry Requirements

MSc: A first degree or other qualification equivalent to a second-class Honours degree in earth, biological and physical sciences, engineering, mathematics, environmental management, and other relevant disciplines; two supportive academic references; and/or appropriate professional experience or achievements.

PgDip: A wider range of qualifications will be considered by the course leader.

In all cases, for candidates whose first language is not English, minimum standards of written and spoken English are an IELTS score of 6.5 (or a TOEFL score of 600, TOEFL internet-based test of 100, TOEFL computer-based test of 250).

Fees

For information on current fee levels, see: www.strath.ac.uk/registry/students/finance

The Department of Chemistry, University of Glasgow

The Department of Chemistry at the University of Glasgow has a long history of excellence in research and teaching. The broad research portfolio spans the entire spectrum of chemical science as well as the interfaces with biology, environmental science, materials science and physics.

Together with Strathclyde's Department of Pure & Applied Chemistry, WestCHEM, the Research School in Chemistry for the West of Scotland has been established which offers an outstanding research environment in a large, diverse and expanding chemistry research school. WestCHEM is also part of ScotCHEM, a major new collaborative venture between the major schools of Chemistry in Scottish universities.

Input to the MSc is by the Environmental Chemistry group, who have a strong track record in research and teaching. Graduates of this group are to be found in environment-related jobs, including regulatory bodies, such as SEPA, and a number of environmental consultancies, as well as analytical laboratories.

Postgraduate Courses Offered by the Department

In addition to the MSc in Environmental Science the Department also offers the courses listed below. All the courses already involve extensive industrial collaboration and further partnerships with companies, government agencies and NGOs are being developed.

- MSc Environmental Engineering
- MSc Environmental Entrepreneurship – in collaboration with Hunter Centre for Entrepreneurship, the first degree of its kind in Europe
- MSc Environmental Forensics – in collaboration with the Centre for Forensic Science, Dept of Pure & Applied Chemistry, the first degree of its kind in the UK
- MSc Environmental Health – accredited by REHIS
- MSc Environmental Studies
- MSc Geotechnics* – in partnership with industry
- MSc Global Water Sustainability*
- MSc Hydrogeology – new for 2010-11
- MSc Science, Technology & Sustainability
- MRes Geo-Environmental Engineering
- MRes Integrated Pollution Prevention & Control (IPPC)
- MRes Sustainable Construction & Infrastructure

* A joint degree between the Universities of Strathclyde and Glasgow

Accreditation has been sought from the Institution of Civil Engineers (ICE) for our MSc courses as 'matching sections'.