MSc in Environmental Health Sciences
What is Environmental Health?

Environmental Health is the assessment & management of environmental influences on human health, including study of:

- **Environmental protection** (including control of air, water and land pollution)
- **Food safety & hygiene** (including production, distribution & fitness for human consumption)
- **Occupational health & safety** (including investigation & control of work-related ill health)
- **The built environment** (including homes, workplaces & public spaces).

The above examples highlight the important & highly worthwhile nature of environmental health work. Many environmental health students are motivated by a desire to directly improve living & working conditions to the benefit of a wide range of people.

Special features of Environmental Health Sciences programme at the University of Strathclyde:

The MSc in Environmental Health Sciences produces graduates with broad scientific and professional knowledge and a sound understanding of Environmental Health issues.

The wide scope of Environmental Health and the corresponding breadth of the degree reflect rapid technological progress. Environmental impact assessment, sustainable development, air, water and noise pollution are increasingly important and there is a pressing need for graduates with skills in these disciplines. Students develop expertise in current methods for examining factors that affect human health, assessing and managing the risks involved, and meeting the challenges resulting from changes in the interaction between people and the environment.

Enhancing Environmental Health in developing countries:

Staff within the Department of Civil & Environmental Engineering have engaged with developing Environmental Health training in Africa for over 20 years. The Department has been a key player in gaining recognition for the contribution that environmental health professionals make in Africa. Departmental staff contribute to the African Academy for Environmental Health, who have published, via a British Council sponsored DelPHE (Development Partnerships in Higher Education) grant, a generic curriculum for training programmes in Environmental Health within Africa. The University of Strathclyde continues to maintain active links with Environmental Health activities in Malawi.
The Host Department: The MSc Environmental Health Sciences is taught by the Department of Civil & Environmental Engineering. Although Environmental Health is a distinct scientific discipline, it has strong links with Civil Engineering through engineering approaches to manage risks to human health from contaminated water, air, and land; and in the design of built environments that account for potential health impacts on people.

The Department has high quality teaching facilities and staff with an international reputation in specialist fields of Environmental Health. Students learn in a friendly and supportive environment, with an ethos of staff-student communication fostered through guidance schemes and liaison committees.

The Department has strong links with professional organisations responsible for Environmental Health & Environmental Protection throughout the UK. Links with Europe, the USA, Africa & Australia provide many students with much-valued opportunities to undertake part of their studies abroad.

Structure of MSc programme:
Studied over 1 year full-time or two years part-time. The course is arranged into two 15 week semesters, each consisting of 12 teaching weeks followed by one week of revision and two weeks of examinations. The MSc involves a core curriculum of eight modules (totalling 80 credits) and the selection of four optional modules (40 credits). Each module is taught two to three hours per week over 8 to 12 weeks. In addition, students also undertake a research dissertation (60 credits).

Compulsory Core Modules:
- Air pollution, climate change & human health
- Contaminated Land Management
- Food Inspection and Control
- Food Safety and Hygiene
- Occupational Health and Toxicology
- Public Health Studies
- Waste Management and Landfill Design
- Water and Environmental Management

Optional Modules (choice of 4):
- Acoustics
- Environmental Impact Assessment
- Environmental Pollution Management
- Geographical Information Systems (GIS)
- Housing Policy and Law
- Infection and Vector Control
- Pollution of Degraded Ecosystems
- Principles of Environmental Microbiology
- Qualitative & Quantitative Research Methods
- Sustainability and Strategic Environmental
Final year students monitoring urban air pollution on a rooftop site at the University.

Methods of teaching and assessment: Throughout the course there is a strong emphasis on teaching that is relevant to contemporary problems faced by communities, government, industry and commercial organisations. For example, external professionals work together with academic staff and students in the teaching of case studies of outbreaks of water-borne and food-borne diseases, and in urban and industrial air quality management.

Teaching is based on a core of conventional lectures and tutorials, complemented by group projects, laboratory classes, student-led seminars and fieldwork. Students present work in written, verbal and graphical forms, including field and laboratory reports, portfolios, posters and oral presentations. Training in communication and presentation skills is provided. Laboratory work in Chemistry and Bioscience allows interaction with students from other disciplines. There are many opportunities for fieldwork, together with chemical and microbiological analyses in dedicated Public Health laboratories. The Department has an extensive computer suite where laboratory classes help to develop information technology skills.

Project students collecting water specimens with University of Malawi staff.
Career opportunities in Environmental Health

Graduation day for Environmental Health students.

Career opportunities:

The Environmental Health MSc produces graduates with a broad knowledge of environmental influences on health, who are well prepared for a wide range of professions that require intellectual flexibility and analytical skill. Many graduates from the Strathclyde programme have highly successful careers in environmental consultancy, health and safety management, food industry, public water utilities, waste management, and housing sector. Other options include careers as Environmental Protection Officers (EPOs) working for the Environmental Protection Agencies, e.g. the Scottish Environment Protection Agency (SEPA), and the Environment Agency. There is increasing recognition by employers in the private sector that graduates in Environmental Health have skills and backgrounds that are well suited to management roles in a range of related business activities, including the specialist field of Corporate Social Responsibility (CSR).

Employers of Strathclyde Environmental Health graduates include: AECOM; ACS Physical Risk Control Ltd; British Army; British Petroleum; Glasgow Caledonian University; GlaxoSmithKline plc; Health Protection Scotland; IBI Group Inc; International Atomic Energy Agency; Institute of Occupational Medicine; Malaysian Government; Maltese Government; Swaziland Department of Health; Logica plc; Malawi Government; National Health Service in Scotland; Ricardo AEA Ltd; Royal Bank of Scotland; Royal Environmental Health Institute of Scotland; Royal Navy; RPS Group Plc; Scottish Environmental Protection Agency; Scottish Government; UK Meteorological Office; University of Edinburgh; University of Glasgow; University of Strathclyde; World Health Organisation.

Monitoring noise pollution in an urban environment.

SEPA staff collecting seawater specimens for biological and chemical analysis at a designated bathing beach.
Admission requirements

Admission requirements to the MSc programme:
Minimum requirements for entry are a first or second class Honours degree from a UK University (or equivalent) in a relevant science (e.g. Biology, Chemistry, Food Technology, Environmental Science) or engineering discipline. Other qualifications may be acceptable, and each application is judged on its merits, please contact the department for further information.

Environmental Health Open Day:
The Department holds an open days each year (usually in spring). Prospective students are invited to visit the Department, find out about the courses, and look around the public health laboratories and computing facilities.

Teaching in Environmental Health

The Environmental Pollution Management module includes a case study in industrial pollution control at the Grangemouth petrochemical complex with input from pollution control professionals from SEPA, Falkirk Council and Ricardo AEA Ltd.
Tracy Thomson:

I learned of the multi faceted nature of environmental health through a work placement period from my school.

Throughout the UK, and the world, there are many opportunities to work in Environmental Health, and I decided to take the global challenge. Through an existing British Council Higher Education Link between Strathclyde and the University of Malawi, I have recently completed my PhD on waterborne disease in children, as well as teaching and involvement in other public health projects. All in all, this has been an experience one hundred times more than what I expected! In the future I intend to build on what I have learned in Malawi and use it to assist others.

Stuart Sneddon:

I really enjoyed studying at the University of Strathclyde for both academic and social reasons.

The MSc course provided myself and other students with a good understanding of the numerous fields encompassed by environmental health, and a strong foundation for developing a career as an environmental professional. All the lecturers were knowledgeable and encouraging, providing a supporting environment for students of all ages to reach their full potential, through both taught courses and research.

The social aspects enhanced my experience at Strathclyde further. There were always opportunities to interact with classmates and other students through sporting and social events. The University provides a wide range of sporting and social events, which enable MSc students to feel welcome and involved very quickly.

I believe that by completing the MSc I have gained greater insight into a wide range of environmental issues that are a benefit to me in the role of an environmental consultant.

Overall, I can’t express how much I enjoyed my time at Strathclyde University. I made many friends during my degree and would recommend the course and University to anyone interested in a career in the environmental sector.
Contact for further academic information:

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