

Environmental science

Essentials

Research programmes

MPhil, PhD Environmental Science

Admissions requirements

For information on overseas degrees that meet the admissions requirements, refer to pages 156-157

A first- or upper second-class undergraduate honours degree in environmental science, chemistry, geography, geology, biology or related subjects

English language requirements

IELTS 6.5 overall, with not less than 6.5 in Writing and 6.0 in the other sections. Internet TOEFL with 92 overall, with 21 in Listening, 22 in Reading, 24 in Speaking and 25 in Writing. For more information and alternative English language requirements, refer to page 156

Fees

Refer to pages 158-159 for information on fees

Further information

Environmental science,
Deeptima Massey,
School of Life Sciences,
John Maynard Smith Building,
University of Sussex, Falmer,
Brighton BN1 9QG, UK
T +44 (0)1273 678057
E d.massey@sussex.ac.uk

- In the 2008 Research Assessment Exercise (RAE) 80 per cent of our environmental science research was rated as internationally recognised or higher, and one-third rated as internationally excellent or higher.

- Sussex is ranked among the top 20 universities in the UK for geography and environmental science in *The Complete University Guide 2011-12* and *The Guardian University Guide 2012*.

- Environmental science forms a central part of the Environmental Systems and Processes Research Group (ESPRG), which acts as a focus for interdisciplinary environmental research across the University.

- The ESPRG has been recognised as a Marie Curie Training Site by the EU.

Research programmes

Diverse research projects are available that often involve collaboration with other research groups across biology and chemistry. Areas include:

- assessment of contaminated land
- uptake of heavy metals in soils by plants and its implications for risk assessment
- uncertainty of measurements caused by primary sampling of food and of the environment
- biological effects of various classes of environmental contaminants in fish
- fate of endocrine-disrupting chemicals in the aquatic environment
- geochemical cycling and reactivity of contaminants in estuarine and coastal systems, and
- behaviour of heavy metals in the environment.

Recent thesis titles

Development of biomarkers of estrogen exposure in the marine bivalve Mytilus edulis Linnaeus (Mollusca: Bivalvia)

Estimation and achievement of optimal measurement uncertainty from the sampling of food and feed

Investigation of steroid receptor active compounds in UK wastewater treatment works effluents

Isolation of the retinoblastoma cDNA from the marine flatfish dab (Limanda limanda) and evidence of mutational alterations in liver tumours

Occurrence and removal of endocrine-disrupting chemicals from aquatic environment by adsorption and photodegradation

Optimisation of investigation strategies for contaminated land

Optimising uncertainty from sampling and analysis of foods and environmental samples

Polycyclic aromatic hydrocarbons: their speciation and fate in marine water and sediments

The effects of the environmental endocrine disrupter, ethinyloestradiol, on steroid metabolism in the roach (Rutilus rutilus)

Uncertainty in the estimation of bioavailability and its implications for human health-risk assessment

Uncertainty of geochemical measurements of contaminated land: causes, estimation and cost-based optimisation

Career opportunities

Many of our graduates have gone on to pursue careers in teaching or research. Others have gone into industry in organisations such as the Carbon Trust.

Faculty research interests

Research centres around the processes controlling the mobility, persistence, availability and biological effects of toxic substances in soil and aquatic systems. Areas of current research are briefly described below. For more detailed information, visit www.sussex.ac.uk/biology

Elizabeth Hill *Chemical pollution and chemical ecology.* Endocrine-disrupting chemicals. Metabolite profiling of environmental contaminants toxicity to wildlife and human health.

Michael Ramsey *Environmental geochemistry.* Uncertainty of measuring environmental contamination. Applications include human health; contaminated land, plants and food.

Some of our research at Sussex uses field portable tools to give instant measurements of the concentration of contaminants in the environment. The device pictured provides new information on the heterogeneity of the contamination, which has implications for plant uptake of heavy metals

