MSc Environmental Pollution

The programme structure consists of a mixture of core taught modules (120 credits worth) reflecting the highly vocational nature of the programme, and an independent research project (60 credits worth). Together these components comprise a total of 180 credits that students are required to take at MSc level. Our current modules are:

Programme Overview

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<td>Environmental and Pollution Microbiology</td>
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<td>Laboratory analysis of Soils and Pollutants</td>
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<td>Air Pollution: Effects and Control</td>
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Detailed Module Outlines

Pollutant Behaviour in the Environment

Module Convenor: Dr Elizabeth Shaw

Description: The module focuses on both the processes and applied aspects of pollutant behaviour in the environment with an emphasis on terrestrial and freshwater systems and their interface

Aims: This module aims to provide a fundamental grounding in the physical and (bio)chemical processes underpinning the behaviour of pollutant chemicals in the environment, their risk assessment and their remediation.

Assessment: Structured essay and two written reports

Environmental and Pollution Microbiology

Module Convenor: Dr Elizabeth Shaw

Description: This module provides an understanding of the major groups of microorganisms in soils, their adaptation to soil environments, and their impact on the wider environment.

Aims: To provide you with an understanding of the major groups of microorganisms in soils, their adaptation to soil environments, and their impact on the wider environment. Emphasis will be placed on the role of soil microorganisms in global cycling of C, N, P and S and in the degradation of natural and anthropogenic chemicals in the environment (biogeochemical processes).
Assessment: Essay, written report and exam.

Laboratory Analysis of Soils and Pollutants
Module Convenor: Dr Geoff Warren
Description: This module introduces you to the main analyses which are applied to soils to determine their properties
Aims: To provide you with laboratory skills related to good laboratory practice and the importance of care for health protection and precise results. The module introduces the apparatus used to determine the fate and behaviour of a whole suite of pollutants and develops good reporting and record keeping in the laboratory.
Assessment: Practical skills assessment and written report

Air Pollution: Effects and Control
Module Convenor: Prof Richard Skeffington
Description: This module examines the effects and control of air pollution, enabling students to understand the issues and give them a basis for evaluating the controversies.
Aims: To promote an understanding of the nature and effects of human-induced air pollution and to assess some current controversies on the effects of air pollutants and the appropriate control measures to be applied.
Assessment: Essay, exam and oral presentation

Quantitative Analysis of Environmental Data
Module Convenor: Dr Joanna Clark
Description: This module will provide an overview of commonly used statistical and graphical techniques for environmental data analysis.
Aims: To help you learn how to analyse environmental data by applying and interpreting the outputs from a range of classic and modern statistical methods using Minitab and ArcGIS.
Assessment: Written report

Practical Site Investigation and Assessment
Module Convenor: Dr Geoff Warren
Description: In this module you will undertake a practical site investigation on a former landfill. The results of the field sampling are used to develop a risk assessment of the site. The findings are presented to an expert panel under realistic conditions.
Aims: To teach the theory and application of techniques for contaminated site investigation and assessment with the subsequent presentation of the findings to clients.
Assessment: Written assignment, set exercise and oral presentation

Waste and Environmental Management
Module Convenor: Dr Steve Robinson
**Description:** This module will provide you with an understanding of the various ways in which underlying principles are applied to the management of environmental issues in the commercial world.

**Aims:** To provide you with an understanding of the origin and composition of a variety of industrial and domestic organic and inorganic wastes, their treatment and disposal.

**Assessment:** Essay and exam

**Field Class**
**Module Convenor:** Dr Tom Sizmur

**Description:** The field class visits Dartmoor National Park and provides field examples of environmental problems discussed during the teaching terms.

**Aims:** To provide students with the knowledge and practical skills for (i) Assessing environmental and human impacts at ecologically sensitive sites, (ii) Site investigation of contaminated soils, and (iii) The influence of effluent discharges on water quality.

**Assessment:** Written reports

**Research Skills and Careers Learning**
**Module Convenor:** Dr Rob Batchelor

**Description:** This module provides a comprehensive knowledge of the resources, techniques and skills required for conducting independent research and critical analytical writing at Masters Level and for future study and employment within and beyond the discipline.

**Aims:** To enable you to access your own learning needs and provide the opportunity to gain practical experience in a range of ICT and data sources, and to develop your own independent research. You will also learn about publishing and presenting your work, interview techniques and article critiques.

**Assessment:** Written assignment and portfolio

**Research Project**
**Module Convenor:** Dr Elizabeth Shaw

**Description:** This module provides training in the skills required to devise, carry out and report a scientific project

**Aims:** The project, which may be in any appropriate area of Environmental Pollution, is intended to provide training in the skills required to devise, carry out and report a research project.

**Assessment:** Literature review and dissertation.