

# Environmental Science

## Environmental Science and Employment

Environmental Science graduates have a long track record in gaining employment across a number of different professions and organisations, including environment-based industries. This is due to the wide range of skills they have developed in the study of the subject through hands-on learning activities such as fieldwork, laboratory work and team-based projects. Working in the natural environment provides opportunities and constraints on project work that are different, unexpected and more challenging than those found in classroom-based activities. The skills and qualities developed through studying Environmental Science are highly transferable into a variety of roles and different working environments, and form the basis of the real contributions highly motivated and able employees can make to an organisation. In particular, the abilities to think through issues, analyse situations and problems and come up with creative solutions, and to work with others in sometimes difficult and tight timeframes, and unfamiliar environments, are familiar skills to Environmental Scientists. As a result, they have a highly desirable suite of skills which are of a premium to all types of organisations.

## What is Environmental Science?

Environmental Science is the study of present and past processes in the surface and near-surface Earth, its waters and atmosphere. It includes physical, chemical, biological and human processes, the history of the Earth during the period of human occupancy, and the monitoring and management of natural and human-induced environmental changes. Environmental scientists develop their knowledge through accurate observation and recording in the field, and fieldwork and other forms of hands-on learning are key features of higher education degree programmes.

## Knowledge, skills and competencies

Like all graduates, Environmental scientists should possess the following skills and qualities: communication, organisation, critical thinking, research skills, critical analysis, presentation, ability to work under pressure, self-management, interpersonal skills, confidence and a willingness to learn.

More specifically, a typical Environmental scientist can offer advanced knowledge and skills in many or all of the following:

### Knowledge

- Monitoring and management of natural and human-induced environmental changes such as surface and groundwater, human, agricultural and industrial waste, natural and semi-natural environments, environmental impact assessment and environmental legislation.
- An interdisciplinary approach to the awareness of environmental problems that combines breadth and depth of understanding.
- Global awareness and an understanding of earth systems, sustainability and conservation.

### Thinking skills

- Ability to think and make decisions in an integrated and holistic way and to work with and appreciate complexity and change.
- Competence in developing arguments from many points of view including scientific, philosophical and ethical perspectives.

### Practical skills

- By routinely working in teams on laboratory, desk and field-based research, environmental scientists are versed in project management including planning, execution and evaluation; this involves skills such as time-management, risk-assessment, problem solving and analysis.
- Environmental Science requires the generation and use of a diversity of data types (text, numbers and images). They therefore have well-developed literacy, numeracy and graphicacy skills and they are accustomed to manipulating and presenting these various data using a range of ICT formats.
- The complex 'real-world' nature of Environmental Science research requires environmental scientists to be flexible and adaptable – they must have the confidence and initiative to be able to deal with the unexpected.

To check the growing range of resources produced by the Subject Centre to support employability and the use of this profile (including the Skills and Attributes map), go to [www.gees.ac.uk](http://www.gees.ac.uk).

This profile, produced in 2005, is based on the QAA benchmark to be found at [www.qaa.ac.uk/academicinfrastructure/benchmark/honours/default.asp](http://www.qaa.ac.uk/academicinfrastructure/benchmark/honours/default.asp).