The range of environmental challenges facing governments and organisations is creating new opportunities for a new generation of environment professionals. Growth areas include corporate social responsibility and sustainability management within companies and organisations. Environmental professionals are increasingly required to be able to manage a wider brief, embracing a range of challenges.

Management of the natural environment is increasingly important in all sectors from business to public policy. This course will equip you to critically evaluate environmental issues and contribute to the economic and policy decision making process in organisations of any size.

Topics include the identification of sustainability issues, financial and economic approaches, communication, regulatory and social issues, and the practice of environmental management in organisations implementing ISO14001 systems. Students on the course have the opportunity to actively engage on the Cranfield University ISO14001 accreditation by working with our Facilities team.

Who is it for?

This course is for students intending to pursue careers in environmental management in both the private and public sectors, either as a more career-oriented course after a first degree, or as a career development move.

It provides students with up-to-date knowledge and understanding of environmental issues, and the ability and skills to critically appraise alternative environmental measures and to identify and recommend suitable solutions for effective environmental management.

The course is ideal for:
- students from environmental science, economics and policy backgrounds,
- students with management and business experience who wish to enhance their science understanding,
- students looking to widen their career options in the environmental management and sustainability sectors.

Course structure

- Eight taught modules (five core, three elective) (40%),
- Group project or dissertation (20%),
- Individual research project (40%).

Informed by industry

An industry advisory panel meets at least once a year to engage with external stakeholders on curriculum design and currency of course content.

Sponsorship and support for individual research projects from water and resource sector employers provide professional experience and development opportunities for students.

Future career

On completion, graduates have a broader network of global contacts, and new knowledge and skills, opening up increased individual opportunities. Many go on to roles as environment managers or sustainability managers in leading companies, or as environmental consultants. Others pursue similar careers in the public sector.

This course will allow international students to return to their home countries having gained environmental management knowledge and skills to help them promote environmentally sustainable practices.

Key information

Duration:
- MSc: one year full-time, two to three years part-time
- PgDip, PgCert: one year full-time, two years part-time.

Start date:
- Full-time: October.
- Part-time: October.

Qualification:
- MSc, PgDip, PgCert.

Location:
- Cranfield campus.

Entry requirements

This course is suitable for graduates with science, engineering, social science or business related degrees keen to pursue careers in environmental management; or graduates currently working in industry keen to extend their qualifications; or individuals with other qualifications who possess considerable relevant experience.
Overview of taught modules

Compulsory modules
(all the modules in this list need to be taken as part of this course).

**Principles of Sustainability** introduces and critiques three approaches to sustainability: ecosystem services, circular economy, and the energy, food and ecosystem nexus. It examines their application to resolve problems and create commercial opportunities.

**Environmental Valuation** covers techniques for non-market valuation of environmental goods and services, and environmental accounting for business, sector and national levels.

**Financial and Economic Appraisal** introduces financial appraisal as a decision making process used to compare competing projects, and economic appraisal to identify, measure and compare the societal costs of an investment project or programme.

**Environmental Policy and Risk Governance** draws together the technical, organisational and human elements of governing environmental risks and developing environmental policy by introducing core concepts and illustrating them with case studies.

**Technology, Environment and Society** explores technological change as part of positive sum strategies put forward by ecological modernisers. Theories of technological change are reviewed then set in contexts such as innovation for low carbon living.

Elective modules
(three modules from this list needs to be taken as part of this course).

**Risk Communication and Perception** develops an appreciation of the importance of individual and group attitudes towards the perception of risk and how this may influence views, conduct and actions, including the development of communication methods.

**Environmental Econometrics** provides knowledge and skills in quantitative methods of economic analysis (such as data management, modelling and interpretation of spatial data) to support decision making in natural resources and environmental management.

**Evaluating Sustainability through Lifecycle Approaches** applies the methods of life cycle analysis to quantify the impacts on the environment of production and consumption of goods and services.

**Natural Resource Economics** explores the functional role of the environment in the economy and examines how natural resources can be classified. It applies economic theory to the relationship between the stocks of natural capital and the flows of services that emanate from them.

**Environmental Management in Practice** introduces the practical issues associated with implementing Environmental Management Systems (EMS) into organisations, including the concept of an EMS, the ISO14000 standards, and potential barriers and pitfalls during implementation.

**Strategic Foresight** studies how horizon scanning can provide new insights into current or emerging trends and developments. Based on these, other foresight methodologies are used to help identify how the future might develop.

Group project

The group project will provide you with the opportunity to work as part of a consultancy team, typically made up of students from more than one MSc course, over a period of 10 weeks.

The consultancy team is responsible for running the project and presenting the outputs of their work as a single project report and a presentation at the exhibition day at the conclusion of the group project period. Many of the projects are supported by external organisations giving you the opportunity to network with potential future employers.

Through the group project process you will be working on real challenges that are faced in the work environment where you will not only be able to apply the technical knowledge gained from the taught modules but you will be able to develop and enhance your team working, management of resources, reporting and presentation skills.

For part-time students a dissertation usually replaces the group project. The topic of the dissertation is typically proposed by the student and linked to their employment.

Examples of recent group projects include:
- Integrated catchment planning using a natural capital approach: a case study of the Bristol Avon
- A Natural Capital Based Approach to Infrastructure Site Selection as Applied to Transport Routes
- Using GIS modelling with DEM to explore flood emergency response pathways
- Scenario planning for a circular future: Peterborough context
- Sustainable food and beverage strategy for Cranfield University.

Individual project

The four-month individual research project can be carried out within industry or academia and for part-time candidates it can be undertaken in your place of work. This key part of the course allows you to apply the research skills acquired during the taught phase of the course to a practical problem in your area of specialism and acts as an opportunity for you to meet potential future employers. Typically you will have two supervisors who will provide advice and guide you through the research work.

The individual project is assessed by the presentation of a written document in the form of a scientific paper and by an oral presentation of a poster to your examiners about your project.

Accreditation

The MSc of this course is accredited by:

Contact details

T: +44 (0)1234 758082
E: studyenvironment@cranfield.ac.uk

For further information please visit www.cranfield.ac.uk/emb

Every effort was made to ensure that the information on this document was correct at the time it was produced. Please check our website for the latest information. October 2018.