Date: 23-03-2019

BSc (Hons) Countryside and Environmental Management

UCAS code	D462
Institution code	H12
Duration	4 years (full-time) including a one-year work placement
Start date	September 2019
Accredited by	Chartered Institute of Ecology and Environmental Management (CIEEM)
Accredited by	Institute of Chartered Foresters (ICF)
Location	Harper Adams University campus (and location of work placement)

The course

Key features include:

- Residential field trips in years 1 and 4 to underpin and contextualise what you learn.
- A range of field trips and visits to relevant local and national organisations to provide real life experience and to meet professionals in their field of work.
- Emphasis on applied environmental science.
- A focus on the practical application of theory to give you the skills to succeed.

A-level entry requirements

- Offers tend to be in the region of **88 - 104** UCAS points (from A2 exams only)
- Students should typically be studying **3 subjects at A2 level** to be considered
- An understanding of a science based subject, whether through a taught qualification, beyond GCSE level, or independent learning, would be preferable. Evidence of independent learning should be included within your personal statement.
- **4 GCSEs at grade C/4 or above**, including English Language, Maths and a Science
- Applicants can expect to receive offers including specific grades in specific subjects (for example, a B or C at A level, or an M or D for BTEC modules)
- Key Skills (and other level 2 variants) and First Certificates/Diplomas are not accepted in place of GCSE passes
- Overseas applicants please check our English Language Requirements
- The majority of candidates will not be called for an interview and a decision will be made via UCAS Track. However, for some students a telephone interview or campus based guidance session will be required. We will simply want to meet you to understand if the course is the right choice for you and to discuss your application in more detail. We will be keen to know your reasons for choosing the course and your career aspirations.

Note: Entry Requirements are for guidance only, please check the UCAS website or contact Admissions for further information.

Work placement

Studying an accredited CIEEM course in Countryside and Environmental Management opens up a range of graduate careers. You will spend your placement year working in a key sector of your choice. Placements can be matched to your career aspirations to help you develop skills, knowledge and understanding that will improve your employability.

Key skills you will develop may include; research and interpretation data, including GIS skills, scientific and lab skills, fieldwork techniques, and ccological and environmental awareness. Current placement employers include public bodies such as; Natural England, Environment Agency, Forestry Commission, Local Authorities, through to organisations/consultancies such as; RSK ADAS, Eurofins, Game & Wildlife Conservation Trust, National Trust, The Wildlife Trusts, Field Studies Council. Placement gives you unique prospects as employers value the combination of theory and hands-on experience.

Accreditation

This course has been awarded Chartered Institute of Ecology and Environmental Management (CIEEM) accredited degree course status. We are one of the first UK universities to receive this accreditation.

This course is accredited by the Institute of Chartered Foresters and gives partial fulfilment of Professional Membership Entry based upon appropriate module selection.

Teaching and learning

What you study

This course will give you comprehensive training in modern environmental management techniques and will introduce you to key concepts of biodiversity, sustainability, ecology and environmental systems.

You will develop a broad understanding of the scientific principles needed to effectively manage our environment, which is coming under increasing pressure as a result of human activities. You will gain hands-on experience of collecting, analysing and interpreting data for the conservation and management of our natural environment.

The strongly vocational nature of this course is supported by field visits to a diverse range of habitats, which include woodlands, nature reserves, conservation areas and other key UK landscapes.

Field trips

All first year CEW students attend the **Introduction to Ecology** field trip as part of their course. The trip provides students with practical ecological field skills and techniques of quantitative analysis. It normally takes place in May at the Field Studies Council Slapton Ley Field Centre in Devon. This is a seven night residential course, and costs £50*.

All final year CEW students attend a five night residential field course, currently situated on Anglesey. The course provides students with an opportunity to investigate a real world issue of relevance to the environment and provides advanced data collection, analysis, project management and presentation skills. The trip normally takes place in the autumn term and costs £30*.

**cost includes all meals, accommodation and transport to and from the field centre, and are correct as of the 2018/19 academic year.*

Teaching and learning

Here at Harper Adams we are committed to high standards in teaching and learning.

Teaching methods include student centred learning, resource based learning, independent project work, all of which is delivered in a variety of formats: including lectures, seminars and tutorials. In addition to this, research-led learning is encouraged where students can be exposed to relevant research in a number of ways, from learning about the work of others and its relevance to wildlife resource management to conducting their own studies and field experiments.

To further underpin the applied nature of this course visiting speakers from within the sector are used and practical field work and site visits form essential elements in the learning method as they provide the contextual relevance for students to establish the link between theory and practice.

Assessment methods

Assessment of student learning is conducted using a variety of methods. Each course module is assessed by a combination of coursework and an end of year exam. A part of the assessment process, student feedback forms an important element in the learning process. All students receive verbal and written feedback on their coursework and exam scripts.

Example of assessment methods include:

- Time constrained exams
- Flora and fauna Identification test
- Management plans
- Essays / case studies
- Field reports
- Practical examinations
- Poster presentations

Careers

The breadth and flexibility of this industry accredited course means our students go on to careers in a wide range of areas. Countryside and Environment students at Harper Adams have a strong reputation in the graduate jobs market. This stems from our balanced and up-to-date course structure, good links with the industry and the placement year.

These key elements of the Harper Adams approach help to produce graduates with a valuable combination of academic knowledge and real-world experience. There are many career opportunities in this field with, for example, environmental and land-based consultancies, statutory bodies like the Environment Agency, local authorities, and employers such as Natural England, Defra, Wildlife Trusts, the National Trust and environmental consultancies.

What will I study?

	Study time (The percentage of time spent in different learning activities)			Assessment methods (This is the breakdown of assessment methods)		
Year	% time in lectures, seminars and similar	% time in independent study	% time on placement	Written exams	Practical exams	Coursework
1	35%	65%	0%	45%	0%	55%
2	33%	67%	0%	18%	0%	82%
3	0%	0%	100%	0%	0%	100%
4	22%	78%	0%	30%	10%	60%

Year 1		Year 2		Year 3	Year 4	
Skills for the Environmental Scientist (C4009C17)	15	Research Methods for Environmental Scientists (C501017)	15	Placement year	Honours Research Project (HRPROJ)	30
Introduction to Ecology (C4004C17)	15	Forestry and Forest Products (C5013C17)	15		Ecosystems and Environmental Resource Management (C6006C17)	15
Introduction to the Natural Environment (C4006C17)	15	Forestry, Game and Land Management (C5014C17)	15		Environmental Assessment and Management (C6008C17)	15
Environmental Monitoring (C4002C17)	15	Wildlife Identification and Conservation (C5011C17)	15		Applied Ecology for Management (C6003C17)	15
Environmental Survey and Field Skills (C4003C17)	15	Pollution, Ecology and Brownfield Reclamation (C5012C17)	15		Geographical Information Systems and Land Use (C6009C17)	15
Introduction to Sustainable Agriculture and the Environment (C4015C17)	15	Social Geography and Sustainable Development (C5017C17)	15		Environment and Geography Field Course (C6007C17)	15
Contemporary Countryside and Environmental Issues (C4012C17)	15	Environmental Quality and Protection (C5015C17)	15		**Options**	
Managing People in the Environment (C4007C17)	15	Planning and Development (R5011C17)	15		Developing and Managing Environmental Projects (C6005C17)	15
		Options			UK and Global Forest Systems (C6015C17)	15
		Landscape Development and Management (C5016C17)	15			

Skills for the Environmental Scientist

Year of study 1
Code C4009C17
Credits 15
Core/option Core
Module contact Mrs Kath Leigh

This module helps develop students' confidence and competence in the academic skills and professional practices that will enable success within their Environment course. The module has four main strands or themes:

- 'Academic skills' including exploring reading for success, writing in different ways and information searching.
- 'Professional futures' - preparing for placement and employment.
- 'Learning well' which promotes students' self-monitoring and planned improvements in individual approaches to learning
- 'Digital citizenship' where students review the online and information technology skills that they

need to succeed in study and in their professional practice.

Introduction to Ecology

Year of study 1
Code C4004C17
Credits 15
Core/option Core
Module contact Nicky Hunter

Ecology is about understanding the dynamic changes in individuals, populations, communities and ecosystems in relation to each other and the physical environment. This requires knowledge of the essential processes that determine the distribution and abundance of organisms and the variety of complex biotic and abiotic interactions that take place. This module is designed to provide students with a general understanding of the ecology of living systems together with an introduction to basic ecological theory. This module will include a field studies element which will deliver the practical elements of identification, sampling and analysis of data collected.

Introduction to the Natural Environment

Year of study 1
Code C4006C17
Credits 15
Core/option Core
Module contact Simon Irvin

The countryside and the quality of the rural environment are inextricably linked to studies in the natural environment. This module is designed to investigate the many aspects of the natural environment which impact on the British countryside. This will include the study of rainfall patterns in the UK and causes of climatic change, which has a marked effect on the range of natural habitats in the British countryside. The variety and nature of soils in the UK and how these affect the land quality will be considered. Conservation and the assessment, creation and management of habitats commonly found in, and around agricultural lowland sites and the impact of pollution from agricultural sources will be investigated.

- Outline the hydrological cycle in the UK and the causes and effects of climatic change on the natural environment.
- Identify and assess soil relationships, including soil texture, structure, organic matter and soil processes such as erosion.
- Demonstrate a need for conservation of species and habitat protection.
- Recognise a variety of habitats on lowland farmland and outline how these can be managed to the benefit of the environment.
- State the main sources of agricultural pollution and how these can be controlled.

Environmental Monitoring

Year of study 1
Code C4002C17
Credits 15
Core/option Core
Module contact Dr William Hartley

To understand our chemical environment we must have knowledge of pollutants, the origin of these pollutants and the harm that they may cause. This module concentrates on looking at the environment as three distinct media (air, water and land/soil), identifying a range of pollutants and their effects on the environment. It describes how the media may be sampled for the content of pollutants. It also studies field and laboratory methods which may be employed to identify and measure quantities of pollutants. In addition, this module covers an overview of the relevant UK legislation which determines how businesses are required to monitor and control emissions from their industrial process. This module provides the basis for understanding key aspects of our environment and the scientific context of how chemicals influence soil,

water and air.

- Identify pollutants in the three environmental media and the harm they may cause.
- Understand basic chemical structures of pollutants.
- Outline the legislation controlling the release of prescribed substances.
- Sample accurately the three environmental media (air, soil and water) using appropriate sampling equipment.
- Be familiar with a range of Laboratory techniques used in environmental monitoring
- Write scientific reports using appropriate structure and scientific English.

Environmental Survey and Field Skills

Year of study 1
Code C4003C17
Credits 15
Core/option Core
Module contact Simon Irvin

This module provides an essential understanding of the main components of applied contemporary field survey / monitoring techniques and procedures. It provides experience in the practical application of these techniques and procedures across a representative range of habitats and environments and vital awareness of risk assessment in field survey work.

The skills and knowledge gained will enable students to undertake survey and monitoring work using a range of practical methods, understand the range of techniques involved and their relative strengths and limitations and to present and interpret data in a coherent and appropriate way.

This module complements the modules at level 4: Introduction to the Natural Environment and Introduction to Ecology and links to the level 5 module Habitat Ecology and Conservation Management. These modules are core modules for all routes accessing this module and form a fundamental knowledge and practical base for any student entering the environmental and wildlife sector. The module content will also provide material which directly relevant to placement work undertaken by the majority of the students.

Introduction to Sustainable Agriculture and the Environment

Year of study 1
Code C4015C17
Credits 15
Core/option Core
Module contact Simon Irvin

Please contact the course manager for details of this module.

Contemporary Countryside and Environmental Issues

Year of study 1
Code C4012C17
Credits 15
Core/option Core
Module contact Dr Jonathan Cooper

This module is designed to provide students with a background to contemporary countryside and environmental issues and their implications for resource management.

The principal focus for the module will be the UK, with appropriate international comparison and contextualisation.

The module will provide a background to the pressures and conflicts that occur within UK and global countryside and environmental management. It will show how government and other organisations use a range of methods to ensure sustainable management of the countryside, landscapes and natural /

semi-natural environments and how environmental change influences the way in which the countryside is managed.

Managing People in the Environment

Year of study 1
Code C4007C17
Credits 15
Core/option Core

This module aims to enhance students' understanding of the link between human activities, principally recreation, and the natural environment. The module will introduce students to basic methods of assessment and management of environmental impact of typical recreational activities within the countryside and how best management practice is communicated to the wider public at range of different levels, including school children and other groups. Emphasis is placed on the need to manage conflict and develop specific visitor management techniques in order to produce sustainable management strategies within the countryside.

Research Methods for Environmental Scientists

Year of study 2
Code C501017
Credits 15
Core/option Core
Module contact Dr Andrew Cherrill

The module develops the skills and knowledge necessary to successfully complete the Honours Research Project. Enhanced research confidence will also be an employability skill for the Placement Period and careers on graduation.

The module will cover the key elements of the research process, set in the context of the student's own course discipline. Students will examine the academic role of research and how it informs professional and managerial practice. They will enhance their ability to locate, select and critically evaluate information associated with a particular problem, using a range of sources and particularly peer reviewed empirical studies. By carrying out statistical analysis using appropriate software, the students will develop their ICT skills and further their understanding of the role of statistics in the research process.

Forestry and Forest Products

Year of study 2
Code C5013C17
Credits 15
Core/option Core
Module contact Jim Waterson

Forestry and forest products have an increasingly important role in the management of land and in making a series of significant contributions to sustainable living and development. This is closely reflected in national and international policy.

This module will give students a comprehensive and detailed understanding of sustainable forest management policy and practice in the UK. It will also provide an overview of global forestry issues and a full appreciation of both traditional and contemporary products and services sourced from forests and forest management.

Students completing the module will be able to critically evaluate different approaches to silviculture and forest management in terms of the range and quality of products/services supplied and the economic, social and environmental implications of the management and conservation processes adopted.

Forestry, Game and Land Management

Year of study 2
Code C5014C17
Credits 15
Core/option Core

Please contact the course manager for details of this module.

Wildlife Identification and Conservation

Year of study 2
Code C5011C17
Credits 15
Core/option Core
Module contact Nicky Hunter

This module aims to provide students with an extension of knowledge from the level 4 ecology module and to focus primarily on the synthesis and analysis of the ecological requirements of species and habitats, and the issues around conservation and funding currently in the UK. In order to fully understand the ecology of species, correct identification and adaptation features for the major groups of fauna and flora needs to be recognised.

A practical knowledge and skills-based understanding of the selection and use of identification keys and community classification systems is one of the corner stones to effective assessment of biodiversity for conservation. Students will develop practical knowledge of, and skills in, the use of species identification techniques. Particular attention will be focused on species that are associated with the UK countryside, but the module will also address globally applicable general principles and concepts. Essentially a hands-on approach to learning is encouraged introducing students to the flora and fauna found in a range of habitats which will reinforce the competences of survey skills studied previously.

Pollution, Ecology and Brownfield Reclamation

Year of study 2
Code C5012C17
Credits 15
Core/option Core
Module contact Dr William Hartley

The aim of the module is to interpret the effects of anthropogenic pollution on ecosystems. You will evaluate, monitor and quantify the ecological impact of environmental pollution and the scientific and methodological problems associated with contaminated land reclamation. You will investigate patterns of environmental contamination, accumulation and chronic toxicity caused by toxic metals and other hazardous wastes and the response of plants and animals to pollution, the evolution of pollution tolerance and the effectiveness of bioremediation treatments.

Social Geography and Sustainable Development

Year of study 2
Code C5017C17
Credits 15
Core/option Core
Module contact Dr Jonathan Cooper

This module is concerned with the significance of space and place, in particular it attempts to understand the patterns and processes of social and environmental inequality in the context of sustainable development. Understanding the drivers of change and interconnectivity at local, regional, national and international levels are core skills for a geographer and are fundamental if sustainable resource management and development are to be undertaken.

Legislative and policy drivers will be analysed as drivers for sustainable practice. The principles of environmental, social and economic sustainability will be considered and the importance of their mutual inclusivity will be explored. A number of examples of contemporary sustainable development case studies will be considered in detail and such examples for the Global North and the Global South will be compared and contrasted.

Environmental Quality and Protection

Year of study 2
Code C5015C17
Credits 15
Core/option Core
Module contact Paul Lewis

The maintenance of high quality soil, water and air is an essential component of sustainable development. The countryside is used in a wide variety of ways, each of which can have an impact on the environment. For example, pesticides and fertilisers used in agriculture, fish farming and forestry, if not carefully controlled, may affect the air, water and soil quality and eventually contaminate food. The disposal of wastes, access to the countryside for leisure and amenity use and the introduction of new technology may also have an environmental impact. Changes to ecosystems resulting from the emission of greenhouse gases and ozone depleters could significantly affect the rural landscape.

This module will allow the student to define what is meant by soil, water and air quality and to identify some of the major risks to environmental quality arising from our varied use of the countryside. Approaches to managing the countryside so as to maintain or improve the environmental quality will then be evaluated together with assessment of appropriate environmental legislative requirements.

- Select appropriate approaches to assessing soil, air and water quality
- Identify and evaluate the severity of the various risks to soil, air and water quality
- Formulate strategies for protecting soils, air and water and for protecting the countryside from the risk of pollution
- Compare the current status of a site with the appropriate environmental standard(s).

Planning and Development

Year of study 2
Code R5011C17
Credits 15
Core/option Core
Module contact Emma Pierce-Jenkins

This module seeks to build-upon the level 4 modules, Introduction to Rural Geography and Economics and Contemporary Countryside and Environmental Issues. The module provides a broad understanding of the statutory spatial planning system, covering both national and local planning policy, whilst exploring the particular challenges associated with rural development and the delivery of sustainable development.

This will include an analysis of policy and practice in a range of topics such as housing, agriculture, renewable energy, infrastructure planning and protection of designated areas.

The module will provide a grounding in spatial planning, upon which the level 6 modules, such as Environmental Assessment and Management, can be developed.

Landscape Development and Management

Year of study 2
Code C5016C17
Credits 15
Core/option Option
Module contact Dr Richard Byrne

Over the centuries the countryside has undergone considerable changes and developed in an evolutionary fashion. Nowadays there are many, often conflicting, demands made on the countryside. How the assets of the countryside are assessed and recorded and how change is affected and managed is of major concern.

The module also explores landscape development and examines how landscape components have evolved over time. The module will be also be concerned with the relationship between human activity and landscape. It will deal with societal drivers of change and the effects of human activity on landscape pattern. An important part of this relationship is understanding the impact of human activity on landscapes and how these effects can be assessed using appropriate landscape assessment methodologies. Additionally it will explore the impact of recreational activities upon landscape and the process of landscape restoration.

Placement year

Year of study 3
Core/option Core

Read our dedicated Placement Learning pages for information on the many benefits of the placement year.

Honours Research Project

Year of study 4
Code HRPROJ
Credits 30
Core/option Core

To qualify for an honours degree a student must demonstrate the capacity for sustained, independent and high quality work. One of the most important vehicles for the demonstration of this capacity, and for developing the necessary skills, is the individual Honours Research Project. Each student will therefore be required to complete such a project under the general supervision of a member of staff and present the results in a project report and in a *viva voce* exam, with two tutors, which will also test to a high level, skills of communication and rational argument. This major exercise represents one-quarter of the final year studies and will therefore have an important influence on the classification of award.

Ecosystems and Environmental Resource Management

Year of study 4
Code C6006C17
Credits 15
Core/option Core
Module contact Paul Lewis

This module is specifically designed to progress the practices and principles taught in the level 4 module, Environmental Monitoring and the level 5 module Environmental Quality and Protection. Countryside ecosystems are diverse, whether terrestrial or aquatic, and are associated with wide ranging habitats, functions, management and services. All such ecosystems have considerable links to, and impacts on the environment and the resources of water, soil and air. The maintenance of high quality resources is an essential component of sustainable development and land use. This module will allow the student to analyse abiotic factors associated with countryside terrestrial and aquatic ecosystems, whether managed or natural, and consider associated environmental processes and science in detail. Ecosystem services, sustainability indicators and sustainable land use systems will be core elements throughout this module's delivery. There will be an emphasis on UK systems, both agricultural and natural, but consideration will also be given to overseas case-studies and examples.

Environmental Assessment and Management

Year of study 4
Code C6008C17
Credits 15
Core/option Core
Module contact Emma Pierce-Jenkins

Environmental protection and enhancement is a crucial element of achieving sustainable development and features heavily in International, European and UK legislation and policy, a key requirement of which is that potential environmental impacts of human activities are identified and considered in decision making.

In seeking to protect our environment and deliver sustainable development it is crucial that we are able to recognise when and how human activity will impact upon the environment and how best to mitigate and manage those impacts. This module will examine the relevance and relative merits of a range of formal processes for assessing likely environmental impacts of human interaction with our environment. It will build upon earlier modules relating to environmental policy and legislation, as well as developing conservation, environment and planning themes from earlier modules.

It studies in detail Environmental Impact Assessment (EIA) and Environmental Management Systems (EMS) in terms of legislative compliance, assessment techniques, environmental protection and mitigation strategies etc. and introduces Strategic Environmental Assessment (SEA)/ Sustainability Appraisal.

Applied Ecology for Management

Year of study 4
Code C6003C17
Credits 15
Core/option Core
Module contact Dr Nicola Randall

Humans depend upon biological processes for their continued existence and for the provision of ecosystems services. The high rates of biodiversity loss remain the subject of concern. This module aims to provide an understanding of the concepts of biodiversity and of ecosystem services, and the use of biodiversity as an ecosystem service provider

In order that biodiversity may be conserved or exploited sustainably, it is important to have an understanding of how populations and communities of organisms are distributed and function and how they react to disturbance. This module is designed to provide students with a background to the complexities of community organization and the general factors that affect community stability. The module subsequently demonstrates how ecological science can be applied to real world conservation and management situations such as the design of nature reserves, pest control, and the sustainable harvesting of populations.

Geographical Information Systems and Land Use

Year of study 4
Code C6009C17
Credits 15
Core/option Core
Module contact Dr Andy Wilcox

Land management is a complex process involving a combination of agricultural, environmental, recreational and social issues. Geographical Information Systems (GIS) allow storage, analysis and dissemination of spatial information are an essential tool for resource management. This module will provide students with an overview of GIS theory, application and software and allow students to develop practical skills relating to spatial data capture, analysis and presentation using the ESRI ArcGIS platforms.

Environment and Geography Field Course

Year of study 4
Code C6007C17
Credits 15
Core/option Core
Module contact Dr Andy Wilcox

Sustainable solutions to environmental problems are often complex and require a combination of different disciplines in order to achieve an acceptable outcome. Typically, such activities are carried out by a single project team or collection of project teams that each offer their own area of expertise to the solution. This module allows students to develop their high level skills and abilities by undertaking a team project based on a real situation or issue. The project will be focused around a residential field course and combine elements of the entire CEWG portfolio, including aspects of countryside, environmental and geographical management.

Developing and Managing Environmental Projects

Year of study 4
Code C6005C17
Credits 15
Core/option Option
Module contact Emma Tappin

Countryside and environmental management are complex and multi-disciplinary areas of practice. For both non-governmental organisations such as National Parks, Wildlife Trusts and the National Trust and government agencies such as Natural England, short term projects are an important mechanism to achieve desired environmental and social changes. This drive towards project delivery is as a result of funding sources increasingly being linked to short-term projects.

The implementation and success of these projects requires a sound understanding of the principles of project management. This module aims to give students insight into project development and management for clients. This module will be action-based learning where students actively work on live projects for clients, developing proposals and competing for 'support' or 'funding'. Students will gain insights into writing project proposals, competing in this bidding process, working and negotiating with clients and implementing projects proposals. They will be encouraged to develop as reflective practitioners in order that they can improve their skills for future practice.

UK and Global Forest Systems

Year of study 4
Code C6015C17
Credits 15
Core/option Option
Module contact Jim Waterson

Forestry and forest products have significant functional importance in the management and conservation of land, the supply of raw and processed materials, environmental protection and in contributing to sustainable living and development. This is closely reflected in UK and global forest policies.

This module will enable a comprehensive and detailed understanding of sustainable forest management policy and practice in the UK. It will also provide a current overview of global forestry issues and an appreciation of mainstream and innovative products and services sourced from forests and sustainable forest management worldwide.

Students completing the module will be able to critically evaluate different approaches to forest management in terms of the range and quality of products/services supplied and the economic, social and environmental implications of the management and conservation processes adopted.