

**PROGRAMME SPECIFICATION**

for the award of

**MSc Conservation Ecology**

**Managed by the Faculty of Health and Life Sciences**

**delivered by Department of Biological and Medical Sciences**

<b>Date first approved:</b>	September 2013
<b>Applies to students commencing study in:</b>	September 2020 for FT students and new PT September 2019 for PT

**RECORD OF UPDATES**

<b>Date amended*</b>	<b>Nature of amendment**</b>	<b>Reason for amendment**</b>
16 Jan 2020	EIAM 7006 GIS and Spatial Analysis replaced EAAM7004 GIS and Environmental Modelling	P38333/EAAM7004 GIS and Environmental Modelling was an optional module in the Programme. It stopped running from academic year 2019/2020.
16 Jan 2020	EIAM 7005 Effective and Proportionate Environmental Impact Assessment was added to replace EAAM Procedures of EIA	EAAM Procedures of EIA was a 40 Credit module which closed before Sept 2019
16 Jan 2020	Removed an essay from BIOL7004 Biodiversity and Ecosystem Services and the weighting of the remaining two assessments adjusted.	Decrease assessment load
16 Jan 2020	Remove the BIOL7005 Independent Study from the International Pathway	A requirement for CIEEM accreditation in order to ensure students have enough field work in their Programme to comply to CIEEM accreditation criteria
16 Jan 2020	Rewritten BIOS7003 Career Development and Research Skills	Ensure the module was specific to the MSc Conservation Ecology

**SECTION 1: GENERAL INFORMATION**

<b>Awarding body:</b>	Oxford Brookes University
<b>Teaching institution and location:</b>	Oxford Brookes University, Gipsy Lane
<b>Language of study:</b>	English
<b>Final award/s:</b>	MSc
<b>Programme title:</b>	Conservation Ecology
<b>Interim exit awards and award titles available:</b>	PGDip / PGCert Conservation Ecology
<b>Brookes course code:</b>	MSC-CSE (Old code - BM63)
<b>UCAS code:</b>	P035706
<b>JACS code:</b>	
<b>HECoS code:</b>	
<b>Mode of delivery:</b> (Mode of Study given in brackets)	Face to face supported by online resources
<b>Duration of study:</b>	Full-Time (1 year) and Part-Time (2 years)
<b>Subject benchmark statement/s which apply to the programme:</b>	<p>The outcomes of the Conservation Ecology MSc broadly conform to the Quality Assurance Agency for Higher Education descriptors at Master's degree level as set out in the National Qualifications Framework.</p> <p>The course content has also been developed to help meet the skills gaps in conservation as identified by Natural England, the British Ecological Society and the Chartered Institute of Ecology and Environmental Management.</p>
<b>Professional accreditation attached to the programme:</b>	Chartered Institute of Ecology and Environmental Management
<b>Apprenticeship Standard:</b>	Not applicable
<b>University Regulations:</b>	The programme conforms to the University Regulations for the year of entry as published/archived at: <a href="http://www.brookes.ac.uk/regulations/">http://www.brookes.ac.uk/regulations/</a>

## **SECTION 2: WHY STUDY THIS PROGRAMME?**

Biological conservation and biodiversity assessment has a strong legislative background with specific set targets for the maintenance and enhancement of habitats and species. Most countries are signatories to International Conventions covering wildlife, biodiversity and sustainability with national legislative frameworks designed to address these conventions. This programme is designed to provide two alternative pathways, one focusing on UK/EU approaches to conservation and the second provides a perspective on International Conservation. Both pathways have been designed to provide graduates with the skills needed for a career focused on either the national or international level.

Within the UK, EU legislation sets the framework for biodiversity assessment in relation to development and associated mitigation measures. Within the EU member states, reform of the agricultural subsidy system has also increased the opportunities for biodiversity enhancement at the landscape scale, backed up by financial incentives. At the international level there are international conventions which govern trade, site and species designations and which aim to enhance and promote biodiversity. These are usually implemented via legislation at national levels but are often overseen by trans-national organisations. To implement legislation and monitor compliance with conventions and to effectively identify and take the best opportunities for biodiversity enhancement, there is a need for well-trained, knowledgeable and highly informed practitioners. Numerous recent reports have drawn attention to serious, and growing, skills gaps of potential practitioners. Both pathways are designed to address this skills gap.

There is a requirement for trained and experienced practical ecologists with appropriate field skills including identification abilities that are able to undertake biodiversity surveys and produce professional reports and assessments as well as undertake monitoring of species and communities. Effective nature conservation also requires five other sets of key skills: knowledge of international and national wildlife legislation, planning law and environmental policy; a basic knowledge of IT, particularly GIS; an understanding of species ecological requirements and the implications of environmental change; an ability to statistically interpret field data; and an ability to organise one's work and communicate to a variety of audiences.

This Postgraduate course is designed to provide post-graduate training in these skills and specifically aims to equip students with the professional knowledge and understanding required for a career in conservation.

Our programme will also give training in research planning and transferable skills, and the opportunity to carry out research at Oxford Brookes University or within a conservation organisation. A Post Graduate Diploma will be awarded for completion of all course modules excepting the research project and a Post Graduate Certificate for half the course modules.

Staff have extensive experience of ecological research and environmental policy, with [the core members](#) of the teaching group having over 250 publications, including peer reviewed research papers, consultancy reports, reports to the EU and books. They have also been successful at gaining research funding from external bodies including NERC, BBSRC, Royal Society, Leverhulme Trust, the EU, Defra, British Ecological Society and Natural England. Staff also work with public and private sector conservation organisations such as Natural England and Butterfly Conservation and work with Environmental Consultancies.

On enrolment all students have a period of induction and are supplied with generic and programme specific handbooks. All modules have handbooks and modules and the program are supported by a VLE presence. Every student has an academic advisor and can also access the Faculty student support co-ordinator. Additionally they have access to all central support services, including the careers service.

The course aims to provide:

- Expert instruction in the scientific methods underpinning effective conservation and biodiversity assessment. These include: species identification, field survey methods and biodiversity assessment methods in the context of environmental change and legislation This is accomplished

by having a significant amount of practical work, in the field and laboratory, together with the use of IT systems to analyse and interpret practical work.

- Expert instruction in elements of good research practice including appropriate data collection and analysis techniques (including multivariate analysis), research presentation skills, and production of research proposals.
- Training in identification skills relating to key animal and plant groups and habitats, including an understanding of their ecological requirements.
- Training in the research and management skills required to collect, analyse and interpret information (including the use of multivariate analysis) in the context of current practices in conservation ecology.
- Opportunities to gain an understanding of wildlife legislation, international conventions, planning law and environmental policy.

## **SECTION 3: PROGRAMME LEARNING OUTCOMES**

On successful completion of the programme, graduates will demonstrate the following Brookes Attributes:

### **3.1 ACADEMIC LITERACY**

- autonomously employ high level skills in the identification of specific taxonomic groups;
- understand the complexity of species management, species requirements and distributions in order to produce reports and proposals to a professional standard;
- demonstrate a comprehensive understanding of the Legislative background underpinning policies, biodiversity targets, and the planning process to be able to justify why specific conservation measures are used in mitigating the effects of environmental changes;
- appraise the effectiveness of restoration and conservation at the site and landscape scales;
- comprehend the organisational and operational framework of conservation in order to play an effective role as a professional conservation ecologist; apply advanced theoretical concepts to creatively resolve conservation issues
- critically evaluate evidence and argument to produce or judge the validity of conclusions;
- proficiently use a variety of forms of written communication according to context.

### **3.2 RESEARCH LITERACY**

- carry out and manage industry standard habitat and species surveys to a professional standard and be able to critically evaluate the limitations of such surveys;
- undertake with independent analysis, a sustained piece of original research on a topic of relevance to the context and content of the programme;
- synthesise relevant information from a range of appropriate sources to construct and support a rational argument where the underlying information is contradictory, incomplete or complex (also fits 3.4);
- interpret data in a meaningful way with a critical understanding of appropriate experimental design and data collection;
- design and implement specific ecological surveys, and critically evaluate and review the data from surveys;
- write professional research proposals, abstracts and a thesis.

### **3.3 CRITICAL SELF-AWARENESS AND PERSONAL LITERACY**

- reflect on and communicate complex information orally and in writing to a variety of customers and colleagues and demonstrate negotiation and diplomacy skills;
- work independently and manage their own time in the completion of several tasks within the same time frame;
- work with others, taking both leadership and supportive roles to take strategic, analytical and creative approaches to problem solving;
- reflect on and analyse the factors influencing personal and longer term career objectives.

### 3.4 DIGITAL AND INFORMATION LITERACY

- undertake data interpretation and data evaluation, selecting appropriate statistical techniques, including multivariate analysis and using such data predictively;
- use IT in accessing and handling ecological data including data held on national and international databases;
- select and use a range of generic and specific software to analyse complex ecological data.

### 3.5 ACTIVE CITIZENSHIP

- incorporate a critical ethical and cultural dimension to the practice of conservation ecology;
- work proactively with others to formulate solutions to the biodiversity crisis in the light of international and national legislation, policies and constraints.

## SECTION 4: CURRICULUM CONTENT & STRUCTURE

### 4.1 PROGRAMME STRUCTURE AND REQUIREMENTS:

Code	Module Title	Credits	Level	Status	Coursework: Exam ratio
BIOL7002	Ecology for Conservation	20	7	C	100:0
BIOL7007	Career Development & Research Skills	20	7	C	100:0
BIOL7006	Research Project	60	7	C	100:0
BIOL7001	Taxonomy & Identification	20	7	C* O**	100:0
BIOL7008	Ecosystem Degradation & Management	20	7	C*	100:0
BIOL7003	International Legislation, Humans and Wildlife	20	7	C**	100:0
BIOL7004	Biodiversity and Ecosystem Services (20 credits)	20	7	C** O*	100:0
BIOL7005	Independent Study	20	7	O*	100:0
BIOS7001	Advanced Molecular Techniques	20	7	O	100:0
EIAM7006	GIS & Spatial Planning	20	7	O	100:0
EIAM7005	Effective and Proportionate EIA	20	7	O*	100:0
ANTH7004	Genetic and Population Management	20	7	O	100:0
ANTH7006	Conservation Education	20	7	O**	100:0

\*=only for the UK Pathway; \*\*=only for International Pathway

### 4.2 PROGRESSION AND AWARD REQUIREMENTS

A postgraduate Diploma will be awarded for completion of all modules without a Research Project BIOL7006 (P10299). A postgraduate certificate will be awarded for completion of Ecology for Conservation BIOL7002 (P10202) and either Ecosystem Degradation & Management BIOL7008 (P38305) and Taxonomy & Identification BIOL7001 (P10201) or International Legislation, Humans and Wildlife BIOL7003 (P10203) and Biodiversity and Ecosystem Services BIOL7004 (P10204).

### 4.3 PROFESSIONAL REQUIREMENTS

Not applicable as the degree award are aligned to the requirements of CIEEM accreditation.

## **SECTION 5: TEACHING AND ASSESSMENT**

The teaching and learning methods used in the course reflect the wide variety of topics and techniques associated with conservation ecology and have been developed in the accordance with the University's Assessment Strategy. This ensures that there is diversity and balance in assessment practice within and between modules and equity in module workloads. The course is underpinned by research and employs a variety of teaching, learning and assessment methods.

Lectures provide the framework, essential background and knowledge base for each module and students are encouraged to probe more deeply by reading widely. Analysis, synthesis and application of material introduced in lectures is achieved through practical work in the field and labs, site visits and syndicate work with tutors and peer review.

Students are introduced to the importance of species identification and a feature of the course is the development of high level identification skills. This is achieved by individuals selecting those groups they are most interested in and which are of importance in conservation. Skills are developed and practised using specialist knowledge from within the University and by consultation with external taxonomic experts (e.g. University Museum, Oxford), and the use of reference collections.

Knowledge and understanding in many areas of conservation ecology are advancing rapidly, particularly as the discipline is becoming evidence based. Interpretive visits are made to conservation and restoration schemes, often with interpretation from site practical conservation managers. Staff ensure that teaching is up-to-date by integrating research findings in lectures and practical classes. Some of the staff are involved with major developments in the field and bring these advances to the students. Articles from the primary research journals are an integral part of the students learning experience and feature in reading lists and students are expected to make use of the primary research journals when preparing assignments. Guest lectures are made use of, providing students with the experience of listening to conservation practitioners and theoreticians. Emphasis is placed on critical evaluation of existing information and identifying knowledge gaps and areas of controversy, fostering the development of academic and research literacy.

The standards that are expected in research are also widely taught and practiced (developing research literacy). The research project module in particular, provides an opportunity for students to undertake substantial research specific activities, and opportunities are available for students to undertake projects with consultancies and conservation bodies, developing critical self-awareness and personal awareness.

Conservation Ecology is an international discipline, with opportunities to reflect on different attitudes to wildlife and conservation, contributing to global citizenship. The programme offers two pathways: conservation within the UK and the European background to its legislative framework and the international conventions underlying conservation and biodiversity targets; and international conservation, with a focus on the implementation of international conventions and legislation and an emphasis on human-wildlife interactions (both negative and positive). However, conservation theory and practice, including the use of software tools for analysis is an international discipline and the two pathways thus have commonality. Species and habitat assessment techniques are taught within the modules, offering the opportunity to develop professional skills. Additionally the programme offers some opportunity for students to develop ties with research groups and conservation bodies that operate at the European and International levels and opportunities for practical work within consultancies and conservation agencies are offered to students when these are available.

Assessment on the programme is 100% coursework. Different modules cover different theoretical and practical components and overall the programme offers opportunities for formative assessment, peer review and directed learning. Digital literacy is enhanced by the use of advanced information retrieval techniques, data handling and the development of professional presentation techniques.

## **SECTION 6: ADMISSION TO THE PROGRAMME**

### **6.1 ENTRY REQUIREMENTS**

Candidates for the MSc degree, PG Diploma and PG Certificate should normally have (or be about to attain) at least a second class undergraduate honours degree in a relevant scientific subject from a recognised institute of higher education.

If the candidate's first language is not English, then they must satisfy our English language requirement by providing us with evidence of a minimum TOEFL score of 575 (paper-based) or 232 (computer-based), or an IELTS score of 6.5. Prior qualifications necessary for entry to the programme, including English language requirements.

### **6.2 DBS AND OTHER PRE-COURSE CHECKS REQUIRED**

Not applicable

### **6.3 JOB ROLE/EMPLOYER PROFILE (DEGREE AND HIGHER APPRENTICESHIPS)**

Not applicable

## **SECTION 7: PREPARATION FOR EMPLOYMENT**

The program is designed to help students gain employment in conservation organisations including Government agencies, NGOs, wildlife charities and environmental consultancies.

Past graduates have gone onto work with the Environment Agency, RSPB, Border Agency (CITES inspectorate), Defra, and county naturalist trusts, National Parks and local authorities (planning and environmental). Others have gone on to PhD research but the biggest employment sector is with Environmental Consultancies,

Visits are made to sites of conservation concern and talks from environmental practitioners are arranged. The most important linkage with employers is via the project work in which students are encouraged to work with an employing organisation on a specific conservation topic. Career talks are arranged with employers and opportunities to work with consultancies are offered during the course.

We encourage our students to develop their knowledge of employment, current practices in the professional discipline of conservation ecology and engagement with professional practitioners by making full use of events and information provided by our accrediting body, The Chartered Institute of Ecology and Environmental Management.