

PROGRAMME SPECIFICATION

1	Awarding Institution	Newcastle University
2	Teaching Institution	Newcastle University
3	Final Award	MSc
4	Programme Title	MSc Conservation and Ecosystem Management
5	UCAS/Programme Code	5437F
6	Programme Accreditation	N/A
7	QAA Subject Benchmark(s)	N/A
8	FHEQ Level	7
9	Date written/revised	May 2024

10 Programme Aims

1 The broad educational purposes are to provide students with the theoretical and practical knowledge and skills for successful careers related to biodiversity, conservation and ecosystem management. This training is aimed at graduates of biology, physical geography, environmental science or related disciplines. The programme explains the rationale for biodiversity conservation and enables students to understand the implementation of conservation policy. It develops knowledge and understanding of the underpinning ecological science and improves key skills in experimentation, habitat assessment, and ecological survey and monitoring methods. Students experience habitat and species management methods and learn to write management plans. The programme also aims to:

2 Provide an understanding of the range of temperate zone ecosystems and wildlife species, and a critical awareness of contemporary conservation issues and research insights, much of which is informed by our knowledge of how environmental, management and land-use factors influence ecosystems and wildlife species.

3 Provide a comprehensive understanding of scientific survey, habitat assessment and experimental techniques and the ability to identify common species from selected habitats.

4 Provide an opportunity to demonstrate originality in the application of knowledge, together with a practical understanding of how established techniques of research and enquiry are used to develop effective management plans for species and ecosystems.

5 Provide conceptual understanding that enables students to critically evaluate current research and attain advanced scholarship in the discipline; and to evaluate methodologies and develop critiques of them and, where appropriate, to propose new hypotheses.

6 The programme also equips graduates with key skills such that they are able to:

(a) Deal with complex biodiversity and ecosystem management issues both systematically and creatively, make sound judgements in the absence of complete data, and communicate their conclusions clearly to specialist and non-specialist audiences;

(b) Demonstrate initiative and originality in tackling and solving problems, and act autonomously in planning and implementing tasks at a professional level;

(c) Continue to advance their knowledge and understanding, and to develop new skills to a high level in the future;

(d) Develop the qualities and transferable skills necessary for employment in the environment sector requiring initiative and personal responsibility; decision making in complex and unpredictable situations; and the independent learning ability required for continued professional development.

11 Learning Outcomes

The programme provides opportunities for students to develop and demonstrate knowledge and understanding, qualities, skills and other attributes in the following areas.

Knowledge and Understanding

On completing the programme students should develop and demonstrate:

- A1 An understanding of a range of ecosystems and wildlife species
- A2 A critical awareness of, and new insights into, contemporary conservation issues
- A3 Advanced knowledge and understanding of the influence of environmental, management and land-use factors on ecosystems and wildlife species
- A4 A comprehensive understanding of scientific survey, habitat assessment and experimental techniques

Teaching and Learning Methods

Teaching Strategy

Specialist knowledge and understanding of the core material is taught via lectures (A1-A4) and field classes (A1-A4) in the compulsory modules. Compulsory and optional residential field classes allow students to experience a wide range of upland and lowland habitats in Britain (A1, A3 and A4). Optional modules enable students to concentrate on particular aspects of individual interest, and/or remedy deficiencies in the use of information technology, habitat assessment and biodiversity monitoring (A4) and a broader understanding of global ecosystems, sustainability and environmental change (A1). Other teaching methods include practical classes (A1, A4), literature reviews (A2) and the design and implementation of research projects (A1, A3 and A4), with the latter also being an important part of the learning strategy.

Learning Strategy

The understanding of lecture material is encouraged through independent reading (A1-A4) assisted by the provision of prioritised reference lists. Such learning is reinforced by formative feedback provided by literature reviews (A3, A4), with active participation in seminars, fieldwork and research projects (A1, A3 and A4), with some workshops (A3) and independent problem solving exercises (A4). The MSc project preparation module (10 credits), and the associated 70-credit research project, provides training in research methods and specialised experimental, analysis and survey techniques in addition to management knowledge. This is learnt through supervised tuition in the study of a particular question of interest to the student (A3, A4).

Assessment Strategy

Assessment strategy

Assessment of knowledge and understanding is by formal unseen examination at the end of the first semester in January or by coursework, particularly in Semester 2 (A1-A4). Examinations are usually of two hours with 2-3 out of 5 or 6 questions to be answered. Essays and other written assignments submitted as part of coursework provide a fuller test of student understanding of the relevant literature (A2, A3). Field class reports are also assessed (A1-A4).

Intellectual Skills

On completing the programme students should be able to demonstrate:

- B1 Ability to assess wildlife habitats and to identify common plant and/or animal species from selected ecosystems

<p>B2 Originality in the application of knowledge B3 The use of established field and statistical techniques of research and enquiry B4 Ability to develop effective conservation and ecosystem management plans</p>
<p>Teaching and Learning Methods</p>
<p><i>Teaching Strategy</i> Research and enquiry skills are taught via lectures, seminars, literature reviews, practical classes and the MSc project preparation module (B3, B4), with policy planning taught via lectures and seminars (B4). The research project is particularly important to consolidate and extend these skills (B1-B4).</p> <p><i>Learning Strategy</i> Independent reading of recommended references is important in understanding how knowledge is applied and techniques used (B1-B4). However, research projects (B1-B4), problem solving exercises (B3, B4) and coursework (B2-B4) are also important and fieldwork is of great importance in learning to identify plant species (B1).</p>
<p>Assessment Strategy</p>
<p><i>Assessment strategy</i> Formal examination (B3) is used to assess some subject specific/professional skills, particularly when additional reading reinforces learning. However, most of these skills are assessed by reports on research projects and coursework (B1-B4).</p>
<p>Practical Skills</p>
<p>On completing the programme students should be able to:</p> <p>C1 critically evaluate current research and advanced scholarship in conservation and ecosystem management C2 evaluate conservation methodologies and develop critiques of them C3 to propose new hypotheses, when appropriate C4 deal with complex biodiversity issues both systematically and creatively</p>
<p>Teaching and Learning Methods</p>
<p><i>Teaching Strategy</i> The compulsory modules are important for developing cognitive skills. In these modules the evaluation of complex management situations and the development of good judgement are important features of seminars (C1-C4), lectures (C1, C2, C4), research projects (C1, C4) and literature reviews (C1, C2). These skills are also taught in some of the optional modules.</p> <p><i>Learning Strategy</i> Understanding of the taught material is reinforced by reading (C1, C2, and C3) and through experience of case studies, course work (C1, C2, C4) and problem solving (C2, C4). The design of the research projects is also important and is particularly useful for understanding the development of hypotheses (C3).</p>
<p>Assessment Strategy</p>
<p><i>Assessment strategy</i> Cognitive skills are assessed by both formal examination (C1, C2, C4) and reports (C1-C4), including that produced for the main project.</p>
<p>Transferable/Key Skills</p>
<p>On completing the programme students should be able to:</p> <p>D1 Communicate conclusions clearly to specialist and non-specialist audience D2 Direct their own work programme D3 Show originality and initiative in tackling and solving problems</p>

Teaching and Learning Methods

Teaching Strategy

The teaching of key skills is an important part of the MSc throughout many modules. Verbal presentations are encouraged in seminars (D1) and all aspects (D1-D3) are important in the research project. Field classes (D1-D3), workshops (D1& D3) and independent problem solving (D2-D3) teach students about the importance of communication skills, information sources and originality and independence in the professional implementation of their knowledge.

Learning Strategy

A wide range of methods is used to reinforce the teaching of key skills and aid understanding. Whilst there is some recommended reading (D1-D3) most key skills are better developed through the use of fieldwork (D1-D3), case studies (D1-D3), the research project (D1-D3), workshops (D1.D3), problem solving exercises (D2-D3) and presentations (D1). The project is particularly important in providing students with an opportunity for developing and demonstrating creativity and originality.

Assessment Strategy

Assessment strategy

Reports (D1-D3) and coursework (D1-D3) are the main methods of assessment. Presentations test verbal communication skills (D1).

12 Programme Curriculum, Structure and Features

Basic structure of the programme

The programme is offered in full time mode. The length of study for the programme is one year. It conforms to the modular structure of other MSc programmes taught in the School in three phases similar to the undergraduate semester system. It consists of 120 credits in the taught component and 60 credits for a research project, which takes place in MSc phase 3, University summer term and the summer vacation. The taught component is assessed throughout MSc phases 1 and 2, with most phase 2 modules examined by course work. The report for the project is submitted in very late August or very early September.

There are 180 credits altogether: 40 credits of compulsory modules in semester 1 plus 20 credits from a choice of two optional modules, 60 credits of compulsory modules in the semester 2 and 60 credits for the project. These compulsory modules are part of the core biodiversity conservation material for the degree. They focus on the management of conservation projects and appropriate field techniques, conservation policy, and issues in the management of species and ecosystems, including habitat assessment. The core conservation material given in, ecosystem management and global ecosystems and environmental change will normally be taken by all students.

MSc candidates undertake an MSc academic skills module in semester 1, which precedes an independent project (60 credits) in semester 2 and ongoing into the summer leading to a project report (submitted late August). This will normally be a piece of applied ecological science concerned with a conservation issue. An initial project proposal is developed at the start of the project and requires students to submit a costed project, usually with links to a conservation organisation.

Students will have to satisfy the standard MSc regulations that apply to MSc degrees in the School of Natural and Environmental Sciences. Decisions on fail, pass, MSc merit and MSc distinction awards will be made by the Board of Examiners in September after completion of the project work and will be based on overall performance in all aspects of the subject.

Key features of the programme (including what makes the programme distinctive)

The MSc degree utilises a wide range of expertise available in the Faculty of Science, Agriculture and Engineering. It is innovative in enabling biodiversity conservation to be studied as applied ecology in the wider context of land use, particularly agriculture and

amenity. Additionally it offers opportunities for students to understand how expertise might be used in subsequent employment and includes links with local and national, statutory and non-governmental conservation organisations. Practical skills are emphasised with local links to practical management problems on nature reserves and field work that provides experience in plant identification and habitat assessment from a wide range of upland and lowland habitats. The experience of practitioners is utilised in a programme of visiting speakers and visits to conservation sites in a number of modules, including Defra, Northumberland and Durham Wildlife Trusts, Northumberland National Park, RSPB, National Trust, Natural England, Game and Wildlife Conservation Trust and the North Pennines Area of Outstanding Natural Beauty.. The project is an important vehicle for allowing practical, experimental and survey skills to be applied to a specific conservation or ecosystem management problem with possible links to a conservation organisation.

Programme regulations (link to on-line version)

5437F: [-R5437F.pdf \(ncl.ac.uk\)](#)

13 Support for Student Learning

Generic information regarding University provision is available at the following link.

[Generic Information](#)

14 Methods for evaluating and improving the quality and standards of teaching and learning

Generic information regarding University provision is available at the following link.

[Generic Information](#)

Accreditation reports

Additional mechanisms

15 Regulation of assessment

Generic information regarding University provision is available at the following link.

[Generic Information](#)

In addition, information relating to the programme is provided in:

The University Prospectus: [Find a Degree | Postgraduate | Newcastle University \(ncl.ac.uk\)](#)
Degree Programme and University Regulations: <http://www.ncl.ac.uk/regulations/docs/>

Please note. This specification provides a concise summary of the main features of the programme and of the learning outcomes that a typical student might reasonably be expected to achieve if she/he takes full advantage of the learning opportunities provided.

Mapping of Intended Learning Outcomes onto Curriculum/Modules

Module	Type	Intended Learning Outcomes			
		A	B	C	D
NES8002	Compulsory	1, 2, 4	1, 2, 3	1,3	1, 2, 3
NES8006	Compulsory	4	3		3
NES8100	Compulsory	1, 4	1, 2, 3	1, 4	1, 2, 3
NES8101	Compulsory	1, 3, 4	4	1, 2, 4	1, 3
NES8104	Compulsory	1,2	1		1,2
NES8312	Compulsory	4	3		1
NES8313	Optional	1, 2, 3	2	4	1, 3
NES8314	Optional	4	2,3,4	1,2	
NES8316	Compulsory	1,2,3,4	1,2,3,4	1,2,3,4	1,2,3
SPG8013	Compulsory	4	3,4	2,3,4	1,2,3