PROGRAMME SPECIFICATION		Newcastle University

1	**Awarding Institution**	Newcastle University
2	**Teaching Institutions**	Newcastle University
3	**Final Award**	MSc
4	**Programme Title**	Wildlife Management
5	**UCAS/Programme Code**	5235/5236
6	**Programme Accreditation**	N/A
7	**QAA Subject Benchmark(s)**	none
8	**FHEQ Level**	7
9	**Last updated**	04-10-2013

10 Programme Aims

The overall aim of this programme is to provide a link between the theory and practice of wildlife management from the perspective of the regulatory authorities associated with UK wildlife management. The programme will provide advanced training in policy and science implementation in the UK giving graduates a professionally focussed postgraduate qualification that is directly relevant to a wide range of employment in the wildlife management sector. Whilst much of the training and case studies will be focussed on UK and EU policy, the generic training will allow graduates to work in other countries where policy and management are strongly linked.

Specifically the course aims to provide graduates with:
- Advanced knowledge on wildlife management theory, the principles of biodiversity and conservation, epidemiology, wildlife conflicts and humaneness and welfare issues.
- Practical skills in wildlife and environmental data collection, data analysis, data handling, statistics and modelling methodologies with a focus on providing evidence for policy.
- Field skills in wildlife monitoring, surveying and GIS.
- Critical thinking to address wildlife problems in a policy context.
- The ability to meet the expectation of the Framework for Higher Education Qualifications as at Level 7

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 acquired detailed knowledge and thorough understanding of:

A1 the complexities of biodiversity, population dynamics and species management issues.
A2   the technologies, approaches and strategies available to survey, monitor and model wildlife.
A3 wildlife disease epidemiology and management
A4 how research and evidence is used in the formulation of government policy
A5 human-wildlife conflicts and ethical issues in wildlife management

Teaching and Learning Methods

A1–A2 are achieved by lectures, seminars and case study workshops. The teaching strategy for **A1**, **A3** and **A5** includes lectures to set out baseline knowledge, principles and standards, and small group discussions, group exercises and seminars where current knowledge and species specific case studies are presented and examined from a range of perspectives.

Students will acquire knowledge, particularly for **A4** and **A5** through team work, case studies, presentations, and independent study and research. Some modules include short problem solving exercises.

Practical elements will be taught in the field and will form much of the knowledge and understanding of learning outcome **A2**.

Assessment Strategy

Intended learning outcomes (see **A1** to **A5** above) regarding knowledge and understanding are assessed based on course work involving both written and oral communications at the individual or team level. This will include a variety of continuous forms of assessment including essays, problem-solving exercises, laboratory reports and case studies and provide both formative and summative assessment through relevant examples. The interactive learning environment, Blackboard, will be used for both formative and summative assessments. A reflective learning log will be used to assess understanding of some of **A2**.

A1, A5 closed book examinations are a complementary means of assessing factual knowledge.

Intellectual Skills

On completing the programme students should be able to:

B1 synthesise key findings and knowledge from across natural and social sciences, in particular those relating to wildlife management and associated policy and regulatory frameworks
B2 critically evaluate the quality of data and information offered from different sources
B3 develop logical thinking and a structured approach to problem solving
B4 plan and conduct applied research projects either individually or as a team and critically evaluate results
B5 determine the appropriate method for analysis and modelling of data and interpret results.

Teaching and Learning Methods

Intellectual skills (**B1-B5**) are developed progressively throughout the programme in modules containing seminars and case studies.

Throughout the programme, students will develop intellectual skills by participating in group discussions, case studies and science and technology workshops to enhance their **(a)** analytical and interpretative faculties and **(b)** ability to formulate objective and coherent arguments.

Field visits and associated team problem solving exercises are the main method used to enhance intellectual skills related to technology transfer capabilities.

Design, execution, statistical analysis and reporting of the final dissertation project enhance the learning of these skills in a focused manner.

Assessment Strategy

B1-B5 are assessed through individual and/or group R&D and technology transfer proposal preparation exercises and through individual dissertation proposals and theses
B1-B3 are also assessed via oral presentations and assessed essays, mainly in compulsory modules
B1and B2 are also assessed in certain optional modules by closed book examinations
The interactive learning environment, Blackboard, will be used for both formative and summative assessments.

Practical Skills
On completing the programme students should be able to: **C1**   demonstrate bibliographic and key IT skills appropriate to R&D at Master's level **C2**   design and conduct a wildlife survey **C3**   collect data using a variety of methods and sources, **C4**   manage and critically analyse data using advanced statistical and modelling approaches **C5**   prepare and present information, in both written and verbal formats, to stakeholders (e.g. policy makers, advisors and consumers) with contrasting levels of knowledge and understanding

Teaching and Learning Methods
Practical Skills (**C1-C5**) are primarily obtained through course work, practical laboratory classes, assignments and the research project. Bibliographic and IT skills (**C1**) will be transferred through specific components (data handling, statistical and computing skills practical classes) of modules. C2 will be as a result of modules BIO8058 and BIO8059.

Assessment Strategy
The assessment of practical skills (**C1-C5**) will be based on **(a)** bibliographies produced as part of essays, seminar presentations and the final project thesis, **(b)** data handling and analyses carried out as part of problem solving exercises and the project thesis and **(c)** presentations to farmer and other food chain stakeholder groups as part of industry workshops and the annual postgraduate conferences.

Transferable/Key Skills
On completing the programme students should be able to: **D1**   communicate and present research findings (including those from their dissertation) to academic and stakeholder/industry audiences **D2**   produce effective written communications and presentations using state-of-the-art software packages **D3**   project management skills, including writing proposals, planning of projects and implementation **D4**   use effective time and resource management practices **D5**   work effectively as a member of teams both subject specific and multidisciplinary

Teaching and Learning Methods
Transferable/Key skills **D1-D5** are developed through the programme of course work, field visits, final dissertation and the industry and postgraduate workshops.

Assessment Strategy
Key skills are not independently assessed. However, **D1-D5** are indirectly assessed through coursework, team and individual presentations, research papers and the dissertation.

12	**Programme Curriculum, Structure and Features**

Basic structure of the programme

The programme curriculum will be delivered by **Newcastle University with** major support for the delivery by the NWMC at the AHVLA. AHVLA is the agency that provides advice to Defra on wildlife management, is involved with the development, assessment and implementation of policy associated with wildlife problems in the UK. It is concerned with invasive species, wildlife disease and has a large portfolio of research and management that is implemented at the National scale.

Most modules will be taught in the teaching and laboratory facilities at the main Newcastle University campus in the city centre.

The programme consists of:

Six 10 credit modules, four 15 credit modules and a 60 Credit research project.
All modules align with Universities Qualifications and Credit framework.

1.   Theory
  BIO8048   Introduction to Biodiversity and Wildlife Management
  BIO8053.   Population Dynamics and Conflict Management
  BIO8054   Management of Wildlife Disease and Epidemiology
  BIO8055   Wildlife Research and Policy 1: Policy and Licensing
  SPG8013   Environmental Impact Assessment
2 Skills
  BIO8056   Modelling and Data Analysis for Wildlife Management
  BIO8057   Wildlife Research and Policy 2 : Evidence base
  BIO8014   GIS and remote sensing
  BIO8058   Field and Laboratory Skills
  BIO8059   Humaneness and Ethics
3.   Application
  BIO8060   Research Project

A field based module which will be delivered by AHVLA at various sites in the UK (BIO8058) This will enable students to gain expertise wildlife management survey skills in the field and first hand experience of some current problems and conflicts during the one year MSc course. The taught element of the programme (between October and May) will take place at Newcastle. In this period staff from Newcastle and AHVLA will provide modules on the necessary ecological and wildlife management theory. Major support for the delivery of the policy focussed modules (BIO8055, BIO8056, BIO8057 and BIO8059) will be provided by AHVLA staff or industry guest lecturers. Any examination assessment will be timetabled for the January assessment period and all further modules will be assessed by course work. Some practical fieldwork elements of the course will take place in May- June when it is most appropriate to carry out wildlife surveys and sampling in the field. In semester 3 students will be based where they will undertake research project placements.

Research projects will form a third of the degree credits and will be undertaken in Semester 3. Depending upon the nature of the project the student may spend a significant proportion of this time in the field (i.e. away from Newcastle). Supervision of the research projects will usually consist of one member of Newcastle staff and one member of NWMC centre staff.

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

Why Wildlife Management?

Wildlife management and conservation is based on understanding the biology of wildlife and understanding how interventions will impact on the long term trends in the population or communities being managed. Understanding the underlying biology to allow intervention is not sufficient, interventions and management have to be acceptable for society as a whole and regulators who will licence or oversee any intervention. Defra is the UK government department that formulates, regulates and oversees implementation of wildlife problems through a range of agencies and advisory bodies. There is a clear need to provide graduates with the necessary theoretical and practical expertise in wildlife management which is framed in the context of the legal and policy requirements of UK regulators.

The underlying aim of this programme is to provide a specialist MSc programme to bridge the gap between theory and teaching of wildlife biology and the practical implementation of research findings to the regulatory framework in which wildlife is managed. The programme is designed to provide training in this close link between science and policy allowing in depth specialisation in Wildlife Management.

There are currently no other specialised MSc programmes on integration of theory and policy implementation of wildlife management in the UK.

Unique features of MSc in Wildlife Management:

The only degree in the UK to equip the graduate with the knowledge, skills and competencies required of a wildlife manager.

Many modules have direct input from the UKs leading wildlife ecologists from the National Wildlife Management Centre at Animal Health and Veterinary Laboratories agency.

Students will have the opportunity to develop practical skills in wildlife monitoring, surveillance and handling including specific training on humaneness, risk assessment and home office licensing.

Throughout the degree programme the relevance and application of the theory and knowledge is integrated within the UK framework.

Highly quantitative teaching to develop numeric ability and understanding. This will be achieved through familiarisation with techniques and software available for data collection, surveillance, analysis, modeling and interpretation of results for policy, this will be integrated across the degree course.

Unique course on Wildlife diseases and Epidemiology .

Students have the opportunity to conduct an independent research project on current wildlife problem.

The programme has a direct relevance to UK political landscape and graduates will have a specific focus on the specialist skills required for UK Government agencies and academic jobs.

Programme regulations (link to on-line version)

http://www.ncl.ac.uk/regulations/programme/

13	Criteria for admission

Entry qualifications
Good Honours Degree (2ii or higher) in a relevant subject.

Other non-standard qualifications and relevant experience are also considered. This applies in particular to relevant work experience in the wildlife management sector. Each application is considered individually by the course selector, and if appropriate will be made an offer.

Admissions policy/selection tools
As this programme requires a wide range of abilities and attributes, selection is not solely based on academic qualifications. Selectors seek evidence of motivation and commitment, supported by the personal statement and references.

Level of English Language capability
6.5 IELTS or equivalent. If the score of ≥ 5.5 is achieved applicants will be considered if they take an appropriate pre-sessional English courses (e.g. INTO Newcastle University programme).

14	Support for Student Learning

The Student Services portal provides links to key services and other information and is available at: *http://www.ncl.ac.uk/students/*

Induction
During the first week of the first semester students attend an induction programme. New students will be given a general introduction to University life and the University's principle support services and general information about the School and their programme, as described in the Degree Programme Handbook. New and continuing students will be given detailed programme information and the timetable of lectures/practicals/labs/ tutorials/etc. The International Office offers an additional induction programme for overseas students.

Study skills support
Students will learn a range of Personal Transferable Skills, including Study Skills, as outlined in the Programme Specification. Some of this material, e.g. time management is covered in the appropriate Induction Programme. Students are explicitly tutored on their approach to both group and individual projects.

Numeracy support is available through Maths Aid and help with academic writing is available from the Writing Development Centre (further information is available from the Robinson Library).

Academic and Pastoral support
Each undergraduate and taught postgraduate student will be assigned a personal tutor.*
A personal tutor is one part of a wider network of advice and guidance available to students to support their personal and general academic development. The module leader acts as the first point of contact for subject-specific academic advice. Thereafter the Degree Programme Director or Head of School may be consulted. Issues relating to the programme may be raised at the Student-Staff Committee, and/or at the Board of Studies. Within the academic unit, students may also receive additional academic and pastoral advice from a range of other student-facing staff including degree programme directors, dissertation/project supervisors, and administrative support staff.
*Arrangements may vary for students taking special types of provision.

The University also offers a wide range of institutional services and support upon which students can call, such as the Writing Development Centre, Careers Service and Student Wellbeing Service. This includes one-to-one counselling and guidance or group sessions / workshops on a range of topics, such as emotional issues e.g. stress and anxiety, student finance and budgeting, disability matters etc. There is specialist support available for students with dyslexia and mental health issues. Furthermore, the Student Union operates a Student Advice Centre, which can provide advocacy and support to students on a range of topics including housing, debt, legal issues etc.

Support for students with disabilities
The University's Disability Support team provides help and advice for disabled students at the University - and those thinking of coming to Newcastle. It provides individuals with: advice about the University's facilities, services and the accessibility of campus; details about the technical support available; guidance in study skills and advice on financial support arrangements; a resources room with equipment and software to assist students in their studies.

Learning resources
The University's main learning resources are provided by the Robinson and Walton Libraries (for books, journals, online resources), and Information Systems and Services, which supports campus-wide computing facilities.

All new students whose first language is not English are required to take an English Language Proficiency Test. This is administered by INTO Newcastle University Centre on behalf of Newcastle University. Where appropriate, in-sessional language training can be provided. The INTO Newcastle University Centre houses a range of resources which may be particularly appropriate for those interested in an Erasmus exchange.

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

Module reviews
All modules are subject to review by questionnaires which are considered by the Board of Studies. Changes to, or the introduction of new, modules are considered at the Board of Studies and/or the School Teaching and Learning Committee. Student opinion is sought at the Student-Staff Committee and/or the Board of Studies. New modules and major changes to existing modules are subject to approval by the Faculty Learning, Teaching and Student Experience Committee.

Programme reviews
The Board of Studies conducts an Annual Monitoring and Review of the degree programme and reports to Faculty Learning, Teaching and Student Experience Committee. The FLTSEC takes an overview of all programmes within the Faculty and reports any Faculty or institutional issues to the Faculty Learning, Teaching and Student Experience Committee.

External Examiner reports
External Examiner reports are considered by the Board of Studies. The Board responds to these reports through Faculty Learning, Teaching and Student Experience Committee. External Examiner reports are shared with institutional student representatives, through the Student-Staff Committee.

Student evaluations
All modules, and the degree programme, are subject to review by student questionnaires. Informal student evaluation is also obtained at the Student-Staff Committee, and the Board of Studies. The results from student surveys are considered as part of the Annual Monitoring and Review of the programme and any arising actions are captured at programme and School / institutional level and reported to the appropriate body.

Mechanisms for gaining student feedback
Feedback is channelled via the Student-Staff Committee and the Board of Studies.

Faculty and University Review Mechanisms
Every six years degree programmes in each subject area undergo periodic review. This involves both the detailed consideration of a range of documentation, and a review visit by a review team (normally one day in duration) which includes an external subject specialist and a student representative. Following the review a report is produced, which forms the basis for a decision by University Learning, Teaching and Student Experience Committee on whether the programmes reviewed should be re-approved for a further six year period.

Additional mechanisms
An industry advisory panel has been established to advise the course management team on industry needs regarding the knowledge and skills transferred on the MSc programme.

16	Regulation of assessment

Pass mark
The pass mark is 50 (Postgraduate programmes)

Course requirements
Progression is subject to the University's Masters Degree Progress Regulations, Taught and Research and Examination Conventions for Taught Masters Degrees. There are reassessment opportunities, with certain restrictions. Limited compensation up to 40 credits of the taught element and down to a mark of 40% is possible for candidates who commenced their programme in 2013/14 or earlier. For students starting their programme in 2014/15 or later, no compensation is possible.

Common Marking Scheme
The University employs a common marking scheme, which is specified in the Taught Postgraduate Examination Conventions, namely:

Summary description applicable to postgraduate Masters programmes		Summary description applicable to postgraduate Certificate and Diploma programmes	
<50	Fail	<50	Fail
50-59	Pass	50 or above	Pass
60-69	Pass with Merit		
70 or above	Pass with Distinction		

Role of the External Examiner
An External Examiner, a distinguished member of the subject community is appointed by Faculty Teaching and Learning Committee after recommendation from the Board of Studies. The External Examiner is expected to:
        See and approve examination papers
        Moderate examination and coursework marking
        Attend the Board of Examiners
        Report to the University on the standards of the programme

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

The University Prospectus: http://www.ncl.ac.uk/postgraduate/

The School Brochure http://www.ncl.ac.uk/marketing/services/print/publications/ordering/

Degree Programme and University Regulations: http://www.ncl.ac.uk/regulations/docs/

The Degree Programme Handbook: http://www.ncl.ac.uk/biology/study/postgrad/index.htm

ANNEX 1. Mapping of Intended Learning Outcomes onto Curriculum/Modules

Module	Type	Intended Learning Outcomes			
		A	**B**	**C**	**D**
Compulsory modules					
BIO8048 Introduction to Biodiversity and Wildlife Management	Compulsory	1,2,5	1,2,3	5	2,3,4,5
BIO8053 Population Dynamics and Conflict Management	Compulsory	1,2,5	1,2,3	5	1,2,3,4,5
BIO8054 Management of Wildlife Disease and Epidemiology	Compulsory	1,2,3,5	1,2,3,4,5	1,4,5	1,2,3,4,5
BIO8055 Wildlife Research and Policy 1: Policy and Licensing	Compulsory	3,4,5	1,2,3	5	2,3,4,5
SPG8013 Environmental Impact Assessment	Compulsory	2	1,2,3,4	3,5	1,2,3,4,5
BIO8056 Modelling and Data Analysis for Wildlife Management	Compulsory	1,2,4	1,2,3,5	1,4,5	1,2,3,4,5
BIO8057 Wildlife Research and Policy 2: Evidence	Compulsory	1,2,3,4,5	1,2,3,5	5	1,2,3,4,5
BIO8014 GIS and remote sensing	Compulsory	2,	1,2,3,4	3,5	1,2,3,4,5
BIO8058 Field and Laboratory Skills	Compulsory	1,2,5	3,4	2,3,5	2,3,4,5
BIO8059 Humaneness and Ethics	Compulsory	1,2,5	2,3,4	2,5	2,3,4,5
BIO8060 Research Project	Compulsory	1,2,4	1,2,3,4,5	1,3,4,5	1,2,3,4,5