MSc in Species Identification and Survey Skills (full-time)
For students entering in 2015/6

Awarding Institution:	University of Reading
Teaching Institution:	University of Reading
Relevant QAA subject Benchmarking group(s):	
Faculty:	Life Sciences Faculty
Programme length:	12 months
Date of specification:	25/Aug/2015
Programme Director:	
Programme Advisor:	
Board of Studies:	Biological Sciences MSc Board of Studies
Accreditation:	

Summary of programme aims

The MSc in Species Identification and Survey Skills (SISS) is designed specifically to facilitate student entry into a career in Ecological Consultancy. The consultancy sector is very clear on the skills that it requires applicants to possess; the single most important aim of the proposed programme is to equip students with these skills. Whilst the Ecological Consultancy sector requires these skills, many conservation organizations, such as Natural England (NE) and RSPB, lament the decline in identification and field skills in students and often find it hard to fill vacant positions due to the lack of suitably skilled applicants. The proposed programme should equip students with the types of skills that would be appreciated by conservation organizations as well as Ecological Consultancies.

The expected outcomes are that students should acquire and demonstrate:

- Appreciation of the philosophical context in which wildlife conservation is carried out both in the UK and overseas.
- Understanding of the essential principles of research design in conservation biology and wildlife management.
- Appreciation of a range of wildlife issues both in the UK and overseas.
- Competence in a range of research methods for data collection and detailed expertise in a subset relevant to the student's own research interests.
- Expertise in data management and analysis, and awareness of issues affecting data interpretation.
- Understanding of the legal and ethical issues in the conduct and dissemination of a research programme.
- Competence in research management and in written and oral skills for communicating research output wildlife conservation issues.
- Competence in report writing.
- Awareness of issues relevant to the pursuit of a career in wildlife conservation or management.
- Ability to identify a range of plants and animals under field conditions
- Ability to deploy a range of field survey techniques
- Acquisition of a broad range of transferable employment-related skills.

Transferable skills

By the end of the course, students will have developed the following transferable skills:
(i) word processing, use of the Internet and Worldwide Web, spreadsheets, statistics packages and other computer skills;
(ii) preparation of reports and research proposals;
(iii) development of identification skills, specifically plant, insect, bird and mammal;
(iv) development of field based survey techniques;
(v) communication skills, written and verbal, poster presentation and use of PowerPoint;
(vi) ability to use database/library resources.

Programme content
Compulsory modules (160 credits):

Code	Module title	Credits	Level
BIMPI12	Research and Professional Skills	20	7
BIMPK12	Vegetation Survey and Assessment	20	7
BIMWA12	Quantitative Methods	20	7
BIMWG2	Geographic Information Systems	10	7

BIMWK1	Invertebrate Survey and Assessment	10	7
BIMWK2	Advanced Insect Identification	10	7
BIMWL1	Field Trips	10	7
BIMWL2	Vertebrate Survey and Assessment	10	7
BIMWF1	Species and Habitat Conservation	10	7

Either
| BIMPLA | Project Placement | 60 | 7 |

or
| BIMWPRO | Dissertation | 60 | 7 |

Part-time or modular arrangements
The course can only be taken on a full-time basis.

Progression requirements
N/A

Summary of Teaching and Assessment
Teaching is by a variety of methods, including lectures, small group seminars, discussion sessions, field-based practicals, individual feedback on written work and one-to-one advice. Assessment procedures mirror the diversity of teaching methods and include scientific essays, oral and poster presentations, essay based examinations, production of a wildlife diary, spot tests and submission of placement report.
Marks should be interpreted within the following framework:

Mark Interpretation
70 - 100% Distinction
60 - 69% Merit
50 - 59% Good standard (Pass)
Failing categories:
40 - 49% Work below threshold standard
0 - 39% Unsatisfactory Work

For Masters Degrees
To pass the MSc students must gain an average mark of 50 or more overall including a mark of 50 or more for the Project Placement or Dissertation. To qualify for the award of MSc, the total credit value of all modules marked below 40 must not exceed 30 credits and for all modules marked below 50 must not exceed 55 credits. Students who gain an average mark of 70 or more overall including a mark of 60 or more for the Project Placement or Dissertation and have no mark below 40 will be eligible for a Distinction. Those gaining an average mark of 60 or more overall including a mark of 50 or more for the Project Placement or Dissertation and have no mark below 40 will be eligible for a Merit.

For PG Diplomas
To pass the Postgraduate Diploma students must gain an average mark of 50 or more over 120 credits. In addition the total credit value of all modules marked below 40 must not exceed 30 credits and for all modules marked below 50 must not exceed 55 credits.
Students who gain an average mark of 70 or more and have no mark below 40 will be eligible for the award of a Distinction. Those gaining an average mark of 60 or more and have no mark below 40 will be eligible for a Merit.

For PG Certificates
To pass the Postgraduate Certificate students must gain an average mark of 50 or more over 60 credits. In addition the total credit value of all modules marked below 40 must not exceed 10 credits.

Admission requirements
Entrants to this programme are normally required to have obtained an honours degree in a suitable subject, for example biological science, geographical science, agricultural science or environmental science. Applicants should have gained or expect to gain a class mark of 2(1) or better (i.e. 60%+ [or international equivalent, e.g. B+ US letter grade]). Applicants holding 2(2) degrees may also apply and each case will be considered on its own merits (e.g. non-standard qualified mature student who has been working in a relevant field).

Admissions Tutor: The admission tutor for this course is Dr G.J. Holloway

Support for students and their learning

University support for students and their learning falls into two categories. Learning support is provided by a wide array of services across the University, including: the University Library, the Careers, Placement and Experience Centre (CPEC), In-sessional English Support Programme, the Study Advice and Mathematics Support Centre teams, IT Services and the Student Access to Independent Learning (S@il) computer-based teaching and learning facilities. There are language laboratory facilities both for those students studying on a language degree and for those taking modules offered by the Institution-wide Language Programme. Student guidance and welfare support is provided by Personal Tutors, School Senior Tutors, the Students' Union, the Medical Practice and advisers in the Student Services Centre. The Student Services Centre is housed in the Carrington Building and offers advice on accommodation, careers, disability, finance, and wellbeing, academic issues (eg problems with module selection) and exam related queries. Students can get key information and guidance from the team of Helpdesk Advisers, or make an appointment with a specialist adviser; Student Services also offer drop-in sessions and runs workshops and seminars on a range of topics. For more information see www.reading.ac.uk/student

Support for graduate students in the School of Biological Sciences is similarly aimed at both learning and pastoral support. Learning support includes the use of a workroom dedicated to postgraduate students with networked PCs and printers, scanners, provision of photocopy cards and inter library loans (limited number), and ready access to members of staff who are all respected scholars in the fields taught. Pastoral support augments the University care system with each student being allocated a Personal Tutor within the School.

Career prospects
In the UK (and EU) there has been a dramatic and sustained increase in the number of Ecological Consultancies. The reason for this is that any organisation wanting to develop land or erect structures are legally required to have impact assessments carried out by suitably qualified professional organisations. Given the number of Ecological Consultancies, there are relatively few academic programmes designed to provide this sector with appropriately trained students. In addition to consultancy, students will be well equipped to enter employment with organisations such as Natural England, Wildlife Trusts, Biological Record Centres and other employers requiring species identification skills and survey expertise.

Opportunities for study abroad or for placements
This course currently offers limited opportunities for study abroad since it is specifically targeted at a UK (perhaps EU) job market.

Programme Outcomes

Knowledge and Understanding

A. Knowledge and understanding of:

1. Understanding of a broad variety of methods in, and approaches to, wildlife management and conservation biology.
2. Advanced understanding of the principal qualitative and quantitative research methods used in wildlife management.
3. The use of computer software designed to analyse and present data, to prepare presentations, and to word process.
4. Ethical, legal and economic issues as they relate to practical wildlife management.
5. Theoretical issues as they relate to wildlife management research.
6. Individual qualities required to carry out conservation work under field conditions.
7. Approaches available to communicate concepts to a non-scientific audience both orally and written.
8. Field identification
9. Field survey techniques

Teaching/learning methods and strategies

1-5 are covered in lectures and seminars, and are further supported during the project work and thesis preparation. 4 is covered by visiting speakers and members of staff. 6, 8 and 9 are covered by field trips and practical work under field conditions, including the project work. 7 is supported by small group seminars, the production of a poster and pamphlet, and the preparation of material designed for publication in popular magazines.

Assessment
1,2,4, 5 and 9 are assessed through continuous coursework and examinations. 3, 8 and 9 are assessed through continuous assessment and the project thesis. 6 is assessed through field trips and the project thesis. 7 is assessed through seminar presentations and coursework.

Skills and other attributes

B. Intellectual skills - *able to:*

1. Understand the theoretical framework(s) in which research in wildlife management and conservation is carried out.
2. Give an account of the basics of research design, data capture, and analysis as they apply to wildlife management.
3. Understand the basis on which evidence based decisions are made in wildlife management.
4. Select from a number of possible methods the one most appropriate to a particular data set or a given research question.
5. Critically evaluate the design and conduct of conservation research.
6. Write well-structured and well-argued scientific essays.
7. Present convincing and well-structured arguments to non-scientific audiences.
8. Summarise complex arguments in the form of posters or pamphlets.

Teaching/learning methods and strategies

1-5 are developed in lectures and seminars. Coursework essays give the opportunity for formative feedback in support of 6 and 7. 7 is supported by feedback on small group oral presentations and feedback on written assignments designed for popular magazines. Feedback on poster presentations and pamphlet construction support 8.

Assessment
1-6 are assessed through coursework and examination. 6-8 are assessed through coursework 7 is also assessed during student run seminars

C. Practical skills - *able to:*

1. Perform advanced searches for information relevant to specific topics.
2. Choose and apply appropriate data preparation and analytical procedures.
3. Plan and carry out research into wildlife management and conservation issues.
4. Collect and manage data.
5. Write up empirical conservation research.
6. Carry out habitat management for wildlife conservation purposes
7. Carry out wildlife surveys.
8. Identify species from a variety of taxonomic groups.
9. Use items of equipment, such as radio-tracking kit, mist nets and small mammal traps.
10. Report writing

Teaching/learning methods and strategies

1 is practiced throughout the course in conjunction with the preparation of coursework and the thesis. 2 and 4 are achieved through dedicated seminars and practicals, and during the preparation of the project thesis. 2-5 are undertaken during the project period and thesis preparation. 6-10 are practised during dedicated practical sessions.

Assessment
1 is assessed through the submission of coursework and the project thesis.
2 and 4 are assessed through coursework, examination and the project thesis.
2-5 are assessed through the project thesis.
6-10 are assessed during dedicated practical sessions.

D. Transferable skills - *able to:*

1. Communicate precisely or at length to scientific or non-scientific audiences.
2. Give oral presentations.
3. Work as part of a group.
4. Plan and implement a project.
5. Solve practical problems.
6. Use IT to write, to present information visually, to manage and analyse numeric data, to communicate, and to find information.
7. Manage time.
8. Condense complex orally delivered information.

Teaching/learning methods and strategies

Transferable skills are integrated in subject based teaching. 1 is learned, with formative feedback, through essays and other written assignments. 2 is included in seminars 3 forms a natural part of several of the modules. 4 and 5 are included in the project. 6 and 7 pervade all parts of the course. 8 is supported by formative feedback on research seminars written by the student.

Assessment
1,2,6 and 8 are formally assessed as coursework. 4 and 5 are assessed through the project thesis. An adequate standard in 3 and 7 are required to pass the course.