

MSc by Research Entomology (full-time)
For students entering in 2017/8

Awarding Institution:	University of Reading
Teaching Institution:	University of Reading
Relevant QAA subject Benchmarking group(s):	
Programme length:	12 months
Date of specification:	14/Aug/2017
Programme Director:	Dr Graham Holloway
Board of Studies:	Biological Sciences MSc Board of Studies

Summary of programme aims

The purpose of the course is to prepare graduates from appropriate disciplines (e.g. biological, agricultural or environmental sciences) for employment in a variety of careers associated with insect ecology or to continue to PhD. The course provides both the theoretical and the practical experience required for the students to realise their potential and to discover where their talent lies in the multidisciplinary field of Entomology.

The expected outcomes are that students should acquire and demonstrate in the context of applied entomology:

- Appreciation of the philosophical context in which entomology is carried out both in the UK and overseas.
- Understanding of the essential principles of research design in entomology.
- Appreciation of a range of insect related 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.
- Awareness of issues relevant to the pursuit of a career in entomological research
- Acquisition of a broad range of transferable employment-related skills.

Transferable skills

By the end of the course, the students will have developed the following transferable skills:

- Ability to use computers for statistics, data analysis and communication.
- Ability to use databases and other library resources.
- Writing skills: writing of articles for a scientific and a broader audience, abstraction of other's work from written and oral material, critically reviewing the work of peers.
- Ability to make oral presentations.
- Ability to use keys and other identification material.
- Ability to collect field data on a variety of taxonomic groups in a structured manner.

Programme content

Module	Title	Credits	Level
<i>Compulsory</i>			
BIMWA12	Quantitative Methods	20	7
BIMWL1	Field trips	10	7
BIMEA1	Introduction to Insect Identification	10	
BIMEB1	Advanced Entomology	10	7
BIMEPRO	Winter research project	60	7
BIMWPRO	Research Project	70	7

Part-time or modular arrangements

The course can only be taken on a full-time basis.

Progression requirements

Summary of Teaching and Assessment

Teaching is by a variety of methods, including lectures, small group seminars, discussion sessions, practicals, field work, individual feedback on written work and one-to-one advice. Assessment procedures mirror the diversity of teaching methods and include practical write-ups, oral presentations, in-course tests, production of an insect logbook, construction of an insect collection and submission of project dissertations.

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 dissertation. Students will be expected to have gained a pass mark for at least 80% of the total credits on offer to qualify for the award of MSc. 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 overall including a mark of 60 or more for the 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 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. 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. In addition the total credit value of all modules marked below 40 must not exceed 10 credits*.

* The provision to permit a candidate to be passed overall, with a profile containing marks below 40, is made subject to the condition that there is evidence that the candidate applied his or herself.

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.

Admissions Tutor: 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, In-sessional English Support Programme, the Study Advice and Mathematics Support teams and IT Services. 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 the Support Centres. If a student has a general enquiry and is unsure where to seek help, they should visit their Support Centre. There are five Support Centres across the University, including one based at the London Road Campus. The Support Centre will be able to advise on matters such as extenuating circumstances, module selection, suspensions, withdrawals, timetable queries and transferring programme. The Support Centre will also be able to signpost students to Carrington building where other University services related to disability, financial support, counselling and wellbeing, accommodation and careers can be found. More information on what student services are available can be found here: <http://student.reading.ac.uk/essentials>.

Career prospects

Students will have good prospects in careers that involve insect science. Career prospects in research related academic fields are also good.

Opportunities for study abroad or for placements

There is no placement associated with the MSc. Students wanting to carry out their project abroad need to enter into discussion with the course director to explore possibilities.

Programme Outcomes

The students are required to operate at a more advanced level than in an Honours degree, with emphasis on the integration of the various issues and factors associated with entomological research.

Knowledge and Understanding

A. Knowledge and understanding of:

1. Understanding of a broad variety of methods in, and approaches to, entomological research
2. Advanced understanding of the principal qualitative and quantitative research methods used in entomological research.
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 entomology
5. Theoretical issues as they relate to entomology.
6. Individual qualities required to carry out conservation work under field conditions.
7. Approaches available to communicate concepts to a non-scientific audience.

Teaching/learning methods and strategies

1-5 are covered in lectures and seminars, and are further supported during the project work and thesis preparation.

6 is covered by field trips and practical work under field conditions, including the project work.

7 is supported by small group seminars, the production of an insect logbook and collection

Assessment

Assessment

1,2,4 and 5 are assessed through continuous coursework and in-course tests.

3 is 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 insect ecology is carried out.
2. Give an account of the basics of research design, data capture, and analysis as they apply to entomology.
3. Understand the basis on which evidence based decisions are made in entomology
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 entomological research.
6. Write well-structured and well-argued scientific essays.
7. Present convincing and well-structured arguments to non-scientific audiences.

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

Assessment

1-6 are assessed through coursework and in-course tests.

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

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 analytical procedures.
3. Plan and carry out research into insect ecology and management issues.
 4. Collect and manage data.
 5. Write up empirical entomological research.
 6. Carry out habitat management for insect conservation purposes
 7. Carry out insect surveys.
 8. Identify species from a variety orders and families.
 9. Use items of equipment, such as moth traps, sweep nets and suction traps.

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.

and practicals, and during the preparation of the project thesis.

2-5 are undertaken during the project period and thesis preparation.

6-9 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.

6-9 are assessed during dedicated practical sessions.

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.

Please note - This specification provides a concise summary of the main features of the programme and the learning outcomes that a typical student might reasonably be expected to achieve and demonstrate if he/she takes full advantage of the learning opportunities that are provided. More detailed information on the learning outcomes, content and teaching, learning and assessment methods of each module can be found in the module description and in the programme handbook. The University reserves the right to modify this specification in unforeseen circumstances, or where the process of academic development and feedback from students, quality assurance process or external sources, such as professional bodies, requires a change to be made. In such circumstances, a revised specification will be issued.