
Programme Specification

BSc Zoology

UCAS code: C300

Awarding Institution:	University of Reading
Teaching Institution:	University of Reading
Relevant QAA subject benchmarking group(s):	Biosciences
Faculty of Life Sciences	Programme length: 3 years
For students entering Part 3 in:	October 2009
Date of specification:	March 2009
Programme Director:	Dr Gail Hutchinson
Programme Adviser:	Dr Amanda Callaghan
Board of Studies:	Biological Sciences
Accreditation:	None

Summary of programme aims

The programme aims to provide students with the opportunity to study animal life in all its diversity, at scales that range from the subcellular to that of the ecosystem, and to provide them with a suitable foundation for careers in for example research, teaching, the biological control of pests or the conservation of endangered species in the wild. It emphasises a mix of modern molecular laboratory expertise and field skills.

Part 1 imparts an understanding of the basic concepts of modern zoological science, and Part 2 deepens this understanding of zoological concepts and develops a range of expertise over the main areas of the subject. Part 3 aims to study selected subjects in depth, and students will be equipped to tackle detailed problem-solving and analytical tasks associated with pure and applied zoological questions, in areas that include pest management and conservation.

During these studies students will be exposed to a variety of information sources and techniques and be trained in various skills including those used in reasoning, argument and communication. Several transferable skills will be acquired including the ability to design and execute experiments in the laboratory and in the field (including working in a team), access information, interpret data using statistics and computing, write essays, scientific papers and reports, and give oral and poster presentations.

Transferable skills

The University's Strategy for Teaching and Learning has identified a number of generic transferable skills which all students are expected to have developed by the end of their degree programme. In following this programme, students will have had the opportunity to enhance their skills relating to career management, communication (both written and oral), information handling, numeracy, problem-solving, team working in the laboratory and in the field, and use of information technology. Students will also gain experience in the methodology of research and scholarship.

Programme content

The profile which follows states which modules must be taken (the compulsory part), together with recommended modules (Part 1 only), and optional modules thought to be most appropriate for zoologists. Students must choose modules offered by the School of Biological Sciences, or other University of Reading Schools and Departments, subject to the agreement of the Programme Adviser, to a total of 120 credits in each Part.

Part 1 (three terms, 120 credits)

<i>Compulsory modules (90 credits)</i>		<i>Credits</i>	<i>Level</i>
AM1P11	Introductory Microbiology	10	C
BI1EB2	Humans and the Changing World	10	C
BI1EC12	Exploiters and Exploited	20	C
BI1ED2	Mammals: Diversity, Behaviour and Conservation	10	C
BI1EF23	Ecology: Species and their Interactions	20	C
BI1BA1	The Living Cell	10	C
BI1BC2	Genes and Chromosomes	10	C
Students without AS or A2 level Chemistry, or an equivalent qualification, are <i>required</i> to take:			
CH1FC1	Fundamental Concepts in Chemistry	10	C
<i>Optional modules (30 credits)</i> . To achieve a total of 120 credits, students will choose further modules, subject to approval by the Programme Adviser. Suggestions include:			
AP1A10	Countryside and the Environment	10	C
PM1PB2A	Human Physiology	10	C
PM1PB2	Human Physiology	20	C
BI1EA1	Introduction to Enterprise and Marketing	10	C
LA1XX	Institution-Wide Language Programme	20	C
B1EG2	Plant Diversity, Structure and Utilisation	10	C
BI1EH1	Principles of Horticulture	10	C

Part 2 (three terms, 120 credits)

<i>Compulsory modules (90 credits)</i>		<i>Credits</i>	<i>Level</i>
AS2A1	Statistics for Life Sciences	10	I
BI2BG5	Animal, Plant and Microbial Development	10	I
BI2BK5	Molecular Biology of Gene Expression	10	I
BI2BM5	Science Communication	10	I
BI2BN5	Vertebrate Zoology	10	I
BI2EE4	Evolutionary Biology	10	I
BI2EI4	Invertebrate Zoology	10	I
BI2EN5	Animal Behaviour	10	I
<i>Also, students are <u>required</u> to take one field course - EITHER</i>			
BI2EV3P	Part 2 Zoology Field Course OR	10	I
BI2EA3	Tropical Biology Field Course	10	I
<i>Optional modules (30 credits).</i> To achieve a total of 120 credits, students will choose further modules, subject to approval by the Programme Adviser. Suggestions include:			
AS2H1	Genetic Data Analysis	10	I
BI2BB4	Endocrinology	10	I
BI2BD4	Life and Death of a Cell	10	I
BI2BI5	Immunology	10	I
BI2BP6	Practical Skills: Recombinant DNA Exercise	10	I
BI2EF6	Habitat Management	10	I
BI2EH4	Introduction to History and Philosophy of Science	10	I
BI2EO5	Applied Ecology	10	I
BI2EP5	Crop Pests and Integrated Crop Protection	10	I

Part 3 (three terms)

<i>Compulsory modules (50 credits)</i>		<i>Credits</i>	<i>Level</i>
BI3EU78	Animal Diversity	10	H
BI3PRO	Project	40	H
<i>Optional modules (70 credits)</i> Further modules, to a total of 120 credits will be selected. <i>Recommended modules: The modules listed immediately below are strongly recommended</i>			
BI3ED6P	Marine Biology Field Course	10	H
BI3EG7	Evolutionary Genetics and Phylogeny	10	H
BI3EI8	Research Topics in Ecology	10	H
BI3EJ8	Conservation Biology	10	H
BI3EK7	Behavioural Ecology and Life History Theory	10	H
<i>Other Options:</i> Modules from the list below may be chosen. Read the information associated with each module – some with generalist titles may not be based on animals. <i>*Places are restricted on AP3A91 and need to be booked in Term 5.</i>			
AP3A67	Animal Welfare	10	H
AP3A68	Wildlife in a Farming Environment	10	H
AP3A76	Principles and Practice in Biological Control	10	H
AP3A91	Captive Animal Management*	10	H
BI3BE8	Cardiovascular Disease	10	H
BI3BH8	Mammalian Reproduction	10	H
BI3BJ8	Viral Pathogens	10	H
BI3EE8	Biodiversity Assessment and the Sustainable Use of Plant Resources	10	H
BI3EF8	Biodiversity Informatics	10	H
BI3EL7	Plants and Climate	10	H
BI3EN7	Conservation and Biodiversity: the Global and Local Scale	10	H

Progression requirements

To gain a threshold performance at Part 1 a student shall normally be required to achieve an overall average of 40% over 120 credits taken at Part 1 and a mark of at least 30% in individual modules amounting to not less than 100 credits. **In order to progress from Part 1 to Part 2** a student shall normally be required to achieve a threshold performance at Part 1.

To gain a threshold performance at Part 2 a student shall normally be required to achieve an overall average of 40% over 120 credits taken at Part 2 and a mark of at least 30% in individual modules amounting to not less than 100 credits. **In order to progress from Part 2 to Part 3** a student shall normally be required to achieve a threshold performance at Part 2.

Summary of teaching and assessment

Teaching is organised in modules that typically involve both lectures and practical classes and student-led seminars. The assessments are carried out within the University's degree classification scheme, details of which are in the programme handbooks. The pass mark in each module is 40%.

Part 2 contributes one third of the overall assessment and Part 3 the remaining two thirds. In order to be eligible for Honours, students must gain an overall weighted average mark of 40% and must gain a mark of at least 40% in the Research Project module.

The assessment is carried out within the University's degree classification scheme, details of which are in the programme handbooks.

Admission requirements

Entrants to this programme are normally required to have obtained:

UCAS Tariff: 300 points from no more than 4 subjects at A level, including grade B in A level Biology and one other Science A level (Chemistry preferred) at grade C. Total points exclude Key Skills and General Studies. **GCSEs:** grade C required in Mathematics, English and Science.

International Baccalaureate: Pass Diploma and achieve 6,6,5 in 3 higher level subjects, including Biology and another Science.

Applicants with other types of qualifications and mature students are also encouraged to apply

Admissions Tutor: Dr Mark Fellowes

Support for students and their learning

University support for students and their learning falls into two categories. Learning support includes IT Services, which has several hundred computers and the University Library, which across its three sites holds over a million volumes, subscribes to around 4,000 current periodicals, has a range of electronic sources of information and houses 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, the Careers Advisory Service, the University's Special Needs Advisor, Study Advisors, Hall Wardens and the Students' Union.

The Programme Adviser is available to offer advice on the choice of modules within the degree course.

Career prospects

After graduation, students will be qualified to undertake a zoological career in a range of areas, or to use skills and problem-solving abilities in careers not directly related to zoology. Honours graduates will be eligible for graduate membership of the Institute of Biology, which could lead to Chartered Biologist status.

Opportunities for study abroad: The Erasmus programme (within Socrates) enables undergraduates to undertake project work for one term in their final year at one of a number of European Universities. Recent exchanges involving AMS students have taken place with the following: University of Tours, France; Odense University, Denmark; Uppsala University, Sweden; University College Cork, Ireland; University of Zaragoza, Spain; ENSA, Montpellier, France; University of Cagliari, Sardinia. Students also have the opportunity to go to Rostock University, Germany and Siena University, Italy.


Industrial Placement

Students interested in a scientific career, whether in industry, research or some other related field may be able to apply for a year's placement between Parts 2 and 3. Students who wish to apply would normally be expected to have a weighted average of at least 60% in Part 1.


Programme Outcomes


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


Knowledge and Understanding

<p>A. Knowledge and understanding of:</p> <ol style="list-style-type: none"> 1. The fundamental concepts of zoology 2. The higher-level taxonomy and diversity of animal life. 3. How zoological principles can be applied to problems in conservation and applied biology. 4. Statistics as applied to biological data. 5. A selection of more specialised optional topics. 		<p>A. Teaching/learning methods and strategies</p> <p>Formal lectures and practicals supported by tutorials (Part 1), group work and mini-projects.</p> <p>Both laboratory and field work/ecology exercises (including residential field courses), the latter dealing with ecosystems found both in SE England, elsewhere in the UK/Europe, and possibly further afield.</p> <p>Assessment</p> <p>Most knowledge is tested through a combination of coursework and unseen formal examinations. Dissertations, oral and poster presentations also contribute.</p>
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Skills and other attributes

<p>B. Intellectual skills – able to:</p> <ol style="list-style-type: none"> 1. Think logically. 2. Analyse and solve qualitative and quantitative problems. 3. Organise tasks in structured form. 4. Transfer appropriate knowledge and methods from one topic to another (both previously experienced and novel) within the overall subject area. 5. Plan and conduct an independent project and then to write a report. 		<p>B. Teaching/learning methods and strategies</p> <p>Rational thought and logical analysis are embedded throughout the program, where solutions to problems in zoology have come about through the application of appropriate experiments. Research project in Part 3.</p> <p>Assessment</p> <p>Embedded throughout the assessment protocols.</p>
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<p>C. Practical skills – able to:</p> <ol style="list-style-type: none"> 1. Carry out practical work with minimal risk, both to self and to others). 2. Undertake laboratory tasks and techniques. 3. Undertake fieldwork tasks and techniques. 4. Plan experiments and carry them out. 5. Analyse data using appropriate statistical methods, including by computer (e.g. MINITAB) 		<p>C. Teaching/learning methods and strategies</p> <p>Formal practical classes, both in the laboratory and the field. Mini-projects during field courses. The design, conduct and completion of a research project. Statistical analysis of data is incorporated into appropriate practical classes and is also required for projects.</p> <p>Assessment</p> <p>By practical laboratory and fieldwork reports and by project reports.</p>
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<p>D. Transferable skills – able to:</p> <ol style="list-style-type: none"> 1. Use IT. 2. Communicate scientific ideas by a variety of methods and to a variety of target audiences. 3. Give oral and poster presentations. 4. Work as part of a team. 5. Use library resources both paper and electronic. 6. Manage time. 7. Plan a career. 		<p>D. Teaching/learning methods and strategies</p> <p>The use of IT and other skills is a major element of some modules. The use of all skills is embedded throughout the course. The research project is likely to require application of all skills.</p> <p>Assessment</p> <p>The skills will enhance to performance of students both in coursework and unseen examinations, including in integrating papers.</p>
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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 expect 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 module and programme handbooks.