

Royal Holloway, University of London
Course specification for an undergraduate award
BSc Ecology and Conservation (C180)

Section 1 – Introduction to your course

This course specification is a formal document, which provides a summary of the main features of your course and the learning outcomes that you might reasonably be expected to achieve and demonstrate if you take full advantage of the learning opportunities that are provided. Further information is contained in the College prospectus, and in various handbooks, all of which you will be able to access online. Alternatively, further information on the College's academic regulations and policies can be found [here](#). Further information on the College's Admissions Policy can be found [here](#).

Your degree course in Ecology and Conservation is delivered in three stages, each of which comprises one year of full-time study, or two years of part-time study, during which you must follow modules to the value of 120 national credits. The curriculum is based around a core of mandatory modules running through all three stages providing a broad base of biology and ecology in Stage one, essential training in systematic and quantitative biology and ecological studies in Stage two and a study of biodiversity and ecosystems and an individual project in the final stage.

Stage one comprises a set of 7 mandatory modules and seeks to provide the necessary grounding for the study of the subject at degree level. These modules introduce the major themes of the degree, with modules in Ecology and Conservation, Vertebrate Evolution and Diversity, Biomes and Ecosystems, Green Planet: Plants and Our Future, Cell Biology and Genetics. One additional module is selected from either Biology in a Changing World or Chemistry of Life. In **Stage two** you take a total of 6 mandatory modules to the value of 90 credits and choose the remaining credits from the options available. These take the students beyond the basic foundations laid in stage one and the choices available enable students to specialise. The mandatory modules include Invertebrate Biology, Food Security, Sustainability and Green Biotechnology, and Evolution, as well as a solid statistical grounding with Biological Data Analysis and Interpretation. Options include Animal Behaviour, Applications of Molecular Genetics in Biology and Microbiology. Practical Field Ecology is a mandatory field course for this degree, and the residential field course in Marine Biology, held in the Millport Marine Biology Centre in Scotland, provides another option. **Stage three** allows for increasing specialisation as students take 4 mandatory modules to the value of 75 credits and choose further modules from the options available. Most of these modules closely reflect the research interests of members of staff who are all specialists in their fields. The mandatory modules include Conservation Biology, Climate Change: Plants and the Environment, and Population and Community Ecology. The modules available as options include Marine Ecology and Biodiversity, Entomology, Evolutionary Ecology, and Circadian Biology, as well as the overseas field courses of Conservation Ecology in the Field, and the Tropical Rainforest Expedition. Students complete an individual research project providing training in a specialised research area and also in generic skills such as literature searching, report writing, use of word processing, graphics and statistics and in independent work. The project is regarded as your graduate capstone experience, as it is the culmination of your training in experimental design, research techniques, data analysis and presentation.

The course provides coverage across a range of modern ecology topics, and involves training in a variety of practical techniques and skills relevant to research in the biological sciences. The system is also flexible and allows the students to transfer to other degree streams within the Department up to the start of the second term, or indeed to the Biology degree up to the start of the second year. You can also take up to 30 credits outside of the Department of Biological Sciences, but within other Science Departments during stage two/three. Options are selected in consultation with your Personal Tutor and the Director of Teaching.

While Royal Holloway keeps all the information made available under review, courses and the availability of individual modules, especially optional modules are necessarily subject to change at any time, and you are therefore advised to seek confirmation of any factors which might affect your decision to follow a specific course. In turn, Royal Holloway will inform you as soon as is practicable of any significant changes which might affect your studies.

The following is brief description for some of the most important terminology for understanding the content of this document:

Degree course – May also be referred to as 'degree programme' or simply 'course', these terms refer to the qualification you will be awarded upon successful completion of your studies.

Module – May also be referred to as 'course unit', this refers to the individual units you will study each year to complete your degree course. Undergraduate degrees at Royal Holloway comprise a combination of modules in multiples of 15 credits to the value of 120 credits per year. On some degree courses a certain number of optional modules must be passed for a particular degree title.

Section 2 – Course details			
Date of specification update	March 2022	Location of study	Egham Campus
Course award and title	BSc Ecology and Conservation	Level of study	Undergraduate
Course code	3140	UCAS code	C180
Year of entry	2022/23		
Awarding body	Royal Holloway, University of London		
Department or school	Department of Biological Sciences School of Life Sciences and the Environment	Other departments or schools involved in teaching the course	N/A
Mode(s) of attendance	Full-time or Part-time	Duration of the course	Three years or Six years
Accrediting Professional, Statutory or Regulatory Body requirement(s)	You must pass the BS3010 Individual Research Project in order to qualify for an Honours Degree in Ecology and Conservation; this is a requirement of the Royal Society of Biology for an accredited degree.		
Link to Coursefinder for further information:	https://www.royalholloway.ac.uk/studying-here/	For queries on admissions:	study@royalholloway.ac.uk

Section 3 – Degree course structure										
3.1 Mandatory module information										
The following table summarises the mandatory modules which students must take in each year of study										
Year	Module code	Module title	Contact hours*	Self-study hours	Written exams**	Practical assessment**	Coursework**	Credits**	FHEQ level	Module status (see below)
1	BS1021	Becoming a Bioscientist	66	84		25%	75%	15	4	MC
1	BS1042	Vertebrate Evolution and Diversity	43	107	70%		30%	15	4	MC
1	BS1043	Green Planet: Plants and Our Future	44	106	60%		40%	15	4	MC
1	BS1051	Ecology and Conservation	42	108	60%		40%	15	4	MC
1	BS1052	Biomes and Ecosystems	42	108	50%		50%	15	4	MC
1	BS1071	Cell Biology and the Origin of Life	39	111	50%	20%	30%	15	4	MC
1	BS1072	Genetics	35	115	50%		50%	15	4	MC
2	BS2010	Invertebrate Biology: Structure, Behaviour and Evolution	48	102	60%		40%	15	5	MC
2	BS2020	Food Security, Sustainability and Green Biotechnology	51	99	70%	<u>10%</u>	20%	15	5	MC
2	BS2090	Plant Biotic Interactions and Ecological Networks	32	118	50%	<u>12.5%</u>	37.5%	15	5	MC
2	BS2110	Practical Field Ecology	57.5	92.5		35%	65%	15	5	MC
2	BS2120	Biological Data Analysis and Interpretation	40	110	25%	45%	30%	15	5	MC

2	BS2160	Evolution	29	121	50%	20%	30%	15	5	MC
3	BS3010	Individual Research Project	183	117		35%	65%	30	6	MNC
3	BS3120	Population and Community Ecology	22	128	55%		45%	15	6	MC
3	BS3060	Conservation Science	25	125	55%	10%	35%	15	6	MC
3	BS3190	Climate Change: Plants and the Environment	25	125	60%	15%	25%	15	6	MC

This table sets out the most important information for the mandatory modules on your degree course. These modules are central to achieving your learning outcomes, so they are compulsory, and all students on your degree course will be required to take them. You will be automatically registered for these modules each year. Mandatory modules fall into two categories; 'condonable' or 'non-condonable'.

In the case of mandatory 'non-condonable' (MNC) modules, you must pass the module before you can proceed to the next year of your course, or to successfully graduate with a particular degree title. In the case of mandatory 'condonable' (MC) modules, these must be taken but you can still progress or graduate even if you do not pass them. Please note that although Royal Holloway will keep changes to a minimum, changes to your degree course may be made where reasonable and necessary due to unexpected events. For example; where requirements of relevant Professional, Statutory or Regulatory Bodies have changed and course requirements must change accordingly, or where changes are deemed necessary on the basis of student feedback and/or the advice of external advisors, to enhance academic provision.

*Contact hours come in various different forms, and may take the form of time spent with a member of staff in a lecture or seminar with other students. Contact hours may also be laboratory or, studio-based sessions, project supervision with a member of staff, or discussion through a virtual learning environment (VLE). These contact hours may be with a lecturer or teaching assistant, but they may also be with a technician, or specialist support staff. It is intended that these contact hours will be face-to-face as far as possible, but in certain unavoidable situations, these may take place virtually.

**The way in which each module on your degree course is assessed will also vary, however, the assessments listed above are all 'summative', which means you will receive a mark for it which will count towards your overall mark for the module, and potentially your degree classification, depending on your year of study. On successful completion of the module you will gain the credits listed. 'Coursework' might typically include a written assignment, like an essay. Coursework might also include a report, dissertation or portfolio. 'Practical assessments' might include an oral assessment or presentation, or a demonstration of practical skills required for the particular module.

3.2 Optional modules

In addition to mandatory modules, there will be a number of optional modules available during the course of your degree. The following table lists a selection of optional modules that are likely to be available. However, not all may be available every year. Although Royal Holloway will keep changes to a minimum, new options may be offered or existing ones may be withdrawn. For example; where reasonable and necessary due to unexpected events, where requirements of relevant Professional, Statutory or Regulatory Bodies (PSRBs) have changed and course requirements must change accordingly, or where changes are deemed necessary on the basis of student feedback and/or the advice of External Advisors, to enhance academic provision. There may be additional requirements around option selection, so it is important that this specification is read alongside your department's Student Handbook, which you can access via their [webpage](#).

Year 1	Year 2	Year 3
BS1031: Chemistry of Life	BS2001X: Marine Biology	BS3030: Biology of Parasitic Diseases
BS1041: Biology in a Changing World	BS2005: Microbiology	BS3100 Tropical Rainforest Expedition
	BS2140: Animal Behaviour	BS3110: Conservation Ecology in the Field
	BS2150: Applications of Molecular Genetics in Biology	BS3180: Marine Ecology and Biodiversity
	BS2900: Dissertation	BS3210: Evolutionary Ecology of Vertebrates
		BS3220: Extreme Animal Physiology
		BS3230: Circadian Biology
		BS3520: Seed Biology: Molecular & Conservation Biology to Industrial Applications

3.3 Optional module requirements

In year 1 you must choose options to the value of 15 credits from the list of stage one modules offered by the Department
 In year 2 you must choose options to the value of 30 credits from the list of stage two modules offered by the Department.
 In year 3 you must choose options to the value of 45 credits from the list of stage three modules offered by the Department.

Section 4 - Progressing through each year of your degree course

For Part-time study:

Stage one (a):

BS1021 Becoming a Bioscientist (15 credits; condonable)

BS1041 Biology in a Changing World (15 credits; condonable)

BS1042 Vertebrate Evolution and Diversity (15 credits; condonable)

BS1071 Cell Biology and the Origin of Life (15 credits; condonable)

Stage one (b):

BS1043 Green Planet: Plants and Our Future (15 credits; condonable)

BS1051 Ecology and Conservation (15 credits; condonable)

BS1052 Biomes and Ecosystems (15 credits; condonable)

BS1072 Genetics (15 credits; condonable)

Stage two (a)

BS2010 Invertebrate Biology: Structure, Behaviour and Evolution (15 credits; condonable)

BS2110 Practical Field Ecology (15 credits; condonable)

BS2120 Biological Data Analysis and Interpretation (15 credits; condonable)

BS2160 Evolution (15 credits; condonable)

Stage two (b)

BS2020 Food Security, Sustainability and Green Biotechnology (15 credits; condonable)

BS2090 Plant Biotic Interactions and Ecological Networks (15 credits; condonable)

and choose 30 credits of options from the stage two modules listed above.

Stage three (a)

BS3010 Individual Research Project (30 credits) (Non-condonable fail – must be passed in order to qualify for the field of study).

BS3120 Population and Community Ecology (15 credits; condonable)

BS3060 Conservation Science (15 credits; condonable)

Stage three (b)

BS3190 Climate Change: Plants and the Environment (15 credits; condonable)

and choose 45 credits from the stage three optional modules listed above.

Progression and Award:

For further information on the progression and award requirements for your degree, please refer to Royal Holloway's [Academic Regulations](#).

All first year undergraduate students are required to take and pass the non-credit bearing Moodle-based Academic Integrity module SS1001 in order to progress into the second year of study (unless their course includes the alternative mandatory SS1000 module). The pass mark for the module assessment is stated in the on-line Academic Integrity Moodle module. Students may attempt the assessment as often as they wish with no penalties or capping. Students who meet the requirements for progression as stipulated in the [College's Undergraduate Regulations](#) (Section: Conditions for progression to the next stage) but fail to pass the Moodle-based Academic Integrity module will not be permitted to progress into their second year of academic study at the College.

Section 5 – Educational aims of the course

The aims of the Honours Degree course in Ecology and Conservation are to:

- provide sound knowledge and understanding of the organismal and environmental principles of the subject through a core set of modules, and develop an insight into the current frontiers of knowledge, primarily through a series of specialised Stage 3 modules many of which focus on ecology and conservation ;
- develop, through a flexible and progressive structure, a range of subject-specific and transferable skills, including practical laboratory skills, fieldwork skills, self-management, information retrieval, communication and presentation skills, working with others, decision making and meeting deadlines, that equip you for future employment;
- provide experience of independent research through a final year project that focuses on ecology and conservation;
- produce graduates who can work safely and responsibly with biological materials, laboratory equipment and in the field.

Section 6 - Course learning outcomes

In general terms, the courses provide opportunities for students to develop and demonstrate the following learning outcomes. (*Categories – Knowledge and understanding (K), Skills and other attributes (S), and Transferable skills (*)*)

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| <ol style="list-style-type: none"> 1. describe the diversity and complexity of life and life processes (K); 2. demonstrate a familiarity with terminology, nomenclature and classification systems (K); 3. describe the cellular basis of life processes (K); 4. elaborate on the function of ecological systems and of the interrelationships between organisms and the environment they live in focussing on population processes, dynamics and interactions; community structure development and biodiversity; ecological methodologies and data analyses; the impact of different approaches to species management and conservation; nutrient and energy flow through populations and communities (K); 5. elaborate on genetics and the evolutionary processes that give rise to the diversity and complexity of life (K); 6. engage with philosophical and ethical issues arising from some of the current developments in the biosciences and their impact on society, and explain how ethical issues underpin professional integrity and standards (K); 7. demonstrate competence in a range of practical techniques and skills in relevant areas of the biosciences, applying standard safety protocols and Good Laboratory Practice (S);(S); 8. perform accurate data collection, analysis and interpretation including relevant numerical calculations, statistical analysis, testing of hypotheses, and show ability to place the work in context, analyse and solve problems, make decisions, and suggest lines of further study (S*); | <ol style="list-style-type: none"> 9. apply well-developed strategies for accessing information from a wide range of sources to maintain, update, and enhance your knowledge of the Biosciences including the cutting edge developments in the field and cross-disciplinary awareness, and sort, filter, synthesise and abstract information to communicate the principles clearly in oral and written forms in a way that is organised, topical and recognises the limits of current hypotheses (K,S*); 10. critically assess the merits of contrasting subject-specific theories, paradigms, concepts and principles and develop a reasoned argument to support your position (S); 11. plan, design, execute and present an independent piece of research through a theoretical or practical project in ecology, demonstrating time management, initiative, problem solving and independence, and critically assess the quality of evidence (S*); 12. take personal responsibility for your own behaviour to benefit learning and wellbeing, and develop habits of reflection on that learning (S*); 13. creatively apply original ideas, using imaginative and/or innovative approaches to tackle problems (S*); 14. write and speak to effectively communicate science to peers and non-scientists (S*); 15. use information technology, including spreadsheets, databases and bioinformatics approaches in the analysis of large datasets (S*); 16. demonstrate interpersonal skills and social intelligence, including collaborating with others in groups, taking opportunities for leadership and recognising and respecting the views of others (S*); 17. prepare for your career and develop awareness of your graduate-level transferable skills (S*). |
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Section 7 - Teaching, learning and assessment

The overall strategy is to provide a progressive approach to biological concepts and systems of increasing complexity through teaching methods that aid learning and stimulate interest. Teaching is mostly by means of lectures, laboratory and fieldwork classes, seminars, tutorials, study/revision sessions, with knowledge and understanding further developed by guided independent study. Learning and analytical ability are developed and reinforced through problem solving, essay writing, practical classes (both laboratory and fieldwork), critical evaluation and by giving you the opportunity to design, execute and evaluate your own experiments. You are encouraged to acquire further knowledge beyond taught material, e.g. by reading topical reviews, original research literature and attending research seminars, especially in the final year.

The practical assignments associated with stage one and stage two modules provide training in a range of subject specific laboratory techniques, including safety assessment. The culmination of these skills is demonstrated in the stage three research project, and for literature skills the preparation of a literature report. Training in intellectual and key transferable skills is embodied throughout the course and forms a strong element of the tutorial and study session courses. You are required to meet basic standards in information technology.

Assessment of knowledge and understanding is typically by formal written examinations, practical exams, and a range of coursework, including practical assignments (both laboratory and fieldwork based), poster preparation, oral presentations, essays and the individual research project.

Section 8 – Additional costs

There are no additional costs associated with this degree course.

These estimated costs relate to studying this particular degree course at Royal Holloway. General costs such as accommodation, food, books and other learning materials and printing etc., have not been included, but further information is available on our website.

Section 9 – Indicators of quality and standards	
QAA Framework for Higher Education Qualifications (FHEQ) Level	4-6
Your course is designed in accordance with the FHEQ to ensure your qualification is awarded on the basis of nationally established standards of achievement, for both outcomes and attainment. The qualification descriptors within the FHEQ set out the generic outcomes and attributes expected for the award of individual qualifications. The qualification descriptors contained in the FHEQ exemplify the outcomes and attributes expected of learning that results in the award of higher education qualifications. These outcomes represent the integration of various learning experiences resulting from designated and coherent courses of study.	
QAA Subject benchmark statement(s)	http://www.qaa.ac.uk/quality-code/subject-benchmark-statements
Subject benchmark statements provide a means for the academic community to describe the nature and characteristics of courses in a specific subject or subject area. They also represent general expectations about standards for the award of qualifications at a given level in terms of the attributes and capabilities that those possessing qualifications should have demonstrated.	

Section 10 – Further information
<p>This specification provides a concise summary of the main features of the course and the learning outcomes that a typical student might reasonably be expected to achieve and demonstrate when taking full advantage of the learning opportunities that are available. More detailed information on modules, including teaching and learning methods, and methods of assessment, can be found via the online Module Catalogue. The accuracy of the information contained in this document is reviewed regularly by the university, and may also be checked routinely by external agencies, such as the Quality Assurance Agency (QAA).</p> <p>Your course will be reviewed regularly, both by the university as part of its cyclical quality enhancement processes, and/or by your department or school, who may wish to make improvements to the curriculum, or in response to resource planning. As such, your course may be revised during the course of your study at Royal Holloway. However, your department or school will take reasonable steps to consult with students via appropriate channels when considering changes. All continuing students will be routinely informed of any significant changes.</p>

Section 11 – Intermediate exit awards (where available)

You may be eligible for an intermediate exit award if you complete part of the course as detailed in this document. Any additional criteria (e.g. mandatory modules, credit requirements) for intermediate awards is outlined in the sections below.

Award	Criteria	Awarding body
Diploma in Higher Education (DipHE)	Pass in 210 credits of which at least 90 must be at or above FHEQ Level 4 and at least 120 of which must be at or above FHEQ Level 5	Royal Holloway and Bedford New College
Certificate in Higher Education (CertHE)	Pass in 120 credits of which at least 90 must be at or above FHEQ Level 4	Royal Holloway and Bedford New College

Section 12 - Associated award(s)	
BSc Ecology and Conservation	BSc Ecology and Conservation with a Year in Industry