

Royal Holloway, University of London
Course specification for an undergraduate award
BSc Ecology and Conservation with a Year in Industry (C151)

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 with a Year in Industry is delivered in four stages, each of which, apart from the year in industry, 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 fixed set of 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, Biology in a Changing World, Vertebrate Evolution and Diversity, Biomes and Ecosystems, Green World: Plant Evolution, Form and Function, Cell Biology and Genetics. 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 begin to specialise. The mandatory modules include Invertebrate Biology, Plant Life, 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. In **Stage 3**, you spend a year in a relevant placement setting, to gain valuable experience in the workplace. The assessment from this placement counts as 30 credits which for the purposes of award classification is counted in the final stage. **Stage four** 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 Science, Climate Change: Plants and the Environment, and Population and Community Ecology. The modules available as options include Marine Ecology and Biodiversity, Entomology, Evolutionary Ecology, Circadian Biology, Behavioural Ecology and the overseas field course that looks at Mediterranean Conservation and Ecology. 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 from other Science Departments, during stage two/four. Options are selected in consultation with your Personal Tutor and the Director of Teaching/Department Lead in UG Education.

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 'programme', these terms refer to the qualification you will be awarded upon successful completion of your studies.

Module – May also be referred to as 'course', 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 2020 | Location of study | Egham Campus |
| Course award and title | BSc Ecology and Conservation with a Year in Industry | Level of study | Undergraduate |
| Course code | 3479 | UCAS code | C151 |
| Year of entry | 2020/21 | | |
| 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 | Duration of the course | Four 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 with a Year in Industry; 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 | BS1041 | Biology in a Changing World | 42 | 108 | 70% | | 30% | 15 | 4 | MC |
| 1 | BS1042 | Vertebrate Evolution and Diversity | 43 | 107 | 70% | | 30% | 15 | 4 | MC |
| 1 | BS1043 | Green World: Plant Evolution, Form and Function | 41 | 109 | 70% | | 30% | 15 | 4 | MC |
| 1 | BS1051 | Ecology and Conservation | 42 | 108 | 70% | | 30% | 15 | 4 | MC |
| 1 | BS1052 | Biomes and Ecosystems | 42 | 108 | 70% | | 30% | 15 | 4 | MC |
| 1 | BS1071 | Cell Biology and the Origin of Life | 45 | 105 | 60% | 10% | 30% | 15 | 4 | MC |
| 1 | BS1072 | Genetics | 35 | 115 | 70% | | 30% | 15 | 4 | MC |
| 2 | BS2010 | Invertebrate Biology: Structure, Behaviour and Evolution | 48 | 102 | 70% | 0 | 30% | 15 | 5 | MC |
| 2 | BS2020 | Plant Life: From Genes to Environment | 40 | 110 | 65% | 0 | 35% | 15 | 5 | MC |
| 2 | BS2090 | Insects, Plants and Fungi: Ecology & Applications | 30 | 120 | 70% | 0 | 30% | 15 | 5 | MC |
| 2 | BS2110 | Practical Field Ecology | 67 | 83 | | 35% | 65% | 15 | 5 | MC |

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|---|--------|---|----------------|-----|-----|-----|-----|----|---|-----|
| 2 | BS2120 | Biological Data Analysis and Interpretation | 40 | 110 | 25% | 45% | 30% | 15 | 5 | MC |
| 2 | BS2160 | Evolution | 29 | 121 | 80% | 0 | 20% | 15 | 5 | MC |
| 3 | BS3900 | Year in Industry | Up to 50 weeks | 101 | | 40% | 60% | 30 | 5 | MNC |
| 4 | BS3010 | Individual Research Project | 183 | 117 | 0 | 25% | 75% | 30 | 6 | MNC |
| 4 | BS3120 | Population and Community Ecology | 22 | 128 | 75% | 0 | 25% | 15 | 6 | MC |
| 4 | BS3060 | Conservation Science | 25 | 125 | 70% | 5% | 25% | 15 | 6 | MC |
| 4 | BS3190 | Climate Change: Plants and the Environment | 25 | 125 | 80% | 5% | 15% | 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.

**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 4 |
|--------|---|---|
| None | BS2001X: Marine Biology | BS3020: Special Study: Dissertation |
| | BS2005: Microbiology | BS3030: Biology of Parasitic Diseases |
| | BS2140: Animal Behaviour | BS3090: Entomology: Pure and Applied |
| | BS2150: Applications of Molecular Genetics in Biology | BS3100 Borneo Rainforest Field Course |
| | | BS3110: Mediterranean Conservation and Ecology Field Course |
| | | BS3160: Behavioural Ecology |
| | | BS3180: Marine Ecology and Biodiversity |
| | | 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

During stage two, you must choose options equal to the value of 30 credits from a list of stage two modules offered by the Department.
 During stage four, you must choose options equal to the value of 45 credits from a list of FHEQ level 6 modules offered by the Department.

Section 4 - Progressing through each year of your degree course

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

Year in Industry

Students taking an industrial year take additional module BS3900 and thus have 150 credits in their final year.

Students on degree courses with Year in Industry need to fulfil the requirements set out in the departmental Year in Industry Handbook in order to progress to the placement and be eligible for the degree title.

Section 5 – Educational aims of the course

The aims of the Honours Degree course in Ecology and Conservation with a Year in Industry 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 4 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 professional experience in a relevant workplace environment;
- 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. a critical understanding of the diversity and complexity of life and life processes (K); 2. a familiarity with terminology, nomenclature and classification systems (K); 3. a knowledge of the cellular basis of life processes (K); 4. a critical understanding 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. a critical understanding of genetics and of the evolutionary processes that give rise to the diversity and complexity of life (K); 6. understanding cutting edge developments in a range of areas specific to the subject (K); 7. knowledge and engagement with philosophical and ethical issues arising from some of the current developments in the biosciences (K); 8. well-developed strategies for updating, maintaining and enhancing their knowledge of the Biosciences (K); 9. appreciation for the relevance of ecology and the importance of the scientific (research) approach in employment settings and organisations, and an understanding of expected professional standards in the workplace (K); 10. the ability to employ and evaluate suitable experimental methods (both laboratory and fieldwork based) for the investigation of relevant areas of ecology (S); 11. a range of laboratory and fieldwork techniques of key importance in ecology (S); 12. working safely in a scientific laboratory and in the field, with some knowledge and understanding of standard safety protocols and Good Laboratory Practice (S); | <ol style="list-style-type: none"> 13. the ability to apply relevant numerical skills, including statistics to biological data (S); 14. the ability to access bioscience information from a wide range of sources in order to maintain and enhance knowledge of the Biosciences and to communicate that information clearly in oral and written forms (S); 15. assessing the merits of contrasting subject-specific theories, paradigms, concepts and principles (S); 16. critically interpreting and evaluating experimental data and relevant literature, analysing and solving problems, and decision-making;* 17. applying subject-specific knowledge and understanding to address familiar and unfamiliar problems (S); 18. the ability to plan, design and execute an independent piece of research through a theoretical or practical project in ecology, including the production of the final report (S); 19. taking personal responsibility for learning, and developing habits of reflection on that learning (S*); 20. identifying, retrieving (including the use of online computer searches), sorting and exchanging information (S*); 21. abstracting and synthesising information, and developing a reasoned argument (S*); 22. developing creativity by applying original ideas, being imaginative or using innovative approaches for tackling problems (S*); 23. written communication and verbal presentation (S*); 24. information technology (including spreadsheets, databases, word processing, email and WWW) (S*); 25. interpersonal skills, including working in groups/teams and recognising and respecting the viewpoints of others (S*); 26. CV and career preparation (S*). 27. demonstrating the key skills for successful employment to a professional standard in industry or other organisations, including good time management, team working, |
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| | record keeping, showing appreciation of health and safety issues, and showing leadership or management potential (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 four research project, and for literature skills the preparation of a literature report. You have to prepare your own risk assessment prior to commencing your final year project work.

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

Other essential costs - £303

Costs incurred by students while on a Year in Industry/Business vary depending on the nature and location of the placement. For further information please contact our Student Fees Office.

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

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).

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.

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)

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| BSc Ecology and Conservation (C150) | BSc Ecology and Conservation with a Year in Industry (C151) |
|-------------------------------------|---|