

**City College Norwich
Higher Education: Programme Summary Specification**

This Summary Programme Specification sets out the essential features and characteristics of the BSc (Hons) Wildlife and Conservation course.

Course Title	BSc (Hons) Wildlife and Conservation
Awarding Body	University of East Anglia
Level of Award	Level 6
Professional, Statutory and Regulatory Bodies Recognition	None
Credit Structure	120 credits at Level 4, Level 5 and Level 6: 360 credits in total
Mode of Attendance	Full-Time
Standard Length of Course	3 Years
Intended Award	BSc (Hons): Bachelor of Science
Fall-back Awards	Certificate of Higher Education: 120 Credits Diploma of Higher Education: 240 Credits
Entry Requirements	64 UCAS Points English, Maths and Science GCSE at 4 (C) Mature students (21 years and over) may be considered on prior learning and experience AP(C/E)L & RPEL may be considered for non-standard entry. For international applications Academic IELTS at level 6 (minimum 5.5 in all components) is required.
Delivering Institution(s)	Easton College
UCAS Code	C500

Course Summary

This BSc (Hons) Wildlife and Conservation is designed to meet the needs of students who wish to gain knowledge and understanding of the breadth of ecology within an academically challenging yet supportive environment.

Our aim is to produce confident, knowledgeable, and questioning graduates with the skills and experience needed for a wide range of careers.

The programme strongly emphasizes applied and practical conservation and ecological principles, giving students access to wide and varying fieldwork sites both on the campus and across the East Anglian region. Access to this range of habitats along with specialist teaching remains a key distinguishing feature of the programme. Skills such as habitat management, ecological surveying, trapping, and tracking techniques and species identification remain highly sought after within the industry as well as knowledge and understanding of business, consultancy and use of technology.

Course Aims

This programme aims to equip students with skills, knowledge, and confidence necessary to pursue graduate careers in the biological sciences or other areas requiring graduates with strong analytical, communication and enquiry skills. This will be achieved by providing students with an educational framework in which they can develop their knowledge and understanding of the fundamental principles of plant and animal conservation in a context where skills development is encouraged and supported as an integral part of the academic experience. Students will be encouraged to learn independently and to pursue areas they find particularly interesting in an enquiry-based approach.

Course Learning Outcomes

Learning outcomes will be communicated to students and external examiners through the course handbook, the module specifications and assignment briefs.

A selection of learning outcomes associated with this degree programme:

- Describe the characteristics and distribution of significant plant and animal communities within a range of British habitats
- Explain plant taxonomy, structure, and function
- Describe detailed project plans for specified practical projects relating to habitat creation and management
- Explain the origin and diversity of life including the principles of genetics and evolution
- Analyse the implications of climate change on UK species and habitats
- Differentiate between the role of genetics and the environment in shaping the behaviour of organisms
- Design and apply a field ecology investigation
- Analyse the efficacy of practical measures to conserve biodiversity
- Describe and evaluate main sources of spatial and temporal data and the use of GIS in the context of environmental and biological studies
- Create a plan for the implementation of management techniques to conserve valued habitat features
- Investigate, review and appraise current strategies to breed and manage a captive

- population of endangered flora or fauna
- Critically evaluate current planning and environmental legislation in the context of land use changes
- Plan, deliver and evaluate a range of outdoor learning activities for specified audiences
- Engage with and reflect on the inclusion of science in social media

Course Design

The design of this course has been guided by the following QAA Benchmark and Professional Standards:

QAA Framework for HE Qualifications of UK Degree-Awarding Bodies (publication date 3 November 2014).

UK Quality Code for Higher Education:

Earth Sciences, Environmental Sciences and Environmental Studies
https://www.qaa.ac.uk/docs/qaa/subject-benchmark-statements/subject-benchmark-statement-earth-sciences-environmental-sciences-and-environmental-studies.pdf?sfvrsn=ff2c881_6

Course Structure

This course comprises modules at levels 4, 5 and 6.

Module Specifications for each of these modules will be made available to students on-line at the beginning of each academic year.

Modules

Year 1 – Level 4 Modules		
Module Title	Credit Value	Module Summary (including associated assessments)
Professional and Academic Skills	20	<p>Professional and Academic Skills is a core module and designed to aid your success in your programme of study.</p> <p>This module aims to:</p> <ul style="list-style-type: none"> • to provide a framework of professional and academic skills at undergraduate level. • to promote your recognition of the value of research, critical analysis and reporting in the context of your programme specialism.

		<ul style="list-style-type: none"> • to aid in the identification and development of a developmental approach to learning and to the professional skills required for employment. <p>Whilst delivery and the learning outcomes are generic, the content and output of your work will reflect your programme specialism.</p> <p>Assessment:</p> <ul style="list-style-type: none"> • Group presentation • Reflective Journal
Principles of Biology	20	<p>This module provides you with the essential background knowledge in cellular and molecular biology with an emphasis on genetics and evolution. You will become familiar with cellular structures and functions and the classification of living organisms.</p> <p>The module aims to develop your knowledge and understanding of plant and animal physiology alongside with the homeostatic processes that are essential in ensuring the survival of the organism in constantly changing environments. The module introduces you to the mechanisms of heredity including cell division, sex determination and the laws of inheritance.</p> <p>You will also examine the processes which drive evolution, the concepts of natural selection and events which upset the population genetics including genetic drifts and founder effect.</p> <p>This module aims to introduce you to, and develop, your observational and practical skills using light microscopy, breeding <i>Drosophila melanogaster</i> and using molecular techniques such as electrophoresis. These practical activities will improve your understanding and practical skills in biological science, the fundamental processes in living organisms and of contemporary scientific technologies.</p> <p>Assessment:</p> <ul style="list-style-type: none"> • Exam • Academic Poster
Introduction to Botany	20	<p>This module contains the basis of plant science and is an introduction to plant physiology and taxonomy, covering general botany including morphology and plant anatomy. The module will explore the ways in which plants acquire and process energy, nutrients, and water and how plants reproduce, grow, and develop. The module will familiarise students with botanical terminology and will enable them to learn the key diagnostic features of our commonest plant families.</p> <p>Assessment:</p> <ul style="list-style-type: none"> • Report • Exam

<p>Practical Habitat Creation and Management</p>	<p>20</p>	<p>This module aims to equip the student with a range of practical skills appropriate to working in conservation management that will enable them to undertake specified construction, maintenance and habitat management tasks. These tasks will be focussed upon the creation and management of semi-natural habitats.</p> <p>The module aims to develop the student's practical confidence which will allow them to instruct and, where necessary, supervise staff and volunteers in undertaking practical tasks, as well as providing students with the opportunity to develop specifications and design briefs as required when engaging with outside contractors.</p> <p>The health and safety requirements of practical tasks are key components of the module. Students must consider the implications of tool and livestock use and the need for risk assessment in project planning and implementation. Students will undertake practical sessions on the College Nature reserve and other sites on the college farm.</p> <p>Assessment:</p> <ul style="list-style-type: none"> • Practical Portfolio • Project Plan
<p>Principles of Environmental Science and Ecology</p>	<p>20</p>	<p>This module aims to provide you with a broad understanding of the Earth's natural system and an underpinning understanding of soil and water resources is essential to the sustainable management of the local, national and global environment. You will explore and examine geographical climate patterns and the impact that climate change is having on global populations, ecosystem services, and the policy decisions used in mitigation.</p> <p>The module allows you to learn fundamental ecological theories in terms of the way that individuals, populations and species grow, interact and are distributed. The way in which energy is transferred through ecosystems and impacts on the length of food chains and numbers of individuals at varying trophic levels will be considered and it will further review the manner in which ecosystems alter with time and the influence of living organisms on successional processes.</p> <p>You will also have the opportunity to build practical skills in assessing environmental systems and the analytical skills to discuss the complex issues that influence resource use. Furthermore, an understanding of these principles will be key to help graduates towards following a more sustainable path in the development of policies, management plans and personal choice.</p> <p>Assessment:</p> <ul style="list-style-type: none"> • Essay • Examination

British Wildlife and Identification	20	<p>This module aims provides you with the skills and knowledge to identify a range of British wildlife and habitat types. This will include the recognition of dominant and characteristic vegetation as well as knowledge of significant plant and animal species found within each habitat. The ability to identify key species from a wide range of taxa is key to appreciating the biodiversity value of a range of habitats. You will develop an understanding of the abiotic and biotic relationships that determine the nature and diversity of each habitat. Adaptation of species to their given habitat will also be explored.</p> <p>The module develops your understanding about the strategies for conserving species and habitats in the United Kingdom The anthropogenic impacts on UK wildlife will be considered and what mechanisms are in place to protect wildlife in this country from the impacts of farming, urban development, pollution and alien species. If the multifunctional nature of land in the British countryside is to be conserved, then a balance must be found between conflicting land users.</p> <p>Assessment:</p> <ul style="list-style-type: none"> • Case study • Collection
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Year 2 – Level 5 Modules

Module Title	Credit Value	Module Summary (including associated assessments)
Research Skills	20	<p>This module is designed to enable participants to further develop the learning and development skills introduced in the Higher Learning Skills module in year 1 (or its equivalent). It provides the opportunity for students to focus on practice-based research and evaluation skills.</p> <p>The module will develop an appreciation of qualitative and quantitative methodology, research methods and critical thinking skills appropriate to the subject area. This will provide a foundation for research at level 6.</p> <p>Assessment:</p> <ul style="list-style-type: none"> • Open book time constrained assignment • Research Proposal
Field Ecology	20	<p>This module is designed to enable participants to further develop the learning and development skills introduced in the Higher Learning Skills module in year 1 (or its equivalent). It provides the opportunity for students to focus on practice-based research and evaluation skills.</p> <p>The module will develop an appreciation of qualitative and quantitative methodology, research methods and critical thinking skills appropriate to the subject area. This will provide a foundation for research at level 6.</p>

		<p>Assessment:</p> <ul style="list-style-type: none"> • Portfolio
Introduction to QGIS	20	<p>This module will provide students with valuable practical skills in the use of Geographical Information Systems through the understanding of the concepts and training during practical sessions (two third of the face-to-face teaching time). Students will discover, using relevant case studies, how to use Open-Source software (QGIS). Students will also explore a variety of resources for spatial data at both local and global scales including species distribution, protected areas, habitats maps, satellite images, etc. Students will learn how to collect spatial data in the field using GPS and tracking devices, how to manage and insert these data into QGIS, how to explore and analyse the data and how to create high quality cartographic and non-cartographic outputs. The practical sessions will cover a variety of techniques on how to use, analyse and represent available spatial data relevant to the study of terrestrial and marine organisms in the context of ecological and behavioural studies and wildlife conservation.</p> <p>The theory of QGIS and its uses in biology are assessed through a short essay assessment. The practical skills are assessed through a scientific report demonstrating the use of QGIS to answer a biologically relevant question. Students can either use a dataset provided by the lecturer or are free to use any available spatial dataset. Assessment focuses on the correct use of the QGIS tools and methods and the quality of the cartographic output. This module provides strong links to employment, as the knowledge of QGIS and the use of these techniques are valuable practical skills in industry.</p> <p>Assessment:</p> <ul style="list-style-type: none"> • Essay • Scientific Report
Management Planning for Habitats	20	<p>Without management planning many important habitats and their species may be lost and the diversity of the British landscape eroded. This module aims to allow learners the opportunity to focus on the conservation management of one selected site of conservation interest that is relevant to the local area or of particular interest to the individual. The conservation of habitats, and the species that they contain, is the central pillar of the management of biodiversity. This module examines the approaches to achieving the sustainable management of a site with specific habitats and associated species. Its aim is to equip learners with the ability to apply conservation approaches to the site's management. Where appropriate, strategies for the reintroduction of key species will also be discussed.</p>

		<p>The module enables students to discuss the factors that affect the conservation value of habitats and to evaluate their impact. In order to equip learners with management planning skills, practical survey and monitoring techniques will be employed in this module. These are the key tools that facilitate scientific and evidence-based planning to ensure that conservation objectives are met in the long term of management of sites. This module assists students to assess the strategic mechanisms available to influence these factors, and to propose appropriate mitigation and remedial activity. By the completion of this module, students will be able to formulate appropriate plans to conduct management activity on selected habitats.</p> <p>Assessment:</p> <ul style="list-style-type: none"> • Survey Report • Management Plan
Global Biodiversity	20	<p>As a result of the Rio Conference, 1992, the concept of biodiversity, and its importance in maintaining a sustainable global environment, gained prominence. Since that time there has been a significant decline in global biodiversity and serious concerns that we may be facing another mass extinction. It is now of fundamental importance that humans understand the mechanisms that drive areas of high biodiversity, where these hotspots are found, what are the threats and what can be done to negate the impacts.</p> <p>This module provides an understanding of the phenomenon of biodiversity and investigates the factors that promote it and those that threaten it. You will explore the mechanisms by which biotic diversity is generated and explores the benefits that are associated with biodiversity. You will have the chance to discuss the threats facing biodiversity on a local and global scale and will be encouraged to explore and evaluate practical conservation measures to ensure the maintenance and enhancement of biodiversity for future generations.</p> <p>The module aims to allow you to develop an appreciation of the value of biodiversity as a resource in economic and aesthetic terms from the value of an individual organism to large scale ecosystem services/natural capital. It will provide you with a sound theoretical framework from which to assess the significance of local, national and international developments on the world's biodiversity.</p> <p>Assessment:</p> <ul style="list-style-type: none"> • Case Study • Examination
Behavioural Ecology	20	<p>This module will explore the inter-relationships between behaviour, ecology and evolution of animals and plants. Students will learn why organisms behave the way they do under particular ecological conditions and how they respond and adapt to changes in their environment. The principal models and theories in relation to behaviour and behavioural ecology will be examined, using case studies and examples to illustrate.</p>

		<p>Students will seek to explain the evolution of specific behavioural patterns and have the opportunity to undertake some original research in behavioural ecology on a selected species. This will involve experimental design, research, interpretation, analysis, and presentation of results. Through understanding key concepts of behavioural ecology students will be able to make more informed choices with regards to conservation within other subject areas such as habitat management and countryside recreation.</p> <p>Assessment:</p> <ul style="list-style-type: none"> • Examination • Experimental Project Report
Year 3 – Level 6 Modules		
Module Title	Credit Value	Module Summary (including associated assessments)
Dissertation	40	<p>This module allows students to work on an academic research project of their own choosing, utilising evidenced based methodologies and using appropriate research tools. This research project could be completed in conjunction with local businesses/charities, as well as either student utilising existing data, collecting their own data or undertaking an evaluative project. Each student will be allocated a supervisor who will advise on choice of topic and on the progress of the work. Students will be encouraged to use the research project as a summative exercise. Through which to evaluate their own academic progress during the degree programme. The dissertation may take the form of either a discursive, structure and evaluative thesis or a data-based project. Learners completing a project will be given an opportunity to envisage, design, and implement a piece of research that will entail collecting, analysing, and interpreting. original data in the light of extant knowledge. It will also provide them with practical skills in participant recruitment, research ethics and design, project management, data analysis, and communication that will galvanise their employability profile.</p> <p>Assessment:</p> <ul style="list-style-type: none"> • Report • Presentation
Science Communication for Conservationists	20	<p>This module aims to give students an understanding of how modern science is disseminated to the public via a range of science communicators and how science is communicated to governments, politicians, and policy makers.</p> <p>Students will examine strong and poor strategies for communicating science to various audiences and how science</p>

		<p>information and misinformation can be used to change public perception.</p> <p>Students will examine the role of written press, TV, radio, websites, blogs, etc. and using case studies, will look at the approach of the press and the impact on the public and government policy. Examples utilized will be current within the industry and research fields, which may include topics such as climate change, land management, biodiversity loss, rewilding, and invasive species.</p> <p>This module aims to provide students with a series of multidisciplinary skills for use in industry and academia. Continuous technological advancements mean that animal scientist roles can range from field work to marketing and liaising with the public or government officials.</p> <p>By providing students with the opportunity to analyse communication strategies and create their own targeted media, they will be appropriately skilled to meet the demands of future employers.</p> <p>Assessment:</p> <ul style="list-style-type: none"> • Presentation • Multimedia and reflection
<p>Ecological Techniques for Industry</p>	<p>20</p>	<p>The monitoring and evaluation of flora and fauna remains a key element of ecological practice. Techniques and technology for undertaking work in the field are constantly under development and to remain industry competent, practitioners need to stay up to date. This may be regarding recent developments in monitoring, the use of computerised applications, use of mechanical resources whilst also maintaining a sound knowledge and understanding of taxonomy.</p> <p>The module aims to allow you to hone your skills in the wide field of ecology from the perspective of identifying the species of animals and plants present on selected sites of interest within East Anglia. You will focus more specifically on the most appropriate method of surveying and monitoring species on these sites and discuss how effective report writing and imaginative planning might mitigate land-use changes.</p> <p>College staff will deliver the core of the module with significant input from ecological consultants and practitioners in conservation organisations providing a real-life link to industry and application of theory.</p> <p>Assessment:</p> <ul style="list-style-type: none"> • Exam • Report

Environmental Education	20	<p>This module seeks to provide students with coherent understanding of the theories, methods and the necessary professional skills for providing outdoor learning activities and interpretative media resources that will support multiple roles in the nature conservation sector. Environmental activities suitable for implementation in nature reserves, schools, colleges and the wider community will be linked to interpretation theories, methods and techniques to provide a wide range of strategies for use in countryside management.</p> <p>The historical aspects of environmental education will be explored within both local and global contexts and be related to environmental good practice and sustainability. The module will develop the student's ability to evaluate the impact of outdoor activities on wildlife, within the context of nature conservation and ways to educate to mitigate. Effective development of interpretative media designed to engage visitors will be appraised at selected sites along with opportunities for outdoor learning. The impact of such outdoor experiences on environmental behaviours will be reviewed.</p> <p>Students will be encouraged to communicate environmental information using a range of practical and theoretical approaches. Organisational skills, teaching methods and the implementation of safe working strategies will develop leadership and teamwork skills for successfully creating a range of learning activities and resources. Students will design, develop, deliver and evaluate outdoor learning activities and resources as part of their assessment in this module.</p> <p>Assessment:</p> <ul style="list-style-type: none"> • Site Report • Portfolio of outdoor learning activities
Conservation Biology	20	<p>There are a range of conservation management strategies, and some are more successful than others. Students will appraise the features of effective conservation programmes and identify reasons for failures of others. Methods for measuring outcomes in conservation will be critically analysed. Animal welfare is a significant factor in saving species from extinction. Students will explore which aspects of animal welfare are fundamental to the success of captive breeding programmes. Comparing and contrasting issues and case-study examples from in-situ and ex-situ breeding programmes will enable students to justify the most effective approaches for breeding animals in captivity for conservation. The vital roles of population structure and genetic diversity will be evaluated alongside welfare aspects within the context of releasing animals from captive breeding programmes into the wild to create sustainable wild populations. Field study excursions to a range of collections will support research into welfare and population management. Through understanding the processes involved in breeding and managing captive species, students will be encouraged to</p>

		<p>question traditional and modern techniques in conservation. The core of the module will be delivered by Easton campus staff together with significant input from practicing researchers and practitioners in conservation. Guest speakers from ancillary businesses, conservation projects and charities will also be involved.</p> <p>There may be the additional opportunity, subject to interest and current travel parameters, to undertake a residential field trip to the Durrell Institute in Jersey, a world-renowned conservation and research facility, to support the study of this module and provide appropriate content towards assessments. This trip would provide hands on experience coupled with lectures delivered by the institutes qualified staff members. The cost of this trip would be in addition to course fees and would need to be met by the student in full by a specified date to ensure a guaranteed place on the trip. Specific costings for a student place will be calculated each year and are subject to change.</p> <p>Assessments:</p> <ul style="list-style-type: none"> • Field Study Report • Essay
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Awards

On successful completion of the course, students will be awarded a **UEA BSc (Hons) Wildlife and Conservation**

Course Delivery

The full BA programme will run over 3 years with students attending two days per week. Each 20-credit module will contain 48 hours of lectures/tutorials with students expected to undertake around 152 hours of private study. Students also receive 3 hours of personal tutoring per year. Students will complete 120 credits per academic year and therefore the programme will be full time.

The course is mainly delivered at Easton College, Bawburgh Road, Norwich, NR9 5DX.

Course Assessment

Assessment methods will include exams, assignments, and presentations.

Course Team

The academic staff delivering this course are drawn from a team that includes teaching

specialists and current practitioners. All staff are qualified in their subjects with their own specialist knowledge to contribute.

Course Costs

The tuition fees that new students pay will be fixed for the duration of the course and will not be subject to any further increases.

Payment of tuition fees is due at the time of enrolment and is managed in accordance with the Course Fees & Eligibility Statement and Rules and Regulations.

Students are likely to incur other costs for books, printing, and other learning materials they may choose to buy, and the cost incurred for printing two copies of their final year dissertation. This should amount to a total of not more than £300 per year.