

Nottingham Trent University Course Specification

Basic Course Information

1.	Awarding Institution:	Nottingham Trent University
2.	School/Campus:	School of Animal, Rural & Environmental Sciences / Brackenhurst Campus
3.	Final Award, Course Title and Modes of Study:	BSc (Hons) Zoo Biology (FT, SW)
4.	Normal Duration:	Full time (3 years); Sandwich (4 years)
5.	UCAS Code:	C300; C303

6. Overview and general educational aims of the course

The BSc (Hons) Zoo Biology course is designed to provide you with a sound knowledge and understanding of animal biology, and the ability to apply this knowledge to the rapidly expanding animal sector both in the UK and abroad with a focus towards the zoo industry. It will attract students who are interested in biological disciplines including nutrition, anatomy, physiology, animal behaviour, reproduction, health and how these may influence animal welfare and conservation. You will develop a sound scientific approach to these disciplines across a broad range of subjects. In choosing our degree in Zoo Biology you are demonstrating your desire to adopt an objective and scientific approach to current zoo animal contexts, to make sound judgements based on scientific evidence.

The course covers major scientific principles including anatomy & physiology, behaviour, health, disease, nutrition, reproduction and animal welfare. Including the application of these principles to captive zoo animals and associated industries. The course combines the study of captive zoo animals, utilising domestic species where appropriate.

A combination of theoretical and practical studies ensures that your knowledge and understanding as well as your technical skills, are developed throughout the course. You will acquire a range of laboratory, zoo-based and animal management and research skills necessary to underpin a scientific and analytical approach to work. In addition, you will gain experience working with industry relevant software and databases giving you the edge for employment within the zoo and conservation sector.

The course will help you to develop a range of transferable skills to prepare you for employment or further study. There are also modules and tutorials that consider aspects of career planning which will further develop these skills and enhance your subsequent graduate prospects.

The course has been developed in consultation with industry and these links are maintained and continue to inform course developments through an industrial advisory committee. Accredited membership of relevant zoo organisations such as BIAZA, EAZA and Species 360 are key aspects to ensure the course is continually kept up to date and maintains industry relevance and standards.

The course is available with an optional sandwich year, either in the UK or abroad, giving you the opportunity to gain valuable experience in a relevant field of work and enhance your professional profile as you start your career.

In summary, the course aims to:

- Foster and develop in students a knowledge and understanding of zoo biology and animal science and its relevant disciplines.
- Produce animal scientists who have a sustainable and creative approach to studying global scientific problems and resolving conflict including a solution-based approach to addressing challenges in the broad animal sector.
- Develop a range of research and technical skills to enable students to be effective in scientific research and the management of animals.
- Produce qualified scientists with the necessary knowledge, skills and personal attributes to take up responsible positions within relevant fields of biological sciences and the animal industry.
- Provide transferable skills that will support your personal, academic and career development.

7. **Course outcomes**

Course outcomes describe what you should know and be able to do by the end of your course if you take advantage of the opportunities for learning that we provide.

Knowledge and understanding

By the end of the course you should be able to:

1. Apply knowledge and understanding of animal biology (e.g. anatomy & physiology, behaviour, nutrition, reproduction and health) within zoo housed species (B).
2. Consider and synthesise information and issues from a range of multi- and inter-disciplinary perspectives to take a holistic view of zoo animal science (B).
3. Demonstrate a critical understanding of the relevance and application of animal-related disciplines, including their environmental impact and sustainability on local and global scales (B).

4. Critically evaluate a range of zoo animal management systems and environments that may influence zoo animal welfare (B).
5. Demonstrate knowledge and appropriate application of legal frameworks within which zoo animal science functions.

Skills, qualities and attributes

By the end of the course you should be able to:

6. Demonstrate a scientific approach to study, including appropriate data/information gathering and interpretation, and critical awareness of the quality of evidence (B).
7. Demonstrate a range of transferable skills (e.g. written and/or oral communication, effective and safe use of digital technologies and media, team work, the ability to demonstrate innovative, multi-disciplinary perspectives, a strong work ethic, and appropriate resource management) (B).
8. Demonstrate well-developed strategies for updating, maintaining and enhancing knowledge of issues relating to zoos, including cross-disciplinary awareness and application (B).

'B' indicates those outcomes that have specific reference to the QAA Biosciences benchmark statement (2015).

8. Teaching and Learning Methods

In the majority of modules, your teaching and learning is centred on lectures supported by group exercises, seminars and practical classes. Group exercises are focused around problem solving and generally support the academic content of lectures. Seminars are more student-led than lectures and will help you to develop your communication and collaborative skills. Lectures, group work and seminars all help to develop your subject knowledge and understanding.

Practical classes emphasise acquiring competence in a range of fundamental laboratory and zoo-based field techniques of relevance to animal science, including the ability to safely handle or identify relevant techniques for safely moving a wide range of animal species. Laboratory and zoo-based field work will be carried out at all levels of the course and are where you will learn most about hypothesis testing, experiments, data collection and interpretation.

A final year individual research project allows you to conduct an in –depth investigation into an area of animal science which is of particular interest to you. This may incorporate surveying zoo related staff or visitors to investigate the societal impact of zoos. Staff-student research collaborations are also supported through the dissertation module and a range of summer studentship opportunities or placement year programmes. Opportunities for research, either in the UK or abroad, are possible either through short placements or the sandwich option.

The course emphasises independent learning as an outcome and it is structured to facilitate greater learner autonomy by the final year. At level 4 particular attention is paid to support

teaching and learning, whilst at level 6 there is far greater emphasis on independent learning and research. At all levels of the course you will be encouraged to undertake independent reading to supplement and consolidate what is being taught.

The Brackenhurst campus features a number of specialist units for animal and equine studies, agriculture, countryside management and horticulture. The animal unit at Brackenhurst accommodates approximately 600 animals, representing 75 species. Students benefit from access to the unit for practical handling classes in level 4 (Year 1) and observational studies on topics such as behaviour, animal enclosure usage and nutrition (across all years of study). Also on-site is a working farm, comprising a herd of cattle, sheep and 200 hectares of semi-natural and constructed habitats which provides a valuable learning resource and utilised in relevant sessions.

Research-led teaching underpins the teaching philosophy on the course, whereby staff expertise and research specialism is embedded at a course and modular level. The delivery of the course is enhanced by the use of external professional staff, either as visiting speakers or through visits to a range of animal establishments. This ensures that your learning is continuously enhanced through exposure to real world perspectives and will help you to contextualise your learning. Additionally, residential fieldtrips are available (at an additional cost) including Mauritius, Durrell Wildlife Park, Five day Zoo Tour and Madagascar to help enhance course content and application within the industry.

9. **Assessment Methods**

The course uses a variety of assessment techniques to ensure that you can demonstrate the range of learning outcomes. Subject knowledge and understanding are mainly tested through assignments, reports, projects, presentations and unseen examinations. These also assess a range of transferable skills, including confidence in written and oral communication.

Knowledge acquisition at levels 4 and 5 is assessed by a combination of examinations and reports but at each module there are individual assignments to encourage independent thought. At level 6, assessments involve a greater emphasis on independent research and critical thought and are designed to assess your ability to synthesise ideas and concepts. These assessments are used to develop skills and to differentiate between the levels of attainment of individual students.

Throughout the course, you are encouraged to undertake regular self-reflection and assessment in order to enhance awareness of your development and progress, alongside the personal tutorial system offered by the School. As part of the final year assessment strategy you will be given the opportunity to refine awareness of your professional identity through the production of an industry-relevant portfolio of achievements, skills, and experiences.

Laboratory and zoo-based /practical work are used to assess a range of practical skills and those outcomes associated with hypothesis testing and data capture and interpretation. Typical forms of assessment include laboratory reports, project reports and presentations.

In addition to testing your critical understanding of the research topic, the final year dissertation assesses a range of important transferable skills, including the formation of a research hypothesis; the planning and execution of research work; time and resource management; data collection, analysis and interpretation; critical evaluation; and presentation.

As well as formal assessments, the course includes a number of formative and diagnostic assessments – through these staff will provide you with more informal feedback on your progress and development.

10. **Course structure and curriculum**

The course is studied on either a full-time (3 years) or part-time (5 years) basis, with the option of an industrial sandwich placement between years two and three.

We have chosen the modules so that you have the opportunity to develop the course outcomes as you progress through the course. As well as developing subject specific knowledge, understanding and skills the course is designed to help you develop lifelong learning skills, including analysis of personal development, strengths and weaknesses and to develop key transferable skills that will be important to you as you prepare for employment and/or further study.

BSc (Hons) Zoo Biology

Level 4

Anatomy and Physiology (20 credits)

Animal Behaviour (20 credits)

Professional Development for Animal Scientists (20 credits)

Zoo Animal Husbandry (20 credits)

Principles of Animal Science (20 credits)

Introduction to Zoology (20 credits)

Level 5

Biological Basis of Behaviour (20 credits)

Management of Reproduction in Zoo Animals (20 credits)

Research Skills (20 credits)

Animal Health and Disease (20 credits)

Zoo Nutrition (20 credits)

Zoo Conservation & Education (20 credits)

Level 6

Core Modules:

Dissertation (40 credits)

Zoo Animal Science (20 credits)

Welfare Science (20 Credits)

Optional Modules (choose 2 from):

Adaptive Physiology (20 credits)

Zoo Conservation Genetics (20 credits)

Anthrozoology (20 credits)

Placement Award

Students who undertake the sandwich placement will be eligible for a Placement Diploma in Professional Practice award if they:

- a) satisfactorily complete at least 36 weeks of supervised work experience;
- b) submit a satisfactory placement report
- c) submit a satisfactory reflective log outlining transferable and employability skills
- d) participate within the placement showcase

Students who undertake a minimum of 10 weeks supervised work experience and achieve (c) and (d) above will be eligible for a Placement Certificate in professional Practice

Interim Awards

Students who do not progress to the final stage may receive a Certificate of Higher Education (Level 4), Diploma of Higher Education (Levels 4 and 5) or an Ordinary Degree (Levels 4 and 5, and 60 credits at Level 6).

11. Admission to the course

Entry requirements

For current information regarding all entry requirements for this course, please see the course information web page.

12. Support for Learning

The combination of an idyllic rural setting and friendly dedicated staff results in an atmosphere which generations of students have come to appreciate. We are proud of the excellent support and guidance that we offer students throughout their time with us.

There is an induction programme (including IT and library use and an introduction to the laboratories and animal unit) which provides all the essential information about the course and

the support we provide for your learning. During induction you will receive a detailed course handbook and this will be followed by individual information packs for each of the modules which you will study. All of this information is also accessible online via the University's virtual learning environment (NTU online workspace: NOW).

Ongoing support is provided through the tutorial system. You will be allocated a personal tutor who will monitor your progress on an individual basis and provide pastoral support. Support for students on the course is acknowledged as excellent by both students and the external examiner.

Personal Development Planning (PDP) is a structured and supported process which will encourage you to reflect upon your own learning, performance and/or achievement and plan for your personal, educational and career development. Formal support for PDP will be provided through the professional development module at Level 4, whilst tutorial sessions at all levels will provide you with further opportunities to engage with this process.

The library and other learning resources (animal unit, laboratories, IT) are continually reviewed and updated to ensure that they are fit for purpose. Library and IT support is provided during tutorial sessions at all levels, and additional study guides are available in the library this ensures high levels of digital literacy of zoo biology graduates.

The University central Student Support Services offer a range of general, specialist and professional support services for students, and have a centre based at the Brackenhurst campus. Additional learning support is available for students with specific learning needs such as dyslexia.

Specialist careers advice is provided by the University Employability Team. In addition, industrial advisory committee meetings give students the chance to liaise with staff in relevant careers and provide valuable opportunities for students to meet employers and identify the skills which industry needs.

13. Graduate destinations / employability

Zoo Biology graduates are well-placed for entry into a variety of careers within the biosciences and related industries both in the UK and abroad. Potential areas for employment include various job roles in zoological collections, aquaria and wildlife parks, welfare organisations and charities, relevant governmental departments, science education institutes, and private sector feed companies, research organisations and breeding centres. Alternatively, you may decide to use your degree as a progression route to further study such as a MSc or PhD. Lastly, should you decide to change direction at the end of your studies, your skills as a science graduate would qualify you for entry into a variety of alternative professions in other sciences, teaching, communications, digital and information technologies amongst others.

Regular consultation with employers ensures the continued relevance of the curriculum to employment opportunities. Industrial liaison committee meetings are one way in which such consultation is carried out, and also provide valuable opportunities for students to meet employers and identify the skills which industry needs.

Employability aspects feature significantly throughout each level of the course ensuring that students are continually improving their transferrable skills and graduate attributes.

14. **Course standards and quality**

There are well established systems for managing the quality of the curriculum within the School.

- Induction questionnaires, module reviews, end-of-year reviews, module feedback questionnaires and School end-of-year questionnaires are all used to gather feedback from students on their learning experiences.
- An external examiner submits an annual report on the standards and quality of the course.
- Termly course committee meetings, attended by student representatives and academic staff, provide an opportunity for students and staff an opportunity to raise and resolve any issues relating to the course.

The outcomes of all the above inform an annual course standards and quality report, which includes an action plan for the following year. The action plan provides a focus for the course team and the School, and is monitored through the course committee to ensure that the action loops are closed and there are no outstanding issues. In this way, students are updated on the actions taken in response to issues raised previously and have the opportunity to feed back to staff on the impact of any changes made.

In addition to these formal systems, tutorials provide a more informal means of gathering student feedback and enable staff to address issues as soon as they arise.

Industrial advisory committee meetings have an important role in the enhancement of standards and quality. The involvement of employers in this way ensures that course development is grounded in reality and reflects a balance between academic and vocational themes.

The subject benchmarks of the Quality Assurance Agency have been incorporated into the course's learning outcomes.

15. **Assessment regulations**

This course is subject to the University's Common Assessment Regulations (located in its [Academic Standards and Quality Handbook](#)). Any course specific assessment features are described below:

The award classification will be calculated using 20% of the aggregate mark for level 5 and 80% of the aggregate mark at level 6.

16. **Additional Information**

Collaborative partner(s):	None
Course referenced to national QAA Benchmark Statements:	Biosciences (2015)
Course recognised by:	
Date this course specification approved:	June 2017
Any additional information:	

This course contains a number of modules undertaken by students on the Animal Biology course. Students will therefore interact and exchange ideas with others on related courses, thus broadening their experiences.

The course includes multiple fieldtrips relevant to the module content and optional international fieldtrips. This encourages group working and develops research methods, and is often a memorable highlight of a student's university experience. Students will be expected to make some financial contributions to the cost of some of the fieldtrips.