

1st Half Year Modules (September 2018 to January 2019)						
Module Codes	Module Title	Course	Level	Number of NTU credits	Assessments	Module Content
ANIM20232	Nutritional Biochemistry	BSc (H) Animal Biology	2	20	100% Presentation	Discover the principles of nutrient metabolism, reviewing the importance of enzymes.
ANIM22136	Zoo Conservation & Education	BSc(H) Zoo Biology	2	20	100% Assignment	Develop understanding and knowledge of the role of zoos in conservation and education as key deliverables of modern zoos as set out by the World Association of Zoos and Aquaria (2015).
ANIM22104	Biological Basis of Behaviour	BSc (H) Animal Biology BSc (H) Zoo Biology	2	20	100% Coursework	Advance your knowledge and understanding of key areas of mammalian physiology, including cardiovascular, respiratory and excretory physiology and pharmacology.
ANIM20262	Zoo Nutrition	BSc (H) Zoo Biology	2	20	100% Assignment	Aims to address issues facing the feeding of captive animal populations, specifically restrictions placed on diet provision in captivity.
ANIM22116	Professional Skills for Biologists	BSc(H) Animal Biology	2	20	100% Coursework	Will enable students to understand a range of field-based skills of relevance to the animal industry and captive animal management
2nd Half Year Modules (February 2019 to June 2019)						
Module Codes	Module Title	Course	Level	Number of NTU credits	Assessments	Module Content
ANIM20251	Management of Reproduction in Exotics	BSc (H) Zoo Biology	2	20	100% Exam	Will provide you with an overall understanding of genetics, reproduction and breeding. You will also look at the factors influencing reproductive success in captive and endangered species. You will examine how these can be addressed through knowledge of reproductive physiology and anatomy.
ANIM22109	Animal Reproduction & Breeding	BSc (H) Animal Biology	2	20	100% Assignment	Examine reproductive physiology, the principles of inheritance and the application of these principles in animal breeding programmes.
ANIM22102	Research Skills	BSc (H) Animal Biology BSc (H) Zoo Biology	2	20	100% Assignment	Explore the principles of scientific investigation in relation to Animal Science. Topics covered include experimental design, data generation and collection, and data analysis, with teaching supported in the laboratories and Animal Unit.
ANIM22110	Animal Health & Disease	BSc (H) Animal Biology BSc (H) Zoo Biology	2	20	100% Exam	Learn about the principles of animal health and disease. The module covers a range of pathogenic organisms and looks at a variety of common diseases.

**Note: The above modules may be subject to change**

# School of Animal, Rural & Environmental Sciences

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1st Half Year Modules (September 2018 to January 2019)						
Module Codes	Module Title	Course	Level	Number of NTU credits	Assessments	Module Content
EQUE20337	Equine Health and Nutrition	BSc (H) Equine Sports Science BSc (H) Equestrian Psychology & Sports Science	2	20	100% Coursework	The module aims to enable students to evaluate a range of health disorders and problems of the horse and determine relevant treatment regimes. In addition, this module aims to expand the understanding of nutritional science and practical feeding and the relationship between nutrition and disease problems in the horse.
EQUE20314	Equine and Human Sports Science	BSc (H) Equine Sports Science BSc (H) Equestrian Psychology & Sports Science	2	20	100% Exam	This module will provide you with knowledge of the structure and function of the equine and human athlete. You will come to appreciate the inter-relationship between the different systems and appreciate the demands of equestrian sports on horse and rider.
EQUE20315	Equine Learning and Cognition	BSc (H) Equestrian Psychology & Sports Science	2	20	100% Exam	This module reviews the study of animal cognition and relates the findings to equine cognitive ability. You will discuss the various approaches to the study of learning and related theories in reference to their application in horse management and training; discuss the biological basis of learning; review the neural adaptations that occur in relation to different types of learning and memory.
EQUE20347	Equine Reproduction and Stud Management	BSc (H) Equine Sports Science	2	20	100% Exam	This module covers the anatomical and physiological basis of equine reproduction, making comparisons with other species, and evaluates the practical and physiological basis of horse breeding and breeding stock management.
2nd Half Year Modules (February 2019 to June 2019)						
Module Codes	Module Title	Course	Level	Number of NTU credits	Assessments	Module Content
EQUE20316	Sports Injury	BSc (H) Equine Sports Science BSc (H) Equestrian Psychology & Sports Science	2	20	100% Exam	This module examines the common injuries affecting sports horses. It also examines the implications for health and welfare. The scientific background provided in this module complements the Equine and Human Sport Science module. You will also develop a detailed knowledge of the athlete.
EQUE20319	Research Methods for Behavioural Sciences (core)	BSc (H) Equestrian Psychology & Sports Science	2	20	100% Coursework	This module will provide you with an appreciation of research principles, experimental design and statistical analysis. You will carry out small scale research projects to encourage learning through practical application of theoretical principles. This module will serve as a sound basis for your dissertation in your third year of the course.
EQUE20320	Research Methods and Experimental Design (core)	BSc (H) Equine Sports Science	2	20	100% Coursework	This module will enable you to develop an appreciation of scientific research principles; planning experiments and projects; gathering and evaluating data. You are involved in planning and carrying out a small scale research project to encourage learning through practical application of theoretical principles.
EQUE20367	Equine Disease and Diagnostics	BSc (H) Equine Sports Science	2	20	100% Report	This module aims to develop an understanding of equine disease in a regional and global context and to develop practical competencies in laboratory procedures and others used in the equine industry and veterinary science.
EQUE20312	Therapeutic Use of the Horse	BSc (H) Equestrian Psychology & Sports Science	2	20	100% Coursework	You will explore the different ways in which animals are utilised in human therapy. The module investigates the way horses are used therapeutically both nationally and internationally.
EQUE20317	Analysis of Equestrian Performance	BSc (H) Equine Sports Science BSc (H) Equestrian Psychology & Sports Science	2	20	100% Presentation	This module explores the developing technologies available to riders, coaches and trainers for the analysis of performance and provides students with a sound understanding of performance analysis in both equine and other sports.
EQUE20357	Sport Horse Breeding and Genetics	BSc (H) Equine Sports Science	2	20	100% Coursework	This module covers the use of veterinary management processes, assisted reproductive technologies and molecular tools to support and inform the breeding of horses for sport.

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## 1st Half Year Modules (September 2018 to January 2019)

Module Codes	Module Title	Course	Level	Number of NTU credits	Assessments	Module Content
CCMT20121	Applied Habitat Management	BSc (H) Wildlife Conservation BSc (H) Environmental Conservation	2	20	100% Report	This module is delivered as a series of site-based habitat and species evaluations on and off-campus. These include: surveys and assessments; data analysis; discussion workshops; seminars and lectures.
CCMT20201	Experimental Design and Analysis	BSc (H) Wildlife Conservation BSc (H) Environmental Science BSc (H) Environmental Conservation	2	20	100% Report	This module will prepare you for your final-year research project. You will develop an understanding of: research methodology; hypothesis testing; statistical analysis; data presentation.
CCMT20301	Environmental Law and Policy	BSc (H) Environmental Science BSc (H) Geography BSc (H) Environmental Conservation	2	20	100% Exam	This module will introduce you to the legal and institutional framework within the environmental sector. You will investigate the development, implementation and impact of environmental policies and laws at a national and international level.
CCMT20422	Wildlife Population Biology	BSc (H) Wildlife Conservation	2	20	100% Exam	This module aims to provide you with an understanding of wildlife populations and the factors that affect them. You will gain an understanding of what affects the growth of populations, what limits population size and what impact predators and other competing species have. We will also investigate disease dynamics, population genetics and captive breeding programmes. We will use case studies and discussions throughout to help you understand how these topics apply to real world situations.

## 2nd Half Year Modules (February 2019 to June 2019)

Module Codes	Module Title	Course	Level	Number of NTU credits	Assessments	Module Content
CCMT20122	Behavioural and Evolutionary Ecology	BSc (H) Wildlife Conservation	2	20	100% Class Test	This module explores the way in which animals behave in relation to their environment and covers topics such as: the selfish gene; optimal foraging; game theory; sexual selection. The module is taught as a series of lectures and practical exercises.
CCMT20291	Advanced Analytical Techniques	BSc (H) Environmental Science	2	20	100% Field Report	<p>The primary objective of this module will be to provide the students with a grounding in the principles, methods and applications of modern analytical laboratory and field techniques.</p> <p>The module aims are:</p> <ul style="list-style-type: none"> <li>To develop an understanding of the principles of the major methods used in the chemical analyses of environmental samples.</li> <li>To develop an understanding of the applicability and limitations of these methods to different types of samples and analytes.</li> <li>To design and undertake surveys of wildlife habitats, rural resources and use research methods in a range of applications.</li> <li>To develop research problems that have scope and viability.</li> <li>To use scientific and innovative approaches to solve problems and exercise judgements, and be receptive to alternative scientific viewpoints; handle and interpret data, analyse and evaluate the evidence; undertake preliminary investigative field research.</li> <li>To demonstrate a range of key transferable skills such as the ability to express themselves with confidence, both orally and in writing; good visual presentational skills; good analytical and problem-solving skills.</li> <li>To demonstrate the capacity for independent critical thought, rational inquiry and self-directed learning.</li> </ul> <p><b>A significant amount of contact hours for this module relate to a fieldtrip to south east Spain, for one week residential field work (contact time 40 hours of 52 in the module). Booking for this trip is made before the start of the semester (e.g. at the end of October) and a deposit of £200 will be required</b></p>

CCMT20121	Applied Habitat Management	BSc (H) Wildlife Conservation BSc (H) Environmental Conservation	2	20	100% Report	This module is delivered as a series of site-based habitat and species evaluations on and off-campus. These include: surveys and assessments; data analysis; discussion workshops; seminars and lectures.
CCMT20332	Ecotourism and Recreation	BSc (H) Environmental Conservation	2	20	100% Report	This module will provide students with an understanding of the importance and value of recreational provision but will explore the challenges that this presents to managers of open green space in terms of providing an accessible and stimulating recreational environment alongside other land use priorities such as habitat and wildlife protection.
CCMT20412	Environmental Monitoring and Geographical Information Systems (GIS)	BSc (H) Environmental Conservation	2	20	100% Portfolio	This course will help you to understand the methods and processes involved in the long-term monitoring of air and water quality through the use of case studies. It introduces students to mapping and spatial analytical techniques used in geographical information systems (GIS) and remote sensing. You will develop skills through practical tasks using GIS software such as MapInfo and GPS (Global Positioning System) data.
CCMT20514	Wildlife Law and Policy	BSc (H) Wildlife Conservation	2	20	100% Exam	This module will introduce you to the broad range of legal and policy issues that affect those engaged in protecting the environment and wildlife conservation.
CCMT20523	Wildlife Field Techniques and Geographical Information Systems (GIS)	BSc (H) Wildlife Conservation	2	20	100% Report	This module provides students with an understanding of the processes involved in assessing the status of wildlife using field techniques, data acquisition and processing, particularly through Geographic Information Systems (GIS). This module is delivered via a series of lecture and a week-long field trip to Spain. This costs on average £200 and is met by the student.

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GEOG20011	Geographical Information Systems and Spatial Analysis	BSc (H) Geography BSc (H) Geography (Physical) BSc (H) Environmental Science	2	20	100% Coursework	This module introduces you to the mapping and analytical techniques used in Geographical Information Systems (GIS). Applications of the technology across a wide range of topic areas will be explored.
GEOG20041	Principles and Practice in Geography	BSc (H) Geography BSc Geography (Physical)	2	20	100% Coursework	This module will familiarise you with a range of research methods. You will also gain the skills needed to select and research a topic of your choice in Geography for the dissertation in Year Three.
GEOG20051	Environmental Hazards and Disasters	BSc (H) Geography BSc Geography (Physical)	2	20	100% Exam	You will study natural and human-induced events which may directly threaten human life and economic well-being. You will assess the actions needed to: reduce disaster potential manage the aftermath of hazards, including an examination of the role geospatial technology can play in hazard management.
2nd Half Year Modules (February 2019 to June 2019)						
Module Codes	Module Title	Course	Level	Number of NTU credits	Assessments	Module Content
GEOG20032	Living with Climate Change	BSc (H) Geography BSc (H) Geography (Physical) BSc (H) Environmental Science	2	20	100% Coursework	This module aims to: <ul style="list-style-type: none"> <li>Place debate about the nature and scale of recent changes in climate in the context of longer term historical change.</li> <li>Introduce you to methods used to predict future climates at a global scale and enable students to make evaluations of various predictions.</li> <li>Consider perceptions and responses to climate change at a number of scales- from individual and community to state and differences across geographical regions.</li> <li>Outline the political economic and equity issues associated with responding to climate change.</li> </ul>
GEOG20092	Quaternary Environments Fieldwork	BSc Geography (Physical)	2	20	100% Coursework	This module focuses on aspects of climatic and environmental change that have taken place during parts of the Quaternary Period, which is the last c. 2.6 million years of Earth's recent history. A range of evidence will be assessed including: sedimentological and geomorphological evidence whilst participating on the 1 week field course in north Wales. The field course is the majority of the module contact hours. <b>This module includes residential fieldwork so there will be additional costs/travel.</b>
GEOG20071	Fluvial Geomorphology and River Management	BSc (H) Geography BSc Geography (Physical)	2	20	100% Exam	This module introduces the physical basis of landform development in fluvial environments. It will examine the role of rivers and lakes in the transport and storage of water and sediment. Students undertake surveys and monitoring of fluvial systems.
GEOG20091	Sustainability	BSc (H) Geography BSc (H) Environmental Science	2	20	100% Report	This module aims to: <ul style="list-style-type: none"> <li>explore the historical development of the concept of sustainability</li> <li>examine debates about how to achieve sustainable development</li> <li>investigate obstacles to sustainability and possible ways to overcome them</li> </ul>
GEOG20093	Cities and Development in the 21st Century	BSc (H) Geography	2	20	100% Coursework	The module aims: <ul style="list-style-type: none"> <li>To provide both a theoretical and substantive understanding of key aspects of the contemporary urban geography</li> <li>To illustrate, using relevant examples, the impact of economic, social and political structures and processes on urban development and urban space</li> <li>To illustrate, using relevant examples, the interplay between global, national and local processes in shaping urban development and the urban experience;</li> <li>To provide students via the use of international field work the opportunity to engage with and study at first hand the interplay between people, places and conflict in urban contexts.</li> </ul> <b>This module includes residential fieldwork so there will be additional costs/travel overseas.</b>

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