

1st Half Year Modules
(September 2020 to January 2021)

Module Codes	Module Title	Course	Academic contact/Email	Level	Number of NTU credits	Assessments	Module Content
CCMT20121	Applied Habitat Management	BSc (H) Wildlife Conservation BSc (H) Ecology and Conservation	Louise Gentle Email: louise.gentle@ntu.ac.uk Adam Bates Email: adam.bates@ntu.ac.uk	2	20 (10 ECTS)	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) Ecology and Conservation BSc (H) Food Science & Technology	Louise Gentle Email: louise.gentle@ntu.ac.uk Karen Rial-Lovera Email: karen.rial-lovera@ntu.ac.uk Adam Bates Email: adam.bates@ntu.ac.uk Sara Poulson Email: sara.poulson@ntu.ac.uk	2	20 (10 ECTS)	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.
CCMT20412	Environmental Monitoring and Geographical Information Systems (GIS)	BSc (H) Environmental Science BSc (H) Ecology and Conservation	Karen Rial-Lovera Email: karen.rial-lovera@ntu.ac.uk Adam Bates Email: adam.bates@ntu.ac.uk	2	20 (10 ECTS)	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.
CCMT20600	Microbiology of Food Processing	BSc (H) Food Science & Technology	Sara Poulson Email: sara.poulson@ntu.ac.uk	2	20 (10 ECTS)	100% Exam	This module aims to provide students with knowledge and understanding of the microbiology of food processing, develop the students laboratory analytical skills and develop the students ability to understand and evaluate the production of safe food.
CCMT20603	Consumer Nutrition and Health	BSc (H) Food Science & Technology	Sara Poulson Email: sara.poulson@ntu.ac.uk	2	20 (10 ECTS)	100% Exam	This module aims to provide students with knowledge and understanding of human nutrition, develop the student's ability to analyse foods for macronutrients associated with nutrition and allergens and provide students with knowledge and understanding of how consumer nutrition needs and trends affect product development, processing, and packaging.
CCMT20422	Wildlife Population Biology	BSc (H) Wildlife Conservation	Louise Gentle Email: louise.gentle@ntu.ac.uk	2	20 (10 ECTS)	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
(January 2021 to June 2021)

Module Codes	Module Title	Course	Academic contact/Email	Level	Number of NTU credits	Assessments	Module Content
CCMT20122	Behavioural and Evolutionary Ecology	BSc (H) Wildlife Conservation	Louise Gentle Email: louise.gentle@ntu.ac.uk	2	20 (10 ECTS)	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	Technical Skills	BSc (H) Environmental Science BSc (H) Ecology and Conservation	Karen Rial-Lovera Email: karen.rial-lovera@ntu.ac.uk Adam Bates Email: adam.bates@ntu.ac.uk	2	20 (10 ECTS)	100% Portfolio	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. The module aims are: To develop an understanding of the principles of the major methods used in the chemical analyses of environmental samples. To develop an understanding of the applicability and limitations of these methods to different types of samples and analytes. To design and undertake surveys of wildlife habitats, rural resources and use research methods in a range of applications. To develop research problems that have scope and viability. 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. 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. To demonstrate the capacity for independent critical thought, rational inquiry and self-directed learning. 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 will be required
CCMT20333	Land Use Ecology	BSc (H) Ecology and Conservation	Adam Bates Email: adam.bates@ntu.ac.uk	2	20 (10 ECTS)	100% Report	The aim of this module is to explore those land uses such as farming and forestry whose productivity is determined by the presence and products of ecological processes, how these processes can define those land uses and the impacts of human manipulation upon them with a view, especially, to increasing student employability.
CCMT20500	Law and Policy	BSc (H) Environmental Science BSc (H) Wildlife Conservation BSc (H) Ecology and Conservation BSc (Hons) Geography	Karen Rial-Lovera Email: karen.rial-lovera@ntu.ac.uk Louise Gentle Email: louise.gentle@ntu.ac.uk Adam Bates Email: adam.bates@ntu.ac.uk Annemarie Valentine annemarie.valentine02@ntu.ac.uk	2	20 (10 ECTS)	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 conservation. This module will introduce you to the legal and institutional framework within the sector. You will investigate the development, implementation and impact of policies and laws at a national and international level.
CCMT20523	Wildlife Field Techniques and Geographical Information Systems (GIS)	BSc (H) Wildlife Conservation	Louise Gentle Email: louise.gentle@ntu.ac.uk	2	20 (10 ECTS)	100% Portfolio	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.
CCMT20601	Sustainable Food Production	BSc Food Science & Technology	Sara Poulson Email: sara.poulson@ntu.ac.uk	2	20 (10 ECTS)	100% Coursework	This module aims to provide students with the opportunity to gain knowledge and develop an understanding of the challenges, problems and benefits related to the sustainability of food production and food supply chains. Identify and evaluate methods by which the environmental impact of the food industry can be minimised and/or mitigated
CCMT20602	Food Technology	BSc Food Science & Technology	Sara Poulson Email: sara.poulson@ntu.ac.uk	2	20 (10 ECTS)	100% Coursework	This module aims to enhance the student's knowledge and understanding of the unit food processing operations in use in the food industry, develop the student's ability to select and operate a variety of food processing equipment and also provide students with knowledge and understanding of food processing efficiencies
CCMT20604	Food Industry Employability	BSc Food Science & Technology	Sara Poulson Email: sara.poulson@ntu.ac.uk	2	20 (10 ECTS)	100% Portfolio	This module aims to enable development of soft, corporate, transferable and subject skills in the work environment. To evidence participation in a period of work placement to obtain an informed view of the work environment and demonstrate applied knowledge and skills. To develop the individual's awareness of personal and professional development. To develop a portfolio of evidence and professional social media profile for the purpose of raising the individual's employability profile and to develop and evidence the individual's continued professional development profile through meaningful activity.

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1st Half Year Modules (September 2020 to January 2021)							
Module Codes	Module Title	Course	Academic contact/Email	Level	Number of NTU credits	Assessments	Module Content
EQUE20370	Applied Exercise Physiology	BSc (H) Equine Sports Science BSc (H) Equine Behaviour, Health & Welfare	Lauren Birkbeck Email: lauren.birkbeck@ntu.ac.uk Sarah Hallam Email: sarah.hallam@ntu.ac.uk	2	20 (10 ECTS)	100% Coursework	This module is designed to provide students with the underpinning scientific knowledge that explains the physiological response to exercise and training in the equine and human athlete. Students will be able to develop an appreciation for the inter-relationship between the musculoskeletal, respiratory and cardiovascular systems and understand the physiological demands of various equestrian sports on the horse and rider. By evaluating exercise testing techniques and the use of current technology, students will be able to identify areas of future research and investigation. Students will be able to personalise their learning experience on this module via their assessment. Published academic research from leading groups worldwide will inform lecture content, and is a requirement for student assessments.
EQUE20357	Reproduction, Breeding and Genetics	BSc (H) Equine Sports Science BSc (H) Equine Behaviour, Health & Welfare	Lauren Birkbeck Email: lauren.birkbeck@ntu.ac.uk Sarah Hallam Email: sarah.hallam@ntu.ac.uk	2	20 (10 ECTS)	100% Exam	This module covers the anatomical and physiological basis of equine reproduction and evaluates the stud and veterinary management processes, assisted reproductive technologies and molecular tools used to support the selection and breeding of horses. You are able to personalise your assessment via your choice of examination question. The variation of management practices within studs worldwide, due to sport and local environmental factors, will be considered.
EQUE20315	Equine Learning and Cognition	BSc (H) Equine Behaviour, Health & Welfare	Sarah Hallam Email: sarah.hallam@ntu.ac.uk	2	20 (10 ECTS)	100% Exam	This module reviews the study of animal cognition and relates the findings to equine cognitive ability. The various approaches to the study of learning and related theories are discussed, with reference to their application in horse management and training. The biological basis of learning is evaluated and the neural adaptations that occur in relation to different types of learning and memory are investigated.
EQUE20371	Biomechanics	BSc (H) Equine Sports Science	Lauren Birkbeck Email: lauren.birkbeck@ntu.ac.uk	2	20 (10 ECTS)	50% Log book 50% Coursework	This module is designed to provide students with an understanding of the relationship between anatomy and movement. The module aims to facilitate awareness of biomechanical principles and practice. Students will then be able to apply this knowledge to evaluate various methods of biomechanical assessment whilst developing practical skills necessary to measure and collect data relevant to horse and rider locomotion.
2nd Half Year Modules (January 2021 to June 2021)							
Module Codes	Module Title	Course	Academic contact/Email	Level	Number of NTU credits	Assessments	Module Content
EQUE20316	Sports Injury	BSc (H) Equine Sports Science	Lauren Birkbeck Email: lauren.birkbeck@ntu.ac.uk	2	20 (10 ECTS)	100% Case Study	This module aims to provide students with knowledge and understanding of the common injuries affecting performance horses and the implications these pose for horse health and welfare. The scientific background provided in this module complements Equine and Human Exercise Physiology and will allow students to develop a deep and detailed understanding of diagnosis, repair and healing of musculoskeletal tissues. Students will be expected to identify and discuss extrinsic factors that influence risk of injury by reviewing current epidemiological research. Consideration will be given to the differing prevalence of injury type by discipline, and local environmental factors.
EQUE20368	Assessing and Optimising Welfare	BSc (H) Equine Behaviour, Health & Welfare	Sarah Hallam Email: sarah.hallam@ntu.ac.uk	2	20 (10 ECTS)	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.
EQUE20319	Research Methods for Animal Sciences	BSc (H) Equine Sports Science BSc (H) Equine Behaviour, Health & Welfare	Lauren Birkbeck Email: lauren.birkbeck@ntu.ac.uk Sarah Hallam Email: sarah.hallam@ntu.ac.uk	2	20 (10 ECTS)	100% Coursework	This module provides students with the underpinning knowledge required to develop an appreciation of research principles within the context of applied animal research. Students are involved in planning, executing and analysing data through small scale group research projects to encourage learning through practical application of theoretical principles. You will produce a scientific report based on data generated as a result of a group project. As a group, you will select a project from a list of suitable options provided by the Module Leader, and you will work together to carry out your project and collect data, however your write up will be your individual work.
EQUE20369	Human, Animal Interaction	BSc (H) Equine Behaviour, Health & Welfare	Sarah Hallam Email: sarah.hallam@ntu.ac.uk	2	20 (10 ECTS)	100% Coursework	This module aims to enable students to focus on an area of interest relating to animal assisted intervention. The module will provide students with the framework from which to develop global knowledge and understanding of this sector and evaluate the issues associated with intervention strategies, both from a human and non-human perspective.
EQUE20337	Nutrition for Health and Performance	BSc (H) Equine Sports Science	Lauren Birkbeck Email: lauren.birkbeck@ntu.ac.uk	2	20 (10 ECTS)	100% Exam	This module builds on the fundamental concepts of nutrition; exploring the effects of nutrition and disease on the health and welfare of the horse, and performance nutrition for the sports horse. Students are able to personalise their learning experience on this module via their choice of examination questions. Students will study differing perspectives by considering variation in nutritional management dependent on discipline, sustainability of food sources, and prevalence of nutritional diseases, globally.

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Module Codes	Module Title	Course	Academic contact/Email	Level	Number of NTU credits	Assessments	Module Content
GEOG20011	Geographical Information Systems and Spatial Analysis	BSc (H) Geography BSc (H) Geography (Physical)	Annemarie Valentine annemarie.valentine02@ntu.ac.uk Nicholas Midgley Email: nicholas.midgley@ntu.ac.uk	2	20 (10 ECTS)	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)	Annemarie Valentine annemarie.valentine02@ntu.ac.uk Nicholas Midgley Email: nicholas.midgley@ntu.ac.uk	2	20 (10 ECTS)	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.
GEOG20092	Quaternary Environments Fieldwork	BSc Geography (Physical)	Nicholas Midgley Email: nicholas.midgley@ntu.ac.uk	2	20 (10 ECTS)	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. This module includes residential fieldwork **Due to Covid-19 there is uncertainty when the fieldtrip will take place - originally planned for November 2020**
GEOG20091	Sustainability	BSc (H) Geography BSc (H) Environmental Science	Annemarie Valentine annemarie.valentine02@ntu.ac.uk Karen Rial-Lovera Email: karen.rial-lovera@ntu.ac.uk	2	20 (10 ECTS)	100% Report	This module aims to: • explore the historical development of the concept of sustainability • examine debates about how to achieve sustainable development • investigate obstacles to sustainability and possible ways to overcome them
2nd Half Year Modules (January 2021 to June 2021)							
Module Codes	Module Title	Course	Academic contact/Email	Level	Number of NTU credits	Assessments	Module Content
GEOG20032	Living with Climate Change	BSc (H) Geography BSc (H) Geography (Physical) BSc (H) Environmental Science	Annemarie Valentine annemarie.valentine02@ntu.ac.uk Nicholas Midgley Email: nicholas.midgley@ntu.ac.uk Karen Rial-Lovera Email: karen.rial-lovera@ntu.ac.uk	2	20 (10 ECTS)	100% Exam	Climate change and our response to it are perhaps the most pressing issues of global importance affecting Earth systems and human societies. We literally have to learn to live with climate change. In this module you will address the impacts of climate change on ecosystems, food production, water resources, energy use and many other issues. You will focus on the science of climate change, perceptions of climate change and how we respond to climate change, specifically mitigation (reducing greenhouse gases) and adaptation (altering our environments and behaviours). We will explore how individuals/ communities respond to climate change in contrast to state led policy responses and the political economy and equity issues associated with such responses.
GEOG20051	Environmental Hazards and Disasters	BSc (H) Geography BSc Geography (Physical)	Annemarie Valentine annemarie.valentine02@ntu.ac.uk Nicholas Midgley Email: nicholas.midgley@ntu.ac.uk	2	20 (10 ECTS)	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.
GEOG20071	Fluvial Geomorphology and River Management	BSc (H) Geography BSc Geography (Physical)	Annemarie Valentine annemarie.valentine02@ntu.ac.uk Nicholas Midgley Email: nicholas.midgley@ntu.ac.uk	2	20 (10 ECTS)	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.
GEOG20093	Cities and Development in the 21st Century	BSc (H) Geography	Annemarie Valentine annemarie.valentine02@ntu.ac.uk	2	20 (10 ECTS)	100% Coursework	The module aims: • To provide both a theoretical and substantive understanding of key aspects of the contemporary urban geography • To illustrate, using relevant examples, the impact of economic, social and political structures and processes on urban development and urban space • To illustrate, using relevant examples, the interplay between global, national and local processes in shaping urban development and the urban experience; • 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. This module includes residential fieldwork.

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