

Module Specification

Module Title	Tropical Ecology and Conservation			Module Code	BIO391	
Credit Value	15	Level	6	Mode of Delivery	On Campus	Summer
Module Organiser	Dr R Knell					

Pre-requisite modules	Co-requisite modules	Overlapping modules

1) Content Description

Provide a description of the module, as it will appear in the Module Directory and on the Student Information System (approx. 70-80 words).

This module is for students enrolled on the programmes C100 Biology, C300 Zoology, C400 Genetics and F850 Environmental Science. The entire module is taught as a two-week field course based in a field station in the South African Bushveld close to the Kruger National Park. Savannah habitats such as the one we will be working in are continually threatened by the need for agricultural and other land, and the remaining large mammal populations and communities in Africa are widely exposed to serious threats including habitat loss and poaching. The field exercises will focus on the practical skills needed for ecological surveys, animal behaviour and environmental studies in savannah environments and how to analyse and understand the data generated by such studies. There will also be visits to nearby sites such as Blyde River Canyon, an area of particular botanical interest, and the Kruger National Park. Lectures will be held in parallel with the field exercises and will cover the basic ecology of savannah environments, African mammal diversity, sampling theory and a number of relevant conservation topics including poaching, conservation of small populations, hunting and conservation and conflict between conservation and local communities. This module is entirely assessed by coursework and there is no exam. N.B. Students will be required to cover their own international travel costs. The additional cost will be £50 per week (totalling £100) with all other expenses covered by the School.

Due to the nature of the fieldwork on this module, and in the interests of ensuring student safety at all times, this elective module might not be suitable for students with certain medical conditions. Any student who is interested in applying for this module but who has a medical condition (including mental health conditions) which might affect their ability to work safely in the field should contact the SBCS Student Support Officer (SSO), who will consult the Module Organiser and any other relevant parties (e.g. colleagues in DDS) regarding any additional support required to enable your participation in the module. Given the need to arrange travel, accommodation and/or visas for this module, students are encouraged to contact the SBCS SSO at the earliest possible opportunity. If it is not possible to make suitable adjustments and accommodations such that a student can safely meet the learning outcomes defined for this module, it might be necessary and appropriate for them to choose an alternative elective module.

2) Module Aims

Specify the aims of the module, i.e. the broad educational purposes for offering this module.

This residential module is designed to provide students with first-hand experience of savannah ecological processes, biodiversity and conservation issues associated with humid tropical environments. Tropical rainforests are the most biologically diverse habitats on Earth and the loss of rainforest is of tremendous conservation concern, both due to loss of diversity as well as its consequences for global warming. Students will spend time working in both terrestrial and aquatic systems, and there will be an emphasis on practical training in ecological survey and assessment methods. Students will gain a direct appreciation of the issues, problems and solutions surrounding rainforests and their wildlife. It is anticipated that this module will provide an opportunity for students to translate text book examples to the real world. It will build on *Global Change Biology* and *Aquatic*

Ecosystems: structure and function, and will complement other third year courses such as *Mammals and Evolution*.

3) Learning Outcomes

Identify the learning outcomes for this module, i.e. knowledge, skills and attributes to be developed through completion of this module. Outcomes should be referenced to the relevant [QAA benchmark statements](#) and the [Framework for Higher Education Qualifications in England, Wales and Northern Ireland \(2008\)](#). The [SEEC Credit Level Descriptors for Further and Higher Education 2003](#) and [Queen Mary Statement of Graduate Attributes](#) should also be used as a guiding framework for curriculum design.

Academic Content:	
A1	Identify the key characteristics of tropical rainforests
A2	Describe the processes influencing rainforests and tropical lakes
A3	Use standard measures for measuring and describing biodiversity
A4	Deploy capture methods and handle a number of key species
A5	Understand the importance of tropical forests and lakes as centres of biodiversity and ecological diversification
A6	Describe the main threats to tropical terrestrial and freshwater systems

Disciplinary skills - able to:	
B1	Enhance the students' understanding and appreciation of the importance of tropical rainforests and lakes as centres of biodiversity and ecological radiations
B2	Students will learn a range of sampling methods for assessing species richness
B3	Practical sessions will be designed to provide insights into the processes influencing tropical habitats, and how species are impacted by habitat change
B4	The module will combine practical skills such as animal surveying and handling with analytical approaches including sampling design and data handling

Attributes:	
C1	Gain firsthand experience of working in tropical environments, and will acquire practical skills and experiences that are applicable to a range of career paths in ecology and conservation
C2	Practical assignments will encourage students to work together effectively in teams, and data collection and analysis will develop planning, organisational ability and presentation skills

4) Reading List

Provide an indicative reading list for the module. This should include key texts and/or journals but **should not** be an exhaustive list of materials.

Textbook of Structural Biology. Anders Liljas, Lars Liljas, Jur Piskur, Göran Lindblom, Poul Nissen and Morten Kjeldgaard, World Scientific, 2009.

Biochemistry. Donald J Voet and Judith G. Voet, 4th edition, Wiley, 2011.

These texts are recommended, but the course is not tied to a particular text-book.

Up-to-date review articles on target complexes will be given at the start of each topic.

5) Teaching and Learning Profile

Provide details of the method of delivery (lectures, seminars, fieldwork, practical classes, etc.) used to enable the achievement of learning outcomes and an indicative number of hours for each activity to give an overall picture of the workload a student taking the module would be expected to undertake. This information will form the Key Information Set for each undergraduate programme and will be used to populate the KIS widget found on the QMUL programme information pages. More information can be found [online](#) about KIS. You may also wish to refer to the [QAA guidance on contact hours](#) when completing this section.

Activity Type	KIS Category	Time Spent (in hours)
Lecture	Scheduled	16
Practicals	Scheduled	20
Total		36

Specify the total module notional study hours. This should be a total of the hours given for each activity. The notional study hours for each academic credit point is 10. A 15 credit point module therefore represents 150 notional study hours.

Activity Type	Total Time Spent (in hours)	Percentage of Time Spent
Scheduled learning and teaching	110	73
Placement	0	0
Independent Study	40	27
Total	150	100

Use the information provided in the box above to specify the total time spent and the percentage time spent in each category of teaching and learning activity.

6) Assessment Profile

Provide details of the assessment methods used to assess the achievement of learning outcomes.

Description of Assessment	Assessment Type	KIS Category	Duration/Length	Percentage Weighting	Final element of assessment	Qualifying Mark
Student Presentation	Oral assessment & presentation	Practical		15%		
Written Exercises	Written assignment, inc Essay	Coursework		85%		

Final element of assessment: The assessment that takes place last. **There should normally be only one element of assessment marked as final unless two assessment or submission dates occur on the same day.**

Qualifying mark: A specified minimum mark that must be obtained in one or more elements of assessment in order to pass a module. **This is in addition to, and distinct from, the requirement to achieve a pass in the module mark to pass the module.**

Reassessment

Provide details of the reassessment methods used, specifying whether reassessment is either standard reassessment or synoptic reassessment.

- Standard Reassessment Synoptic Reassessment

Synoptic reassessment details (if you have indicated synoptic reassessment above, please give details)		
Brief Description of Assessment	Assessment Type	Duration/Length of Examination/ Coursework
Resubmission of written Exercises	Coursework	Coursework