

Module Specification

Module Title Module Code
Credit Value Level Mode of Delivery Semester B

Pre-requisite modules	Co-requisite modules	Overlapping modules
<input type="text"/>	<input type="text"/>	<input type="text"/>

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).

The module will consist of lectures, group discussions, lab and computer-based practical sessions. These will cover aspects of climate change, ecosystem services and sustainability, impact of global warming on the ecosystems at different levels and the role of human activities. The students will also learn about the global conservation challenges such as deforestation and habitat fragmentation and modelling simulations in adaptation to climate change. Work will be both theoretical and practical, with emphasis on current research questions in global ecosystem conservation and methodologies in the primary literature.

2) Module Aims

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

The aim of this module is to introduce the students to the fundamentals of climate change and sustainability, effect on biodiversity, ecosystem services and biogeochemical cycles as well as strategies in global ecosystem conservation. The latter will include the value of forest fragments and the importance of corridors of movement connecting formerly contiguous habitats. It will also address the mechanisms of global biodiversity monitoring.

Practical work will include running simulation models to analyse adaptation to climate change and evaluate the impact of global warming on the ecosystem services in a laboratory setting. The module also aims to familiarise the students with primary literature, and scientific communication.

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	Understand the fundamental principles of climate change, sustainability and its impact on ecosystem services.
A2	Know how to evaluate the effect of climate change on macro and microbiology.
A3	Know how to evaluate the effect of climate change at different ecosystem levels (e.g. ocean acidification, biogeochemical cycles, land and biodiversity loss)
A4	Understand the computer-based modelling techniques used for evaluating the adaptation to climate change.
A5	Understand the strategies developed to adapt to and mitigate climate change.
A6	Understand the importance of ecosystem services and biological diversity.
A7	Understand the challenges of these disciplines.

Disciplinary skills - able to:	
B1	Be able to understand the fundamentals of the climate change and the role of human activities in global warming.
B2	Understand the challenges of monitoring global conservation status and prioritisation
B3	Be able to critically assess adaptation and mitigation strategies to combat the climate change.
B4	Be able to run simulation models and analyse the data using appropriate software.

Attributes:	
C1	Acquire and critically evaluate knowledge.
C2	Familiarise with climate change and global conservation challenges.
C3	Analyse scientific data rigorously and present them in different platforms.
C4	Work individually and in groups.

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.

<p>Newman et al., 2006. Climate Change Biology. CABI Publishing.</p> <p>Maslin, M. 2014. Climate Change: A very Short Introduction. Oxford University Publishing.</p> <p>Descamps, S, et al. 2016. Climate change impacts on wildlife in a High Arctic archipelago–Svalbard, Norway. Global change biology</p>
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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	22
Practical Classes and Workshops	Scheduled	9
Total		31

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	31	20.6
Placement	0	0
Independent Study	119	79.4
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
Coursework	Report	Coursework		15	No	N/A
Presentation	Oral assessment & presentation	Practical	5 min	15		N/A
Exam	Written Exam	Written	3 hours	70	Yes	N/A

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
Exam	Written Exam	3 hours