Programme Specification and Curriculum Map for *MSc Biodiversity, Evolution and Conservation in Action*

1. Programme title	Biodiversity, Evolution and Conservation in Action
2. Awarding institution	Middlesex University
3. Teaching institution	Middlesex University
4. Programme accredited by	
5. Final qualification	MSc Biodiversity, Evolution and Conservation in Action,
6. Academic year	2017
7. Language of study	English
8. Mode of study	1-year full-time

9. Criteria for admission to the programme
Entry requirements

We welcome applications from graduates with a keen interest in evolutionary processes on biodiversity and conservation. Students would require a good honours degree normally a minimum of a second lower class honours in an appropriate subject including biology, applied biology or bioinformatics (or related disciplines).

We also consider candidates with other relevant qualifications and individuals with significant relevant experience who can demonstrate commitment to a career related to the topic of the programme. In particular, we welcome professionals working within NGOs or research institutes who wish to further develop their skills.
Those without formal qualifications will need to demonstrate relevant work experience and the ability to study at postgraduate level.

All applicants will be contacted prior to offers being made to discuss the

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programme and its requirements. This can be by face-to-face discussions conducted at our Hendon Campus or via videoconference/telephone. During interview students will be made aware of the field trips in Mauritius and Jersey, associated visa requirements and start dates of the programme. Candidates should be aware that the field courses are physically challenging and that the participation in field trips in Jersey and Mauritius is compulsory.

Start dates of programme
The programme will normally start in early September in order to prepare the field trip in Mauritius.

Visas and immigration
This programme of study will take place in the UK and also in Mauritius.

All students enrolling on this programme will need to hold the relevant visa enabling them to study in both countries if required.

English language requirements for international students
You must have competence in English language to study with us. The most commonly accepted evidence of English language ability is IELTS 6.5 (with minimum 6.0 in all components).

10. Aims of the programme

The course is designed to meet academic, professional and employment needs. It develops the range of academic, vocational and transferrable skills associated with biodiversity, evolution and conservation science.

The programme aims to produce graduates that:
- have advanced recognition of the multidisciplinary approach require to address ecological, evolutionary and conservation problems.
- are innovative in solving complex problems arising in the environment.
- can apply an advanced ability to devise, critically assess and implement a research programme
- can demonstrate a comprehensive understanding of the fundamental principles underlying the conservation of biodiversity, both from human and biological perspectives.
- are trained to pursue a career in biodiversity, evolution and conservation science, whether it be within academic research, the NGO sector or publicly funded institutions
- can effectively communicate scientific ideas in a range of formats.

11. Programme outcomes	
A. Knowledge and understanding	**Teaching/learning methods**
On completion of this programme the successful student will possess knowledge and understanding of:	Students acquire knowledge and understanding through integrated delivery of the taught module components: field trips, lectures, seminars and laboratories; through a variety of directed and self-directed learning activities.
1. evolutionary theory and origins and processes of biodiversity	
2. the importance of conservation science in national and international contexts	**Assessment methods**
3. techniques and understanding in conservation science, evolution and ecology	Students' knowledge and understanding is assessed by a large range of integrated piece of assessments including a field journal, data interpretation exercises, essay/examination, oral presentation, critical review of an environmental management report and research grant proposals. These are independent pieces of work with each assessment task spanning a number of theoretical and practical themes throughout the programme. There is also an independent research project conducted in the field or laboratory.
4. methods of evolutionary analysis, focusing on phylogenetics, population genetics and genomics	
5. research techniques and methods associated with the design and conduct of experiments in the laboratory and the field.	

B. Cognitive (thinking) skills	**Teaching/learning methods**
On completion of this programme the successful student will be able to:	Students learn cognitive skills through case study analysis, seminars, essays, problem-solving worksheets, laboratory work, fieldwork, and research projects. Electronic resources will also supplement teaching and learning.
1. use integrated and multicomponent approaches to analyse and solve evolutionary, ecological and conservation problems, combining and evaluating information from different sources	
2. focus on problem definition and problem solving by planning and conducting an original research project by formulating hypotheses, and be able to collect and analyse the right data to test them	**Assessment methods**
	Students' cognitive skills are assessed by a combination of formative and summative assignments. The electronic learning platform, Moodle, on UniHub delivers year-long self-tests to monitor progress and the programme also employs a field journal, data interpretation exercises, essay/examination, oral presentation and critical review of an environmental management project as forms of assessment.
3. use statistical and modelling skills and to transfer techniques and solutions from one field to another	
4. learn independently and effectively with a critical mind	
C. Practical skills	**Teaching/learning methods**
On completion of the programme the successful student will be able to:	Students learn practical skills through participation in laboratory and fieldwork, attendance in the taught module.
1. plan field-based and laboratory experiments	**Assessment**
2. operate as an independent researcher in the field, making use of naturalist observation skills	Students' practical skills are assessed via a field journal, grant proposal, management plan, conference-style research oral presentation, and dissertation module.

Students take the core module in the first and second terms with coursework assessment during both terms and a written examination at the end of the second. The individual research project is taken during the summer months.

12.2 Levels and modules
Starting in academic year 2010/11 the University is changing the way it references modules to state the level of study in which these are delivered. This is to comply with the national Framework for Higher Education Qualifications. This implementation will be a gradual process whilst records are updated. Therefore the old coding is bracketed below.

Level 7(1)

COMPULSORY	PROGRESSION REQUIREMENTS
Students must take all of the following: BIO4001 – 120 credits – Applied and theoretical approaches to Biodiversity, Evolution and Conservation sciences BIO4699 – 60 credits – MSc Research Project	Students who successfully pass BIO4001 can commence the research project BIO4699

12.3 Non-compensable modules (note statement in 12.2 regarding FHEQ levels)

Module level	Module code
7	BIO4001
7	BIO4699

13. A curriculum map relating learning outcomes to modules

See Curriculum Map attached.

14. Information about assessment regulations

The assessment regulations are common to the University.

There are 6 pieces of assessment on BIO4001 each with a different weighting. At the end of the module, the marks of each component are aggregated taking into account their weighting. In order to pass the module, students must reach an overall pass mark of 40% after component aggregation. Students, who have not gained 40% in one or more components, will be required to resit the failed components.

Students should refer to the programme handbook to see the detailed explanation of this aspect.

The six pieces of assessment of the taught component (BIO4001 – 120 Credits) are weighted as follows:

Field journal (15%).

Management plan (15%)

Conference-style research oral presentation related Poster (10%)

Data interpretation paper (20%),

Essay/examination paper (20%)

Research grant proposal (20%).

The research project of BIO4699 (MSc Research Project) corresponds to 60 credits and is assessed using two pieces of work (dissertation project: 70% and Viva 30%).

15. Future careers

Graduates could pursue employment with NGO's specialising in biodiversity and conservation; students will have expertise in bioinformatics and genomics and could find employment in biotechnology companies; have the skills to undertake a PhD; or be employed in a range of establishments (e.g. national parks, environmental agencies, molecular biology laboratories).

16. Particular support for learning (if applicable)

Induction
The first week of the programme includes an induction programme for orientation, introduction to library and information technology, as well as the course aims and contents.

Laboratories
We have specialist laboratory facilities for the development of practical skills in both Hendon and Mauritius campuses.

Library and computing
Middlesex University Library on the Hendon campus has a 24h access with computing facilities and access to specialist journals. There are facilities for inter-library photocopying of any articles required. Other articles may be obtained from the British Library in London where a similar arrangement for photocopying articles exists. Whilst on the Mauritius campus students will be able to access the Library and online journals as part of the Middlesex database.

Support for students
Learning resource services and facilities at Middlesex include English learning and Language Support
Applicants with a disability can enter the programme following an assessment of their needs, and to determine if they can work safely in the laboratory and in the field. Fieldwork in Mauritius is demanding and challenging and students need to be able to participate to be able to complete the learning.

Module and programme resources
Learning resources and other support for modules are delivered via myUniHub. In the specific module area, students can find all module materials as well as other information to support learning including video material, links to reading lists, quizzes and discussion boards.
The MSc student handbook including description of the modules is provided to each student.

17. JACS code (or other relevant coding system)	C180 C182
18. Relevant QAA subject benchmark group(s)	Bioscience Earth Sciences, Environmental Sciences and Environmental Studies

19. Reference points

The following reference points were used in designing the programme:

Middlesex University (2007) *Learning Framework Document.* MU
Middlesex University (2016) *Middlesex University Regulations.* MU
The Quality Assurance Agency for Higher Education (2015) *Subject Benchmark Statement: Bioscience*. QAA
The Quality Assurance Agency for Higher Education (2014) *Subject Benchmark Statement:* statement: Earth sciences, environmental sciences and environmental studies.
The Quality Assurance Agency for Higher Education (2015) *Master's Degree Characteristics Statement.* QAA

20. Other information

The taught component of the course is delivered at Hendon and Mauritius Campuses and Jersey. The programme starts in early September in Hendon and is followed by a one-month field trip to Mauritius early October.

The University makes arrangements for travel to, and accommodation in both Mauritius and Jersey. All costs for the field trips in Mauritius and Jersey as well as insurance are included in the fees. Students will have to pay additional expense including food, and personal local travel expenses.

Students must have the correct student visa for entry to Mauritius (if required) – see section 9 – prior to commencement of the programme. Students will also have to fill in a risk assessment form pertaining to their health and will be provided with comprehensive health advice prior to travel. Although students should check health advice for travel to Mauritius, it is advisable to have usual primary boosters of measles, mumps and rubella but particularly for Mauritius, typhoid, polio, hepatitis A, tetanus and diphtheria prior to travel.

Please note programme specifications provide a concise summary of the main features of the programme and the learning outcomes that a typical student might reasonably be expected to achieve if s/he takes full advantage of the learning opportunities that are provided. More detailed information about the programme can be found in the rest of your programme handbook and the university regulations

Curriculum map for MSc Biodiversity, Evolution and Conservation in Action

This section shows the highest level at which programme outcomes are to be achieved by all graduates, and maps programme learning outcomes against the modules in which they are assessed.

Programme learning outcomes

Knowledge and understanding		Practical skills	
A1	Evolutionary theory and practices related to origins and processes of biodiversity	C1	Plan field-based and laboratory experiments
A2	Importance of conservation science in national and international contexts	C2	Be independent in the field with the naturalist observation skills
A3	Techniques and understanding in conservation science, evolution and ecology	C3	Use computational tools, information and communication technologies
A4	Methods of evolutionary analysis, focusing on phylogenetics and molecular biology	C4	Analyse and critique scientific data
A5	Research techniques and methods to design and conduct experiments in the laboratory and the field	C5	Communicate research for scientific and lay audiences using a variety of formats
		C6	Prepare grant proposals
		C7	Transferable skills focusing on problem definition and problem solving, project design and management
		C8	Manage resources and time
		C9	Search for information and review, prepare for ethical committee review and risk assessment, identify appropriate methodologies and project management

Cognitive skills			
B1	Use integrated and multicomponent approaches to solve and analyse evolutionary, ecological and conservation problems, integrating and evaluating information from different sources		
B2	Focus on problem definition and problem solving by planning and conducting original research project by formulating hypotheses, and be able to collect and analyse the right data to test them		
B3	Use statistical and modelling skills and transfer techniques and solutions from one field to another		
B4	Learn independently and effectively with a critic mind		

Programme outcomes																	
A1	A2	A3	A4	A5	B1	B2	B3	B4	C1	C2	C3	C4	C5	C6	C7	C8	C9
Highest level achieved by all graduates																	
7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7

Module Title	Module Code by Level	Programme outcomes																	
		A1	A2	A3	A4	A5	B1	B2	B3	B4	C1	C2	C3	C4	C5	C6	C7	C8	C9
Applied and theoretical approaches to Biodiversity, Evolution and Conservation science	BIO4001	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
MSc Research Project	BIO4699	X	X	X	X	X	X	X	X	X			X	X	X		X	X	X

MSc Biodiversity, Evolution and Conservation in action