

**Programme Specification for**  
***BSc Biology (Environmental Biology)***



<b>1. Programme title</b>	BSc Biology (Environmental Biology)
<b>2. Awarding institution</b>	Middlesex University
<b>3. Teaching institution</b>	Middlesex University
<b>4. Details of accreditation by professional/statutory/regulatory body</b>	
<b>5. Final qualification</b>	BSc (Honours) Biology (Environmental Biology)
<b>6. Year of validation</b> <b>Year of amendment</b>	
<b>7. Language of study</b>	English
<b>8. Mode of study</b>	Full-time/ Part-time/ Thick Sandwich Programme

**9. Criteria for admission to the programme**

5 GCSEs (Grade C or above) or 5 GCEs (Grade C or above) including English Language, Mathematics.

And one of the following:

- A2 - 260 UCAS points. You should have a minimum of 2 A2 Levels, one should be in Biology and the other in another science subject.
- QCF BTEC Applied Science (from 2010). Diploma at MMM, Certificate at DD. Subjects should include a significant amount of biology.
- HNC/HND Applied Biology (new award since 2011) Students will be eligible to enter Year 2.
- ACCESS to science course in relevant science subject (biology, chemistry, physics, science pathway) with a minimum of a pass mark. Should include significant amount of biology.
- Mature students will be interviewed by the programme leader to discuss suitability for study at Level 4.

- Entry to Year 2 or Year 3 of the programme – students are welcome to apply with appropriate prior qualifications. Year 2 available from 2015/16 and Year 3 from 2016/17.

Overseas students are required to demonstrate competence in English e.g. TOEFL of 550 or IELTS 6.0.

The programme is open to students with disabilities. Students who have a disability are welcome to contact the programme leader prior to applications to discuss any specific needs.

## 10. Aims of the programme

The programme aims to:

- develop critical awareness of biology fostering an interest in the ever changing nature of knowledge, significance of new developments within the field and subsequent impact on society;
- enable students to appreciate the interactions of organisms and their environment;
- provide a multi and inter-disciplinary understanding of the inter-relationship between organisms, the natural and the anthropogenic world;
- equip students with both practical skills of current analytical techniques and the appropriate field skills for employment;
- develop competence in scientific methods of enquiry and problem solving abilities;
- produce graduates able to carry out research and within an ethical framework;
- prepare students for work at postgraduate level and/or employment in relevant fields.

## 11. Programme outcomes

### A. Knowledge and understanding

On completion of this programme the successful student will have knowledge and understanding of :

1. Underpinning scientific principles.
2. Biological concepts from molecular, to cellular to whole organism.
3. Mechanisms of inheritance, gene expression and recombinant DNA technology.

### Teaching/learning methods

Students gain knowledge and understanding through:

- attendance and participation in lectures, seminars, workshops, laboratory classes, fieldwork and group discussions;
- blended learning utilised in modules integrating taught, self-directed and E-learning;
- critical discussion during practical and dissertation work;
- participating in assessment.

<ol style="list-style-type: none"> <li>4. Mechanisms and concepts of evolution, its history and the principles of biological classification.</li> <li>5. Levels and complexity of inter-relationships between organisms and environmental parameters.</li> <li>6. Technological applications of biological sciences and impact on the environment.</li> <li>7. Practical and analytical techniques in biology.</li> </ol>	<p><b>Assessment methods</b></p> <p>Students' knowledge and understanding is assessed by:</p> <ul style="list-style-type: none"> <li>• formative assessment such as online learning tests, peer evaluation, in-course tests, feedback of sample work;</li> <li>• seen and unseen examinations,;</li> <li>• laboratory/ field work;</li> <li>• reports/ journals;</li> <li>• essays;</li> <li>• case studies;</li> <li>• specimen collections;</li> <li>• oral and poster presentations.</li> </ul>
<p><b>B. Cognitive (thinking) skills</b></p> <p>On completion of this programme the successful student will be able to:</p>	<p><b>Teaching/learning methods</b></p> <p>Students learn cognitive skills through</p> <p><b>Assessment methods</b></p> <p>Students' cognitive skills are assessed by</p>
<p><b>C. Practical skills</b></p> <p>On completion of the programme the successful student will be able to:</p> <ol style="list-style-type: none"> <li>1. Competently perform laboratory techniques.</li> <li>2. Execute field work appropriately.</li> <li>3. Interpret and evaluate data.</li> <li>4. Recognise and respond to ethical and health safety issues.</li> <li>5. Recognise impact of investigative work on others, the environment and living organisms.</li> </ol>	<p><b>Teaching/learning methods</b></p> <p>Students learn practical skills through:</p> <ul style="list-style-type: none"> <li>• participation in laboratory classes;</li> <li>• field work;</li> <li>• project work for dissertation.</li> </ul> <p><b>Assessment methods</b></p> <p>Students' practical skills are assessed by:</p> <ul style="list-style-type: none"> <li>• formative and summative laboratory/ field work reports, data evaluation exercises, case studies, dissertation and field/ reflective journal.</li> </ul>

<p><b>D. Graduate skills</b></p> <p>On completion of this programme the successful student will be able to:</p> <ol style="list-style-type: none"> <li>1. Effectively communicate through a range of different methods.</li> <li>2. Work effectively in teams.</li> <li>3. Use information technology to support their learning.</li> <li>4. Analyse data and carry out appropriate numerical calculations.</li> <li>5. Engage in effective learning.</li> <li>6. Reflect on personal and career development.</li> </ol>	<p><b>Teaching/learning methods</b></p> <p>Students acquire graduate skills through:</p> <ul style="list-style-type: none"> <li>• participation in the programme, group work, exercises and case studies;</li> <li>• E-learning for ICT and numeracy skills;</li> <li>• personal development portfolio;</li> <li>• attending career tutorials to enhance their personal and career development.</li> </ul> <p><b>Assessment methods</b></p> <p>Students' graduate skills are assessed by:</p> <ul style="list-style-type: none"> <li>• summative and formative assessment, which include written reports, case study analysis, portfolio, group and individual presentation, through examination and individual research dissertation;</li> <li>• online quizzes;</li> <li>• presentation of work by ICT;</li> <li>• information retrieval and collation using web searches.</li> </ul>
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## **12. Programme structure (levels, modules, credits and progression requirements)**

### **12. 1 Overall structure of the programme**

An undergraduate BSc honours degree is comprised of 360 credits of learning. In each year you will take 120 credits of learning and this will enable you to complete your award as a full-time student in three years. Part-time students normally undertake 60-90 credits of learning per year and so will complete their study in four-six years.

The learning units are comprised of 15 and 30 credit modules. In your first year you will undertake a core programme of study of 120 credits. In subsequent years you will have some core and some optional modules. The 30 credit modules are normally studied over the whole academic year of 24 weeks of learning plus an assessment period. 15 credit modules are either studied for 12 weeks in term 1, or 12 weeks in term 2 or studied on alternate weeks over a 24 week period. Some modules may be taught in blocks of learning.

Not all optional modules will be available each year.

Levels of study are denoted by a nationally recognised system with students progressing from Level 4 learning (Year 1), to Level 5 (Year 2) and to Level 6 (Year 3). In order to qualify for an honours award, students must have 360 credits of learning of which 120 credits must be at Level 5 and 120 credits must be at Level 6.

In order to progress from Year 1 to Year 2 and then Year 2 to Year 3, students will need to pass all of their modules.

The University Regulations allow one module at each level to be compensated at Level 4 (as long as a minimum of 30% is achieved on the module) and 30 credits over Levels 5 and 6. Core modules at Levels 5 and 6 cannot be compensated. For specific details about compensation, refer to the University regulations.

12.2 Levels and modules		
Level 4 (1)		
COMPULSORY	OPTIONAL	PROGRESSION REQUIREMENTS
Students must take all of the following:  <b>BIO1524</b> <i>15 credits</i>  <b>BIO1634</b> <i>30 credits</i>  <b>BIO1113</b> <i>30 credits</i>  <b>BIO1604</b> <i>15 credits</i>  <b>BIO1607</b> <i>30 credits</i>		Successful students who have passed 120 credits can progress to Year 2. Students with credit deficit may be required to repeat modules, or pass outstanding assessment, before progressing
Level 5 (2)		
COMPULSORY	OPTIONAL	PROGRESSION REQUIREMENTS

<p>Students must take all of the following:</p> <p><b>BIO2005</b> <i>30 credits</i></p> <p><b>BIO2501</b> <i>15 credits</i></p> <p><b>BIO2556</b> <i>15 credits</i></p> <p><b>BIO2536</b> <i>15 credits</i></p> <p><b>BIO2803</b> <i>15 credits</i></p> <p><b>BIO2812</b> <i>15 credits</i></p> <p><b>BIO2512</b> <i>15 credits</i></p>		<p>Successful students who have passed 120 credits can progress to Year 2. Students with credit deficit may be required to repeat modules, or pass outstanding assessment, before progressing</p>
<p>Level 6 (3)</p>		
<p>COMPULSORY</p>	<p>OPTIONAL</p>	<p>PROGRESSION REQUIREMENTS</p>
<p>Students must take all of the following:</p> <p><b>BIO3888</b> <i>30 credits</i></p> <p><b>BIO3226</b> <i>15 credits</i></p> <p><b>BIO3301</b> <i>15 credits</i></p> <p><b>BIO3310</b> <i>15 credits</i></p>	<p>Students must take <b>30 credits</b> of optional modules:</p> <p><b>BIO3403</b> <i>15 credits</i></p> <p><b>BIO3506</b> <i>15 credits</i></p> <p><b>BIO3556</b> <i>15 credits</i></p> <p><b>BIO3227</b> <i>15 credits</i></p> <p><b>BIO3899</b> <i>30 credits</i></p>	<p>Students who have gained 360 credits with 120 credits at Level 6 will be awarded the honours degree.</p>

### **12.3 Non-compensatable modules** (note statement in 12.2 regarding FHEQ levels)

<b>Module level</b>	<b>Module code</b>
Level 4	BIO1113
Level 5	BIO2005, BIO2812, BIO2803
Level 6	BIO3888, BIO3899, BIO3301, BIO3310

### **13. Curriculum map**

See attached.

### **14. Information about assessment regulations**

The regulations for assessment are common to the University.

Each module has one or more pieces of assessment. A minimum of 40% is required on each piece of assessment to pass. Within modules, where there is more than one component to a module assessment, and all pieces of work are at pass grade, the marks are aggregated and a grade given using the Middlesex University 20 point scale.

There are opportunities for re-assessment in failed components of work and specific details are given in the module handbooks. At Levels 5 and 6, where a student has failed a piece of work, the mark for the resubmitted work is capped at 40%.

Students must adhere to module assessment deadlines. Where a student cannot meet the deadline for extenuating reasons (for example illness, accidents, bereavement, family problems), an extension can be formally requested. Failure to participate in assessment without permission will result in a fail grade for the module.

In some modules, especially those with seminars and laboratories, participation in the sessions is essential in order to achieve the learning for the module. Students who do not attend sufficiently may not be able to submit the relevant assessment for the module.

Note that self-deferral is not permitted.

### **15. Placement opportunities, requirements and support (if applicable)**

There are two opportunities to gain relevant work experience, the one year long placement and a 30 credit work experience module. Both provide excellent opportunities to gain employability skills, transferable skills and gain experience of working in science. This may be in an industrial, field or hospital based environment for example.

The 30 credit work experience module is taken either as a day release in Year 3 or as a block during the summer months between Years 2 and 3. Students can use the Employability Office to help secure relevant placements and are supported in the placement by the office. The module enables work of about 150 hours (24 days) in a relevant organisation. Students would be expected to have successfully completed Year 2 before they go in to a work experience module.

The programme can be taken as a Thick Sandwich with a one year 120 credit placement. Students will be supported in finding a placement through the University Employability Office. The placement is taken following successful completion of Year 2. There are no University fees for the placement year. Students will be visited in their placement at least twice and supported by an in-placement mentor, the Employability Office and a member of the programme team. Both mentor and student will have a guide handbook to explain the requirements and students will keep an ongoing reflective diary of their experiences and also produce a critical appraisal of the organisation they work in.

#### **16. Future careers (if applicable)**

Skills and knowledge development through the programme coupled with the acquisition of analytical and critical appraisal skills enables graduates to enter a wide range of careers and further study programmes.

Successful graduates from this programme are well qualified and may progress to postgraduate study in a related discipline, teaching training for either primary or secondary school or to a research studentship.

Employment may be sought on graduate training programmes, laboratory or technical work, conservation work or in other disciplines such as journalism for example.

#### **17. Particular support for learning (if applicable)**

Learning Resources facilities at Hendon.

Connection to data base services – Athens, Ingenta, Web of Science.

A wide range of laboratories including Microbiology Laboratory, Science Laboratories, Biomedical Sciences Laboratory, Instrumentation room.

The University has a number of points of support for students:

- Academic support is provided by the Learning Enhancement Team advising students on literacy, English language and numeracy.
- The Disability Support Service offers support to disabled students during their time at Middlesex.
- There is an on-line learning platform to provide module and programme support.
- Departmental Graduate Teaching Assistants support students with their



coursework and subject understanding in small group tutorials or on a 1:1 basis.

- First year students will be offered programme progression interviews.

<b>18. JACS code (or other relevant coding system)</b>	C500
<b>19. Relevant QAA subject benchmark group(s)</b>	Biosciences (Dec 2007)

<b>20. Reference points</b>
<ul style="list-style-type: none"><li>• Middlesex University Regulations 2012/13</li><li>• Middlesex University Learning, Quality and Enhancement Handbook, 2012/13</li><li>• QAA for Higher Education, Subject Benchmarks, Biosciences, 2007</li><li>• Middlesex University (2006) The Learning Framework, London, MU</li></ul>

<b>21. Other information</b>

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.

## Appendix 2: Curriculum Map

### Curriculum map for *[title of Programme]*

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		C1	
A2		C2	
A3		C3	
A4		C4	
A5		C5	
A6		C6	
A7		C7	
Cognitive skills		Graduate Skills	
B1		D1	
B2		D2	
B3		D3	
B4		D4	
B5		D5	
B6		D6	
B7		D7	

