Module Specification

Module Title	Practical Molecular and Cellular Biology	Module Code	BIO190

Credit Value	10	Level	4	Mode of Delivery	On Campus	Semester A

Pre-requisite modules	Co-requisite modules	Overlapping modules
None	None	None

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 teaches the practical and analytical skills required for molecular and cellular biology. The module will start by introducing basic laboratory safety and routine laboratory procedures, it will then move on through DNA extraction and purification to microbiological and physiological techniques.

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 provide students with:

(1) A clear knowledge of the essentials of laboratory practice, experimental technique and data handling and analysis.

(2) An understanding of how statistics provide tools for problem solving in biology

(3) The basic skills necessary to underpin a successful degree programme in the biology

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 how to design and carry out experiments in the laboratory
A 2	Understand how to collect and analyse simple datasets

Disciplinary skills - able to:	
B1	Learn how to use a microscope
B2	Carry out basic laboratory procedures of biology, such as liquid handling , DNA analysis and microbiological work, competently
B3	Analyse and interpret experimental results
B4	Interpret simple datasets and draw inference from them
B5	Work safely in the laboratory

Attributes:	
C1	Engage critically with knowledge - acquire and apply knowledge in a rigorous way
C2	Engage critically with knowledge - connect information and ideas within their field of study
C3	Learn continuously in a changing world - use quantitative data confidently and competently
C4	Research capacity - produce analyses which are grounded in evidence
C5	Rounded intellectual development - transferrable key 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.

The reading material associated with this course will be posted on the QMplus home page for this module.

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)
Practical classes and workshops	Scheduled	24
	Total	24

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	24	24
Placement	0	0
Independent Study	76	76
Total	100	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
Practical	In-course Practical & Statistical Analysis Assessments	Practical		100	Yes	

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
Standard reassessment will consist of a written examination.	Written Exam	2 hrs