Module Specification

Module Title	Membrane and Cellular Biochemistry	Module Code	BIO263

Credit Value	15	Level	5	Mode of Delivery	On Campus	Semester B

Pre-requisite modules	Co-requisite modules	Overlapping modules
Basic Biochemistry		

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 structures and functions of biological membranes and associated cellular processes are introduced through an examination of key concepts including the structures of lipids, the structures of membrane proteins, membrane dynamics and methods for their study, intra- and intercellular signalling, protein import/export through membranes, endocytosis and exocytosis, coupling membranes, the chemiosmotic hypothesis, and membrane transport. Lecture material is supported by 3 linked practical sessions.

2) Module Aims

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

To provide an introduction to the structures and functions of biological membranes and illustrate the involvement of such membranes in key cellular processes.

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	Recognise the range of functions associated with biological membranes
A2	Compare and contrast the roles of lipids and proteins in the structures and functions of membranes
A3	Discuss complex processes involved in membrane assembly, transmembrane communication and membrane transport
A4	Explain the basic principles of the chemiosmotic hypothesis and its significance in biology

Disciplinary skills - able to:	
B1	Understanding of the the fundamental structures and functions of biological membranes
B2	Appreciate the development of key concepts in the study of biological membranes and how these have shaped our understanding
B3	Realize the value of a multidisciplinary approach to the study of fundamental cellular processes at the molecular level.

Attributes:	
C1	Enhancement of fundamental scientific understanding, improvement in planning, organization and teamwork skills through the practical exercises
C2	Organization and integration of lecture material with recommended reading and web-based resources

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.

Karp, G. 'Cell Biology' 7th ed. (2013) published by John Wiley and Sons (earlier editions of this textbook also contain the relevant material).

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 class	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	20.7
Placement	0	0
Independent Study	119	79.3
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		Coursework		25%	No	
Examination		Exam	2 Hours and 30 Minutes	75%	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
Resit Examination	Written Exam	2 Hours and 30 Minutes