Section 2 - Module Specification

Module Title	Infection, Immunity and Inflammation	Module Code	BMD269

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

Pre-requisite modules	Co-requisite modules	Overlapping modules
BMD115 OR BIO111		BMD251

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 provide the students with a sound understanding of the principles of immunology and of the biology of infectious microorganisms. We will start by exploring the principle components of the immune system, describing the molecules and cells that protect against infection and cancer, and their contribution to innate and adaptive immunity. The role played in disease by inappropriate immune response will be also addressed with example of autoimmune and inflammatory conditions. In the second part of the module, key characteristics of bacteria, viruses and other microorganisms causing infections in humans will be investigated. An emphasis will be given on the mechanisms used by the microorganisms to evade the immune system and cause disease and students will also learn about how infectious agents can be identified and treated.

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 a basic understanding of the taxonomy of microorganisms and the processes of infection and the host immune response. Students studying biomedical topics will encounter many medical problems that are related to either infection and/or inappropriate immune responses, with examples including multiple sclerosis (Neuroscience) and numerous infections and inflammatory conditions (Pharmacology and Innovative Therapeutics). At the end of the module students should be able to demonstrate a good knowledge of the major immune functions and of infectious agents of medical importance and should be able to discuss their interactions in the infectious process.

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:	
A 1	Compare and contrast the features of bacteria, viruses and protozoa and human cells
A 2	Evaluate the lifestyle of microorganisms in relation to their own survival and their ability to cause disease
A 3	Be able to explain the functions of key molecules and cells of the immune system including antibodies, complement, cytokines, interferons, B cells, T cells and other immune effector cells
A 4	Appreciate the role of different components of the immune system in mediating immunity and inflammation, and its regulation
A 5	Recognise that inappropriate immune responses can lead to human disease

Disciplinary Skills - able to:	
B 1	Recognise the potential for particular biological responses to be beneficial or harmful in different contexts
B 2	Analyse complex information to explain the outcome of immune responses
B 3	Interpret the significance of characteristics of different microorganisms with respect to their ability to cause disease or respond to different therapies
B 4	Identify and describe experimental methods for investigation of microorganisms and immune responses

Attributes:	
C 1	Engage with learning of complex information and concepts
C 2	Integrate information on different topics to explain an outcome
C 3	Identify the relevance of scientific knowledge to understanding health problems common in the global population

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.

Janeway's Immunobiology, 8th edition; Garland Science

Introduction to Microbiology, 13th Edition, Tortora, Funke and Case**,** Pearson

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
Tutorials	Scheduled	4
Workshops	Scheduled	4
Guided independent study	Independent	120
	Total	150

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	30	20
Independent Study	120	80
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	% Weighting	Final element of assessment?	Qualifying Mark
Examination	Written Exam	Written	2hr	75	Yes	n/a

Coursework	Coursework	Coursework	3 x 1,000 words	25%	No	

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
Written exam	Written Exam	2hr

Section 3 - Alternative Assessment Arrangements for Associate Students

This section must only be completed if the module will be made available to associate students in Semester A and where the credit value of the "associate" version is the same as for the main version, and the main version is assessed by exam in May which is not available to the associate students. All other aspects of the module specification remain the same as indicated in Section 2 above. To add alternative assessment arrangements please click 'Add Alternative Assessment'.

Section 4a - Half Module for Associate Students (for a half module to be taught in Semester A)

This section must be completed if the proposed module will take place over 2 semesters but will be made available to single-semester associate students in a half-credit format in Semester A. Modules worth less than 30 credits taken over 2 semesters may not be made available in a half-credit format. To add details for the half module please click 'Add Half Module (Semester A

Section 4b - Half Module for Associate Students (for a half module to be taught in Semester B)

This section must be completed if the proposed module will take place over 2 semesters but will be made available to single-semester associate students in a half-credit format in Semester B. Modules worth less than 30 credits taken over 2 semesters may not be made available in a half-credit format. To add details for the half module please click 'Add Half Module (Semester B)'.