

Summary Information

Module Code	6106BMBMOL
Formal Module Title	Advanced Immunology and Infection
Owning School	Pharmacy & Biomolecular Sciences
Career	Undergraduate
Credits	20
Academic level	FHEQ Level 6
Grading Schema	40

Module Contacts

Module Leader

Contact Name	Applies to all offerings	Offerings
Sidgi Hasson	Yes	N/A

Module Team Member

Contact Name	Applies to all offerings	Offerings
Kate Evans	Yes	N/A
Ismini Nakouti	Yes	N/A
Glyn Hobbs	Yes	N/A
Joanne Foulkes	Yes	N/A
Janice Harland	Yes	N/A

Partner Module Team

Contact Name	Applies to all offerings	Offerings
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Teaching Responsibility

LJMU Schools involved in Delivery
Pharmacy & Biomolecular Sciences

Learning Methods

Learning Method Type	Hours
Lecture	35
Practical	15
Workshop	8

Module Offering(s)

Offering Code	Location	Start Month	Duration
JAN-CTY	CTY	January	12 Weeks

Aims and Outcomes

Aims	This module will enable students to develop an in depth understanding of the origins, functions and aberrations of the immune system, microbial interactions with the immune system and infectious diseases and the strategies employed for the prevention, diagnosis, treatment and research of immune and infectious diseases.
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Learning Outcomes

After completing the module the student should be able to:

Code	Description
MLO1	Critically discuss the generation of immune responses and their disorders.
MLO2	Critically discuss microbial mechanisms of disease.
MLO3	Explain strategies used by pathogens for immune evasion.
MLO4	Critically discuss the role of the clinical and research laboratory in diagnosis, treatment and investigation of immune and infectious disorders.
MLO5	Critically discuss procedures for control of infectious diseases.

Module Content

Outline Syllabus

In both immunology and microbiology the module will further develop material introduced at levels 4 and 5 and in core modules at level 6 with particular reference to Clinical Immunology and Clinical Microbiology. Thus for example the principles of the function and measurement of effectors of the immune response will be extended to include the causes and consequences of a wider range of abnormal immune function, neoplastic diseases and transplantation reactions together with their detection, diagnosis, treatment and monitoring. Immunological techniques used in clinical and research laboratories will be explained, alongside strategies for prophylaxis and immunotherapy while attention will be given to showing the gross structure and ultrastructure of normal cells and tissues and the structural changes which may occur during disease, and an understanding of immunogenetics will be included. The focus of the microbiology will be to develop understanding of the pathogenic mechanisms of a wide range of microorganisms, including implications for public health microbiology. To support this, the laboratory investigation of a range of infectious diseases, including isolation and identification of microorganisms and approaches to anti-microbial and anti-viral therapy (including drug resistance) and infection control will be covered.

Module Overview

This module will enable you to develop an in-depth understanding of the origins, functions and aberrations of the immune system, microbial interactions with the immune system and infectious diseases and the strategies employed for the prevention, diagnosis, treatment and research of immune and infectious diseases

Additional Information

This module provides students with advanced knowledge of pathogens, infectious diseases, immune responses and disorders of immunity. This module extends the coverage and detail provided on the Immunology and Infection module (5103BMBMOL). The syllabus will encompass basic and clinical Immunology and basic and clinical Microbiology. Material covered in this module has links, in part, with other themes such as Transfusion science, Haematology, and Cancer. Where appropriate signposting of such material is provided to foster a sense of integrated learning for the student across the modules. Since final year students should be prepared for frontline developments in basic and clinical research the module also undertakes horizon scanning of the newest paradigms and discoveries. While the focus is on the delivery of core knowledge, signposting of research that is active in these areas and that is changing our understanding or is awaiting ratification and may be in the text books soon, is a salient endeavour. This will engender a feeling of preparedness to hear about the new developments or controversies in these fields of research and abrogate anxiety about contemporary knowledge.

Assessments

Assignment Category	Assessment Name	Weight	Exam/Test Length (hours)	Learning Outcome Mapping
Centralised Exam	Examination	50	2	MLO1, MLO3, MLO4, MLO2, MLO5
Report	Practical Report	50	0	MLO1, MLO4