MODULE SPECIFICATION

Module Title:	**Clinical Immunology and Microbiology**	**Level**: 7	**Credit Value**:	20

Module code:	BMS704	Is this a new module? Yes	**Code of module being replaced**:	NA

Cost Centre:	GANG	JACS3 **code**: HECos code:	F165 100265

Trimester(s) in which to be offered:	1,2	With effect from:	February 19

Faculty:	Social & Life Sciences	Module Leader:	Dr Peter Ella-Tongwiis (BCUHB)

Scheduled learning and teaching hours	21 hrs
Guided independent study	179 hrs
Placement	0 hrs
Module duration (total hours)	200 hrs

Programme(s) in which to be offered	Core	Option
MSc Biomedical Science	✓	
MRes Applied Biomedical Sciences Research		✓

Pre-requisites
None

Office use only
Initial approval January 19
APSC approval of modification *Enter date of approval* Version 1
Have any derogations received SQC approval? Yes ☐ No x

Module Aims

The module aims to allow students to develop an understanding of the immunological processes involved in various aspects of clinical immunology (e.g. autoimmune diseases, hypersensitivity, transplantation) and to develop an in-depth understanding of the interactions between the human host and pathogen (medical microbiology).

Intended Learning Outcomes

Key skills for employability

KS1	Written, oral and media communication skills
KS2	Leadership, team working and networking skills
KS3	Opportunity, creativity and problem solving skills
KS4	Information technology skills and digital literacy
KS5	Information management skills
KS6	Research skills
KS7	Intercultural and sustainability skills
KS8	Career management skills
KS9	Learning to learn (managing personal and professional development, self-management)
KS10	Numeracy

At the end of this module, students will be able to		Key Skills	
1	Discuss mediated disorders and mechanism of autoimmunity	KS1	KS4
		KS6	KS5
2	Evaluate various immune mediated disorders, transplantation and new immunological treatment, such as immunotherapy	KS1	KS6
		KS10	KS9
3	Discuss pathogenicity and evaluate factors affecting pathogenicity in microorganisms	KS1	KS3
		KS4	KS6
4	Discuss methods available for the laboratory diagnosis of infectious disease and analyse the findings of various clinical procedures relevant to medical microbiology	KS1	KS4
		KS6	KS5

Transferable skills and other attributes

- Enhanced understanding of immunology and disease transmission
- Critical analysis of relevant literature
- Research, investigative and problem-solving skills

Derogations
N/A

Assessment:
Indicative Assessment Tasks:
Learning outcomes assessment will be summative by means of written coursework and a presentation. This written coursework is expected to be of high standard and well researched with current references provided. The coursework will explore mediated disorders and the mechanism of autoimmunity of particular disorders, going on to discuss new immunological treatments and transplantation. It will consider pathogenicity and evaluate the factors affecting pathogenicity in microorganisms. The presentation will allow the student to discuss methods available for the laboratory diagnosis of certain infectious diseases and will present a critical discussion of the analysis of the findings of clinical procedures in medical microbiology. **Reassessment** any student who fails this module will be reassessed in the component they failed. This reassessment will be in the same format as the failed component and will assess the original learning outcomes in that component.

Assessment number	Learning Outcomes to be met	Type of assessment	Weighting (%)	Duration (if exam)	Word count (or equivalent if appropriate)
1	1-3	Coursework	80%	N/A	3000 equivalent
2	4	Presentation	20%	N/A	1000 equivalent

Learning and Teaching Strategies:
Strategies used in this module will involve a blend of several Higher Education teaching and Learning methods. These will include lectures, seminars, tutorials, case studies and student-led presentations. On-line learning will consist of blogs, learning diaries, contribution to fora, quizzes and weekly check-ins. Several sources of information (eg. Literary books, online literature, web sites) will also be available for students.

Syllabus outline:

- Immune mediated disorders (e.g. mechanism of autoimmunity, hypersensitivity reactions, immunological markers of disease – Flow Cytometry & ELISA, cytokines)
- Transplantation immunology (HLA polymorphism, HLA function, anti-rejection therapy, graft versus host disease)
- Pathogenesis of Infectious Disease
- Aspects of Infection/Host Parasite Interaction
- Parasitology/Medical Mycology
- Chemotherapy and Immunotherapy
- Epidemiology of Infectious Disease
- Diagnosis of Infectious Disease

Indicative Bibliography:

Essential reading

Institute of Biomedical Science *British Journal of Biomedical Science*, Step Pub. Ltd., Kent, U.K. - available via website (www.bjbs-online.org/).

Delves, P., Martin, S., Burton, D. & Roitt, I. (2011) *Roitt's Essential Immunology* (11th Edition) Blackwell Publishing.

Haeney, M., Misbah, S., Snowden, N. & Chapel, H. (2014) *Essentials of Clinical Immunology* (5th Edition) Blackwell Publishing.

Greenwood, D., Slack, R.C.B. & Peutherer, J.F. (2012) *Medical Microbiology* (17th Edition) Churchill Livingstone.

Mims C., Dockrell, H.M., Goering, R.V., Roitt, I., Wakelin, D. & Zuckerman, M. (2008) *Medical Microbiology* (4th Edition) Mosby Nester.

Other indicative reading

Articles from appropriate journals, e.g. Immunology; Journal of Inflammation; Microbes and Infection.