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Module specification

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Module Code	SCI730
Module Title	Clinical Immunology and Microbiology
Level	7
Credit value	20
Faculty	FAST
HECoS Code	100353
Cost Code	GAFS

Programmes in which module to be offered

Programme title	Is the module core or option for this programme
MSc Biomedical Science	Core
Postgraduate Certificate Biomedical Science	Option

Pre-requisites

N/A

Breakdown of module hours

Learning and teaching hours	21 hrs
Placement tutor support	0 hrs
Supervised learning e.g. practical classes, workshops	0 hrs
Project supervision (level 6 projects and dissertation modules only)	0 hrs
Total active learning and teaching hours	21 hrs
Placement / work based learning	0 hrs
Guided independent study	179 hrs
Module duration (total hours)	200 hrs

For office use only	
Initial approval date	17/8/23
With effect from date	1/9/23
Date and details of revision	
Version number	1

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)

Develop an in-depth understanding of the interactions between the human host and pathogen (medical microbiology).

Module Learning Outcomes - at the end of this module, students will be able to:

1	Discuss the principles underlying mediated disorders and approaches to evaluate effectors of the immune response to infection.
2	Have critical awareness of pathogenicity and evaluate factors affecting pathogenicity in microorganisms.
3	Evaluate current research strategies employed in clinical immunology and microbiology.
4	Discuss the principles and techniques used for screening, diagnosis, treatment of various microbiological and immunological conditions.

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.

Assessment 1: The coursework (3,000 words) 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.

Assessment 2: The oral presentation will allow the student to discuss methods available for the screening and diagnosis of certain infectious and/or immunological diseases.

Assessment number	Learning Outcomes to be met	Type of assessment	Weighting (%)
1	1-3	Coursework	70%

2	4	Presentation	30%

Derogations

N/A

Learning and Teaching Strategies

Strategies used in this module will involve a blend of several higher education teaching and Learning methods. These will mainly be lectures and seminars led by various practicing health professionals.

Weekly directed online engagement will consist of critical reviews, opinion pieces, and quizzes to enhance students' learning. Several sources of information (*e.g.* Literary books, online literature, websites *etc*.) will also be available for students.

Indicative 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 Reads

Delves, P., Martin, S., Burton, D. and Roitt, I. (2017), *Roitt's Essential Immunology, 13th ed*. Chichester: Blackwell Publishing.

Other indicative reading

Haeney, M., Misbah, S., Snowden, N. & Chapel, H. (2014), *Essentials of Clinical Immunology, 6th ed.* Oxford: Blackwell Publishing.

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

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

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

Employability – the University Skills Framework

Each module and programme is designed to cover core Graduate attributes with the aim that each Graduate will leave the University having achieved key employability skills as part of their study. The following attributes will be covered within this module either through the content or as part of the assessment. The programme is designed to cover all attributes and each module may cover different areas.

Core Attributes
Engaged
Creative
Ethical

Key Attitudes
Commitment
Curiosity
Resilience
Confidence
Adaptability

Practical Skillsets
Digital Fluency
Organisation
Critical Thinking
Emotional Intelligence
Communication