

Module Details	
Module Title	Diagnostics in Biochemistry and Immunology
Module Code	BIS6017-B
Academic Year	2024/5
Credits	20
School	School of Chemistry and Biosciences
FHEQ Level	FHEQ Level 6

Contact Hours	
Type	Hours
Lectures	24
Directed Study	176

Availability	
Occurrence	Location / Period
BDA	University of Bradford / Semester 2

Module Aims
The aim of this module is to enable the student to understand and gain experience of the application and delivery of a range of core and specialised methods and techniques in clinical biochemistry and immunology and to understand their importance in the clinical investigation of patients.

Outline Syllabus
Components of the normal immune response. Role of immunity in infection and cancer. Tests of immunoglobulins, antibodies and other specific proteins. Measurement of paraproteins and oligoclonal bands. Mechanisms of allergy, autoimmunity and immunodeficiency disorders and common clinical tests. Basics of cellular, complement and humoral immunodeficiency. Immunogenetics and the major histocompatibility complex. Transplantation immunology and histocompatibility testing. Tests of immunosuppressive therapy Assessment of cardiovascular risk. Tests to aid the diagnosis and monitoring of cancer, endocrine function, GI function, nutrition and micro-nutrition. Therapeutic drug monitoring, toxicology and drugs of abuse testing. Chronic disease monitoring (diabetes, chronic renal failure, osteoporosis, hypertension, chronic heart failure, chronic obstructive pulmonary disease).

Learning Outcomes	
Outcome Number	Description
01	Evaluate the application of specialised clinical biochemistry and immunology methods and techniques and illustrate their value in relevant areas of clinical practice.
02	Understand and evaluate the role of the immune system in allergies, infection, cancer and autoimmune conditions and common tests. Understand transplantation immunology and histocompatibility testing and immunosuppressive therapy. Assess cardiovascular risk and diagnose and monitor cancer and other chronic diseases. Describe endocrine function testing, GI function, nutrition and micro-nutrition. Understand therapeutic drug monitoring and toxicology and drugs of abuse testing (HCPC 9, 13, 14)
03	Present and analyse data in simple terms in both oral and written formats. Conduct a suitable range of diagnostic, investigative or monitoring procedures and address quality control/assurance requirements. Effectively manage your workload, resources and work successfully to a deadline. Demonstrate personal responsibility for self-directed learning and time management. (HCPC 2, 4, 5, 8, 9, 10, 11, 14, 15)
04	Describe endocrine function testing, GI function, nutrition and micro-nutrition. Understand therapeutic drug monitoring and toxicology and drugs of abuse testing.
05	Analyse a suitable range of diagnostic, investigative or monitoring procedures and address quality control/assurance requirements.

Learning, Teaching and Assessment Strategy
<p>Information outlining the knowledge and understanding required for this module is delivered in lectures. This information is reinforced by practical and workshop sessions. In the workshops you will work in groups to research information, interpret data, solve problems and develop your understanding. The workshop exercises will require you to work under pressure, meet deadlines and develop communication skills. Teaching is enhanced by the use of visiting specialist lecturers from local Hospitals and the NHS Blood and Transplant Service.</p> <p>The following statement applies to learners that are completing this module as part of an Apprenticeship.</p> <p>The apprentice must meet all the required standards when measured against each individual learning outcome for the module (as mapped below):</p> <p>Section 1: 8.2 Section 2: 5.1, 5.2, 5.4, 5.5</p>

Mode of Assessment			
Type	Method	Description	Weighting
Summative	Examination - Closed Book	Examination comprising two from 5 essays (2 Hrs)	60%
Summative	Examination - Closed Book	Individual data interpretation exercise (1 Hr)	20%
Summative	Presentation	Group Poster Presentation (1 Hr)	20%

Reading List

To access the reading list for this module, please visit <https://bradford.rl.talis.com/index.html>

Please note:

This module descriptor has been published in advance of the academic year to which it applies. Every effort has been made to ensure that the information is accurate at the time of publication, but minor changes may occur given the interval between publishing and commencement of teaching. Upon commencement of the module, students will receive a handbook with further detail about the module and any changes will be discussed and/or communicated at this point.

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