

Liverpool John Moores University

Title: CLINICAL BIOCHEMISTRY
Status: Definitive
Code: **5102BMBMOL** (122380)
Version Start Date: 01-08-2021

Owning School/Faculty: Pharmacy & Biomolecular Sciences
Teaching School/Faculty: Pharmacy & Biomolecular Sciences

Team	Leader
Gordon Lowe	Y
Laura Randle	
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Academic Level: FHEQ5 **Credit Value:** 20 **Total Delivered Hours:** 60
Total Learning Hours: 200 **Private Study:** 140

Delivery Options

Course typically offered: Semester 2

Component	Contact Hours
Lecture	55
Practical	3

Grading Basis: 40 %

Assessment Details

Category	Short Description	Description	Weighting (%)	Exam Duration
Exam	Exam	3 from 5 essay questions	50	2
Report	Data	Analyse and interpret practical data to determine the quality and reproducibility of the data.	50	

Aims

An introduction into how biochemical markers can investigate the function and

dysfunction of systems, organs and tissues and how this is applied to the diagnosis and treatment of disease.

Learning Outcomes

After completing the module the student should be able to:

- 1 Describe the methods used for the collection, storage and analysis of clinical samples.
- 2 Describe the principles and applications of biochemical investigations for screening, diagnosis, treatment and monitoring of disease, including approaches to personalised medicine.
- 3 Describe the role of the hospital in therapeutic drug monitoring and screening for drugs of abuse.
- 4 Develop an appreciation of QC/QA principles
- 5 Gain experience, analysing and interpreting biochemical test data.

Learning Outcomes of Assessments

The assessment item list is assessed via the learning outcomes listed:

Exam	1	2	3
Data analysis & interpretation	1	4	5

Outline Syllabus

This module will provide an introduction to the clinical biochemistry laboratory, including samples, types of test, automation, QC/ QA, analytical and chemical aspects, specificity and sensitivity, data analysis and interpretation, including for personalised approaches to medicine. The module will cover systems investigations and enable students to develop an appreciation of normal and pathological function and the development of biochemical tests for a variety of organ systems, including renal, cardiovascular, respiratory, liver, endocrine, as well as specialised tests such as tumour assays, bone etc. Aspects of therapeutics will include an introduction to ADMET and DMPK, therapeutic drug monitoring and screening for drugs of abuse, and personalised medicine

Learning Activities

Lectures, practical

Notes

to provide an introduction to the role of clinical biochemists in the diagnosis of disease.

No specific benchmarks are available for this module, but the learning outcomes at least meet, if not exceed, those stipulated in the relevant qualification descriptors for a higher education qualification at level 5 as defined by QAA, Sept 2015. The module has also been informed by the benchmark statement for Biomedical Science June 2015.

Intake is every September.

The criteria for admission to the module require that candidates meet the criteria for admission to the BSc Biomedical Science programme (32805).

The final award is Certificate of Professional Development in Clinical Biochemistry, 20 credits at Level 5.

The students have access to a module Blackboard site and the University's other range of electronic support such as access to the electronic library facilities. The module content is regularly updated on the Blackboard site including contemporary reading lists and links to journal articles. Students have access to the community site for Biomedical Science. All students have access to the module leader through phone contact and email. Module and CPD guides are also provided, which provide a range of information.

The programme is assessed and run in line with the Academic Framework

<http://www.ljmu.ac.uk/eaqs/121984.htm>

The module is accredited by The Institute for Biomedical Science (Sept 2016- Aug 2021). The module forms part of the BSc Biomedical Science programme (32805) which was reviewed in April 2016.

The methods for improving the quality and standards of learning are as follows:

- Annual monitoring Review;
- Liaison and feedback from the students;
- Reports from External Examiner;
- Programme team ensuring the module reflects the values of the current teaching and learning strategy;
- Module leader updating knowledge and skills to ensure these remain current and relevant.

The module is included in the programme specification for the BSc Biomedical Science programme (32805). The module is aligned with the same BSc Biomedical Science module for annual monitoring and external examining purposes.