

## Liverpool John Moores University

Title: PHYSIOLOGICAL BIOCHEMISTRY  
Status: Definitive  
Code: **4104BCBMOL** (122484)  
Version Start Date: 01-08-2021

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

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**Academic Level:** FHEQ4      **Credit Value:** 20      **Total Delivered Hours:** 58

**Total Learning Hours:** 200      **Private Study:** 142

### Delivery Options

Course typically offered: Semester 2

Component	Contact Hours
Lecture	28
Practical	12
Seminar	3
Workshop	13

**Grading Basis:** 40 %

### Assessment Details

Category	Short Description	Description	Weighting (%)	Exam Duration
Portfolio	reports	Four practicals will be undertaken and a template will be completed for each. These practical templates will be submitted as a portfolio at the	50	

Category	Short Description	Description	Weighting (%)	Exam Duration
		end of the practical exercise.		
Exam	exam	Exam	50	2

## Aims

*To provide an introduction to, and make the link between, nutrition, physiology and cellular metabolism in prokaryote and eukaryote cells. In addition, the chemistry which underpins each biochemical process is made clear by making use of worked examples and through practical experiments.*

## Learning Outcomes

After completing the module the student should be able to:

- 1 Describe a number of metabolic and synthetic biochemical pathways operating in eukaryotic and prokaryotic cells.
- 2 Execute a number of biochemically related laboratory techniques and report on their findings by making reference to the literature.

## Learning Outcomes of Assessments

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

Practical reports	2
Exam	1

## Outline Syllabus

*Physiology: selected organs including GI tract, kidney, liver, pancreas.*

*Biochemical basis of nutrition.*

*Biochemical pathways operating in prokaryotes, eukaryotes (animals and plants).*

*Energy balance in prokaryotic and eukaryotic cells: Electron transport pathway, ATP synthesis, properties of ATP,*

## Learning Activities

Lectures to contextualise and deliver the key concepts.

Workshops to explore the lecture material, develop critical thinking skills and prepare for the exam.

Seminars to evaluate learning.

Practicals to develop subject specific skills and make the link with theory.

## Notes

This module will introduce the concept of cellular metabolism and how nutrition and physiology impact on both eukaryotic and prokaryotic cells. Recommended text and journal reference links can be found on the Blackboard site for this module.