

Liverpool John Moores University

Title: BIOMATERIALS
Status: Definitive
Code: **6107BMBMOL** (122477)
Version Start Date: 01-08-2021

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

Team	Leader
Nick Bryan	Y
Mark Murphy	
Gordon Lowe	
Gillian Hutcheon	

Academic Level: FHEQ6 **Credit Value:** 20 **Total Delivered Hours:** 55
Total Learning Hours: 200 **Private Study:** 145

Delivery Options

Course typically offered: Semester 2

Component	Contact Hours
Lecture	45
Workshop	10

Grading Basis: 40 %

Assessment Details

Category	Short Description	Description	Weighting (%)	Exam Duration
Essay	Analysis	Students will be presented with a series of papers relating to the field of biomaterials which they will be expected to review and critically appraise.	50	
Presentation	Poster	This assessment is a group presentation of a poster which considers the past, present and future implications of a medical device in a pertinent medical setting	50	

Aims

The aim of this module is to facilitate students examining in detail the importance of biomaterials in contemporary biomedicine, and discover how their analysis in vitro predict success in vivo.

Learning Outcomes

After completing the module the student should be able to:

- 1 Analyse the important characteristics of biomaterials and how they influence biologic responses
- 2 Critically evaluate biomaterial assisted tissue repair
- 3 Critically evaluate the methods by which the body interrogates a biomaterial.

Learning Outcomes of Assessments

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

Critical Analysis of research	1	2	3
Poster presentation	1	2	3

Outline Syllabus

The module will cover the definition, purpose and delivery of biomaterials; the evaluation of biomaterials in vitro and in vivo. Important properties of biomaterials and tissue specific roles of biomaterials will be discussed and the clinical and commercial exploitation of biomaterials explored.

Learning Activities

Lectures and Workshops

Notes

This course is designed to inform students as to the current states of the art in biomaterial science. Through a series of lectures detailing the importance of various properties of biomaterials and how their properties are evaluated students will develop an detailed comprehension of how these substances are continually revolutionising medicine.

Students will learn about specific tissues and diseases in which biomaterials are making a particularly high impact, and also think about how the commercial aspects of biomaterial science and why developing biomaterials carries such global financial interest.

