Liverpool John Moores University

Title:	Current Issues in Biomedical Sciences
Status:	Definitive
Code:	**7106BSBMOL** (126685)
Version Start Date:	01-08-2021
Owning School/Faculty:	Pharmacy & Biomolecular Sciences
Teaching School/Faculty:	Pharmacy & Biomolecular Sciences

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Academic Level:	FHEQ7	**Credit Value:**	20	**Total Delivered Hours:**	38
Total Learning Hours:	200	**Private Study:**	162		

Delivery Options
Course typically offered: Semester 2

Component	Contact Hours
Lecture	22
Seminar	4
Tutorial	2
Workshop	10

Grading Basis: 50 %

Assessment Details

Category	Short Description	Description	Weighting (%)	Exam Duration
Essay	Lit review	A critical review of the literature related to a topic introduced in	60	

Category	Short Description	Description	Weighting (%)	Exam Duration
		lectures, to include both a scientific and lay abstract. Typical word length 2500.		
Presentation	pres	A journal club presentation of a journal article related to a topic introduced in lectures. Duration of presentation 15 min.	40	

Aims

To provide students with an appreciation of current research, controversies, state of the art and newsworthy breakthroughs that are addressed by biomedical scientists Guest speakers from local industry will provide a commercial perspective.

Learning Outcomes

After completing the module the student should be able to:

1 Formulate ideas and develop the skills to communicate these ideas to a scientific audience.
2 Critically evaluate the literature relating to a current research area.
3 Demonstrate the application of knowledge gained throughout the programme to current advances in biosciences research.

Learning Outcomes of Assessments

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

Critical literature review 1 2

Journal club presentation 1 3

Outline Syllabus

Lectures:
The aim is to deliver topical content related to current developments, advances reported in the scientific literature and staff expertise. Industry guest speakers will deliver case studies of products from inception, through R&D to final commercial product.

The following are examples of topics that may be covered in this module:

Infectious disease:
Lipid polymer nanoparticles as a novel vehicle to improve antibiotics delivery.
Improving clinical diagnosis of resistant bacterial strains through development of phenotypic tests
Current challenges in antibiotic resistance.

Cancer:
Chimeric antigen receptor engineered T-cells for patient-specific cancer treatment.
Immunometabolism and immuno-oncology.

Biotechnology:
Production of metabolites using fermentation technologies.

Regenerative medicine:
Correction of genetic disease using in vivo CRISPR gene editing.
Treating dementia.

Cardiovascular disease:
Atherosclerosis and oxidative stress.

External speakers
A number of companies have expressed interest in participating in the delivery of this module.

Workshops:
Workshops will be linked to the topics of lectures in order to allow students to explore subjects in more depth in an interactive environment.

Seminars:
As part of their assessment, students will take part in a Journal Club. Students will be required to critically evaluate a recent paper of interest and then present their findings to the class.

Tutorials:
Two pastoral tutorials will be provided.

Learning Activities

Lectures, workshops, seminars, tutorials and student-centred activities.

Notes

This module aims to present an overview of current hot topics within the biomedical sciences in order to stimulate student interest and provide ideas for potential career paths. Material covered will relate both to research interests of teaching staff and external speakers from the commercial sector. Students will explore topics in more detail through linked workshops and assessments.