

## Liverpool John Moores University

Title: Microbiology and Biotechnology  
Status: Definitive  
Code: **5501YAUBIO** (127886)  
Version Start Date: 01-08-2021

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

Team	Leader
Katie Evans	Y

**Academic Level:** FHEQ5  
**Credit Value:** 20  
**Total Delivered Hours:** 98  
**Total Learning Hours:** 200  
**Private Study:** 102

### Delivery Options

Course typically offered: Semester 1

Component	Contact Hours
Lecture	90
Practical	6

**Grading Basis:** 40 %

### Assessment Details

Category	Short Description	Description	Weighting (%)	Exam Duration
Essay	AS1	Written article	33	
Exam	AS2	Exam related to food microbiology and biotechnology	34	2
Report	AS3	Report related to medical microbiology and biotechnology	33	

### Aims

*The aim of this module is to provide a broad spectrum of knowledge about microorganisms and their activities. Students will develop an understanding of the ecology and importance of microorganisms in different environments. Students will also develop an understanding of the applied nature of microbiology and how fundamental knowledge can be applied for the development of useful products,*

*which address global challenges.*

## **Learning Outcomes**

After completing the module the student should be able to:

- 1 Recognise the diversity of microorganisms in natural environments, and important morphological features.
- 2 Describe the basic methods for cultivation, observation, enumeration and identification of microorganisms, including factors which influence growth.
- 3 Examine the impact of microorganisms in the environment, and their role in health and disease.
- 4 Discuss the importance and future potential of microorganisms in development of useful products.
- 5 Appreciate the role of biotechnology, traditional and modern, in the food industry.
- 6 Discuss the use of biotechnology in the advancement of infectious disease diagnosis and therapy.

## **Learning Outcomes of Assessments**

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

Essay	1	2	3	4
Exam	3	4	5	
Report	3	4	6	

## **Outline Syllabus**

*The module content will include study of the diversity of microorganisms in natural environments, and important morphological features, basic methods for cultivation, observation, enumeration and identification of microorganisms, including factors which influence growth. The module will also cover the impact of microorganisms in the environment, and their role in health and disease, and the importance and future potential of microorganisms in medical and food biotechnology.*

## **Learning Activities**

The module content will be delivered through lectures, workshops, and practical activities. Theoretical lectures will provide appropriate subject knowledge to support practical application.

## **Notes**

This module is for students to develop an understanding of the role of microorganisms in the environment, and how they are used in biotechnology for the manufacture of useful products. Students will also develop basic practical skills in

microbiology. Students will develop an understanding of the advances in biotechnological applications and their importance in food production and human health.