

## Liverpool John Moores University

Title: FORENSIC BIOSCIENCE  
Status: Definitive  
Code: **7105FSBMOL** (123661)  
Version Start Date: 01-08-2021

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

Team	Leader
Komang Ralebitso Senior	Y
Nick Dawnay	
Kostas Kiriakoulakis	
Alan Gunn	
Suzanne McColl	
George Sharples	

**Academic Level:** FHEQ7      **Credit Value:** 20      **Total Delivered Hours:** 40  
**Total Learning Hours:** 200      **Private Study:** 160

### Delivery Options

Course typically offered: Semester 1

Component	Contact Hours
Lecture	16
Practical	12
Seminar	3
Workshop	9

**Grading Basis:** 50 %

### Assessment Details

Category	Short Description	Description	Weighting (%)	Exam Duration
Portfolio	Portfolio	Case notes and laboratory findings from the practical classes	50	
Presentation	Seminar	Seminar presentation based on case study and /or recent publications	50	

## Aims

*The aims of this module are to allow students to critically appraise the use and analysis of biological material within a forensic context, demonstrating an understanding of the importance and limitations of such analysis. They should be able to perform a wide range of laboratory investigations pertinent to this area of study and interpret the results in a timely and appropriate fashion. Additionally, students should be able to review current literature in the area and discuss the limitations of a range of case studies, suggesting newer and/ or more appropriate methods of investigation.*

## Learning Outcomes

After completing the module the student should be able to:

- 1 Apply and adapt problem solving skills to unfamiliar and complex situations relevant to forensic bioscience
- 2 Critically evaluate established and developing techniques in forensic bioscience
- 3 Record, interpret and evaluate biological data in a manner appropriate for forensic science.

## Learning Outcomes of Assessments

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

Laboratory portfolio	2	3
Seminar presentation	1	2

## Outline Syllabus

*A range of topics will be discussed and covered. These will reflect areas of on ongoing research within forensic bioscience and the specialisms of staff members. Areas will include aspects of the following:*

*Forensic microbiology including for example, microbial analysis of soils, bioterrorism, the role of micro-organisms in decomposition and analysis of personal microbiota*

*Forensic entomology - for example the range of organisms under analysis, post mortem interval determination, entotoxicology*

*Diagnosis of drowning and other pathological analysis*

*Other methods for post mortem interval determination*

*use of protein analysis in forensic bioscience*

*Blood pattern analysis and its uses*

*Use of techniques such as stable isotope analysis*

*Basic methods of identification*

## Learning Activities

Lectures, workshops, seminars and practicals

### **Notes**

Advanced level study of the use of bio-organisms in a legal context such as understanding and identifying microorganisms used in bioterrorism or entomology uses including PMI determination. Information relating to decomposition and related pathology based techniques will be introduced.