

## Liverpool John Moores University

Title: BIOANALYTICAL TECHNIQUES  
Status: Definitive  
Code: **7004FSBMOL** (120795)  
Version Start Date: 01-08-2015

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

Team	Leader
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**Academic Level:** FHEQ7      **Credit Value:** 20.00      **Total Delivered Hours:** 40.00  
**Total Learning Hours:** 200      **Private Study:** 160

### Delivery Options

Course typically offered: Semester 2

Component	Contact Hours
Lecture	8.000
Practical	21.000
Seminar	2.000
Workshop	6.000

**Grading Basis:** 40 %

### Assessment Details

Category	Short Description	Description	Weighting (%)	Exam Duration
Report	Report	Journal paper based on practical sessions incorporating analysis of papers relevant to the subject	50.0	
Exam	Exam	Students will answer one pre-agreed question in detail in addition to unseen material	50.0	3.00

### Aims

*To provide students with an understanding of advanced molecular techniques relevant to forensic science including nucleic acid and protein based techniques.  
To enable students to understand and perform appropriate interpretation methods  
To develop critical awareness of the limitations of these techniques and their use in the criminal justice system.*

## **Learning Outcomes**

After completing the module the student should be able to:

- 1 Perform relevant advanced techniques and critically analyse and interpret the results
- 2 Critically evaluate current research and the application of relevant techniques with regard to the criminal justice system
- 3 Demonstrate a comprehensive understanding of the subject

## **Learning Outcomes of Assessments**

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

Journal style report	1	2
Examination	2	3

## **Outline Syllabus**

*Advanced DNA techniques: partial profiles, mixed samples, epigenetic analysis and others relevant and recently published. Review of basic techniques (STR and MtDNA analysis)  
RNA analysis. For example: determination of body fluid identity, aging of samples  
Protein analysis relevant to forensic science. For example: changes in protein levels during decomposition  
Advanced immunological techniques*

## **Learning Activities**

Lectures, laboratory investigations, workshops and seminars. Private study

## **Notes**

This module looks at advanced level bioanalytical techniques relevant to forensic science including recent and new technologies. These are analysed and discussed with reference to the requirements of the criminal justice system.