Liverpool John Moores University

Title:	TRACE EVIDENCE ANALYSIS
Status:	Definitive
Code:	**7101FSBMOL** (123656)
Version Start Date:	01-08-2021
Owning School/Faculty:	Pharmacy & Biomolecular Sciences
Teaching School/Faculty:	Pharmacy & Biomolecular Sciences

Team	Leader
Amanda Boddis	Y
Kirstie Scott	
Jason Birkett	
Mark Murphy	
George Sharples	

Academic Level:	FHEQ7	**Credit Value:**	20	**Total Delivered Hours:**	43
Total Learning Hours:	200	**Private Study:**	157		

Delivery Options
Course typically offered: Semester 2

Component	Contact Hours
Lecture	11
Practical	26
Tutorial	2
Workshop	4

Grading Basis: 50 %

Assessment Details

Category	Short Description	Description	Weighting (%)	Exam Duration
Report	Report	Mini Project Report	50	
Presentation	Case study	Case Study Presentation	50	

Aims

Trace Evidence such as diatoms and pollen play a pivotal role in criminal

investigations. It is essential for forensic scientists to be able to identify, differentiate and analyse different types of trace evidence as well as to be able to interpret the results of their analysis. Analysis of the majority of trace evidence begins with advanced microscopic methods and in some cases can end with chemical composition determination.

The aims of this module are to provide students with the theoretical knowledge and practical experience required by a forensic scientist to identify and examine trace evidence. In addition to, the ability to discuss, appraise and assess the results obtained.

Learning Outcomes

After completing the module the student should be able to:

1	Identify and differentiate between different types of trace evidence and to be able to interpret the results of their analysis
2	Develop detailed knowledge of a range of advanced techniques used in the analysis of trace evidence.
3	Undertake a critcal appraisal of the pivotal role and limitations played by trace evidence analysis using a case study

Learning Outcomes of Assessments

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

Mini Project Report	1	2
Case Study Presentation	3	

Outline Syllabus

The module will provide information about a variety of different pieces of trace evidence, with an emphasis on biological trace evidence, for example diatoms and pollen. As the majority of trace evidence in forensic science is analysed by microscopic techniques, the students will gain both theoretical knowledge and practical experience of a range of advanced microscopic techniques such as SEM and confocal. Workshops and practicals will provide the students with experience to undertake a mini-project. Where evidence from a scenario will be provided and the students will use the practical experience gained to undertake analysis of these pieces of evidence. A report will be written to allow the results to be disseminated. The students will also choose a case study to research, undertake a critical analysis of the use of trace evidence in that case and disseminate the results as a poster.

Learning Activities

Lectures, Mini Project, Practical, Workshops, Tutorial, Case Study

Notes

This module allows students to gain theoretical knowledge and practical experience of advanced techniques used to analyse trace evidence.