Liverpool John Moores University

Title:	Forensic Chemistry
Status:	Definitive
Code:	**4003FSBMOL** (116844)
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:	FHEQ4	**Credit Value:**	24.00	**Total Delivered Hours:**	61.00
Total Learning Hours:	240	**Private Study:**	179		

Delivery Options
Course typically offered: Standard Year Long

Component	Contact Hours
Lecture	31.000
Practical	29.000

Grading Basis: 40 %

Assessment Details

Category	Short Description	Description	Weighting (%)	Exam Duration
Portfolio	FCASS2		60.0	
Exam	FCASS1		40.0	1.00

Aims

To provide a basic knowledge of chemistry and chemical analysis important in forensic science. This course aims to provide core material in chemistry relevant to forensic analysis and sufficient for higher level study of this subject area.

Learning Outcomes

After completing the module the student should be able to:

FORCHEML O1	Perform a range of forensic chemical tests and analyse the results obtained
FORCHEML O2	Discuss the use of the forensic chemical tests within forensic analysis
FORCHEML O3	Demonstrate a knowledge of the chemistry underpinning forensic chemical analysis

Learning Outcomes of Assessments

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

Forensic Chemistry Portfolio	FORCHEML O1	
Forensic Chemistry Exam	FORCHEML O2	FORCHEML O3

Outline Syllabus

Basic chemical analysis techniques, for example: TLC, Colour Tests, Microcrystalline tests, Viscosity and Melting Point Determination.
Polarity and Partitioning.
Basic Chromatography (GC and HPLC).
Spectroscopy (UV-visible and IR), the Beer-Lambert Law and its limitations.
Chemistry of Colour (Dyes and Pigments).
Inks and Paint and their Analysis in a Forensic Laboratory
Polymers, Natural and Synthetic.
Fibres and Paper and their Analysis in a Forensic Laboratory
Chemistry of Combustion and Fire.
Explosives, Bullets, Guns and GSR and their Analysis in a Forensic laboratory
Drugs and their Analysis.
Nuclear Magnetic Resonance
Mass Spectral Interpretation
Techniques for Heavy Metal detection

Learning Activities

Lectures with exercises, workshops and practical sessions

Notes

Forensic Chemistry is a 24 credit Year long module which provides students with information about the different types of evidence a forensic chemist would analyse. Including the chemistry underpinning the different types of evidence and both theoretical and practical experience of the forensic techniques used to analyse this evidence.