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Title: ADVANCED DRUG ANALYSIS AND TOXICOLOGY
Status: Definitive
Code: **7103FSBMOL** (123659)
Version Start Date: 01-08-2021

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

Team	Leader
Jason Birkett	Y

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	25
Practical	12

Grading Basis: 50 %

Assessment Details

Category	Short Description	Description	Weighting (%)	Exam Duration
Exam	Exam	Closed book exam	50	3
Report	Practical	Practical reports	50	

Aims

The aim of this module is to provide students with an in-depth understanding on the theoretical and practical aspects of drug and toxicological analysis using the appropriate analytical techniques. Laboratory work will be based upon case work studies providing experience of the required role of the forensic analyst. Laboratory problems will be enquiry/problem-based to further develop skills in team work and

independent learning. The generation of the appropriate documentation will be utilised as would be expected for a professional forensic practitioner.

Learning Outcomes

After completing the module the student should be able to:

- 1 Select, design and conduct the appropriate analytical methods for sampling and analysis of drugs and toxins in a range of sample types
- 2 analyse and interpret laboratory drug and toxicological data taking into account the pharmacokinetic and pharmacodynamic characteristics of toxins where necessary
- 3 Critically appraise relevant research literature in field of drug and toxicology analysis
- 4 professionally report the results of a scientific investigation

Learning Outcomes of Assessments

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

Examination	2	3	
Practical reports	1	2	4

Outline Syllabus

- *Applications of analytical techniques in the sampling and analysis of drugs and poisons in forensic specimens.*
- *Pharmacokinetics and pharmacodynamics.*
- *Specific drugs and their metabolites Multi-drug use and drug interactions.*
- *Case studies and laboratory investigations.*
- *Advanced methods of analysis. E.g. MSn methods*
- *Research and Development in Forensic Drug and Toxicology analysis*
- *Case studies. Drugs and metabolites. Development in extraction techniques and instrumentation. Methods of data analysis.*
- *Drug Legislation (UK and International). Report writing.*

Learning Activities

Lectures

Lab based work – enquiry/problem based

Research – reading encouraged throughout the module

Notes

This module covers the theoretical and practical aspects of drug and toxicological

analysis and the appropriate analytical techniques. All lecture material will be made available to the students via blackboard.