Module Definition Form (MDF)

Module code: MOD002890	**Version:** 8 **Date Amended:** 06/Dec/2023

1. Module Title
Forensic Analysis of Drugs and Poisons

2a. Module Leader
Agatha Grela

2b. School
School of Life Sciences

2c. Faculty
Faculty of Science and Engineering

3a. Level
6

3b. Module Type
Standard (fine graded)

4a. Credits
15

4b. Study Hours
150

5. Restrictions

Type	Module Code	Module Name	Condition
Pre-requisites:	None		
Co-requisites:	None		
Exclusions:	None		
Courses to which this module is restricted:	BSc (Hons) Forensic Science BSc (Hons) Forensic Science (sandwich) BSc (Hons) Forensic Science (extended degree)		

LEARNING, TEACHING AND ASSESSMENT INFORMATION

6a. Module Description

Drug trafficking, use and addiction are responsible for much of the crime which occurs in our society. In this respect forensic scientists have an important role to play both in the classification of drugs from seizures and the analysis of drugs in body fluids. You will be able to link these two important disciplines. Many of the techniques used for quantitative analysis of street drugs and toxicological specimens are identical; in both cases the definitive results arise from mass spectrometric determination. However you will discover that there are essential differences in the actual procedures used.

The main focus of street drug analysis is on the processes used in drug identification and profiling. You will explore the materials that can be used, critically evaluating the processes and methodologies applied, and review the data generated and appraise the interpretations.

Forensic toxicology combines the specialist areas of analytical chemistry and pathology. A forensic toxicologist detects and identifies foreign chemicals (toxins) in the body. In order to accurately interpret toxicological findings, it is essential that the toxicologist has an understanding of the pharmacology of that substance and the pathological effects it has on the body. You will explore both toxicological and drug profiling data in court presentations.

You will have access to our digital library and suitable websites identified through our online learning system. Through practical sessions you will develop your self-management skills, organisational skills, critical thinking, team-working skills as well as working to ISO17025 requirements. The use of interactive lectures will develop your communication skills and critical thinking further. This module prepares you for a career in forensic chemistry, forensic toxicology, toxicology and analytical chemistry.

6b. Outline Content

- Forensic Toxicology - Pharmacokinetics and pharmacodynamics - Sample collection and manipulation - Analytical Techniques in Forensic Toxicology and Drug Analysis - Clandestine drug synthesis - Identification of target substances in drug profiling - Data interpretation and critical evaluation of data

6c. Key Texts/Literature

The reading list to support this module is available at: https://readinglists.aru.ac.uk/

6d. Specialist Learning Resources

Equipment available within the School of Life Sciences

7. Learning Outcomes (threshold standards)		
No.	**Type**	**On successful completion of this module the student will be expected to be able to:**
1	Knowledge and Understanding	Demonstrate a high level of competency in the discussion of cases of death due to toxicological reasons and a critical awareness of the factors of importance in cases of toxicology where the victim is alive
2	Knowledge and Understanding	Demonstrate knowledge of the manufacturing processes for cannabis, heroin, cocaine, amphetamine and ring substituted amphetamines and competently identify targets suitable for drug identification and profiling
3	Intellectual, practical, affective and transferrable skills	Critically evaluate the evidence types that can be used and the alpha numeric data generated by drug profiling
4	Intellectual, practical, affective and transferrable skills	Critically assess the various methods of analysis and interpretation used in forensic toxicology and drug analysis

8a. Module Occurrence to which this MDF Refers				
Year	**Occurrence**	**Period**	**Location**	**Mode of Delivery**
2026/7	ZZF	Template For Face To Face Learning Delivery		Face to Face

8b. Learning Activities for the above Module Occurrence			
Learning Activities	**Hours**	**Learning Outcomes**	**Details of Duration, frequency and other comments**
Lectures	22	1-4	11 x 2 hrs Lectures/active learning
Other teacher managed learning	13	1-4	Practical (5 x 2 hrs); Revision session (1 x 3 hrs)
Student managed learning	115	1-4	Background reading, online activities, preparation for lectures and practicals, and completion of assessments
TOTAL:	150		

9. Assessment for the above Module Occurrence

The assessment for some modules includes a presentation (see below for details on how this particular module is assessed). We recognise that presenting, especially to a large group, can cause significant anxiety or distress for some students. If this may affect you, please contact your Module Leader or the Disability and Neurodiversity Service as early as possible. We will work with you to consider appropriate reasonable adjustments. Depending on your individual needs, these might include, for example, presenting to a smaller group or presenting only to a member of academic staff.

Assessment No.	Assessment Method	Learning Outcomes	Weighting (%)	Fine Grade or Pass/Fail	Qualifying Mark (%)
010	Examination Cambridge	1-4	50 (%)	Fine Grade	30 (%)
Examination 1 hour 30 minutes					

Assessment No.	Assessment Method	Learning Outcomes	Weighting (%)	Fine Grade or Pass/Fail	Qualifying Mark (%)
011	Practical	1-4	50 (%)	Fine Grade	30 (%)
Laboratory notebook, 1500 words					

In order to pass this module, students are required to achieve an overall mark of 40% (for modules at levels 3, 4, 5 and 6) or 50% (for modules at level 7*).

In addition, students are required to:
(a) achieve the qualifying mark for each element of fine graded assessment as specified above
(b) pass any pass/fail elements

[* the pass mark of 50% applies for all module occurrences from the academic year 2024/25 – see Section 3a of this MDF to check the level of the module and Section 8a of this MDF to check the academic year]