Module Descriptor

Title	Forensic Laboratory Techniques		
Session	2025/26	**Status**	Published
Code	CHEM09009	**SCQF Level**	9
Credit Points	20	**ECTS (European Credit Transfer Scheme)**	10
School	**Computing, Engineering and Physical Sciences**		
Module Co-ordinator	Ann-Sophie Korb		

Summary of Module

The following topics shall be presented over the course of the module:

Drugs of Abuse: Drugs of Abuse: UK legislation (including MDA 1971; MDAR 1985). Terms/definitions. Sampling of drug seizures – presumptive tests, microscopic examination, methodologies, colour-forming reaction mechanisms.

Laboratory Techniques related to Forensic Science: Introductory principles of sample isolation and clean up. Chromatographic and spectroscopic identification of drugs. Fingerprints and development techniques.

Crime Scene Procedures: Fingerprint development, presumptive testing of biological materials DNA profiling, analysis by PCR amplification; DNA as evidence

Forensic Science Laboratory Analyses: Analysis of alcohol and drugs by Gas Chromatography and Thin Layer Chromatography. Atomic Absorption Spectroscopic analysis of metals from bullets. Presumptive tests and microscopy of drug samples.

This module will work to develop a number of the key 'I am UWS' Graduate Attributes. Those who complete this module will have developed professional competencies in report writing and the knowledge, skills and abilities related to research and laboratory work in Forensic Science.

Module Delivery Method	**On-Campus[1]**	**Hybrid[2]**	**Online[3]**	**Work -Based Learning[4]**
	☒	☐	☐	☐

[1] Where contact hours are synchronous/ live and take place fully on campus. Campus-based learning is focused on providing an interactive learning experience supported by a range of digitally-enabled asynchronous learning opportunities including learning materials, resources, and opportunities provided via the virtual learning environment. On-campus contact hours will be clearly articulated to students.

[2] The module includes a combination of synchronous/ live on-campus and online learning events. These will be supported by a range of digitally-enabled asynchronous learning opportunities including learning materials, resources, and opportunities provided via the virtual learning environment. On-campus and online contact hours will be clearly articulated to students.

[3] Where all learning is solely delivered by web-based or internet-based technologies and the participants can engage in all learning activities through these means. All required contact hours will be clearly articulated to students.

[4] Learning activities where the main location for the learning experience is in the workplace. All required contact hours, whether online or on campus, will be clearly articulated to students

Campuses for Module Delivery	☐ Ayr ☐ Dumfries		☐ Lanarkshire ☐ London ☒ Paisley		☐ Online / Distance Learning ☐ Other (specify)	
Terms for Module Delivery	Term 1	☐	Term 2	☒	Term 3	☐
Long-thin Delivery over more than one Term	Term 1 – Term 2	☐	Term 2 – Term 3	☐	Term 3 – Term 1	☐

Learning Outcomes	
L1	Demonstrate a critical understanding of the theory and application of a selection of laboratory methods in forensic science
L2	Display an understanding of the processing of forensic evidence from crime scene to laboratory
L3	Acquire and develop analytical and associated data handling and processing skills in a series of laboratory analytical techniques examining materials of forensic interest
L4	
L5	

Employability Skills and Personal Development Planning (PDP) Skills	
SCQF Headings	**During completion of this module, there will be an opportunity to achieve core skills in:**
Knowledge and Understanding (K and U)	**SCQF 9** Broad integrated knowledge of the principle analytical techniques employed in forensic science laboratories
Practice: Applied Knowledge and Understanding	**SCQF 9** Undertake a series of experiments featuring the above techniques in both a qualitative and quantitative context in the analysis of 'real' samples
Generic Cognitive skills	**SCQF 9** Undertaking critical analysis of the available methodologies to devise appropriate analytical protocols for sample preparation and analysis.
Communication, ICT and Numeracy Skills	**SCQF 9** Bringing information together from a variety of sources, using information retrieval systems and appropriate IT skills, to produce written reports for assignments and laboratory exercises. Carrying out a literature review and delivering a presentation
Autonomy, Accountability and Working with Others	**SCQF 9** Working effectively with others in laboratory environment and identifying and addressing individual/personal learning needs in the subject area associated with the module

Prerequisites	**Module Code** CHEM08013	**Module Title** Chemical Analysis and Evaluation
	Other	
Co-requisites	**Module Code**	**Module Title**

Learning and Teaching	
In line with current learning and teaching principles, a 20-credit module includes 200 learning hours, normally including a minimum of 36 contact hours and maximum of 48 contact hours.	
Learning Activities During completion of this module, the learning activities undertaken to achieve the module learning outcomes are stated below:	**Student Learning Hours** (Note: Learning hours include both contact hours and hours spent on other learning activities)
Lecture / Core Content Delivery	24
Laboratory / Practical Demonstration / Workshop	24
Independent Study	152
Please select	
Please select	
Please select	
TOTAL	200

Indicative Resources
The following materials form essential underpinning for the module content and ultimately for the learning outcomes: Jackson, A., Jackson J. (2017) Forensic Science. 4th edn. Harlow : Pearson Cole, MD. (2003) The Analysis of Controlled Substances, Chichester: Wiley Khan, J., Kennedy, T.J., Donnelll, C.R. (2012) Basic Principles of Forensic Chemistry. New York, N.Y. ; London : Humana Press Langford, A. (2018) Practical Skills in Forensic Science. 3rd edn. Harlow: Pearson Education Limited
(N.B. Although reading lists should include current publications, students are advised (particularly for material marked with an asterisk*) to wait until the start of session for confirmation of the most up-to-date material)

Attendance and Engagement Requirements
In line with the Student Attendance and Engagement Procedure, Students are academically engaged if they are regularly attending and participating in timetabled on-campus and online teaching sessions, asynchronous online learning activities, course-related learning resources, and complete assessments and submit these on time. **For the purposes of this module, academic engagement equates to the following:**

The School of Computing, Engineering and Physical Sciences considers attendance and engagement to mean a commitment to attending, and engaging in, timetabled sessions. You will scan your attendance via the scanners each time you are on-campus and you will login to the VLE several times per week. Where you are unable to attend a timetabled learning session due to illness or other circumstance, you should notify the Programme Leader that you cannot attend. Across the School an 80% attendance threshold is set. If you fall below this, you will be referred to the Student Success Team to see how we can best support your studies.

Equality and Diversity
The University's Equality, Diversity and Human Rights Procedure can be accessed at the following link: UWS Equality, Diversity and Human Rights Code. Aligned with the University's commitment to equality and diversity, this module supports equality of opportunity for students from all backgrounds and learning needs. Using the VLE, material will be presented electronically in formats that allow flexible access and manipulation of content. This module complies with University regulations and guidance on inclusive learning and teaching practice. This module has lab-based teaching and as such you are advised to speak to the Module Co-ordinator to ensure that specialist assistive equipment, support provision and adjustment to assessment practice can be put in place, in accordance with the University's policies and regulations.
(N.B. Every effort will be made by the University to accommodate any equality and diversity issues brought to the attention of the School)

Supplemental Information

Divisional Programme Board	**Engineering Physical Sciences**
Overall Assessment Results	☐ **Pass / Fail** ☒ **Graded**
Module Eligible for Compensation	☒ **Yes** ☒ **No** **If this module is eligible for compensation, there may be cases where compensation is not permitted due to programme accreditation requirements. Please check the associated programme specification for details.**
School Assessment Board	Physical Sciences
Moderator	Carrie Mullen
External Examiner	TBC
Accreditation Details	This is a core module in the BSc (Hons) Forensic Science programme which is accredited by the Chartered Society of Forensic Science. This is a core module in the BSc (Hons) Criminal Justice and Forensic Science programme which is Recognised by the Chartered Society of Forensic Science.
Module Appears in CPD catalogue	☐ **Yes** ☒ **No**
Changes / Version Number	Attendance and Engagement statements updated. Equality and Diversity statement updated. Updated Accreditation details.Changes to assessment descriptions.

Assessment (also refer to Assessment Outcomes Grids below)

Assessment 1
Invigilated, unseen class test (60%)
Assessment 2
Laboratory assessments (30%)
Assessment 3
Literature Presentation (10%)
(N.B. (i) Assessment Outcomes Grids for the module (one for each component) can be found below which clearly demonstrate how the learning outcomes of the module will be assessed. (ii) An indicative schedule listing approximate times within the academic calendar when assessment is likely to feature will be provided within the Student Module Handbook.)

Component 1							
Assessment Type	**LO1**	**LO2**	**LO3**	**LO4**	**LO5**	**Weighting of Assessment Element (%)**	**Timetabled Contact Hours**
Unseen, invigilated, closed book class test	☒	☒	☒	☐	☐	60	2

Component 2							
Assessment Type	**LO1**	**LO2**	**LO3**	**LO4**	**LO5**	**Weighting of Assessment Element (%)**	**Timetabled Contact Hours**
Laboratory Assessments Literature Presentation	☒	☒	☒	☐	☐	40	

Component 3							
Assessment Type	**LO1**	**LO2**	**LO3**	**LO4**	**LO5**	**Weighting of Assessment Element (%)**	**Timetabled Contact Hours**
	☐	☐	☐	☐	☐		
Combined total for all components						100%	2 hours

Change Control

What	**When**	**Who**