Module Descriptor

Title	Forensic Biology		
Session	2025/26	**Status**	Published
Code	CHEM10010	**SCQF Level**	10
Credit Points	20	**ECTS (European Credit Transfer Scheme)**	10
School	**Computing, Engineering and Physical Sciences**		
Module Co-ordinator	Carrie Mullen		

Summary of Module

This module enhances students' understanding of the science and techniques that underpin forensic biology. Topics covered will include identification of biological fluids, the analysis of the human genome in forensic biology, blood stain pattern analysis and forensic anthropology.

The module will focus on the use of biological evidence in sexual offences and expand on the analytical methods covered in previous modules to include more detailed understanding of real-time PCR and a more in-depth study of evaluative reporting. Where possible, material covered in lectures will be illustrated through lab work.

This module will strengthen several of the key 'I am UWS' Graduate Attributes, with students acquiring competencies in: Critical Thinker, Collaborative, Autonomous, Problem Solver.

Module Delivery Method	**On-Campus[1]** ☒	**Hybrid[2]** ☐	**Online[3]** ☐	**Work -Based Learning[4]** ☐
Campuses for Module Delivery	☐ Ayr ☐ Dumfries	☐ Lanarkshire ☐ London ☒ Paisley	☐ Online / Distance Learning ☐ Other (specify)	

[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

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	Comprehend and work to the analytical, laboratory and legal requirements of producing DNA STR profiles, in the UK and elsewhere
L2	Perform interpretation of DNA STR profiling results, including calculation of likelihood ratios.
L3	Critically evaluate DNA STR profiling results citing significant research in the field.
L4	IShow an understanding of the scientific basis and utilisation of techniques of bone anthropometry and pathology in the study of human tissue
L5	Demonstrate the ability to critically evaluate body fluid evidence and blood stain patterns

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 10** Critical analysis and understanding of the biology that underpins forensic science.
Practice: Applied Knowledge and Understanding	**SCQF 10** The application of knowledge and understanding gained will be applied in forensic biology. Students should be able to critically evaluate the techniques and our understanding of the science important in forensic biology
Generic Cognitive skills	**SCQF 10** Critically evaluate scientific data making judgements on the validity and interpretation of the data.
Communication, ICT and Numeracy Skills	**SCQF 10** Use oral and written communication techniques that would be expected in employment, including a formal court report. Use of software in communication. Critically evaluate material found in databases and other sources.
Autonomy, Accountability and Working with Others	**SCQF 10** Show a professional approach to assessing ones own learning needs and studying independently

Prerequisites	**Module Code** CHEM09002	**Module Title** Forensic Laboratory Techniques
	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: Butler, J. (2005) Forensic DNA Typing 2nd Ed. Elsevier (MA) ISBN: 9780121479527 Nafte M., Flesh and Bone: An Introduction to Forensic Anthropology. Academic Press, ISBN:0890896380 Wonder A (2001) Blood Dynamics, Academic Press ISBN: 0127624570
(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	Ciaran T. Ewins
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 Sciences
Module Appears in CPD catalogue	☐ **Yes** ☒ **No**
Changes / Version Number	Attendance and Engagement statements updated. Equality and Diversity statement updated. Assessment 1 changed from Examination to Unseen, Invigilated Class Test. External Examiner Updated. Updated Accreditation details.

Assessment (also refer to Assessment Outcomes Grids below)
Assessment 1
Coursework (50%)
Assessment 2
Class Test (25%)
Assessment 3
Class Test (25%)

(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**
Coursework	☒	☒	☒	☐	☒	50	

Component 2							
Assessment Type	**LO1**	**LO2**	**LO3**	**LO4**	**LO5**	**Weighting of Assessment Element (%)**	**Timetabled Contact Hours**
Unseen Class Test 1	☒	☐	☐	☐	☒	25	

Component 3							
Assessment Type	**LO1**	**LO2**	**LO3**	**LO4**	**LO5**	**Weighting of Assessment Element (%)**	**Timetabled Contact Hours**
Unseen Class Test	☐	☐	☐	☒	☐	25	
Combined total for all components						100%	hours

Change Control

What	**When**	**Who**