Module Descriptor

Title	Forensic Genetics		
Session	2025/26	**Status**	Published
Code	CHEM08017	**SCQF Level**	8
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 use of DNA and genetics has changed the field of forensic science. Using new technology, and understanding the information obtained from DNA is key to many crimes.

This module aims to present the importance of genetics and genetic profiling in forensic science. It will build on the skills and knowledge learned in the previous academic year, and include how to collect, characterise, and store biological samples and materials. Furthermore, STR profiles, and some statistical interpretation of these, with specific focus on the analysis (such as PCR and EPG) and interpretation of results will be key to this module.

Undertaking this module will develop a range of graduate attributes. Valuable experience in practical work, analysing and interpreting data will develop critical thinking skills. Basic knowledge of Genetics will be extended to include its applications and relevance to forensic work, and ambition developed by consideration of current cutting-edge developments in the field. Collaborating and working as as a group for presentation skills on current technologies as well as in laboratories will enhance communication, collaboration, and creativity.

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	Show an understanding of the structure and function of DNA in the genetics
L2	Develop an understanding of the role and importance of DNA in forensic sciences
L3	Apply analytical skills to the interpretation of data from genetic tests to fulfil forensic investigations and reporting requirements.
L4	Accurately demonstrate the collection, characterisation, and preservation of DNA in a forensic context
L5	Demonstrate practical skills in performing molecular techniques relevant to genetics and recording, analysing and interpreting results

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 8** Demonstrate a broad knowledge of genetics in a forensic context.
Practice: Applied Knowledge and Understanding	**SCQF 8** Apply the theoretical knowledge gained to perform experiments with genetic material and interpret the results.
Generic Cognitive skills	**SCQF 8** Use a range of approaches to formulate appropriate responses to problems in Mendelian and molecular genetics
Communication, ICT and Numeracy Skills	**SCQF 8** Communicate effectively orally and in writing. Analyse and interpret data where appropriate.
Autonomy, Accountability and Working with Others	**SCQF 8** Working in teams to perform practical work will require time management, organisational skills and awareness of professional practice.

Prerequisites	**Module Code** CHEM07013	**Module Title** Molecules of Life
	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	28
Laboratory / Practical Demonstration / Workshop	20
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:

Jamieson, A., Bader S. (2016) A Guide to Forensic DNA Profiling, Chicester: Wiley

Goodwin, W., Linacre, A. Hadi S. (2011) An Introduction to Forensic Genetics, 2nd edn., Chichester: Wiley-Blackwell.

Jackson, A., Jackson, J. (2017) Forensic Science, 4th edn., Chichester: Wiley

Snustad, D.P., Simmons, M.J. (2016) Principles of Genetics, 7th edn., Chicester: Wiley.

(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	Mohammed Yaseen
External Examiner	TBC
Accreditation Details	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.

Assessment (also refer to Assessment Outcomes Grids below)
Assessment 1
Class Test (50%)
Assessment 2
Laboratory Report (25%)
Assessment 3
Presentation (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
Class Tests	☒	☒	☐	☒	☒	50	1

Component 2							
Assessment Type	**LO1**	**LO2**	**LO3**	**LO4**	**LO5**	**Weighting of Assessment Element (%)**	**Timetabled Contact Hours**
Laboratory Report Presentation	☐	☒	☒	☒	☒	50	

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

Change Control

What	When	Who