Module Descriptor

Title	Evaluating Forensic Evidence		
Session	2025/26	**Status**	Published
Code	CHEM08007	**SCQF Level**	8 (Scottish Credit and Qualifications Framework)
Credit Points	20	**ECTS (European Credit Transfer Scheme)**	10
School	**Computing, Engineering and Physical Sciences**		
Module Co-ordinator	Dr Kwok Chi Chim		

Summary of Module

This module covers two aspects of forensic science, crime scene investigation and the use of statistics and probability to interpret evidence.

We will look at the role of CSI in investigations and the techniques used to record scenes, identify, and recover potential evidence. Management of scenes, chain of evidence, contamination and risk assessment will also be covered. There are lab sessions where students will develop the practical skills of crime scene processing and applying those techniques in a mock crime scene setting.

Application of probability and statistics to forensic science is also covered. Content includes probability laws, conditional probabilities, independence, Bayes' theorem and tree diagrams. The approach of measuring chance using odds is considered and students will see how a balanced view of the strength of evidence in support of hypotheses can be captured by the likelihood ratio.

An overview of genetics and the use of databases will be given so that DNA evidence can be evaluated. The use of likelihood ratios to evaluate evidence and the evaluation of DNA evidence is also covered.

The binomial and normal distributions will be introduced to assess the probability of different types of evidence occurring by chance.

There will also be an introduction to inferential statistics looking at confidence intervals for a population mean and hypothesis testing.

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)	

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	calculate probabilities and odds in a range of different ways required in forensic science.
L2	apply the principles of evaluating evidence in the context of forensic science.
L3	describe the procedures involved in the identification, recording and recovery of material from various types of crime scene.
L4	demonstrate a full understanding of the importance of crime scene investigation in the crime-scene to-court chain.
L5	understand the roles and responsibilities and information needs of all personnel involved in the processing of crime scenes.

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** Use a range of techniques to calculate probabilities and odds related to forensic evidence. Understanding the principles of an evaluative approach to forensic evidence. Understanding of the issues related to contamination of evidence and knowledge of the roles of various personnel involved at crime scenes.

[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

Practice: Applied Knowledge and Understanding	**SCQF 8** Apply the principles of assessing evidence in routine contexts in forensic science. Evaluate a range of evidence types using probabilities and odds. Carry out the standard techniques of crime scene investigation such as photography, note-taking, evidence packaging, systematically searching for evidence, and recovering various evidence types.
Generic Cognitive skills	**SCQF 8** Critical evaluation of forensic evidence in routine contexts. Drawing conclusions about sets of measurements. Undertaking analysis of crime scenes found in real cases applying the concepts and methods discussed in class.
Communication, ICT and Numeracy Skills	**SCQF 8** Reporting on the results of evaluating evidence. Performing the calculations required to calculate probabilities and odds. Conveying appropriate information from crime scenes in written notes, sketches, reports and photographs.
Autonomy, Accountability and Working with Others	**SCQF 8** Identify and address own learning needs, both within and outwith class time. Be able to work as part of a team that plans and executes the investigation of crime scene.

Prerequisites	**Module Code** MATH07001	**Module Title** Analysis of Data
	Other Or equivalent	
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	Hours Total = 200

Indicative Resources
The following materials form essential underpinning for the module content and ultimately for the learning outcomes: Andrew Jackson and Julie Jackson, Forensic Science, 4th Ed., Pearson Education Ltd. (2017) ISBN 978-1-292-08818-1 Class notes as published on the University VLE. Ian Evett and Bruce Weir: Interpreting DNA Evidence – Statistical Evaluation for Forensic Scientists, John Wiley and Sons 1998 087893 1554 C.G.G. Aitken: Statistics and the Evaluation of Evidence for Forensic Scientists, John Wiley and Sons 2004
(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	Dr Ciaran Ewins
External Examiner	TBC
Accreditation Details	This is a core module in the BSc (Hons) Forensic Science which is accredited by the Chartered Society of Forensic Sciences
Module Appears in CPD catalogue	☐ **Yes** ☒ **No**
Changes / Version Number	3.1 Change to attendance and engagement requirements Change to equality and diversity Change to the descriptions in assessment and assessment outline grids

Assessment (also refer to Assessment Outcomes Grids below)
Assessment 1
Coursework: Continuous assessment worth 100% of the final mark The continuous assessment in this module will consist of the following: a written assignment in statistics (30%), associating with learning outcomes 1 and 2 a class test in statistics (20%), associating with learning outcomes 1 and 2 a lab report in CSI (40%), associating with learning outcomes 3, 4 and 5 a class test in CSI (10%), associating with learning outcomes 3, 4 and 5

Assessment 2
Assessment 3
(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	☒	☒	☒	☒	☒	100%	

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

Component 3							
Assessment Type	**LO1**	**LO2**	**LO3**	**LO4**	**LO5**	**Weighting of Assessment Element (%)**	**Timetabled Contact Hours**
	☐	☐	☐	☐	☐		
Combined total for all components						100%	0 hours

Change Control

What	**When**	**Who**
Change to attendance and engagement requirements Change to equality and diversity Change to the descriptions in assessment and assessment outline grids	March 2025	Dr. Kwok Chi Chim