



CORPORATE AND ACADEMIC SERVICES

MODULE SPECIFICATION

Part 1: Basic Data					
Module Title	Scientific Investigation of Crime				
Module Code	USSJRV-30-1	Level	1	Version	2
Owning Faculty	Health and Applied Sciences	Field	BBAS		
Contributes towards	BSc (Hons) Forensic Science, BSc (Hons) Forensic Science (Biology), BSc (Hons) Forensic Science (Chemistry)				
UWE Credit Rating	30	ECTS Credit Rating	15	Module Type	Standard
Pre-requisites	None		Co- requisites	None	
Excluded Combinations	USSJT4-30-2		Module Entry requirements		
Valid From	September 2014		Valid to	September 2020	

CAP Approval Date	28/03/2014
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Part 2: Learning and Teaching	
Learning Outcomes	<p>On successful completion of this module students will be able to:</p> <ul style="list-style-type: none"> • recognise and describe the various types of physical evidence, and understand their potential importance in a forensic investigation (assessed in components A1, A2 and B3) • distinguish clearly between volume crime and serious crime, describe the personnel involved and the procedures used for the processing of both classes of scene (assessed in component A1) • examine and document simple crime scenes (assessed in component B1) • select and apply appropriate techniques for the recovery and preservation of evidence and the maintenance of the chain of custody (assessed in components B1 and B3) • describe techniques used in the laboratory examination of physical evidence (assessed in components A1 and A2) • undertake and document simple forensic tests and analyses (assessed in component B3) • understand the relevance of biological and chemical principles to forensic investigations (assessed in components A1, A2 and B3) • communicate scientific material clearly to peers (assessed in component B2)
Syllabus Outline	<ul style="list-style-type: none"> • Introduction of Locard's principle and history of Forensic Science. • Types of evidence and evidential value. • Volume crime and serious crime scene processing.

	<ul style="list-style-type: none"> • Crime scene documentation including photography and sketching. • Packaging and preservation of evidence. • Marks and impressions, including fingerprinting. • The nature of forensic evidence, sampling issues and analytical approaches. • Location and recovery of biological material for laboratory testing. • Components of biological fluids including the biochemistry of presumptive testing. • Bloodstain pattern analysis. • The persistence of DNA, either as stain or in terms of body, tissue <i>etc.</i> • Introduction to the processes involved in DNA analysis and the NDNAD. • Light and comparison microscopy as employed in examination of items and evidence. • Document examination using physical and chemical techniques including Electrostatic Detection Apparatus and the Video Spectral Comparator. • Presumptive and screening tests for chemicals including immunoassays and thin layer chromatography. • Legislation pertaining to the misuse of drugs, and analytical methods for identifying suspect materials. • Legal and analytical aspects of alcohol analysis in body fluids. • The chemical processes involved in fires and explosions, specific issues concerned with these potential crime scenes and the chemical analysis of evidence. • Forensic examination and laboratory documentation of examination of materials such as paint, plastics and hair; including issues of transfer, persistence and significance of findings. • Choice of analytical methods for a range of forensic samples. • Communication of scientific results.
Contact Hours	<p>72 hour contact time as follows:</p> <ul style="list-style-type: none"> • Lectures: 36 hours • Tutorials: 11 hours • Crime scene house 2 hours • Laboratory practical sessions 20 hours • Synchronous virtual learning environment (VLE) - Second Life 3 hours
Teaching and Learning Methods	<p>The teaching and learning strategy is based around a blend of lectures and tutorials with associated laboratory practical exercises to apply the knowledge gained and develop a range of related skills which aid employability. Facilities at the simulation house for crime scene investigation are used for training and assessment.</p> <p>Training in crime scene investigation is aided by the use of Second Life as a VLE. A crime scene has been built in Second Life for use with this degree programme and students will first access these in synchronous sessions with staff, and later be able to use as much as desired to practise and enhance their learning. Students will also be referred to documentary video material <i>via</i> Box of Broadcasts to relate their learning to a range of criminal cases and current forensic issues.</p> <p>Scheduled learning contact hours as above – 72 hours</p> <p>Independent learning – 228 hours apportioned approximately as follows:</p> <p>Preparation for crime scene investigation assessment B1, including independent use of VLE Second Life - 10 hours Preparation for laboratory sessions (contributing to B3) – 10 hours Preparation of documents for assessment B1 - 5 hours Reading and research to answer questions relating to practical exercises for portfolio B3 – 10 hours Preparation of oral presentation B2– 30 hours Viewing recommended and relevant video resources on Box of Broadcasts to support acquisition of knowledge – 10 hours</p>

	<p>Essential reading to support acquisition of knowledge relating to lectures and tutorials – 113 hours Revision and preparation for exams – 40 hours</p>																														
Key Information Sets Information	<p>Key Information Sets (KIS) are produced at programme level for all programmes that this module contributes to, which is a requirement set by HESA/HEFCE. KIS are comparable sets of standardised information about undergraduate courses allowing prospective students to compare and contrast between programmes they are interested in applying for.</p> <table border="1"> <thead> <tr> <th colspan="5">Key Information Set - Module data</th> </tr> <tr> <td colspan="4">Number of credits for this module</td> <td>30</td> </tr> <tr> <th>Hours to be allocated</th> <th>Scheduled learning and teaching study hours</th> <th>Independent study hours</th> <th>Placement study hours</th> <th>Allocated Hours</th> </tr> </thead> <tbody> <tr> <td>300</td> <td>72</td> <td>228</td> <td>0</td> <td>300</td> </tr> </tbody> </table> <p>The table below indicates as a percentage the total assessment of the module which constitutes a -</p> <p>Written Exam: Unseen written exam, open book written exam, In-class test Coursework: Written assignment or essay, report, dissertation, portfolio, project Practical Exam: Oral Assessment and/or presentation, practical skills assessment, practical exam</p> <p>Please note that this is the total of various types of assessment and will not necessarily reflect the component and module weightings in the Assessment section of this module description:</p> <table border="1"> <thead> <tr> <th colspan="2">Total assessment of the module:</th> </tr> </thead> <tbody> <tr> <td>Written exam assessment percentage</td> <td>40%</td> </tr> <tr> <td>Coursework assessment percentage</td> <td>20%</td> </tr> <tr> <td>Practical exam assessment percentage</td> <td>40%</td> </tr> <tr> <td></td> <td>100%</td> </tr> </tbody> </table>	Key Information Set - Module data					Number of credits for this module				30	Hours to be allocated	Scheduled learning and teaching study hours	Independent study hours	Placement study hours	Allocated Hours	300	72	228	0	300	Total assessment of the module:		Written exam assessment percentage	40%	Coursework assessment percentage	20%	Practical exam assessment percentage	40%		100%
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Reading Strategy	<p>All students will be encouraged to make full use of the print and electronic resources available to them through membership of the University. These include a range of electronic journals and a wide variety of resources available through web sites and information gateways. The University Library's web pages provide access to subject relevant resources and services, and to the library catalogue. Many resources can be accessed remotely. Students will be presented with opportunities within the curriculum to develop their information retrieval and evaluation skills in order to identify such resources effectively.</p> <p>This guidance will be available either in the module handbook, via the module information on Blackboard or through any other vehicle deemed appropriate by the module/programme leaders</p>																														
Indicative Reading List	<p><i>The following list is offered to provide validation panels/accrediting bodies with an indication of the type and level of information students may be expected to consult. As such, its currency may wane during the life span of the module specification. However, as indicated above, CURRENT advice on readings will be available via other more frequently updated mechanisms.</i></p>																														

Indicative reading list: (Refer to the most recent edition available)

- Fisher, B.A.J., Svensson, A and Wendel, O. (2000), *Techniques of Crime Scene Investigation*, CRC press (available via forensicnetbase)
- Horswell, J. (Ed) (2004) *The Practice of Crime Scene Investigation*, CRC Press (available via forensicnetbase)
- Jackson, A.R.W. & Jackson, J.M. 3rd edition (2011) *Forensic Science*, Pearson Education Ltd.
- James, S.H. and Nordby, J.J, (2009) *Forensic Science*, CRC Press
- Saferstein, R. (2003), *Criminalistics – An Introduction to Forensic Science*, Prentice Hall.
- White, P.C. (Ed.) 3rd edition (2010) *Crime Scene to Court: The Essentials of Forensic Science*, The Royal Society of Chemistry.

An excellent **encyclopaedia** is available online

Siegel, J.A. and Saukko, P.J., (Eds. in chief) 2nd Ed (2013) *Encyclopaedia of Forensic Sciences*, Academic Press.

In addition **specialist textbooks** are available via forensicnetbase on each evidence type such as

Nick Deaden., (2004). *Fire Investigation*, CRC Press

Students will also be directed to important web-based resources (e.g. government information sites) and video documentaries relating to criminal cases and current issues available via Box of Broadcasts.

Part 3: Assessment

Assessment Strategy

There are three elements of coursework assessment to cover the range of skills being developed in this module – crime scene investigation, laboratory skills and oral communication of scientific information. These map to the three main component standards of the Forensic Science Society which accredits the degree programmes to which this module contributes.

The summative assessments are therefore of crime scene examination (observations of practical skills at the crime scene house and submission of scene examination record, photographs and a scale drawing– component B1), laboratory examination and analysis of evidence (assessed by the portfolio of lab work, component B3), and communication of scientific information (assessed by oral presentation B2).

The crime scene assessment (B1) is held in the exam period. Assessments B2 and B3 are held in-class.

The crime scene examination (B1) is undertaken in small groups (typically 4-5 students) and the oral presentations (B2) in pairs. Students in the same group or pair are normally given the same mark, unless one or more are observed to have contributed to a significantly greater or lesser extent than the other(s). The portfolio of lab work (B3) is individually assessed.

Formative assessment and feedback take place during a practice crime scene examination (B1), and from Second Life exercises, and during each laboratory session for the portfolio (B3) – the first session does not contribute to the mark, it is entirely for formative assessment and feedback. Formative assessment opportunities exist for the oral presentation (B2) during the tutorial sessions in preparation for this and feedback is given shortly after the assessment.

	<p>The controlled component comprises two 90 minute written exams. These are used to assess subject knowledge and understanding. There are two exams so that students in their first year at university have the opportunity to take an assessment in January as an early indication of their progress. It also helps that half the course material is assessed in each exam.</p> <p>All work is marked in line with the Department's Generic Assessment Criteria and conforms to university policies for the setting, collection, marking and return of student work. Assessments are described in the Module handbook that is supplied at the start of module and detailed marking schemes for elements of coursework, where appropriate, are provided in advance.</p>
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Identify final assessment component and element		
% weighting between components A and B (Standard modules only)	A:	B:
	40	60
First Sit		
Component A (controlled conditions) Description of each element	Element weighting (as % of component)	
1. Unseen exam (1 hour 30 min) assessment period 1	50%	
2. Unseen exam (1 hour 30 min) assessment period 2	50%	
Component B Description of each element	Element weighting (as % of component)	
1. Assessed crime scene examination (including proficiency test from practicals in semester 1) – assessment period 1	33%	
2. Oral presentation	33%	
3. Practical portfolio	34%	

Resit (further attendance at taught classes is not required)		
Component A (controlled conditions) Description of each element	Element weighting (as % of component)	
1. Unseen exam (3 hours) assessment period 3	100%	
Component B Description of each element	Element weighting (as % of component)	
1. Assessed crime scene examination (including proficiency test relating to practicals in semester 1) – assessment period 3	33%	
2. Report on the techniques used to examine a specified evidence type	33%	
3. Data analysis and practical write-up (data supplied)	34%	
If a student is permitted an EXCEPTIONAL RETAKE of the module the assessment will be that indicated by the Module Description at the time that retake commences.		