



CORPORATE AND ACADEMIC SERVICES

MODULE SPECIFICATION

Part 1: Basic Data					
Module Title	Forensic Science and Crime Scene Investigation				
Module Code	USSKC6-30-1	Level	1	Version	1
Owning Faculty	Health and Applied Sciences	Field	Biological, Biomedical and Analytical Sciences		
Contributes towards	FdSc Forensic Science @ UCY				
UWE Credit Rating	30	ECTS Credit Rating	15	Module Type	Standard
Pre-requisites	None		Co- requisites	None	
Excluded Combinations	None		Module Entry requirements		
Valid From	September 2014		Valid to	Ongoing	

CAP Approval Date	
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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"> - examine and document simple crime scenes; - recognise, document, recover, preserve and evaluate physical evidence associated with crime scenes; - distinguish clearly between volume crime and serious crime; - describe and apply techniques used in the examination of standard evidence types; - interpret case-related data in the form of a scientific report; - undertake and document simple forensic tests and analyses; - communicate scientific material clearly to peers. - apply simple statistical methods - including Bayesian Statistics - to evaluate evidence in forensic science
Syllabus Outline	<ul style="list-style-type: none"> - history of Forensic Science - Locard's principle - types of evidence and evidential value - marks and impressions - volume crime scene investigation - serious crime scene investigation

	<ul style="list-style-type: none"> - basic crime scene photography and sketching - bloodstain pattern analysis - packaging and preservation of evidence - components of biological fluids and DNA analysis - trace evidence such as paint, plastics, hair - unusual biological evidence including plants, fungi and insects - transfer and persistence - location and recovery of evidential material from exhibits for laboratory testing - presumptive and screening tests - sampling issues - analytical methods, including light microscopy, spectrophotometry and chromatography - bloodstain pattern analysis - document examination - fires and explosions - legal issues <p>Forensic Statistics:</p> <ul style="list-style-type: none"> - Probability, conditional probability and rules for combining probabilities - Frequency of occurrence, discrete and continuous frequency distributions - Bayesian statistics, likelihood ratio and probative value. Modelling in forensic casework
Contact Hours	<p>Students will have 3 hours per week; this will cover the main Forensic part of the module. Within these weeks will be a block to cover the Forensic Statistics and this will link to the areas covered within the module.</p>
Teaching and Learning Methods	<p>In the first part of the module the students will be introduced to crime scene investigation through an integrated approach comprising lectures, practical classes and tutorials culminating in one formative and one summative crime scene investigation assessment.</p> <p>Lectures will give the students the background to and the theoretical knowledge in the practices adopted in crime scene investigation; in particular they will explain current practice and why certain methods and procedures have been adopted. Tutorials focus on clerical skills connected with the documentation of the scene and on basic pattern analysis of fingermarks and footwear marks, whilst practical classes teach the basic skills needed to recover evidence from the crime scene. The students' proficiency in these skills is assessed after each practical session.</p> <p>In the second part of the module the students will be introduced to forensic laboratory analysis. A programme of lectures, fully integrated with tutorials and laboratory work will be supported by material on Blackboard. Students will have the opportunity to develop practical skills in forensic analysis using a wide range of analytical equipment. For the preparation of the presentation the students will work in pairs and their learning will be completely self-directed.</p> <p>The third part of the module will introduce the students to the interpretation of evidence using a probabilistic approach. Students will be introduced to basic probabilistic concepts which are subsequently expanded to enable interpretation of casework examples in a classical and Bayesian framework using real or simulated background databases.</p> <p>Scheduled learning includes lectures, seminars, tutorials, demonstration, practical classes and workshops; Crime scenes.</p> <p>Independent learning includes hours engaged with essential reading, case study preparation, assignment preparation and completion etc. These sessions constitute an average time per level as indicated in the table below. Scheduled sessions may vary slightly depending on the module choices you make.</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</p>

interested in applying for.

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	69	231		300

The table below indicates as a percentage the total assessment of the module which constitutes a -

Written Exam: Unseen written exam, In-class test

Coursework: Written assignment or essay, report, dissertation, portfolio, project

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:

Total assessment of the module:	
Written exam assessment percentage	40%
Coursework assessment percentage	60%
Practical exam assessment percentage	0%
	100%

Reading Strategy

All students will be encouraged to make full use of the print and electronic resources available to them through membership of the University UWE and UCY. These include a range of electronic journals and a wide variety of resources available through web sites and information gateways including the Encyclopaedia of Forensic Sciences and ForensicNetBase, which contains all texts published by CRC Press. 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.

Any **essential reading** will be indicated clearly, along with the method for accessing it, e.g. students may be expected to purchase a set text, be given or sold a print study pack or be referred to texts that are available electronically, etc. 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. If **further reading** is expected, this will be indicated clearly. If specific texts are listed, a clear indication will be given regarding how to access them and, if appropriate, students will be given guidance on how to identify relevant sources for themselves, e.g. through use of bibliographical databases.

Indicative Reading List

The resources below or updated editions thereof:

Core texts:

Adam, C. (2010) *Essential Mathematics and Statistics for Forensic Science*. Chichester: Wiley-Blackwell.

Jackson, A.R.W. and Jackson, J.M. (2011) *Forensic Science*. 3rd Ed. London: Pearson Education Ltd.

Nordby, J.J.J and Bell, S. (2014) *Forensic Science: An Introduction to Scientific and Investigative Techniques*. 4th ed. Florida (USA): CRC Press.

Additional sources:

Coyle, T. and White, P.C. (ed.) (2010) *Crime scene to Court: The essentials of forensic science*. 3rd Ed. Cambridge: RSC Publishing,

Fisher, B.A.J and Fisher, D.R. (2012) *Techniques of Crime Scene Investigation*. 8th Ed. Florida (USA): CRC Press.

Horswell, J. (ed.) (2004) *The Practice of Crime Scene Investigation*. Florida (USA): CRC Press.

Saferstein, R. (2013) *Criminalistics – An Introduction to Forensic Science*. 10th Ed. Essex: Pearson Education Ltd.

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

Skoog, D.A., West. D.M., Holler, F.J and Crouch, S. (2012) *Fundamentals of Analytical Chemistry*. 9th Ed. Connecticut (USA): Cengage

Sutton, R.S. and Trueman, K. (Eds.) (2009) *Crime Scene Management: Scene Specific Methods*. Oxford: Wiley & Sons.

Part 3: Assessment

Assessment Strategy	<p>Examination (40%):</p> <p>2 X 1.5 hours- AP1 and AP2 Exam paper to be split into section A and B. This will cover the Forensic and Crime scene parts with Forensic Statistics integral to the questions; the paper will be split into multiple choice and longer answer questions.</p> <p>Coursework (60%):</p> <p>This will be split into 2 elements; first will be an assessed crime scene @UWE within AP1. This element also includes proficiency testing from 6 practical classes completed and link to theory. Secondly there is a presentation on an area of Forensic Science of the students choice this will include aspects of Forensic Statistics for the particular area.</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. Exam (1.5 hrs)	50%	
2. Exam (1.5 hrs)	50%	
Component B Description of each element	Element weighting (as % of component)	
1. Assessed crime scene examination (includes proficiency test from practical classes)	50%	

2. Presentation on an area of Forensic Science	50%
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Resit (further attendance at taught classes is not required)

Component A (controlled conditions) Description of each element	Element weighting (as % of component)
1. Exam (3 hours)	100%
Component B Description of each element	Element weighting (as % of component)
1. Assessed crime scene examination (includes proficiency test from practical's)	50%
2. Presentation on an area of Forensic Science	50%

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.