

MODULE SPECIFICATION

Part 1: Information						
Module Title	Environmental Forensic	es				
Module Code	USSKCD-15-3	Level	3			
For implementation from	September 2018					
UWE Credit Rating	15	ECTS Credit Rating	7.5			
Faculty	Health and Applied Sciences	Field	Applied Sciences			
Department	Department of Applied Sciences					
	BSc Forensic Science; MSci Forensic Science; BSc Forensic Science (with Foundation Year); MSci Forensic Science (with Foundation Year); BSc Environmental Science; MSci Environmental Science; BSc Environmental Science (with Foundation Year); MSci Environmental Science (with Foundation Year); BSc Integrated Wildlife Conservation; BSc Biological Sciences; MSci Biological Sciences; BSc Biological Sciences (with Foundation Year); MSci Biological Sciences (with Foundation Year).					
Module type:	Standard					
Pre-requisites	None	None				
Excluded Combinations	None	None				
Co- requisites	None	None				
Module Entry requireme	ents None	None				

Part 2: Description

Environmental Forensics is an extremely broad topic and this module aims to give students knowledge across several themes.

The theoretical underpinning of the module is delivered through interactive lectures and workshops with additional resources made available electronically.

It is expected that students will spend a significant proportion of the study time for this module engaging with relevant scientific literature, as directed by academic staff. Preparation for the coursework assessments will require significant research into relevant case studies and the ability to critically evaluate realistic forensic casework data.

Students will study:

Environmental Toxicology

The approaches used to monitor and assess environmental contamination and the implications this has for ecotoxicology. The environmental fate and impact of contaminants, particularly with regard to industrial chemicals, drugs, xenoestrogens and particulate matter.

The physical, chemical and biological processes that influence their environmental cycling and natural absorption, retention, degradation and toxicity.

The Use of Isotopes in Environmental Investigations and Nuclear Forensics

Natural and artificial formation of radionuclides. The use of stable and radiogenic isotopes in tracing and dating pollution events. Radiation release case studies. The use of isotopes in geographical provenancing of plant derived drugs, foods, human remains, animal derivatives and monitoring the release of fuels, explosives and nuclear materials.

Forensic Archaeology

Detection of clandestine burials using geophysical and non-geophysical techniques. Excavation of single and mass burials to include examination and analysis of the grave fill. Analysis of human remains to establish ante and peri-mortem activity.

Wildlife Crime

An overview of the scale and nature of wildlife crime to include examples of both national and international wildlife crimes.

Part 3: Assessment: Strategy and Details

The module can be selected by students from a diverse range of programmes and must contain enough of interest and relevance for each. Topics for the coursework element will be selected by the student from a range to reflect this broad spectrum of interest. It is expected that students will spend a significant proportion of the study time for this module engaging with relevant scientific literature, as directed by academic staff. Preparation for the coursework assessments will require significant research into relevant case studies and original critical evaluation of realistic forensic casework data. Feedback on the coursework assessment will feed forward to the examination.

Coursework: A 1500 word essay

Examination: 2 hours

Identify final timetabled piece of assessment (component and element)	Component A			
		A:	B:	
% weighting between components A and B (Standard	60	40		
First Sit				
Component A (controlled conditions)		Element weighting		
Description of each element	(as % of co	(as % of component)		
1. 2 hour examination			100	
Component B	Element w	Element weighting		
Description of each element			(as % of component)	
1. 1500 word essay			100	
Resit (further attendance at taught classes is not requ	ired)			
Component A (controlled conditions)	Element w	Element weighting		
Description of each element	(as % of co	(as % of component)		
1. 2 hour examination	100	100		
Component B Description of each element		Element weighting (as % of component)		
1. 1500 word essay	100			

Part 4: Learning Outcomes & KIS Data						
Learning Outcomes	On successful completion of this module students will be able to:					
	 Review and critically analyse case studies in environmental forensics (Component A, Component B). Illustrate important examples of chemical, physical and biological processes that influence cycling, contamination and analysis of pollutants and pharmaceuticals in the environment (Component A). Discuss the role of stable and radiogenic isotopes in environmental investigations and their application in the geolocation and analysis of human, animal, plant or energetic materials (Component A). Understand the role of specialists such as Forensic Archaeologists, Geologists and wildlife crime experts in environmental forensic investigation (Component A). 					
Key Information Sets Information (KIS)	Key Information Set - Module data					
	Number of credits for this module 15					
	Hours to be allocated learning and study hours study hours House study hours at leaching study hours at leaching study hours at leaching study hours at leach house study hours at leac	ocated urs				
Contact Hours	The table below indicates as a percentage the total assessment of the module which constitutes a;					
	Written Exam: Unseen or open book written exam Coursework: Written assignment or essay, report, dissertation, portfolio, project or in test Practical Exam: Oral Assessment and/or presentation, practical skills assessment, practical exam (i.e. an exam determining mastery of a technique)					
	Total assessment of the module:					
	Written exam assessment percentage	60%				
Total Assessment	Coursework assessment percentage	40%				
	Practical exam assessment percentage	100%				
Reading List	Electronic Reading List:					
	https://uwe.rl.talis.com/lists/26D033B9-FB8B-FE31-8E21-9F4D7	54C3972.html				

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First CAP Approval Date 28/03/2014					
Revision ASQC Approval Date	17 Jan 2018	Version	4	<u>RIA 12498</u>	