



MODULE SPECIFICATION

Part 1: Information			
Module Title	Environmental Forensics		
Module Code	USSKCD-15-3	Level	Level 6
For implementation from	2020-21		
UWE Credit Rating	15	ECTS Credit Rating	7.5
Faculty	Faculty of Health & Applied Sciences	Field	Applied Sciences
Department	HAS Dept of Applied Sciences		
Module type:	Standard		
Pre-requisites	None		
Excluded Combinations	None		
Co- requisites	None		
Module Entry requirements	None		

Part 2: Description
<p>Educational Aims: Environmental Forensics is an extremely broad topic and this module aims to give students knowledge across several themes.</p> <p>Outline Syllabus: 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.</p> <p>The physical, chemical and biological processes that influence their environmental cycling and natural absorption, retention, degradation and toxicity.</p> <p>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.</p> <p>Forensic Archaeology: Detection of clandestine burials using geophysical and non-geophysical techniques. Excavation</p>

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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.

Teaching and Learning Methods: 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.

Contact: This module will run in semester 2.

Face-to face lectures and workshops - 33 hours

Independent learning will take the following forms with an approximate indication of time required for each:

Essential reading to support acquisition of knowledge relating to lectures and workshops – 39 hours

Preparation and submission of coursework 1 – 39 hours

Revision and preparation for exams – 39 hours

Part 3: Assessment

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 assessment will require significant research into relevant case studies and original critical evaluation of realistic forensic casework data.

Coursework: A 1500 word essay

Examination: Written online (24 hour window)

First Sit Components	Final Assessment	Element weighting	Description
Written Assignment - Component B		40 %	Essay (1500 words)
Examination (Online) - Component A	✓	60 %	Online Examination (24 hours)
Resit Components	Final Assessment	Element weighting	Description
Written Assignment - Component B		40 %	Essay (1500 words)
Examination (Online) - Component A	✓	60 %	Online Examination (24 hours)

Part 4: Teaching and Learning Methods		
Learning Outcomes	On successful completion of this module students will achieve the following learning outcomes:	
	Module Learning Outcomes	Reference
	Review and critically analyse case studies in environmental forensics	MO1
	Illustrate important examples of chemical, physical and biological processes that influence cycling, contamination and analysis of pollutants and pharmaceuticals in the environment	MO2
	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	MO3
	Understand the role of specialists such as Forensic Archaeologists, Geologists and wildlife crime experts in environmental forensic investigation	MO4
Contact Hours	Independent Study Hours:	
	Independent study/self-guided study	117
	Total Independent Study Hours:	117
	Scheduled Learning and Teaching Hours:	
	Face-to-face learning	33
	Total Scheduled Learning and Teaching Hours:	33
	Hours to be allocated	150
	Allocated Hours	150
Reading List	<p>The reading list for this module can be accessed via the following link:</p> <p>https://uwe.rl.talis.com/modules/usskcd-15-3.html</p>	

Part 5: Contributes Towards
<p>This module contributes towards the following programmes of study:</p> <p>Integrated Wildlife Conservation {Top-Up} [Sep][FT][Frenchay][1yr] BSc (Hons) 2020-21</p> <p>Environmental Science [Sep][FT][Frenchay][4yrs] MSci 2018-19</p> <p>Forensic Science [Sep][FT][Frenchay][4yrs] MSci 2018-19</p> <p>Environmental Science [Sep][FT][Frenchay][3yrs] BSc (Hons) 2018-19</p> <p>Biological Sciences [Sep][FT][Frenchay][3yrs] BSc (Hons) 2018-19</p> <p>Biological Sciences [Sep][FT][Frenchay][4yrs] MSci 2018-19</p> <p>Forensic Science [Sep][FT][Frenchay][3yrs] BSc (Hons) 2018-19</p>