

## Module specification

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Module Code	SCI553
Module Title	Forensic Ecology
Level	5
Credit value	20
Faculty	FAST
HECoS Code	100386
Cost Code	GAFS

### Programmes in which module to be offered

Programme title	Is the module core or option for this programme
BSc (Hons) Forensic Science	Core
BSc (Hons) Forensic Science with Placement Year	Core

### Pre-requisites

None.

### Breakdown of module hours

Learning and teaching hours	10 hrs
Placement tutor support	0 hrs
Supervised learning e.g. practical classes, workshops	20 hrs
Project supervision (level 6 projects and dissertation modules only)	0 hrs
<b>Total active learning and teaching hours</b>	<b>30 hrs</b>
Placement / work based learning	0 hrs
Guided independent study	170 hrs
<b>Module duration (total hours)</b>	<b>200 hrs</b>

For office use only	
Initial approval date	10/05/2023
With effect from date	September 2023
Date and details of revision	
Version number	1

## Module aims

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This module offers students the opportunity for hands-on engagement in the collection, preservation, and analysis of ecological evidence. Students will be introduced to some key biological field skills and work with a wide range of ecological samples reflective of those that may be present at a crime scene.

## Module Learning Outcomes - at the end of this module, students will be able to:

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1	Explain how ecological evidence can be used in forensic cases.
2	Use different techniques to extract ecological trace evidence from a number of exhibits.
3	Identify a range of ecological evidence types.
4	Accurately record and document laboratory results, discussing key strategies for preserving evidence in a laboratory setting.

## Assessment

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### Indicative Assessment Tasks:

This section outlines the type of assessment task the student will be expected to complete as part of the module. More details will be made available in the relevant academic year module handbook.

### Assessment 1: Practical (2 hours).

During the practical students will have to process and analyse several exhibits containing ecological evidence from a simulated case.

### Assessment 2: Written Assignment (~1500 words).

Based on the simulation students will produce an industry style laboratory report.

Assessment number	Learning Outcomes to be met	Type of assessment	Weighting (%)
1	1-2	Practical	50%
2	3-4	Written Assignment	50%

## Derogations

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None

## Learning and Teaching Strategies

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Students will be immersed in numerous practical sessions in the laboratory and in the field. These sessions will provide students with experience of the collection, preservation and analysis of different ecological evidence types including pollen, soil and diatoms. Students will also learn the value of such evidence types and how they can be used in criminal investigations. Students gain experience following a simulated case from the crime scene to the court room.

## Indicative Syllabus Outline

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- Crime scene processing of ecological evidence
- Collection and preservation of ecological evidence in volume and major crimes
- Analysis of ecological evidence
- Forensic entomology
- Insect identification
- Forensic botany
- Identification of botanical specimens
- Forensic geology
- Soil analysis
- Forensic limnology
- Crime scene to court
- Continuity of evidence
- Forensic laboratory reporting
- Use of databases
- Evidence in the courtroom

## Indicative Bibliography:

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Please note the essential reads and other indicative reading are subject to annual review and update.

### Essential Reads

Roberts, J. & Márquez-Grant, N. (2012), *Forensic ecology handbook: From crime scene to court*, Chichester: John Wiley & Sons.

### Other indicative reading

Byrd, J.H. & Tomberlin, J.K. (2020), *Forensic Entomology: The Utility of Arthropods in Legal Investigations*, 3<sup>rd</sup> Edition, Boca Raton: CRC Press.

Donnelley, L., Duncan, P., Ruffell, A. & Dawson, L. (2021), *A Guide to Forensic Geology*, 1<sup>st</sup> Edition. Bath: The Geological Society.

## Employability skills – the Glyndŵr Graduate

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Each module and programme is designed to cover core Glyndŵr Graduate Attributes with the aim that each Graduate will leave Glyndŵr having achieved key employability skills as part of their study. The following attributes will be covered within this module either through the content or as part of the assessment. The programme is designed to cover all attributes and each module may cover different areas.

### Core Attributes

Engaged

### Key Attitudes

Commitment

Curiosity

Resilience

Confidence

Adaptability

**Practical Skillsets**

Digital Fluency

Organisation

Leadership and Team working

Critical Thinking

Communication