

## Module specification

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Module Code	SCI451
Module Title	Introduction to Palaeontology
Level	4
Credit value	10
Faculty	FAST
HECoS Code	100398
Cost Code	GAFS

### Programmes in which module to be offered

Programme title	Is the module core or option for this programme
Aligned with BSc (Hons) Forensic Science	N/A

### Pre-requisites

N/A

### Breakdown of module hours

Learning and teaching hours	12 hrs
Placement tutor support	0 hrs
Supervised learning e.g. practical classes, workshops	6 hrs
Project supervision (level 6 projects and dissertation modules only)	0 hrs
<b>Total active learning and teaching hours</b>	18 hrs
Placement / work based learning	0 hrs
Guided independent study	82 hrs
<b>Module duration (total hours)</b>	100 hrs

<b>For office use only</b>	
Initial approval date	11/05/2023
With effect from date	11/05/2023
Date and details of revision	
Version number	1

## Module aims

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Offering students hands-on experience with paleontological techniques in the field and laboratory, the module aims to provide a broad overview of the field of palaeontology, including its history, current research, and major findings. Students will be introduced to basic concepts and techniques used in palaeontology, such as the geological record, fossil identification and preservation covering major groups of fossils. There will be an opportunity to explore the ecological and evolutionary relationships of past organisms, and how they relate to current biodiversity and ecosystems as well as an introduction to the use of paleontological data in understanding past climate change, mass extinctions, and the history of life on Earth.

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

1	Discuss basic concepts, principles and techniques used in the field of palaeontology.
2	Report on the ecological and evolutionary relationships of past organisms and how they relate to current biodiversity and ecosystems.
3	Identify and classify major groups of fossils.

## 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: Portfolio** - Students will compile a portfolio from practical tasks completed across the course.

**Assessment 2: In-class test** - Students will complete an online test (max 1 hour) with both multiple choice and short answer questions a portfolio from practical tasks completed across the course.

Assessment number	Learning Outcomes to be met	Type of assessment	Weighting (%)
1	1 & 2	Portfolio	70%
2	3	In-class test	30%

## Derogations

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N/A

## Learning and Teaching Strategies

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The module will be delivered in line with the University's Active Learning Framework and will involve:

**Lectures:** To provide students with a comprehensive overview of the key concepts and principles.

**Discussions and Seminars:** To allow students to engage with the material and explore different perspectives while also providing an opportunity for students to ask questions and clarify concepts.

**Laboratory work:** To provide students with hands-on experience in techniques such as fossil identification, preservation, and dating. It can also help students to develop practical skills and apply the concepts learned in lectures and discussions.

**Field work:** To allow students a chance to see fossils in their natural setting and learn about the geological context of the fossils, providing opportunities to apply the concepts learned in the class to real-world examples.

**Online resources and videos:** To supplement classroom learning by providing students with additional information and visual aids to further their understanding of the material.

**Self-directed study:** To empower students to take responsibility for their own learning and to explore topics of interest in more depth.

## Indicative Syllabus Outline

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- Introduction to the course – outline and basic information
- The geologic record – extracting environmental information from rocks
- A brief history of life on earth – what we know and how we know it
- What is (and is not) a fossil – how do biological remains persist for millions of years?
- Field palaeontology – what information to look for and how to collect it
- Common fossil groups – where they're found and what they tell us
- The modern relevance of palaeontological science – why fossils are important in understanding the modern world

## Indicative Bibliography:

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Please note the essential reads and other indicative reading are subject to annual review and update. Please *ensure correct referencing format is being followed as per University [Harvard Referencing Guidance](#)*.

### Essential Reads

Benton, M.J. and Harper, D.A., (2020) *Introduction to paleobiology and the fossil record*. John Wiley & Sons: Chichester.

### Other indicative reading

Clarkson, E.N.K., (2009) *Invertebrate palaeontology and evolution*. John Wiley & Sons: Chichester.

Benton, M.J., (2014) *Vertebrate palaeontology*. John Wiley & Sons: Chichester.

Briggs, D.E. and Crowther, P.R., (2008) *Palaeobiology ii*. John Wiley & Sons: Chichester.

## **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  
Ethical

### **Key Attitudes**

Curiosity  
Resilience  
Confidence  
Adaptability

### **Practical Skillsets**

Digital Fluency  
Organisation  
Leadership and Team working  
Critical Thinking  
Communication