MODULE SPECIFICATION

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Refer to guidance notes for completion of each section of the specification.

Module Code:	SCI533

Module Title:	Forensic Biology

Level:	5	**Credit Value:**	20

Cost Centre(s):	GAFS	JACS3 **code**: HECoS code:	F410 100386

Faculty	FAST	**Module Leader:**	Dr Ian Ratcliffe

Scheduled learning and teaching hours	24 hrs
Placement tutor support	0 hrs
Supervised learning eg practical classes, workshops	16 hrs
Project supervision (level 6 projects and dissertation modules only)	0 hrs
Total contact hours	**40** hrs
Placement / work based learning	
Guided independent study	160 hrs
Module duration (total hours)	200 hrs

Programme(s) in which to be offered (not including exit awards)	Core	Option
BSc (Hons) Forensic Science	✓	☐

Pre-requisites
None

Office use only
Initial approval: February 17 Version no:1
With effect from: 01/09/2018
Date and details of revision: August 18 Version no:3
5/8/20 Revised teaching and learning hours

Module Aims
The module aims to: Introduce students to animals and plants of forensic interest. Extend students' experience of techniques of data analysis and presentation. Provide practical experience in the use and analysis of entomological and botanical evidence.

Module Learning Outcomes - at the end of this module, students will be able to	
1	Analyse the use of insects in determining time of death.
2	Appraise a range of case studies and relevant biological evidence.
3	Examine the value of community succession for time of death investigations.
4	Classify and use botanical material including pollen and diatoms.

Employability Skills The Wrexham Glyndŵr Graduate	**I = included in module content A = included in module assessment N/A = not applicable**
Guidance: complete the matrix to indicate which of the following are included in the module content and/or assessment in alignment with the matrix provided in the programme specification.	
CORE ATTRIBUTES	
Engaged	I & A
Creative	
Enterprising	
Ethical	
KEY ATTITUDES	
Commitment	I & A
Curiosity	
Resilient	I & A
Confidence	I & A
Adaptability	
PRACTICAL SKILLSETS	
Digital fluency	I & A
Organisation	I & A
Leadership and team working	I
Critical thinking	I & A

Emotional intelligence	
Communication	I & A

Derogations

None

Assessment:

Indicative Assessment Tasks:

The module will be assessed with two pieces of coursework, examples of which might be:

1. An analysis of insect development data and weather station data to estimate time of death, together with a critical review of case studies involving insect data. (2000 words)

2. The characteristics used to identify pollen, with a case study review of plant evidence. (2000 words)

Assessment number	Learning Outcomes to be met	Type of assessment	Weighting (%)
1	1-4	Coursework	100%

Learning and Teaching Strategies:

The course will be taught through a mixture of lectures and practical sessions. Students are mostly taught with weekly lectures, each of which is supported by supplementary online material (lecture notes plus additional resources). In some cases the lectures are replaced by computer work and by practical sessions. The practicals will involve microscope work in the lab and experience of breeding flies. A visit to the insect collections in Liverpool museum, where the curator sets out a tailored display and runs sessions on identification, is also used. Students will be encouraged to develop their use of the scientific literature through references provided with each lecture.

Syllabus outline:

Forensic entomology
Insects classification, identify groups relevant to forensic work
Insect breeding and identification
Time of death based on individual development
Time of death using ordination of community data
Aquatic insects
Forensic botany: identification of pollen
Other biological evidence: diatoms and testate amoebae

Indicative Bibliography:
Essential reading
Gunn, A. (2019) Essential Forensic Biology,3rd ed. Chichester: John Wiley and Sons Inc.
Other indicative reading
Chinery, M. (2009), Complete Guide to British Insects: A photographic guide to every common species, Collins. Erzinclioglu, Z. (2000), Maggots, Murder and Men, Harley. Gennard, D. (2012), Forensic Entomology: An Introduction, 2nd ed., *Chichester: John Wiley and Sons Inc.* Goff, M.L. (2000), A Fly for the Prosecution: How Insect Evidence Helps Solve Crimes, Harvard University Press. Hall D & Byrd J (2012), Forensic Botany: A Practical Guide. *Chichester: John Wiley and Sons Inc.* Sachs, J.S. (2001) Time Of Death: The Story of Forensic Science and the Search for Death's Stopwatch, William Heinemann Ltd. Reading lists for individual lectures direct students to selected articles in journals such as Forensic Science International and The Journal of Forensic Sciences.