

MODULE DESCRIPTOR

Module Title

Trace Evidence Analysis - Forensic Biology

Reference	PL3661	Version	1
Created	August 2023	SCQF Level	SCQF 9
Approved	December 2023	SCQF Points	15
Amended	August 2021	ECTS Points	7.5

Aims of Module

To provide students with the knowledge and skills to analyse biological evidence and skeletal remains using biological laboratory techniques employed in forensic science.

Learning Outcomes for Module

On completion of this module, students are expected to be able to:

- 1 Discuss the theoretical basis and practical applications of forensic tests used in the examination of a range of biological materials.
- 2 Evaluate the suitable methods used to recover biological evidence and skeletal remains.
- 3 Discuss the biological profiling of skeletal remains using anthropological techniques.
- 4 Evaluate the role of biological forensics and anthropology in forensic investigations and legal proceedings.

Indicative Module Content

Recovery scene methods; forensic examination methods; analysis of body samples (blood; semen; faeces; saliva; epithelia); bloodstain pattern analysis; determination of origin of spatter pattern; entomological evidence and its application; pollen, spores, algae and plant material as evidence; biological profiling of skeletal remains (age; sex; ancestry; height; medical and dental history); DNA profiling; evidence of trauma on skeletal remains (projectile; blunt; sharp; miscellaneous); estimation of post-mortem period and determination of post-mortem events; forensic examination of mass graves.

Module Delivery

This module uses a blended delivery with lectures supplemented with tutorials, practical laboratory classes and case study workshops.

Indicative Student Workload

	Full Time	Part Time
Contact Hours	42	N/A
Non-Contact Hours	108	N/A
Placement/Work-Based Learning Experience [Notional] Hours	N/A	N/A
TOTAL	150	N/A
<i>Actual Placement hours for professional, statutory or regulatory body</i>		

ASSESSMENT PLAN

If a major/minor model is used and box is ticked, % weightings below are indicative only.

Component 1

Type: Examination Weighting: 100% Outcomes Assessed: 1, 2, 3, 4

Description: Closed book written examination.

MODULE PERFORMANCE DESCRIPTOR**Explanatory Text**

Component 1 (Examination) comprises 100%. A minimum of a Grade D is required to pass the module.

Module Grade	Minimum Requirements to achieve Module Grade:
A	A
B	B
C	C
D	D
E	E
F	F
NS	Non-submission of work by published deadline or non-attendance for examination

Module Requirements

Prerequisites for Module None, in addition to SCQF level 9 entry requirements.

Corequisites for module None.

Precluded Modules None.

ADDITIONAL NOTES

This module is taught exclusively by Forensics.

INDICATIVE BIBLIOGRAPHY

- 1 BYERS, S.N. 2016, *Introduction to Forensic Anthropology*. 5th Edition. Routledge; Abingdon
- 2 JAMES, S.H., KISH, P.E. and SUTTON, T.P. 2021, *Principles of Bloodstain Pattern Analysis: Theory and Practice*. 1st Edition. CRC Press: Boca Raton
- 3 JAMES, S.H., NORDBY, J.J. and BELL, S. 2015, *Forensic Science: An Introduction to Scientific and Investigative Techniques*. 4th Edition. CRC Press: Boca Raton.
- 4 LI, R. 2015, *Forensic Biology*. 2nd Edition. CRC Press: Boca Raton.
- 5 LANGFORD, A.M., DEAN, J.R., REED, R., HOLMES, D. A., WEYERS, J. and JONES, A. 2018, *Practical Skills in Forensic Science*. 3rd Edition. Prentice Hall; New Jersey.
- 6 WONDER, A.Y. 2015, *Bloodstain Patterns: Identification, Interpretation and Application*. 1st Edition. Academic Press: Cambridge, Massachusetts.