MODULE DESCRIPTOR

Module Title

Bioanalytical Skills I

Reference	PL2189	Version	1
Created	October 2022	SCQF Level	SCQF 8
Approved	June 2023	SCQF Points	30
Amended		ECTS Points	15

Aims of Module

To enable the student to develop and undertake bioanalytical laboratory-based experiments and subsequent analysis to further build laboratory competence and scientific communication skills.

Learning Outcomes for Module

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

1	Devise suitable experimental procedures.
2	Safely perform suitable experimental procedures.
3	Accurately analyze the results of experimental procedures and perform calculations and statistical tests appropriately.
4	Communicate both orally and in writing the results and conclusions of selected experiments.

Indicative Module Content

Laboratory safety. Preparation of risk assessments and COSHH forms. Keeping accurate records. Data handling and presentation. Intermediate statistics. Preparation of solutions and dilutions. Accurate use of balances and pipettes. Microbiological techniques: principles and applications. Processing of biological samples. Fluorescence and phase microscopy: principles and applications. Electrophoresis: principles and applications. Calibration. Colorimetry, fluorimetry and spectrophotometry: principles and applications. Immunological Methods: principles and applications. Electroanalytical Techniques. Chromatography. Cell culture. Development of communication skills, group skills and time management skills.

Module Delivery

This is a laboratory-based module supported by tutorials/workshops, online support material and guided reading.

Module Ref:	PL2189 v1

Indicative Student Workload	Full Time	Part Time
Contact Hours	70	N/A
Non-Contact Hours	230	N/A
Placement/Work-Based Learning Experience [Notional] Hours	N/A	N/A
TOTAL	300	N/A
Actual Placement hours for professional, statutory or regulatory body		

ASSESSMENT PLAN

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

Component 1

Type:	Coursework	Weighting:	100%	Outcomes Assessed:	1, 2, 3, 4
Description:	Portfolio competencies covering a range of practical, analytical and communication competencies relevant to professional laboratory practice.				

MODULE PERFORMANCE DESCRIPTOR

Explanatory Text

This module is assessed using a competence-based portfolio. All learning outcomes must be passed.

Module Grade	Minimum Requirements to achieve Module Grade:
Pass	A satisfactory performance in a set of laboratory-based competencies
Fail	An unsatisfactory performance in a set of laboratory-based competencies
NS	Non-submission of work by published deadline or non-attendance for examination

Module Requirements

Prerequisites for Module	None, in addition to SCQF level 8 entry requirements or equivalent.
Corequisites for module	None.
Precluded Modules	None.

INDICATIVE BIBLIOGRAPHY

1 REED, R.H., HOLMES. D., WEYERS, J. and JONES, A. 2016. Practical Skills in Biomolecular Science. 5th Edition. Freeman.