MODULE DESCRIPTOR

Module Title

Experimental Molecular Biology

Reference	AS2904	Version	2
Created	August 2017	SCQF Level	SCQF 8
Approved	May 2011	SCQF Points	15
Amended	August 2017	ECTS Points	7.5

Aims of Module

To provide students with the ability to carry out and evaluate laboratory work involving basic and advanced molecular biology techniques and procedures.

Learning Outcomes for Module

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

1	Use safely and effectively, a range of molecular biology techniques and experimental procedures.
2	Evaluate experimental data, identifying sources of error and uncertainty.
3	Demonstrate initiative in problem solving.
4	Maintain a laboratory diary in which results and conclusions are recorded.
5	Write a detailed formal report, including references, demonstrating a full comprehension of experimental objectives.

Indicative Module Content

The laboratory programme will consist of a mixture of core and extended molecular biology experiments which may include restriction digestion, PCR, Southern blotting, gene cloning and DNA database searches. The core experiments are designed to introduce students to a range of advanced experimental techniques by introducing a variety of applications and secondly, allow students to develop time and task management skills. Students are expected to do background reading and conduct detailed literature searches on the experimental topics.

Module Delivery

This module is mainly laboratory based but will involve some computer based exercises and library work.

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Indicative Student Workload	Full Time	Part Time
Contact Hours	67	N/A
Non-Contact Hours	83	N/A
Placement/Work-Based Learning Experience [Notional] Hours	N/A	N/A
TOTAL	150	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, 5
Description:	Laboratory practical(s): Conduct, knowledge and practical reports on laboratory experiments are assessed.				

MODULE PERFORMANCE DESCRIPTOR

Explanatory Text

This module is assessed using the one component detailed in the Assessment Plan. To pass this module, candidates must achieve a grade D or better.

Module Grade	Minimum Requirements to achieve Module Grade:
A	Final mark of 70% or better.
B	Final mark of between 60-69%.
C	Final mark of between 50-59%.
D	Final mark of between 40-49%.
E	MARGINAL FAIL. Final mark of between 35-39%.
F	FAIL. Final mark of 34% or lower.
NS	Non-submission of work by published deadline or non-attendance for examination

Module Requirements

Prerequisites for Module	Successful completion of stage 1 of the course.
Corequisites for module	None.
Precluded Modules	None.

INDICATIVE BIBLIOGRAPHY

1	WEYERS,J., REED,R.H., JONES,A. and HOLMES,D., 2012. *Practical Skills in Biomolecular Sciences.* 4th ed. Pearson Education.
2	MICKLOS, D.A. and FREYER, G.A. 2010. *DNA Science: A First Course.*. 2nd ed. Cold Spring Harbor Laboratory Press.
3	BROWN, T.A., 2016. *Gene Cloning and DNA Analysis: an Introduction.* 7th ed. Wiley-Blackwell.