

Module Title Cell Culture Keywords Aseptic technique, microbiological contamination, animal cell and tissue culture.	Reference	AS1011
	SCQF	SCQF 7
	Level	
	SCQF Points	15
	ECTS Points	7.5
	Created	January 2004
	Approved	January 2005
	Amended	May 2011
	Version No.	3

Prerequisites for Module

None, in addition to course entry requirements.

Corequisite Modules

None.

Precluded Modules

None.

Aims of Module

To enable students to acquire the knowledge and practical experience of the handling of animal cells using sterile and safe techniques.

Learning Outcomes for Module

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

Indicative Student Workload

<i>Contact Hours</i>	Full Time
Laboratory	30
Lectures	10

<i>Directed Study</i>	
Case Studies	20

<i>Private Study</i>	90
----------------------	----

Mode of Delivery

This is a laboratory-based course supplemented with lectures and directed self-study exercises.

Assessment Plan

	Learning Outcomes Assessed
Component 1	1,2
Component	

1. Recognise and describe the basic principles of aseptic techniques as they apply to the elimination of microbial contamination, for animal cell/tissue culture.
2. Demonstrate laboratory competence in performing tasks relating to Learning Outcome 1.
3. Perform diagnostic and investigative applications of cell culture techniques using cell culture systems.

Indicative Module Content

Sterile technique and management of microbial contamination: sterile techniques relating to animal tissue and cell culture, primary vs secondary cultures, animal tissues and organs, applications of cell and tissue cultures, and animal cell culture systems. Measurement of growth in culture systems: solid and liquid media, batch and continuous culture, growth measurement techniques, bioassays.

Component 2	3
----------------	---

Component 2 is assessed through the submission of a written piece of coursework.

Component 1 is assessed through the submission of written laboratory reports and through the assessment of competence in the laboratory.

Indicative Bibliography

1. FRESHNEY, R.I., 2010. *Culture of Animal Cells: A Manual of Basic Technique and Specialized Applications*. 6th ed.: Wiley-Blackwell.
2. DAVIS, J.M., 2002. *Basic Cell Culture: A Practical Approach*. 2nd ed: Oxford University Press.
3. REED, R., HOLMES, D., WEYERS, J. AND JONES, A., 2007. *Practical Skills in Biomolecular Sciences*. 3rd ed.: Pearson Education Ltd.