

<b>Module Title:</b>	Cell Biology
<b>Language of Instruction:</b>	English
<b>Credits:</b>	5
<b>NFQ Level:</b>	6
<b>Module Delivered In</b>	No Programmes
<b>Teaching &amp; Learning Strategies:</b>	This module will be taught in three theory classes of one hour and one two hour practical session per week for fifteen weeks. Relevant class notes, diagrams and self assessment tools will be available to the students. Online resources will also be accessed as appropriate. Class will be subjected to regular informal testing and peer teaching and learning during class time. Emphasis will be given to case studies linking concepts to realistic situations.
<b>Module Aim:</b>	The aim of this module is to impart knowledge of basic cell biology and microbiology with special emphasis on (a) association between cell structure and function and human disease and (b) microbial growth and disease transmission and prevention.
<b>Learning Outcomes</b>	
<i>On successful completion of this module the learner should be able to:</i>	
LO1	Describe the structure and functions of cellular macromolecules, organelles, cells and tissues.
LO2	Explain basic concepts of microbiology and carry out basic histological and microbiological techniques
<b>Pre-requisite learning</b>	
<b>Module Recommendations</b> <i>This is prior learning (or a practical skill) that is recommended before enrolment in this module.</i>	
No recommendations listed	
<b>Incompatible Modules</b> <i>These are modules which have learning outcomes that are too similar to the learning outcomes of this module.</i>	
No incompatible modules listed	
<b>Co-requisite Modules</b>	
No Co-requisite modules listed	
<b>Requirements</b> <i>This is prior learning (or a practical skill) that is mandatory before enrolment in this module is allowed.</i>	
No requirements listed	

## Module Content & Assessment

### Indicative Content

#### Cell Biology

Introduction to the animal cell, cell theory and homeostasis. Overview of cell chemistry. The cell membrane: structure and function. Other cellular components: overview and function. Introduction to methods of cell communication. Cellular genetic processes with emphasis on genetic disease. Introduction to basic concepts of immunology and overview of cells involved in the immune response. Tissues: epithelial, connective, muscle and nervous.

#### Microbiology

Introduction to micro-organisms: bacteria, fungi, protozoans, viruses. Environmental factors affecting microbial growth. Introduction to mechanisms by which microbes overcome host defences. Sources and modes of infection. Prevention procedures: methods of sterilization and disinfection

#### Practical

Practicals will develop skills in the use of the light microscope and the application of simple histological and anatomical techniques. In addition practicals will include application of the fundamental principles of Microbiology, with special reference to the transmission and the prevention of disease, and the utilisation of basic microbiological techniques and methodologies.

Assessment Breakdown	%
Continuous Assessment	10.00%
Practical	40.00%
End of Module Formal Examination	50.00%

### Special Regulation

Students must achieve a minimum grade (35%) in both the practical/CA and final examination.

### Continuous Assessment

Assessment Type	Assessment Description	Outcome addressed	% of total	Assessment Date
Examination	One continuous assessment examination	1	10.00	n/a

No Project

### Practical

Assessment Type	Assessment Description	Outcome addressed	% of total	Assessment Date
Practical/Skills Evaluation	A practical log book and by observing student performance and behaviour in practical classes	1,2	40.00	Sem 1 End

### End of Module Formal Examination

Assessment Type	Assessment Description	Outcome addressed	% of total	Assessment Date
Formal Exam	A final examination of two hour duration.	1,2	50.00	End-of-Semester

SETU Carlow Campus reserves the right to alter the nature and timings of assessment

**Module Workload**

<b>Workload: Full Time</b>		
<i>Workload Type</i>	<i>Frequency</i>	<i>Average Weekly Learner Workload</i>
Lecture	30 Weeks per Stage	1.50
Laboratory	30 Weeks per Stage	1.00
Estimated Learner Hours	30 Weeks per Stage	0.83
Total Hours		100.00

