APPROVED

BIOL6007: Biomolecules and Cells

Module Details

Module Code:	BIOL6007
Title:	Biomolecules and Cells APPROVED
Long Title:	Biomolecules and Cells
NFQ Level:	Fundamental
Valid From:	Semester 1 - 2017/18 (September 2017)
Duration:	1 Semester
Credits:	5
Field of Study:	4211 - Biochemistry & Cell Biology
Module Delivered in:	15 programme(s)
Module Description:	This module is an introduction to the structure and function of the major biological macromolecules. The structure of eucaryotic and procaryotic cells. The function of eucaryotic cell organelles and the cell cycle.

Learning Outcomes	
On successful completion of this module the learner will be able to:	
#	**Learning Outcome Description**
LO1	Recognise and describe the structure and function of the major biomolecules.
LO2	Describe and illustrate the differences between a procaryotic and a eucaryotic cell. .
LO3	Describe the structures and functions of the eucaryotic cell organelles.
LO4	Describe the normal eucaryotic cell cycle and its control.
LO5	Perform and report on, biological laboratory experiments.

Dependencies
Module Recommendations
Incompatible Modules
N/A
Co-requisite Modules
No Co-requisite modules listed
Requirements
None

Indicative Content
Biomolecules Structure and functions of proteins, fats, carbohydrates and nucleic acids.
Cells The structure of a typical eucaryotic and procaryotic cell.The structures and functions of the organelles of a eucaryotic cell.
Eucaryotic cell division. The process of normal eucaryotic cell division, the cell cycle and its regulation. Causes and characteristics of cancer cells.
Laboratory Practicals The module will include laboratory practicals which will supplement the lecture based learning.

Module Content & Assessment

Assessment Breakdown	**%**
Coursework	100.00%

Assessments

Coursework			
Assessment Type	Multiple Choice Questions	**% of Total Mark**	30
Timing	Week 7	**Learning Outcomes**	1
Assessment Description Theory Assessment.			
Assessment Type	Written Report	**% of Total Mark**	20
Timing	Every Second Week	**Learning Outcomes**	5
Assessment Description Laboratory reports will be required every second week for thematic areas.			
Assessment Type	Practical/Skills Evaluation	**% of Total Mark**	20
Timing	Sem End	**Learning Outcomes**	5
Assessment Description Lab exam			
Assessment Type	Short Answer Questions	**% of Total Mark**	30
Timing	Sem End	**Learning Outcomes**	2,3,4
Assessment Description Theory assessment.			

No End of Module Formal Examination

Reassessment Requirement
Repeat examination *Reassessment of this module will consist of a repeat examination. It is possible that there will also be a requirement to be reassessed in a coursework element.*

Module Workload

Workload: Full Time					
Workload Type	*Contact Type*	*Workload Description*	*Frequency*	*Average Weekly Learner Workload*	*Hours*
Lecture	Contact	Class room based learning	Every Week	2.00	2
Lab	Contact	Practical laboratory sessions	Every Week	2.00	2
Independent & Directed Learning (Non-contact)	Non Contact	Student independent learning time for this module	Every Week	3.00	3
				Total Hours	7.00
				Total Weekly Learner Workload	7.00
				Total Weekly Contact Hours	4.00

This module has no Part Time workload.

Module Resources

Recommended Book Resources

Dr. Rob Brooker, Dr. Eric Widmaier, Dr. Linda Graham,. (2016), Biology, 4th. McGraw-Hill Higher Education, [ISBN: 9781259188121].

Supplementary Book Resources

Sylvia Mader and Michael Windelspecht. (2015), Biology, 12th. McGraw-Hill Higher Education;, U.S, [ISBN: 0078024269].

Peter H Raven, George B Johnson, Kenneth A. Mason, Jonathan Losos, Susan Singer. (2010), Biology, McGraw-Hill Higher Education;, [ISBN: 9780077129149].

This module does not have any article/paper resources

Other Resources

Web site, Biology mad,
http://www.biologymad.com

Module Delivered in

Programme Code	Programme	Semester	Delivery
CR_ECPEN_8	Bachelor of Engineering (Honours) in Chemical and Biopharmaceutical Engineering	-1	Mandatory
CR_SAGBI_8	Bachelor of Science (Honours) in Agri-Biosciences	-1	Mandatory
CR_SCHQA_8	Bachelor of Science (Honours) in Analytical Chemistry with Quality Assurance	-1	Mandatory
CR_SNHSC_8	Bachelor of Science (Honours) in Nutrition and Health Science	-1	Mandatory
CR_SPHBI_8	Bachelor of Science (Honours) in Pharmaceutical Biotechnology	-1	Mandatory
CR_SAGBI_7	Bachelor of Science in Agri-Biosciences	-1	Mandatory
CR_SCHEM_7	Bachelor of Science in Analytical and Pharmaceutical Chemistry	-1	Mandatory
CR_SBIBI_7	Bachelor of Science in Applied Biosciences and Biotechnology	-1	Mandatory
CR_SFSTE_7	Bachelor of Science in Food and Health Science	-1	Mandatory
CR_ECBPO_6	Certificate in Chemical and Biopharmaceutical Process Operations	-1	Mandatory
CR_EFDMO_6	Certificate in Food Manufacturing Operations	-1	Mandatory
CR_SCEBS_8	Common Entry Biological Sciences	-1	Mandatory
CR_SBIOS_6	Higher Certificate in Science in Applied Biosciences	-1	Mandatory
CR_SCHEM_6	Higher Certificate in Science in Chemistry	-1	Mandatory
CR_SGMPR_6	Higher Certificate in Science in Good Manufacturing Practice and Technology	-1	Mandatory