

Course Outline (Higher Education)

School:	School of Health and Life Sciences
Course Title:	BIOCHEMISTRY
Course ID:	BTHGC2741
Credit Points:	15.00
Prerequisite(s):	(BIOGC1722 and CHMGC1011)
Co-requisite(s):	Nil
Exclusion(s):	Nil
ASCED:	010901

Description of the Course :

The unit begins with an introduction to the cellular environment, considering the interactions that stabilise biological macromolecules and the maintenance of constant pH within cells and organisms. Next, we will study the structure and function of proteins and the techniques for their isolation and purification. The composition of biological membranes and the structure of nucleic acids and their packaging within cells is considered. This is followed by a study of the mechanisms of synthesis, modification and degradation of nucleic acids and proteins. The mechanisms that control these processes are emphasised.

Grade Scheme: Graded (HD, D, C, etc.)

Supplementary Assessment: Yes

Where supplementary assessment is available a student must have failed overall in the course but gained a final mark of 45 per cent or above and submitted all major assessment tasks..

Learning Outcomes:

On completion of this unit students will be able to:

1. Discuss the buffering mechanisms that operate in biological systems;
2. Recognise the role of non-covalent interactions in the maintenance of tertiary and quaternary conformation of biological macromolecules;
3. Explain the connection between protein structure and function;
4. Discuss strategies for the isolation and purification of proteins from biological samples;
5. Discuss the principles of storage and transmission of genetic information and describe control mechanisms which operate at the level of gene expression;
6. Use spectrophotometric methods to assay biological molecules in solution;
7. Analyse and interpret laboratory data and present in an appropriate format.

Course Content:

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Values and Graduate Attributes:

Learning Task and Assessment:

Learning Outcomes Assessed	Learning Tasks	Assessment Type	Weighting
Assignment work	Assignment work	Assignment work	20%
Practical work	Practical work	Practical work	30%
Examination (3 hours)	Examination (3 hours)	Examination (3 hours)	50%

Adopted Reference Style: