

Module code	SB-2343		
Module Title	Introduction to Biochemistry		
Degree/Diploma	Bachelor of Science (Biology)		
Type of Module	Major Option		
Modular Credits	4	Total student Workload	8 hours/week
		Contact hours	2 hours/week lectures 4 hours/week practicals
Prerequisite	None		
Anti-requisite	None		
Aims			
To provide students with a basic understanding of the structure, properties and function of biologically important macromolecules and assemblies, concept of energy conservation and conversion processes in a living cell to help understand the reactions of metabolism.			
Learning Outcomes			
<i>On successful completion of this module, a student will be expected to be able to:</i>			
Lower order :	50%	<ul style="list-style-type: none"> - Describe the building blocks of the various macromolecules - Describe the composition and architecture of biological membranes - Describe the structure and function of proteins - Explain enzyme action and regulation - Identify the molecular mechanisms underlying energy production in cells 	
Middle order :	40%	<ul style="list-style-type: none"> - Dissect important cellular processes including glycolysis, the tricarboxylic pathway and the electron transport chain - Conduct laboratory practicals, collect data, interpret and discuss results 	
Higher order :	10%	<ul style="list-style-type: none"> - Work effectively in groups during laboratory practicals and independently in reporting experimental results 	
Module Contents			
<ul style="list-style-type: none"> - An overview of the chemical components of cells - Structure and function of macromolecules - Lipids, carbohydrates and proteins - Basic concepts of thermodynamics and bioenergetics - Enzymes, characteristics and regulation - Cellular and anaerobic respiration - Glycolysis and the tricarboxylic acid cycle - The electron transport chain and oxidative phosphorylation - Alcohol and lactate fermentation 			
Assessment	Formative assessment	Weekly discussion of selected topics will be used to test students' understanding	
	Summative assessment	Examination: 60% Coursework: 40% <ul style="list-style-type: none"> - 2 written assignments (30%) - 2 class tests (10%) 	