

Module code	SB-2241		
Module Title	Cell Biology		
Degree/Diploma	Bachelor of Science (Biology)		
Type of Module	Major Core		
Modular Credits	4	Total student Workload	8 hours/week
		Contact hours	6 hours/week
Prerequisite	None		
Anti-requisite	SB-2210 Cells, Biomolecules and Microbiology		
Aims			
<p>The module is designed to introduce students to the basic structure of cell that forms the fundamental basis of unicellular and multicellular life. Students will also learn about prokaryotic and eukaryotic cells, structure and functions of cell organelles, and internal organization of cells. It will provide them with an understanding of the importance of cellular organization and compartmentalization, and cellular processes.</p>			
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"> - Explain the basic structure of cells - Identify the function and organization of the various organelles in eukaryotic cells - Describe intracellular trafficking of macromolecules - Discuss endocytosis and exocytosis - Describe compartmentalization of cells, structure and function of cell organelles, the cytoskeleton, transport across cell membranes 	
Middle order :	40%	<ul style="list-style-type: none"> - Discuss key biological processes in cells and their regulation - Evaluate the important biological processes in cells - Conduct laboratory practicals, collect data, interpret and discuss results - Utilize immunofluorescence microscopy for monitoring subcellular trafficking of proteins 	
Higher order:	10%	<ul style="list-style-type: none"> - Work effectively in groups during laboratory practical sessions and independently in reporting experimental results 	
Module Contents			
<ul style="list-style-type: none"> - Overview of cell - Microscopy and cell theory - Cell fractionation - Prokaryotes and eukaryotes - Structure and function of cell organelles - Biological membranes and transport - Cytoskeleton - Cellular junctions, cell-cell adhesion and extracellular matrix - Cell cycle - Programmed cell death - Cell-cell communication and cell signalling 			
Assessment	Formative assessment	Tutorial assignments and feedback	
	Summative assessment	Examination: 60% Coursework: 40% <ul style="list-style-type: none"> - 3 practical assignments (30%) - 2 class tests (10%) 	