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| Module code | SB-2210 | | |
| Module Title | Cells, Biomolecules and Microbiology | | |
| 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-2241 Cell Biology; SB-2242 Microbiology; SB-2243 Introduction to Biochemistry | | |
| Aims | | | |
| This module introduces students to the basic structure and function of prokaryotic and eukaryotic cells and cell organelles, biologically important macromolecules and assemblies, the diversity and ubiquity of microorganisms, and different types of metabolism exhibited by microbes. The students will understand the importance of cellular organization and compartmentalization, and the significance of molecular interactions in the construction and maintenance of living things. The module will discuss the general principles of microbiology which greatly influence many other areas of biology, medicine, public health and nature. | | | |
| Learning Outcomes | | | |
| <i>On successful completion of this module, a student will be expected to be able to:</i> | | | |
| Lower order : | 40% | <ul style="list-style-type: none"> - Describe the structures and functions of cell organelles, biomolecules and enzymes - Explain the diversity and types of metabolism of microbes | |
| Middle order : | 50% | <ul style="list-style-type: none"> - Analyse the importance of cellular organization and compartmentalization - Review the significance of molecular interactions in living things - Discuss the principles of microbiology that influence biology, medicine, public health and nature - Conduct lab practicals related to cell biology, biomolecules and microbiology, collect data, interpret and discuss results | |
| Higher order: | 10% | <ul style="list-style-type: none"> - Follow lab procedures and protocols and develop competence in basic lab skills - Work independently in writing practical reports and work effectively in groups during lab practicals | |
| Module Contents | | | |
| <ul style="list-style-type: none"> - Cells (microscopy, cell theory, prokaryotes and eukaryotes) - Structures and functions of cell organelles and membranes - Transport across cell membranes - Structure and functions of biomolecules - Enzymes and their characteristics - Classification and some metabolism of prokaryotes -Microbes and human -Principles of diseases -Industrial and environmental microbiology | | | |
| Assessment | Formative assessment | Tutorial assignments and feedback | |
| | Summative assessment | <ul style="list-style-type: none"> Examination: 60% Coursework: 40% - 6 practical reports (30%) - 2 class tests (10%) | |