

SB-2211

MODULE DETAILS	
Module Code:	SB-2211
Module Title:	Genetics
Module Level:	2 (Undergraduate)
Degree/Diploma:	Bachelor of Science (Biology)
Type of Module:	Major Core
Modular Credits:	4
Prerequisite:	None
Anti-requisite:	None
Module Delivery	
Mode of Delivery:	Lectures, tutorials and laboratory practicals
Semester Offered:	August
Time Commitment:	The total expected student workload is 8 h a week. The Contact Hours are 6 h per week. Total Time Commitment per semester: 196 h.
Module Synopsis:	This module is about the study of heredity
Programme Leader:	Module Coordinator is Dr Hussein Taha
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MODULE AIMS, TEACHING METHODS, ASSESSMENT AND SUPPORT	
Aims:	The module is designed for students to have a fundamental understanding of classical and molecular genetics
Learning Outcomes:	On successful completion of this module, a student will be expected to be able to:
Knowledge and Understanding	
Lower order: (60%)	<ul style="list-style-type: none"> - Explain the basic principles of mitosis and meiosis - Identify the Mendelian and non Mendelian inheritance - Describe the chromosomal basis of inheritance - Describe DNA as genetic material - Describe gene expression and its regulation
Application and Analysis	
Middle order: (30%)	<ul style="list-style-type: none"> - Analyse genetic crosses using Punnett square - Interpret genetic code
Evaluation & Synthesis, Competence, Communication, and Values & Attitude	
Higher order: (10%)	<ul style="list-style-type: none"> - Develop competence in laboratory skills - Work and learn independently
Module Content:	The main contents of the module include: the cell cycle; meiosis and sexual life cycles; Mendelian and non-Mendelian inheritance; the chromosomal basis of inheritance; DNA as genetic material; gene expression; regulation of gene expression.
Teaching methods	
	The module will have lectures and laboratory practicals, and all teaching and learning activities will be uploaded to CANVAS Learning Management System
Allocation of Teaching and Learning Activities	

Details of teaching and learning activities:	Lectures/Tutorials:	2 h per two weeks, Total hours per semester: 28 h
	Laboratory/Practicals:	4 h per practical. Practicals will take place in the laboratory.
	Fieldtrips:	None
Assessment tasks		
Details and type of assessments on this module:	Formative assessment	Tutorial assignments and feedback
	Summative assessment	Examination: 70%
		Coursework: 30% - 4 practical assignments (20%) - 2 class tests (10%)
Support and additional information		
Learning Support (References):	Campbell, N.A., Reece, J.B., et al. Biology: A Global Approach (2015). Pearson Education Limited, England. ISBN 10: 1-292-00865-2.	
Breadth Options:	This module is not available as breadth module	
Notes:	This module is a major core for Biological Sciences, Biochemistry & Molecular Biology, and Marine Science Streams	
Attendance Policy/Requirement:	Students are required to attend all taught sessions throughout the module and participate in all assignments, class tests and laboratory practicals	