

Module code	SG-4307		
Module Title	Geotectonics		
Degree/Diploma	Bachelor of Science (Geology)		
Type of Module	Major Option		
Modular Credits	4	Total student Workload	10 hours/week
		Contact hours	6 hours/week
Prerequisite	None		
Anti-requisite	None		
Aims			
<p>This module aims to train students to the origin, formation and operation of tectonic plates of the planet Earth. The evolution and dynamics of the Earth's Core and Mantle are presented, too. The subduction factory, arc mechanics, magmatism and metamorphism will be covered in detail. This module will also analyse collision orogenesis, granites, channel flow and exhumation in much more details. The students will be exposed to neotectonics and cratons, mobile belts and tectonic processes to have a global view of neo- and paleo-tectonics.</p>			
Learning Outcomes			
<i>On successful completion of this module, a student will be expected to be able to:</i>			
Lower order :	20%	<ul style="list-style-type: none"> - understand the tectonic processes and morphology - comprehend the magmatism associated to plate tectonics 	
Middle order :	60%	<ul style="list-style-type: none"> - explain the chemical, mechanical and thermal structure of the Earth - analyse controls of geological phenomena, at a range of scales - discriminate Earth's modern tectonic settings and synthesise their magmatic, sedimentary, metamorphic and structural characteristics - explore the Archean tectonics from the Recent tectonics 	
Higher order:	20%	<ul style="list-style-type: none"> - appraise the evidence for periodic assembly and dispersal of continents - appraise and discuss the mechanisms proposed for the formation and evolution of continental Crust 	
Module Contents			
<ul style="list-style-type: none"> - Plate tectonics and geodynamics; composition and structure of the Earth - Formation, development and types of Crust and Mantle - Tectonic settings and systems - Tectonic accretion and accretionary prisms, tectonic erosion - Tectonic evolution of Brunei and its surrounding areas 			
Assessment	Formative assessment	Practical tests, assignments and feedback	
	Summative assessment	Examination: 50% Coursework: 50% <ul style="list-style-type: none"> - 1 individual assignment (25%) - 1 group project (25%) 	