Module code	SG-2201			
Module Title	Structural Geology			
Degree/Diploma	Bachelor of Science (Geology)			
Type of Module	Major Core			
Modular Credits	4	**Total student Workload**	10	hours/week
		Contact hours	6	hours/week
Prerequisite	None			
Anti-requisite	SG-2302 Structural Geology			

Aims

This module aims to provide fundamental theoretical, and practical knowledge about the Earth's structures, origin, and deformation. It involves study of deformation mechanisms, and patterns from microscopic scale (e.g. grains or within grains) to global scale (e.g. Earth's crust or lithospheric plate). Students will visit geological outcrops in Brunei to understand the local structures, and their tectonic significance. The association of hydrocarbons with tectonic, and gravitational structures will be discussed, with particular reference to local examples.

Learning Outcomes

On successful completion of this module, a student will be expected to be able to:

Lower order :	30%	- understand the basic geological structures - describe and clasificy deformation patterns - describe deformation (stress, strain) and the mechanical properties of rocks
Middle order :	60%	- analyse deformation mechanisms from outcrops and rock microstructures - the discriminate between brittle and ductile deformation - explorethe kinematic significance of fabrics in rocks - interpret complex geological structures - investigate regional, and global structures and their tectonic significance
Higher order:	10%	- synthesise brittle and ductile structural data - correlate and present the complex structures with hydrocarbon potential

Module Contents

- Fundamental concepts of Structural Geology,forces,stresses,deformation and strain
- Stereographic Projections
- Rheology-stress-strain relationships
- Brittle (joints, veins, faults and faulting) and ductile deformation (folding and fold types)
- Geological structural mapping and principal tectonic regimes; balanced cross section

Assessment	Formative assessment	Practical tests, assignments and feedback
	Summative assessment	Examination: 60%
		Coursework: 40% - 1 individual field assignment (20%) - 1 group assignment(20%)