

Module code	SG-4301		
Module Title	Advanced Sedimentology		
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 is designed for the students to develop an advance understanding of sedimentary environments and sedimentary processes. Specifically, the module aims to increase the students' competency and capability in interpreting sedimentary sequences in the field and on the papers. The module is aimed to form students able to work in companies dealing with sediments and sedimentary structures, and to let them be competent in gathering information and consequently interpret them at both regional and extra basin level.</p>			
Learning Outcomes			
<i>On successful completion of this module, a student will be expected to be able to:</i>			
Lower order :	30%	<ul style="list-style-type: none"> - recall sedimentary structures, their processes and their environment - remember the relations between environments, energy and grain sizes, sorting, porosity, permeability, geometry of the deposits 	
Middle order :	50%	<ul style="list-style-type: none"> - interpret the geometries and sequences trough time and space - correlate sequence stratigraphy processeswith the related sedimentary environments, in terms of geometry, energy and accomodation space - determine sea level fluctuation from a sedimentary profile or log 	
Higher order:	20%	<ul style="list-style-type: none"> - correlate profiles among environments in intra-and extra-basin systems - correlate sedimentary facies and successions and determine their evolution 	
Module Contents			
<ul style="list-style-type: none"> - Processes, classification, structure and provenance of clastic sedimentary rocks - Facies formation, and facies model concepts; applications of process sedimentology to siliciclastic successions, from non-marine to coastal and marine environments - Sedimentary environments, sedimentary physical and chemical processes, sequence stratigraphy - Aspects of carbonate mineralogyand geochemistry - Basin analysis 			
Assessment	Formative assessment	Practical tests, assignments and feedback	
	Summative assessment	Examination: 50% Coursework: 50% - 5 reports from field works and group project (50%)	