

Module code	SG-4305		
Module Title	Micropaleontology and Biostratigraphy		
Degree/Diploma	Bachelor of Science (Geology)		
Type of Module	Major Option		
Modular Credits	4	Total student Workload	10 hours/week
		Contact hours	5 hours/week
Prerequisite	None		
Anti-requisite	None		
Aims			
<p>Students will be able to recognise micro- and nanno-fossils from all geological periods and several common environments, in thin sections and loose material. Biology, ecology and stratigraphy of these groups will be studied. Some groups of macrofossils (e.g. trilobites, cephalopods, bivalves, brachiopods and graptolites) will be presented to integrate the biostratigraphical part. Particular attention will be given to oil-related biostratigraphic services and most common biosteering techniques. Some rudiments on microfacies analyses will be also part of the teaching program.</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 fossil names - recognise the most important index and facies fossils - identify fossils in both loose specimens and thin sections 	
Middle order :	50%	<ul style="list-style-type: none"> - interpret several environments and environmental changes through time - observe and interpret transportation, reworking and mixtures 	
Higher order:	20%	<ul style="list-style-type: none"> - correlate logs and environment through geological time and space - reconstruct fossil taxa and their taphonomic pathways - work independently and in groups, use online resources and books 	
Module Contents			
<ul style="list-style-type: none"> - Systematic of organisms (eukaryotes, prokaryotes, archea, bacteria) - Phylogeny of most important groups (Foraminifera & Nanofossils) - Taxonomy of some selected biostratigraphic relevant fossil groups - Microfacies analyses - Precambrian, Paleozoic, Mesozoic and Cenozoic biostratigraphies and microbiostratigraphies - Biostratigraphy in the future (Anthropocene and future mass extinction) - Biostratigraphy in applied Geology and oil industry 			
Assessment	Formative assessment	Practical tests, assignments and feedback	
	Summative assessment	Examination: 50% Coursework: 50% - 3 review tests (50%)	