

Module code	SG-5304		
Module Title	Introduction to Organic Petrology		
Degree/Diploma	Master of Science in Petroleum Geosciences by Coursework		
Type of Module	Option		
Modular Credits	4	Total student Workload	8 hours/week
		Contact hours	4 hours/week
Prerequisite	None		
Anti-requisite	None		
<b>Aims</b> To provide understanding of fossil based organic matter in sedimentary sequences including coal and the finely dispersed organic matter in rocks (DOM) which helps to describe the distinctive features of the macerals that record the starting plant material in the peat mines and the geochemical changes occurring during burial and coalification. To provide better clues for the maceral compositions of organic matter which influence the utilisation properties of the coal as a fuel, metallurgical feedstock and a hydrocarbon source rock.			
<b>Learning Outcomes</b> <i>On successful completion of this module, a student will be able to:</i>			
Lower order:	30%	<ul style="list-style-type: none"><li>- recognise the basic idea of organic petrology</li><li>- report the types of organic matter in coal and other sediments</li></ul>	
Middle order:	50%	<ul style="list-style-type: none"><li>- define the composition and proportions of the organic constituents</li><li>- identify the maceral composition of coal and other source rock sediments</li><li>- explain the geochemical data and interpret the source rock quantity, quality and maturity</li><li>- investigate the different types of macerals in coal source rock</li><li>- investigate the maceral composition in shales and other source rock</li></ul>	
Higher order:	20%	<ul style="list-style-type: none"><li>- perform complete interpretation of organic matter</li><li>- appraise the source rock as hydrocarbon potential</li></ul>	
<b>Module Contents</b> <ul style="list-style-type: none"><li>- Overview of organic petrology with a focus on the organic petrology techniques - Formation of coal, classification of organic matter</li><li>- Organic petrology methods</li><li>- Instrumentation and its implications in organic petrology</li><li>- Coking and coke petrography</li><li>- Characterisation of petroleum source rocks</li></ul>			
Assessment	Formative assessment	Weekly discussion, practical tests and feedback	
		Examination: 50%	

	Summative assessment	Coursework: 50% <ul style="list-style-type: none"> <li>- 5 individual written assignments (30%)</li> <li>- 2 class tests (20%)</li> </ul>
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