Module code	SG-5307			
Module Title	Unconventional Hydrocarbon Resources			
Degree/Diploma	Master of Science in Petroleum Geoscience 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			

Aims

To provide knowledge of unconventional reserves and its huge potential to supplement future energy short falls along with examples from different world class basins notable for unconventional hydrocarbon resources and the recent technological advancements.

Learning Outcomes

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

Lower order:	30%	- recognise different unconventional hydrocarbon resources - evaluate the necessities and applications of unconventional resources
Middle order:	50%	- analyse data, tools and methods used for the exploration of unconventional resources
Higher order:	20%	- develop skills to find the prospects of unconventional energy sources - appraise the uncertainties related to unconventional energy sources - perform integration of different databases and develop protocols to explore and develop unconventional hydrocarbon resources

Module Contents

- Coal and coalbed methane; its occurrence, distribution and exploration techniques
- Gas hydrates and tight gas sands; its occurrence, distribution and exploration techniques
- Gas shale and shale oil; its distribution geological environment and exploration techniques and strategies
- Geothermal Energy; geological environment and sources of energy and its exploitation techniques
- Oil sands and Oil shale; its occurrence, distribution, depositional environment, energy potential and exploration techniques
- Uranium, its occurrence, distribution, geological factors, environmental issues and energy potential

Assessment	Formative assessment	Weekly discussion, practical tests and feedback
		Examination: 50%

	Summative assessment	Coursework: 50% - 5 individual written assignments (35%) - 1 class test (15%)