

Module code	SG-2204		
Module Title	Geophysics		
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-2305 Geophysics		
<b>Aims</b>			
<p>The module aims to highlight the importance of Geophysics in the understanding of the global structure of Earth and the exploration for economic minerals, oil and gas. It includes lectures, practicals and field classes on various methods including the "hands-on" use of Geophysical equipment. Computer interpretation and processing of Geophysical data from various exploration techniques will be introduced, too.</p>			
<b>Learning Outcomes</b>			
<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"> <li>- understand the basic principles of different geophysical methods</li> <li>- understand the importance and role of geophysics in the realm of Geology</li> <li>- understand the basic applications of geophysical methods</li> <li>- understand local structural variations and large scale tectonics</li> </ul>	
Middle order :	50%	<ul style="list-style-type: none"> <li>- acquire and analyse geophysical data for multidisciplinary studies</li> <li>- interpret geological phenomena and to identify natural resources</li> <li>- interpret qualitative and quantitative Geophysical data</li> <li>- develop skills to link Geology with Geophysics</li> </ul>	
Higher order:	20%	<ul style="list-style-type: none"> <li>- visualise local and regional structural styles</li> <li>- to use state-of-art techniques working independently and in groups</li> </ul>	
<b>Module Contents</b>			
<ul style="list-style-type: none"> <li>- Gravity and the figure of Earth (Geodesy)</li> <li>- Gravity and magnetic data acquisition, processing and interpretation</li> <li>- Introduction to seismic waves and theory</li> <li>- Electrical and electromagnetic methods: Data acquisition, processing and interpretation</li> <li>- Use of Geophysical equipment in the field and the laboratory</li> </ul>			
<b>Assessment</b>	Formative assessment	Practical tests, assignments and feedback	
	Summative assessment	Examination: 50% Coursework: 50% <ul style="list-style-type: none"> <li>- 7 written assignments (30%)</li> <li>- 1 class test (20%)</li> </ul>	