

<b>Module code</b>	SG-4311		
<b>Module Title</b>	Ore Deposits and Economic Geology		
<b>Degree/Diploma</b>	Bachelor of Science (Geology)		
<b>Type of Module</b>	Major Option		
<b>Modular Credits</b>	4	<b>Total student workload</b>	10 hours/week
		<b>Contact hours</b>	4 hours/week
<b>Prerequisite</b>	None		
<b>Anti-requisite</b>	None		
<b>Aims</b>			
<p>The module aims at providing an overview of the distribution and the principles of the genesis of the main types of metallic and non-metallic mineral deposits. It also provides methods for the identification of common types of metallic minerals, as well as for core logging. The general characteristics of metallic and non-metallic deposits, as well as the notions of "resource" and "reserve" are presented, too. Strategies for mineral exploration will be explained with case studies.</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 important types of ore deposits and their environments</li> <li>- discern the main applications of mineral raw-materials</li> <li>- understand the fundamentals of mineral economics</li> </ul>	
Middle order :	50%	<ul style="list-style-type: none"> <li>- identify common ore minerals in hand samples and under the microscope</li> <li>- evaluate the economic potential of a deposit</li> <li>- review, investigate and apply the most widely used methodologies in mineral prospecting</li> </ul>	
Higher order:	20%	<ul style="list-style-type: none"> <li>- devise strategies for mineral exploration and analyse economic factors</li> <li>- assess environmental impacts from exploitation and extractive activities</li> <li>- work in groups for the evaluation of economic minerals and their reserve estimation</li> </ul>	
<b>Module Contents</b>			
<ul style="list-style-type: none"> <li>- Geological context of economic minerals and their ore-forming processes</li> <li>- Characterisation of ore deposits</li> <li>- Extraction, resources and reserves, investment requirements and feasibility of metallic and non-metallic minerals</li> <li>- Fundamentals and methods for mineral prospecting</li> <li>- Environmental impacts from the exploitation of economic minerals</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>- 1 individual essay (25%)</li> <li>- 1 individual presentation (25%)</li> </ul>	