

<b>Faculty</b>	Natural Sciences			
<b>Home Department</b>	Earth Sciences			
<b>Module Topic</b>	Geochemistry, Mineralogy and Sedimentology			
<b>Generic Module Name</b>	Geology 232			
<b>Alpha-numeric Code</b>	APG232			
<b>NQF Level</b>	6			
<b>NQF Credit Value</b>	20			
<b>Duration</b>	Semester			
<b>Proposed semester to be offered</b>	First Semester			
<b>Programmes in which the module will be offered</b>	BSc (Applied Geology) (3214, 3011) BSc (Environmental and Water Science) (3027, 3331)			
<b>Year level</b>	2			
<b>Main Outcomes</b>	<p>On completion of this module students should be able to:</p> <ul style="list-style-type: none"> <li>Identify crystal forms and systems.</li> <li>Describe compositional characteristics and physical properties of minerals.</li> <li>Explain the basic principles of geochemistry as it relates to minerals and rocks.</li> <li>Explain the basic principles / processes of sediment deposition and depositional environment.</li> <li>Describe sedimentary rocks.</li> <li>Describe the classification of sedimentary rocks and associated textures.</li> </ul>			
<b>Main Content</b>	<ul style="list-style-type: none"> <li>Principles of crystallography</li> <li>Composition- and structure- based classification of minerals</li> <li>Atomic theory, electron configuration, periodic table</li> <li>Bonding in minerals and element substitution</li> <li>Identification of rocks and minerals in hand specimen</li> <li>Geochemical principles – element substitution, geochemical analysis, major and trace elements, isotope systematics (stable and radiogenic), age dating of rocks</li> <li>Classification of sedimentary rocks and associated textures.</li> </ul>			
<b>Pre-requisite modules</b>	ESC111 and ESC121			
<b>Co-requisite modules</b>	None			
<b>Prohibited module Combination</b>	None			
<b>Breakdown of Learning Time</b>	<b>Hours</b>	<b>Time-table Requirement per week</b>		<b>Other teaching modes that does not require time-table</b>
<i>Contact with lecturer / tutor:</i>	42	Lectures p.w.	3	
<i>Assignments &amp; tasks:</i>	30	Practicals p.w.	2	
<i>Practicals:</i>	84	Tutorials p.w.	0	
<i>Assessments</i>	12			
<i>Selfstudy</i>	32			
<b>Total Learning Time</b>	<b>200</b>			
<b>Method of Student Assessment</b>	Continuous Assessment (CA): 50% Final Assessment (FA): 50%			
<b>Assessment Module type</b>	Continuous and Final Assessment (CFA)			