

Faculty	Natural Sciences		
Home Department	Earth Sciences		
Module Topic	Structural Geology and Optical Mineralogy		
Generic Module Name	Geology 234		
Alpha-numeric Code	APG234		
NQF Level	6		
NQF Credit Value	20		
Duration	Semester		
Proposed semester to be offered	Second Semester		
Programmes in which the module will be offered	BSc (Applied Geology) (3214, 3011)		
Year level	2		
Main Outcomes	<p>On completion of this module students should be able to:</p> <ul style="list-style-type: none"> • Have a conceptual understanding of map construction. • Understand principles of rock deformation, stress and strain. • Develop skills for the structural analysis of deformed rocks. • Recognize and describe faults, joints, folds, tectonic fabric and understand the mechanisms behind these structures • Have a conceptual understanding of tectonic settings and rock mechanics. • Describe the principles of interaction between light propagation in crystalline materials and apply these in the identification of minerals. • Use a polarized-light microscope to identify and describe minerals and rocks in thin section. 		
Main Content	<ul style="list-style-type: none"> • Reading of geological maps and cross-sections. • Constructing simple cross-sections and block diagrams. • Understanding of topographic contours and structure contours. • Concepts of stress, strain and translation. • Description and analysis of deformed rocks. • Theory of light interaction with crystalline material. • Identification minerals under the polarized-light microscope using crystal-optical and morphological properties. 		
Pre-requisite modules	ESC111 and ESC121		
Co-requisite modules	None		
Prohibited module Combination	APG231		
Breakdown of Learning Time	Hours	Timetable Requirement per week	Other teaching modes that does not require time-table
<i>Contact with lecturer / tutor:</i>	27	<i>Lectures p.w.</i>	3
<i>Assignments & tasks:</i>	48	<i>Practicals p.w.</i>	2
<i>Practicals:</i>	54	<i>Tutorials p.w.</i>	0
<i>Tutorials:</i>	0		
<i>Assessments:</i>	23		
<i>Selfstudy:</i>	48		
<i>Other:</i>	0		
Total Learning Time	200		
Methods of Student Assessment	Continuous Assessment (CA): 60% Final Assessment (FA): 40%		
Assessment Module type	Continuous and Final Assessment (CFA)		

