Course Specifications

General Information

Course name	Structural Geology
Course number	GEOL2306
Faculty	
Department	
Course type	Major Needs
Course level	2
Credit hours (theoretical)	2
Credit hours (practical)	1
Course Prerequisites	

Course Objectives

1 - Provide a basis for field observation of brittle and ductile geologic structures including description, orientation, geometry and naming of structures
2 - Introduce concepts from continuum mechanics and experiments that are relevant for understanding structures

Intended Learning Outcomes

Knowledge and Understanding

* Understand and describe the features formed in rocks when subject to stress, analyze the strain in these rocks and interpret the palaeostress field that affected the rock and caused the deformation
* Understand how to quantify the geometry of rock structures
* Understand how the geometry evolved during the development of rock structures (kinematics)
* Understand the mechanics of the rock structure development

Course Contents

1 - Description and classification of beds
2 - Folds, Faults and Joints
3 - Structures and field relation
4 - Geological maps and cross-sections
5 - Structures analysis
6 - Unconformities
7 - The relationship between folds and faults
8 - Folds and faults mechanism
9 - Stereographic projection
10 - Practical part: Maps for different structures

Teaching and Learning Methods

1 - LCD
2 - Maps

Students Assessment

Assessment Method	TIME	MARKS
Two Midterm exams	First month and second month of the semester	30
Homework	During the semester	10
Final Practical exam	End of the semester	20
Final exam	End of the semester	40

Books and References

Course note	Structural Geology: Lecture Notes
Recommended books	Structural Geology - Fundamentals and modern development (1993), S.K. Ghosh
	Foundations of Structural Geology, 2nd edition (1989), R.G. Park
	Geological Structures (1989), John Roberts