

MAJOR PROJECT WORK

ESR 301: Field Geology.

The field program is extended for three weeks; the detailed description of tasks and activities which are executed during this program are as follows:

Day	Program	Equipments used
1 st	<ul style="list-style-type: none"> - Recognition of some geologic features observed along the flanks of the main road leading to the area. - Camping. - A lecture entitled "Safety and Security". 	
2 nd	<ul style="list-style-type: none"> - A brief idea about the field program. - How to use Brunton compass and aerial photographs in the determination of your location. (Bearing and back-bearing methods). - Studying the general characteristics of igneous rocks, with special emphasis on syenite, granites and gabbros. - Studying the intrusive contact of the igneous rocks versus metamorphites. - Field relations and diagnostic features of pink granites, diorites and gabbros. 	Geological Hammer, Field note book, Brunton compass, Hand lens (10X)
3 rd	<ul style="list-style-type: none"> - How to study rhyolites, basalts, tuffs, ignimbrites and pyroclastics in the field. 	
4 th	<ul style="list-style-type: none"> - General characteristics of sedimentary rocks. - Diagnostic field observations of limestones, sandstones, mudstones and siltstones. - Introducing sedimentary primary structures. 	diluted HCL
5 th	<ul style="list-style-type: none"> - Identification of some metamorphic rocks, such as: slates, phyllites, schists and gneisses. 	
6 th	<ul style="list-style-type: none"> - Introduction to geological structures in the field. - A detailed field idea about various kinds of faults. - Geometry and kinematics of thrust faults. - Initiation and propagation of thrusting. 	
7 th	<ul style="list-style-type: none"> - Studying of some extensional and shear fractures recorded in the study area. 	
8 th	<ul style="list-style-type: none"> - How to measure the attitudes of bedding, foliations, fold limbs, fault planes, joints, axes of minor folds and kinks and lineations (e.g. mineral-, stretching-boudinage-, , rodding-, crenulation-, oriented deformed pebbles- and pencil- lineations). 	Brunton compass
9-12 th	<ul style="list-style-type: none"> - How to carry out a geologic traverse by utilizing the pacing method and using the compass. - Students are trained to make several traverses. 	+ 50 m measuring tapes.
13-20 th	<ul style="list-style-type: none"> - Classification of students into groups. Each group has to construct a detailed geologic map and provide a geological report on a selected area. Lithologic units and various kinds of mesoscopic and major structural 	

	fabrics must be represented in the map.	
21st	- Examination	