**CENTRAL UNIVERSITY OF KERALA**
**DEPARTMENT OF GEOLOGY**
**M.Sc. GEOLOGY**

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| Course Code | EGE 5191 | Semester | I |
| Course Title | Structural Geology and Geological Field Mapping | | |
| Credits | 3 | Type | Core |

This is a participatory, experimental, problem solving and employability based course for Geotechnical skills & Geological mapping skills.

***Course Description***

**This course deals with various structural analysis and geological field studies. It will offer the preparation and interpretation of geological maps and sections for the understanding of complex geological history in an area. Stereographic projection or stereonets will enable the students to interpret the deformational events. Geological field work will provide a real life experiences towards the proper understandings of various geological phenomenon.**

***Course Outcome***

By the end of the course, students are expected to be able to:

- Understand the interpretation of geological maps and sections.
- Solve various stereo net based problems.
- Interpretation of geological history and deformational events.
- Perform field identification of geological structures.
- Interpretation and classification of geological terrain based on field work.

***Course Structure***

*Module - 1*

Preparation and interpretation of geological maps and sections. Structural problems. Recording and plotting of field data. Study of deformation structures in hand specimen. Study of dip isogons from fold profiles.

*Module – 2*

Stereographic projection in structural analysis. Application of stereographic projection in solving structural problems. Beta diagram and Pi diagram. Solving problems relating to faults and shear zones.

*Module – 3*

Topo sheets: Map scales, features in toposheet, finding the coordinates of points. Surveying - Chain Survey- Plane Table Survey – Leveling- Dumpy Level surveying, Total Station and GPS surveys. Geological field visit and mapping of litho-units in igneous, metamorphic and sedimentary terrains. Identification and Mapping of Faults, folds, foliations, cleavages, lineations, joints and shear zones

***Evaluation &Grading***

Lab assessment – 10 %
Skill development (Analytical and lab skills) – 10%
Field work – 20%

***End Semester Assessment – 60%***

**References**


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