



MANGALORE UNIVERSITY
DEPARTMENT OF MARINE GEOLOGY

MGP 452: STRUCTURAL GEOLOGY AND PALAEOONTOLOGY LAB

Course Outcome:

- CO1: Preparation of topomap, calculation of slope, drawing profiles etc. is attained.
- CO2: Determination of strike and dip; Strike-whole-circle bearing and quadrant systems.
Representation of planar structures through strike and dip.
- CO3: Helps to study and describe various invertebrate fossils,
- CO4: Practical knowledge will help students to do field work related to exploration of water, minerals and fossils to trace evolution and in search of fossil fuels.



Structural Geology (Lab)

1. Preparation of topomap, calculation of slope; drawing a profile.
2. Determination of strike and dip; Strike-whole-circle bearing and quadrant systems.
3. Representation of planar structures through strike and dip.
4. Representation of linear structures through strike and pitch.
5. Measurement of strike and dip using compass clinometer & brunton compass in the field.
6. Tracing the outcrop patterns of horizontal, vertical and inclined (dip & slope in opposite directions; dip & slope in the same direction – dip > slope, dip < slope) beds keeping the topography constant.
7. Drawing cross section of horizontal, folded, faulted and vertical beds/igneous intrusions, strata with unconformities using structural geological maps.
8. Completion of outcrops (three-point problems).
9. Problems involving thickness of bed (vertical and true), width of outcrop, strike, dip etc. Use of equal area and stereonet.

Palaeontology (Lab)

1. Invertebrate Fossils: Identification and descriptive morphology of Coelenterata Brachiopoda Mollusca, Arthropoda and Echinodermata.
2. Plant Fossils: Identification and descriptive morphology of plant fossils.
3. Microfossils: Descriptive morphology, classification and identification of microfossils.
4. Chronological ordering of invertebrate fossils, plant fossils and microfossils.
5. Evolutionary trends in fossils.
6. Reconstruction and identification of fossils aided by morphological parts.
7. Identification of microfossils and shells in the sediment samples collected by students.

