

## Department Name: Geology

### Semester – III

<b>Course Title:</b> Field Geology and Instruments	<b>Course Code:</b> 24MJGG3S
<b>Total Contact Hours:</b> 28	<b>No. of Credits:</b> 2
<b>L:T:P</b>	2 – 0 – 0
<b>Internal Assessment Marks:</b> 10	<b>Duration of SEE:</b> 2 Hours
<b>Semester End Exam Marks:</b> 40	

#### Course Outcomes (COs):

At the end of the course, students will be able to:

1. To conduct geological field mapping and data collection.
2. To use geological instruments for field measurements and analysis.
3. To identify and classify rocks and minerals in the field.
4. To interpret geological features and construct geological maps and cross-sections.
5. Document and report field observations accurately.

Unit	Description	Hours
<b>1</b>	<b>Introduction to Field Geology:</b> Scope and objectives; Field safety and ethics; Basic tools and techniques. Geological Mapping: Topographic maps and scales; Orientation and use of compass. <i>Rock and Mineral Identification in the Field:</i> Identification techniques for common rocks and minerals; Field guide to rocks and minerals.	9
<b>2</b>	<b>Field Trip Preparation:</b> Planning and organizing a field trip; Packing and field gear essentials; Safety protocols and teamwork; Field mapping techniques; Rock sampling and identification; Recording field observations	8
<b>3</b>	<b>Introduction to Geological Instruments:</b> Overview of instruments (e.g., Global Navigation Satellite System [GNSS], Brunton compass, clinometer); Calibration and maintenance of instruments; Instrument handling and usage; GNSS principles and operation; Collecting and processing GNSS data; GNSS data collection and mapping; Advanced field	11

	mapping techniques; Structural measurements and data recording; Field trip report preparation; Introduction to more advanced instruments (e.g., portable XRF, seismic equipment).	
<b>References:</b> 1. 2. 3. ....		

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