

**Name of Programme:** M. Sc. Applied Geology

**Course Code:** GEO-628

**Title of the Course:** Practical of Soil Science

**No of Credits:** 01

**Effective from AY:** 2023-24

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| <b>Prerequisites for the course:</b> | Students should have undergone M.Sc. Semester I and II.  |          |
| <b>Objective:</b>                    | To get a hands-on experience of soil, its characteristics and recognition.   |          |
| <b>Content:</b>                      | Preparation of soil distribution maps of Goa using NBSS data source, study of soil profile and nomenclature of horizons, soil colour description in the field. Collection of soil sample and grain size distribution analysis and classification of soils using US SCS method.   | 30 hours |
| <b>Pedagogy:</b>                     | Laboratory exercises and field visits.   |          |
| <b>Reference</b>                     | <ol style="list-style-type: none"><li>1. Brady, N. C., &amp; Weil, R. R. (2002). The nature and properties of soils 13th ed Prentice Hall. <i>New Jersey, USA</i>, 249.</li><li>2. Sparks, D. L. (2019). Fundamentals of soil chemistry. <i>Encyclopedia of Water: Science, Technology, and Society</i>, 1-11.</li><li>3. Raymond, B. D., &amp; Richard, D. (2000). <i>Soil geomorphology</i>, John Wiley &amp; Sons, 2000.</li><li>4. Summer, M. E. (1995). Hand Book of Soil Science. University of Georgia.</li><li>5. Sparks, D. L. (2003). <i>Environmental soil chemistry</i>. Elsevier.</li></ol> |          |
| <b>Course outcomes</b>               | <ol style="list-style-type: none"><li>1. Students will be able to prepare soil distribution maps,</li><li>2. They will be able to identify soil horizons.</li><li>3. They will also be able to undertake grain size distribution analysis and classify soils.</li></ol>  |          |