



**Knowledge Network of
Indian Institute of Technology, Gandhinagar
Under TEQIP-II Initiative**

**Summer School on
Geotechnical Engineering Laboratory**

Laboratory investigations play crucial role in understanding of the soil mechanics concepts and design of geotechnical structures. There is no alternative to doing these experiments by hand get a sense or feel of the material behavior.

This summer school will provide the participants with hands-on experience of sampling and performing several geotechnical laboratory tests besides discussions on theoretical background and interpretations.

Topics for discussion

General Testing:

Introduction, Sample Collection, wax sealing; Index properties, wet/dry sieving, LL, PL, SL, pH; Differential free swell index; Hydrometer testing; Specific Gravity, Standard compaction, Permeability Tests, Constant Head Test, Falling Head Test; Relative density;

Shear Strength testing:

Sample preparation, Unconfined Compression (UC) test, Direct Shear test, Unconsolidated Undrained (UU) test, Consolidated Undrained (CU) test.

Tentative schedule for this summer school

- (a) Morning session: Lecture for 1 to 1.5 hours, and 1-1.5 hours Lab
- (b) Afternoon session: 2-3 hours Lab and discussion sessions

Presenters: (Instructors)

1. Prof. Ajanta Sachan (IIT Gandhinagar)
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