



UNIVERSITY OF ALBERTA

DEPARTMENT OF CIVIL AND ENVIRONMENTAL ENGINEERING

GEOTECHNICAL and GEOENVIRONMENTAL GRADUATE LABORATORY OUTLINE FALL TERM 2014

Objective: to familiarize the student with conventional geotechnical laboratory procedures and techniques. Consideration of the uncertainty of the results, arising from both experimental variations and real soil response, is required. The synthesis of laboratory results and applications to practical situations will be communicated through laboratory reports.

Coordinator: Dr. Lijun Deng
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Contact Hours: Wednesday 2-5 pm, NREF L1-120

Suggested References:

1. Engineering Properties of Soils and Their Measurement, 4 th Ed., J .E. Bowles, McGraw Hill, 1992.
2. ISRM Suggested Methods - Rock Characterization Testing and Monitoring, Editor: E. T. Brown, 1981.

Course Description: Students will be divided into laboratory groups. Each group will conduct eight laboratories outlined in the schedule below.

Laboratory Schedule

No.	Date	Course	Laboratory Topic
L1	September 17	680/681	Soil Classification and Atterberg Limits
L2	September 24	680/681	Undrained Strength - Lab Vane & Cone Test – Report of L1 & L2 <u>due October 8</u>
L3a	October 8	680	Consolidation Test
L3b	October 15	680	Consolidation Test – continued – Report of L3 <u>due October 29</u>
L4	October 22	681	Permeability of Granular Soil
L5	October 29	681	Steady State Seepage Through a Model Dam - Report of L4 & L5 <u>due November 12</u>
L6	November 5	697	Deformation Characteristics of Layered Rock
L7	November 12	697	Index Tests and Uniaxial Compression Test on Rock
L8	November 19	697	Characteristics and Properties of Rock Discontinuities – Report of L6, L7 & L8 <u>due December 3</u>

Submit a report (a single PDF file) to ldeng@ualberta.ca before 11:59 pm of the due date. Name the PDF file with your last name. Permission should be requested if you wish to extend the deadline.