PONTIFICIA UNIVERSIDAD CATÓLICA DE CHILE
SCHOOL OF ENGINEERING
DEPARTMENT OF STRUCTURAL AND GEOTECHNICAL ENGINEERING
ABET COURSE SYLLABI

ICE2683 GEOTECHNICAL ENGINEERING WORKSHOP

Credits and contact hours: 10 UC credits/ 10 hours (3 h. Lecture and 7 h. Independent learning experiences)

Instructor's name: Ricardo García

Course coordinator's name None

Textbook:
- Gonzalez de Vallejo, L.; Ferrer, M.; Ortuño, L.; Oteo, C. (2002) Ingeniería Geológica. Madrid, Pearson Educación.
- Terzaghi, K., Peck, R.B. y Mesri G. Soil mechanics in engineering practice.

Course Catalog Description: Students will be faced to real geotechnical engineering problems that will be solved using the acquired knowledge obtained throughout their studies, as it would be done in practice.

Prerequisite Courses: ICE2614 Soil mechanics

Co-requisite Courses: None

Status in the Curriculum: Required

Course Learning Outcomes:
1. Apply autonomous learning habilities.
2. Outline ground exploration programs.
3. Evaluate proper constructive methods given ground conditions.
4. Preparing profesional reports.

Relation of Course to ABET Criteria:
a. Knowledge of mathematics, science and engineering
b. Design and conduct experiments: analyze and interpret data
e. Identify, formulate, and solve engineering problems
k. Techniques, skills, and modern tools for engineering practice.

Topics covered:
1. Operational background for an engineering project. External restrictions.
2. Geology's contribution to geotechnical engineering project planning.
3. Constructive method analysis. Costs review, advantages and disadvantages.
4. Underground exploration. Codes and methods. On-field and lab procedures.
5. Underground exploration program panning. Result analysis and presentation. Uncertainty evaluation.
6. Local condition evaluation.

7. Preliminary determination of design loads.
8. Constructive method selection.
9. Design loads.
10. Control methods and observations during building construction. Amendment alternatives.
11. Final report.