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

ICE2023 FIELD GEOLOGY

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

Instructor's name: To be defined

Course coordinator's name To be defined.

Textbook: Whitmeyer, S.; Mogk, D. Pyle, E (2009) Field geology education: Historical perspective and modern approaches geological society of America. Special papers.

Course Catalog Description: This course is planned to be taught in 2016. It's designed for the students to use integrally all the knowledge acquired in class and laboratory of previous courses and apply them in the solution of field issues. This course is the closest experience to professional practice for students, where they will be able to build geological maps through observation, identification, registry and comprehension of geological elements as they can be found in nature.

Prerequisite Courses: ICE2025 Geochemistry and petrogenesis y ICE2022 Stratigraphy and volcanic-sedimentary processes

Co-requisite Courses: ICE2024 Andean geology and geodynamics

Status in the Curriculum: Required

Course Learning Outcomes:

1. Identify units of rock according to their nature and space distribution.
2. Locate and trace geological contacts on topographic maps, aerial pictures or satellite images.
3. Recognize, analyze and Rank geological structures such as faults, folds, layering and foliation.
4. Establishing the layering of volcanic and sedimentary units, and draw stratigraphic columns and sections from them.
5. Gather and register geological data on a field book.
6. Synthetize the geological history of a region, integrating different geological information.
7. Communicating effectively the results of field work including text, figures and maps by means of a professional report.

Relation of Course to ABET Criteria:

a. Knowledge of mathematics, science and engineering
g. Effective communication
i. Recognition of the need for, and an ability to engage in life-long learning
j. Knowledge of contemporary issues

Topics covered:

1. Topographic maps, aerial pictures, satellite images.
2. Geological maps: What are they and what is their purpose?
3. Elaboration of geological sections of:
   a. Main Range
   b. Coastal Range
4. Tectonic and geological frame of the area of field work.
5. Geological professional reports.