Credits and contact hours: 10 UC credits / 10 hours (3 h. Lectures; 1.5 h. site visit and 5.5 h. Independent learning experiences)

Instructor’s name: Marcelo Arancibia y José Joaquín Jara

Course coordinator’s name: José Joaquín Jara Donoso

Textbook:

Course Catalog Description: Introduce students into the theory of regionalized variables and provide them theoretical and practical tools for the evaluation of mineral resources using geostatistical methods.

Prerequisite Courses: IMM2003: Mining Geology and EYP1113: Probability-Statistics

Co-requisite Courses: None

Status in the Curriculum: Required

Course Learning Outcomes: Know the basics concepts in sampling theory. Understand regionalized processes and its implications for mineral resources evaluation. Know and apply traditional tools and geostatistical techniques to theoretical and practical problems in mineral resources evaluation. Understand the relevance and implications of mineral resources categorization.

Relation of Course to ABET Criteria:
- Knowledge of mathematics, science and engineering
- Design and conduct experiments: analyze and interpret data
- Design a system, component, or process
- Knowledge of contemporary issues
- Techniques, skills, and modern tools for engineering practice.
Topics covered:

1. Introduction to deposit evaluation. General concepts.
4. Data collection and geological model.
5. Sampling: Theory and techniques. Gy’s theory.
8. Local evaluation and classic methods: polygons, inverse distance.
11. Codes and categorization of mineral resources and reserves.
12. Conditional Simulation