

**Department:** Mining Engineering

**Division:** Mineral Processing

**Level and Major:** MSc, Mineral Processing

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**Course Title:** Process Mineralogy

**Number of Credits:** 2

**Lecturer:** Dr. Mehdi Irannajad

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### **Course Goals and Objectives**

Introduction to mineral and ore characterization methods relating mineral processing circuits.

### **Course Topics**

- Introduction to the theory and operation of process mineralogy in mineral processing
- Definitions and generalities
- Electromagnetic rays and wavelength- energy relations
- Ore characterization
- Minerals properties
- Optical microscopy
- Image analysis
- Electron microscopy

### **Reading Resources**

- Applied Mineralogy in the Mining Industry, W. Petruk