

Department: Mining Engineering

Division: Mining Exploitation

Level and Major: Ph.D., Mining Exploitation

Course Title: Mine Reclamation

Number of Credits: 2

Lecturer: Dr. Morteza Gholi Osanloo

Course Goals and Objectives

Planning and learning of mined lands reclamation methods.

Course Topics

- Definition: Reclamation, Restoration, Rehabilitation, Remediation
- Mining and Environmental Impacts : (1) air pollution, (2) water pollution, (3) land pollution, (4) noise pollution
- Natural and Cultural factors affecting mine reclamation plan: (1) Natural factors, (2) Cultural factors
Mine waste characteristics and environmental problems: (1) Origin and range of mine wastes, (2) Physical, chemical, and biological characteristics
- Initial consideration of mine reclamation strategy (constraints to reclamation plan and plant growth): (1) Climate, (2) Physical factors, (3) Chemical factors
- Eventual mined land use: [1] Return to the original conditions (before mining start- native uses), [2] Agricultural uses, [3] Forestry uses, [4] Lake, Amenity and recreation activities
- Duration of mine reclamation plan implementation
- Integrated, Interactive of surface mining, reclamation, and mines land use planning and design
- Mine waters and mines reclamation plan
- Monitoring and Management of mines reclamation plan
- Mine tailings reclamation plan
- Reclamation of cyanides wastes of gold- silver mines
- Reclamation of uranium, phosphate and potash mines
- Definition of Mine Closure and classification
- Collection and Analysis of Closure data

Reading Resources

- Up-to-date articles