

Department: Mining Engineering

Division: Mining Exploration

Level and Major: MSc, Mining Exploration

Course Title: Nonmetallic Ore Deposits Exploration

Number of Credits: 2

Lecturer: Dr. Abbas Maghsoudi

Course Description

Non-Metallic Minerals are geological materials which are mined for their commercial value, which are not used in the production of metals or energy but are used in the industries based on their physical and/or chemical properties.

Course Goals and Objectives

Evaluate various geologic settings of non-metallic ore deposits and their use in various industries.

Course Topics

- Asbestos
- Talc
- Pyrophyllite
- Magnesite
- Celestite and Strontianite
- Coal
- Graphite
- Borate minerals
- Bentonite
- Kaolin
- Diamond

Reading Resources

- Evans, A., 1997. An Introduction to Economic Geology and Its Environmental Impact
- Dill, H., 2010. The “chessboard” classification scheme of mineral deposits Mineralogy and geology from aluminum to zirconium.
- Chatterjee, K.K., 2009. Uses of Industrial Minerals, Rocks, and freshwater, Nova Science Publishers, Inc. New York.

- Karimpour, M.H., 1999. Industrial minerals and rocks, Firdausi Uni of Mashhad.

Evaluation

- Presentation: 30%
- Final Exam: 70%