

Department: Mining Engineering

Division: Mining Exploitation and Rock Mechanics

Level and Major: BSc, Mining Exploitation and Rock Mechanics

Course Title: Petrology

Number of Credits: 2

Prerequisite: Descriptive Mineralogy

Lecturer: Dr. Abbas Maghsoudi

Course Description

Petrology is the branch of geology that studies the origin, composition, structure of rocks and the conditions under which they form. It is concerned with all three major types of rocks: igneous, metamorphic, and sedimentary.

Course Goals and Objectives

The principles behind rock forming processes, textures and structures of rocks, and general classification of rocks.

Course Topics

- The processes responsible for forming igneous and metamorphic rocks
- Structures of igneous rocks
- Plutonic rocks
- Volcanic rocks
- Pyroclastic rocks
- Metamorphic rocks
- Sedimentary rocks

Reading Resources

- Best, M. G., 2003. Igneous and metamorphic petrology, Blackwell Publishing.
- Darvishzadeh, A., 2010. Metamorphic rocks, Payamnoor Press (In Persian).
- Le Maitre, R.W., 2002. Igneous Rocks: A Classification and Glossary of Terms, Cambridge Uni. Press.
- Moeinvaziri, H. Ahmadi, A., 2009. Igneous petrology, Tarbiat Moalem Uni. Press (In Persian).
- Sepahi, A.A., 2009. Igneous petrology, Noor-e-Elm Press (In Persian).
- Tucker, L.E., 2001. Sedimentary Petrology: An Introduction to the Origin of Sedimentary Rocks, 3rd, Wiley-Blackwell Publishing.

Evaluation

- Quiz: 10%
- Midterm: 30%
- Final Exam: 40%