The Hashemite University
Faculty of Natural Resources and Environment
Department of Earth and Environmental Sciences

Mineralogy (111201220)

2017 Course Catalog

3 Credit hours (2 h lectures, 1 h lab). Crystal structure and composition, their origins, classification and significance. The basic principles behind the arrangement of atoms to form crystal structures, how these atoms are coordinated and bonded and how this is reflected in the external form, chemical composition, and physical properties of the crystals. The practical part covers the identification of the most common minerals based on physical properties, crystal systems, and optical mineralogy.

Textbooks

- Manual of Mineral Science (Manual of Mineralogy) by Cornelis Klein and Barbara Dutrow, 2007.
- Introduction to Mineralogy by William D. Nesse, Oxford Press, 2000

Instructor

Instructor: **Dr. Faten Al-Slaty,** E-mail: fatenm@hu.edu.jo Office: Room #203

Prerequisites

Prerequisites by course : 1201102 – General Geology (2)
Prerequisite for : Igneous and Metamorphic Rocks + Practical Igneous and Metamorphic Rocks

Topics Covered

Week	Topics	Chapters in Text
1	Introduction To Minerals Science	1
2-3	Physical Properties of Minerals	2
4-6	Aspects Of Crystal Structures, Crystallography: External Symmetry	4,6
7-9	Optical Microscopy	13
10-12	Elements Of Crystal Chemistry, Chemical Composition Of Minerals, Chemical Analyses, And Recalculation Of Mineral Formula	3,5,14
13-14	MineralS Stability And Phase Diagram	11
15-16	Minerals Classification And Weathering	21

Evaluation

Assessment Tool	Expected Due Date	Weight
First and second Exams	According to the University calendar	30 %
Lab Works	According to the Department Schedule	30 %
Final Exam	According to the University final examination schedule	40 %