
COURSE: Mineralogy

ACADEMIC YEAR: 2018-2019

TYPE OF EDUCATIONAL ACTIVITY: Basic

TEACHER: Dr. Rosa Sinisi

e-mail: rosa.sinisi@unibas.it**website:** scienze.unibas.it/site/home.html

phone: +39 971 205466**mobile (optional):**

Language: Italian

ECTS: 9 (6 of lessons and 3 of tutorials/practice)**n. of hours:** 84 (48 of lessons and 36 of tutorials/practice)**Campus:** Potenza
Dept./School: Dipartimento di Scienze
Program: Geology (L34)**Semester:** I
(date: 01/10/2018 start; 20/01/2019 end)

EDUCATIONAL GOALS AND EXPECTED LEARNING OUTCOMES

The main goal of this course is to provide the knowhow useful for studying the mineralogical composition of any rock and/or sediment, and in addition to face the geochemistry and petrography courses.

The principal knowledge:

- Formation, transformation and alteration processes of minerals from different environments;
- crystal chemistry;
- crystal morphology and symmetry;
- mineral's optical properties;
- mineral systematic;
- analytical methods for mineralogical studies.

The expected learning outcomes:

- analyse and understand the mineralogical composition of rocks and sediments associated to different geological settings;
 - reconstruct the geological paleoenvironment starting from mineralogical composition of rocks, soils and sediments.
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PRE-REQUIREMENTS

Basic knowledge of chemistry

SYLLABUS

- 1- Physical properties of minerals (4 hours)
 - 2- Mineral's symmetry and structure (5 hours + 4 hours of lab activities)
 - 3- Basic Crystal chemistry (8 hours)
 - 4- Mineral's classification (10 hours)
 - 5- Analytical techniques for mineral identification (16 hours + 28 hours of lab activities)
 - 6 - Optical properties of crystals (5 hours + 4 hours of lab activities)
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TEACHING METHODS

Teacher intended 48 hours to theoretical lessons and 36 hours to classroom and laboratory tutorials. Field trips are also planned. Field and laboratory activities are mandatory.

EVALUATION METHODS

During the course two intermediate verifications are planned. Any verification test will consist of 5 open-ended questions at which a score between 0 and 6 will be assigned. At the end of the lessons, any student will discuss the project work on selected issues.

TEXTBOOKS AND ON-LINE EDUCATIONAL MATERIAL

Textbook:

- Mineralogia. Cornelis Klein (translated by G. Gasparotto). Zanichelli, 2004.

Suggested books:

- Mineral Resources, Economics and the Environment (2nd Edition). S.E Kesler, A.C. Simon. Cambridge University Press, 2015.
- Minerals, Their Constitution and Origin (2nd Edition). H.R. Wenk, A.B. Bulakh. Cambridge University Press, 2004.

Lecture notes and learning resources provided by the teacher during the course.

INTERACTION WITH STUDENTS

Lecturer will receive students in his office (on the second floor of the building 3D, room no. 245) on Mondays and Wednesdays from 16:00 to 18:00. The appointment must be agreed by email (rosa.sinisi@unibas.it).

EXAMINATION SESSIONS (FORECAST)¹

(dd/mm/yy) 7/02/2018; 29/03/2018; 7/05/2018; 11/06/2018; 11/07/2018; 12/09/2018; 16/10/2018; 21/11/2018

SEMINARS BY EXTERNAL EXPERTS YES NO

FURTHER INFORMATION

¹Subject to possible changes: check the web site of the Teacher or the Department/School for updates.