
ACADEMIC YEAR: 2019-2020

COURSE: Mineralogy

TYPE OF EDUCATIONAL ACTIVITY: Characterizing

TEACHER: Rosa Sinisi

e-mail: rosa.sinisi@unibas.itwebsite: 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**
(start: 01/10/2019;
end: 20/01/2020)

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.

Knowledge and understanding

Know concepts and principles useful for understanding the formation, transformation and alteration processes of minerals also considering different geological and petrological contexts to be undertaken in subsequent courses.

Applying knowledge and understanding

Ability to: 1) identify analytical methods suitable for solving mineralogical problems or issues, 2) reconstruct the geological paleoenvironment starting from mineralogical composition of rocks, soils and sediments.

Making judgments

To be able to evaluate geological, geochemical and petrological implications of mineralogical composition of a solid matrix (rock, soil or sediment) also considering different natural environments.

Communication skills

Ability to present results of a mineralogical study (a technical report) clearly and synthetically, using IT tools and software dedicate to mineralogical analysis, with scientific language proper of mineralogy.

Learning skills

Self-updating skills by means of reading of online scientific texts and publications, papers or digital book concerning mineralogical issues, and attending training courses, seminars and masters.

PRE-REQUIREMENTS

Basic knowledge of inorganic 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 (9 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 (4 hours + 4 hours of lab activities)
-

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 consists 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 mineralogical 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 3 to 5 p.m. The appointment must be agreed by email (rosa.sinisi@unibas.it).

EXAMINATION SESSIONS (FORECAST)¹

(dd/mm/yy) 18/02/2020; 24/03/2020; 9/06/2020; 14/07/2020; 22/09/2020; 20/10/2020; 18/12/2020

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.