



UNIVERSITÀ
DEGLI STUDI DI MILANO-BICOCCA

SYLLABUS DEL CORSO

Introduzione alla Petrografia

2021-1-E3401Q039-E3401Q046M

Aims

Aim of the “*Introduction to Petrography*” class is to give a general understanding of the main geological processes that occurred during the Earth evolution, with emphasis on rock petrogenesis. During the practical activity (Rock Lab), students will acquire the basic skills and the ability to identify and classify the most representative lithologies.

Contents

LECTURES (4 CFU):

- The Earth system
- Early history of the Earth
- Principles of Mineralogy
- Plate tectonics
- Igneous rocks and their formation
- Volcanoes as geosystems
- Surface processes of the rock cycle
- Sedimentary rocks
- Metamorphism
- Types of metamorphism and geological environments

PRACTICALS ROCKS DESCRIPTION (2 CFU):

- Main rock forming minerals
- Textures and rock classification

Detailed program

LECTURES (4 CFU)

PRACTICALS ROCKS DESCRIPTION (2 CFU):

Prerequisites

None

Teaching form

The “*Introduction to Petrography*” class consists of a combined learning approach based on *Lectures* (28 hours in total), *Practical Activity* (Rock Lab, 24 hours in total) and one day of campus abroad in the fall season. Lectures usually run between October and mid-November, whereas the practical activity lasts the entire first semester (from October to January). Lectures attendance is not mandatory, but highly recommended. Attendance at the Rock Lab is required for 75% of total (students have to sign in).

During Covid-19 emergency part of the lectures will be given in the presence of the lecturer at the University institute, whereas the rest of the course will be video-recorded.

Any doubts on lectures and practical activity, as well as on available e-material, can be clarified with the lecturer and during the tutoring.

Textbook and teaching resource

All teaching material is available on the e-learning platform (<http://elearning.unimib.it/>)

"Understanding Earth"

John Grotzinger; Thomas H. Jordan; Frank Press; Raymond Siever

Further reading:

"Principles of Igneous and Metamorphic Petrology"
2nd Edition - [Anthony Philpott; Jay Ague](#)

Semester

First semester (October - January)

Assessment method

Seven exam sessions of the *Principles of Geology* course are scheduled at the beginning of the Academic Year. Students are evaluated on three tests in this course. Each test has an evaluation in thirtieths. A positive assessment of each test is required to sit for the next one. The three tests have to take as follows:

1. **Cartography Test** (2 CFU) - written examination, related to the module of "Introduction to Geology". The student will have to: draw a topographic profile, a drainage basin and the intersection of a geological surface with the topography; calculate the coordinates of a point on the map, draw a geological section (from a simplified geological map) and answer 9 questions about cartography. This examination will take place approximately one week before the oral examination on Rock Recognition and of the written examination related to the Theoretical Part. The dates will be communicated from the professor to all students by e-mail. A rating $\geq 18/30$ is valid for all subsequent dates of examination.

2. **Rock Lab Test** (2 CFU) – oral examination about the Practical Activity of "*Introduction to Petrography*". Students have to identify the main rock-forming minerals, to describe with correct terminology rock textures and structures, and to classify two rocks among those analyzed. This oral examination has to be taken on the same day of the Final Test. If students do not pass the Final Test, a grade $\geq 25/30$ in Rock Lab test shall be considered valid only for the next exam session.

3. **Final Test** (4 + 4 CFU) – written examination about both classes of "*Introduction to Geology*" and "*Introduction to Petrography*". This test consists of five questions: two long and three short essay questions. The long essay questions require that students are able to neatly and clearly describe with correct terminology the key-concepts relevant to the topic, as well as all related minor issues. The short essay questions require a clear and concise response focused on the subjects.

The final grade of the *Principles of Geology* exam is calculated on the weighted average of the three tests.

No Mid-semester examinations are expected.

Office hours

Every day by appointment. Contact the teacher (nadia.malaspina@unimib.it) by the student e-mail address (.....@campus.unimib.it).

