
COURSE: Structural Geology

ACADEMIC YEAR: 2017-2018

TYPE OF EDUCATIONAL ACTIVITY: Basic

TEACHER: Fabrizio Agosta

e-mail: fabrizio.agosta@unibas.itwebsite: scienze.unibas.it/site/home.html

phone: 0971-206176

mobile (optional):

Language: English

ECTS: (lessons e
tutorials/practice)
8 (6 frontal lectures, 2
laboratory practice and
field excursions)n. of hours: (lessons e
tutorials/practice)
72 (48 frontal lectures, 24
laboratory practice and
field excursions)Campus: **Potenza**
Dept./School: **Dipartimento di**
Scienze
Program:

Semester:
(date)
II semester
From. **05/03/2018**
to **15-30/06/2018**

EDUCATIONAL GOALS AND EXPECTED LEARNING OUTCOMES

The course is aimed at providing the basic concepts on plate tectonics, stress, strain and on the rheology of upper crustal rocks. An effort is made to introduce the mathematical tools necessary to fully characterize both stress and strain. The course focuses on the structural elements typical of brittle and ductile deformation. Laboratory exercises deals with the 3D stereographic projection of deformed rock volumes, and the Mohr's circle methodology to quantify stress fields. Finally, the field excursions to nearby areas of Potenza give the students opportunity to observe some of the main tectonic features of southern Apennines.

PRE-REQUIREMENTS

Physics I - geology

SYLLABUS

- Earth's interior
- Convergent, Divergent and transform plate margins
- Stress
- Strain
- Rheological behavior of crustal rocks
- Opening-mode fractures and pressure solution seams
- Faults
- Folds
- Anatomy of fold-and-thrust belts

TEACHING METHODS

Frontal lectures, Laboratory activities, Field excursions.

EVALUATION METHODS

Intermediate verifications and oral examination.

TEXTBOOKS AND ON-LINE EDUCATIONAL MATERIAL

- Structural Geology, Fossen, Cambridge 2015
-

INTERACTION WITH STUDENTS

he teacher shares all needed material (power point presentation, geological maps, scientific articles) with the students by mean of dropbox. Furthermore, the teacher can be always reached by email: fabrizio.agosta@unibas.it.

EXAMINATION SESSIONS (FORECAST)¹

13/02/2018, 27/02/2018, 26/06/2018, 17/07/2018, 11/09/2018, 25/09/2019, 27/11/2018

SEMINARS BY EXTERNAL EXPERTS YES X NO

FURTHER INFORMATION

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