
COURSE: Geological mapping, mod.I

ACADEMIC YEAR: 2017-2018

TYPE OF EDUCATIONAL ACTIVITY: Characterizing

TEACHER: Paolo Giannandrea

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Language: Italiano

ECTS: 6 (3 lessons e 3 tutorials/practice)

n. of hours: 60 (24 lessons e 36 tutorials/practice)

Campus: Potenza
Dept./School: Dipartimento di Scienze
Program: Geological Sciences (L34)

Semester: Semester I
from 02/10/2017 **to** 15-31 january 2018

EDUCATIONAL GOALS AND EXPECTED LEARNING OUTCOMES

Educational goals: field collection and mapping of the geological data in order to draw a geological map.

Expected learning outcomes:

- Obtaining 3D information from the official geological maps published by the Italian Geological Survey, to interpret the structural setting of the rock bodies.
- Describing, classifying, correlating and representing geological data on topographic maps.

PRE-REQUIREMENTS

Have passed the examination of the courses of: Geology 1, Geology 2, and Physical Geography

SYLLABUS

- 1) Introduction to the geological mapping.
- 2) Instruments used for the geological mapping.
- 3) Use of the geological compass.
- 4) Interpretation of the geological maps.
- 5) Geological cross-sections.
- 6) The concept of sedimentary unit; facies and facies association.
- 7) The principle of stratigraphic superposition.
- 8) Stratigraphic and formational boundaries. Lithostratigraphic Units and Unconformity-Bounded Stratigraphic Units (UBSU).
- 9) Lithological characters of some sedimentary and volcanic formations of the southern Apennines.
- 10) Cartographic representation of natural and artificial outcrops.
- 11) Description of sedimentary rocks.
- 12) Spatial relationships between outcrops and correlations.
- 13) Reconstruction of sedimentary successions.
- 14) Principles of aerial photograph interpretation.

TEACHING METHODS

Theoretical lessons, Classroom tutorials, and field tutorials.

EVALUATION METHODS

An intermediate verification, Written examination, Discussion of a project work, Oral examination.

TEXTBOOKS AND ON-LINE EDUCATIONAL MATERIAL

- Rilevamento Geologico di Giorgio Cremonini - Pitagora Editrice, Bologna.
 - Lettura delle carte geologiche di Brian Simpson - Dario Flacco Editore.
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- Quaderno 1, serie III dell'SGN, 1992, 2003.
 - Approccio alla Geologia Stratigrafica di Loris Montanari.
 - Monographic scientific articles in Italian and English.

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INTERACTION WITH STUDENTS

Using three-way preferential: telephone, email and in person in the office hours.

EXAMINATION SESSIONS (FORECAST)¹

*Sessione I: 18/01/2018, 15/02/2018, 15/03/2018; Sessione II: 19/04/2018, 17/05/2018, 21/06/2018, 19/07/2018;
Sessione III: 13/09/2018, 18/10/2018, 22/11/2018.*

SEMINARS BY EXTERNAL EXPERTS YES ☐ NO ☒

FURTHER INFORMATION

For field activities students should wear trekking footwear and have the following equipment: a geologist's hammer, compass, camera, rigid support, pastel colors, and rubber.

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