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**COURSE:** Geology, mod. 2

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**ACADEMIC YEAR:** 2018-2019

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**TYPE OF EDUCATIONAL ACTIVITY:** Basic

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**TEACHER:** Paolo Giannandrea

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website: scienze.unibas.it/site/home.html

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phone: 0971 206258

mobile (optional): 338 5906841

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Language: Italiano

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ECTS: 6 (2 lessons e 4  
tutorials/practice)n. of hours: 64 (16 lessons e  
48 tutorials/practice)Campus: **Potenza**  
Dept./School: **Dipartimento di  
Scienze**  
Program: Geological Sciences  
(L34)Semester: Semester II  
from **07/03/2019** to  
**15-20/06/2019**

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**EDUCATIONAL GOALS AND EXPECTED LEARNING OUTCOMES**

Educational goals: i) macroscopic classification of igneous, sedimentary and metamorphic rocks; ii) structuring and interpretation of geological maps; iii) The course also includes field work, which provides the basics for surface geological research.

Expected learning outcomes:

- classification of igneous, sedimentary, and metamorphic rocks;
  - reading of the geological maps;
  - identify the geological structures of the first order of Southern Italy.
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**PRE-REQUIREMENTS**

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**SYLLABUS**

Solid state: crystalline and amorphous; silicates; fractional crystallization: Bowen series. Igneous rocks: structure, size, color and mineral composition. Formation of sedimentary rocks: source area, transport, sedimentation, and lithification; classification of the sedimentary rocks; composition and structure of the terrigenous (conglomerate and breccias, sandstones, and mudstones) and carbonate rocks; evaporites; siliceous sediments; black shale. Metamorphic rocks: general characteristics; mode of formation; classification and structure. Geological setting of rock bodies formation. Structure and organization of the official geological maps of the National Geological Service at 1:100,000 and 1:50,000 scale: geological map area, cross-sections, legend, symbols, and contour schemes. Use of colors in the geological map. Stratigraphic criteria adopted in the new geological map of Italy at 1:50,000 scale.

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**TEACHING METHODS**

Theoretical lessons, Classroom tutorials, and field tutorials.

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**EVALUATION METHODS**

Intermediate verifications, Written examination, Oral examination.

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**TEXTBOOKS AND ON-LINE EDUCATIONAL MATERIAL**

- Rocce e successioni sedimentarie di A. Bosellini, E. Mutti, F. Ricci Lucchi - UTET
  - Fotoatlante dei Minerali e rocce di Rupert Hochleitner - Zanichelli
  - Introduzione allo studio delle rocce carbonatiche di A. Bosellini - Italo Bovoletta Editore.
  - Lettura delle Carte geologiche di Brian Simpson; edizione italiana a cura di Gioacchino Cusimano e Pietro Di Stefano - Dario Flaccovio Editore.
  - Guides and 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.

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EXAMINATION SESSIONS (FORECAST)<sup>1</sup>

*07/02/2019; 07/03/2019; 04/07/2019; 01/08/2019, 05/09/2019; 03/10/2019; 07/11/2019*

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SEMINARS BY EXTERNAL EXPERTS    YES     NO

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FURTHER INFORMATION

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