



Dipartimento di Scienze e Tecnologie

ANNO ACCADEMICO 2017/2018

CORSO di STUDIO in Scienze Geologiche
INSEGNAMENTO in Geologia di Campo

DOCENTE Prof. Ciarcia Sabatino

Introduction to field geology: tools and methods (2 hours)

- General principles and methods
- Global tectonics, collisional margins, chains and orogenic cycles; sedimentary basins
- Stratigraphic and tectonic units

The geology of the Mediterranean region and the peninsular Italy (4 hours)

- Tectonics of European continent
- Paleogeographic evolution of the Western Mediterranean
- Sardinian-Corse block rotation. The opening of the Tyrrhenian Sea
- Messinian salinity crisis and “lago-mare” deposits. The Pliocene period
- The Apennine chain, foredeep, and foreland domains
- On the Calabrian-Peloritan arc

Southern Apennine geology: paleogeographic domains and evolution of the chain during Mesozoic, Cenozoic and Plio-Quaternary (6 hours)

- Geological history of the southern Apennines
- Geological patterns of the chain from the seventies to the present
- The oceanic and continental origin units
- The carbonate platform units
- Foredeep and foreland units
- Paleogeographic domains during Miocene tectonic phases
- Intrapennine sinorogenic basins
- The Pliocene-Quaternary evolution of the chain and foreland basin system
- Kinematic evolution of the southern Apennines

Practical activities

- No. 6 field-trips (5 daily and one of two days) in the southern Apennines
- No. 7 Exercises with reading and interpretation of geological maps of the Apennines, geological cross-sections at different scales and probable field control



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Suggested texts:

- *BALLY, CATALANO & OLDOW – Elementi di tettonica regionale . Pitagora*
- *BOSELLINI - Storia geologica d'Italia - Gli ultimi 200 milioni di anni . Zanichelli*
- *CRESCENTI, D'OFFIZI, MERLINI & SACCHI - Geology of Italy . SGI (Spec. Vol.)*
- *AA.VV.- Pubblicazioni scientifiche sull'Appennino (fornite a cura del docente)*
- *AA.VV.- Cartografia geologica dell'Appennino a varie scale*
- *AA.VV. - Guide geologiche regionali, a cura della Società Geologica Italiana*
- *Files delle singole lezioni ed esercitazioni e guide alle escursioni (forniti a cura del docente)*

Structure of the course:

- **FRONTAL LESSONS: No. 6 (12 hours)**
- **EXERCISES IN CLASSROOM: No. 7 (14 hours)**
- **FIELD TRIPS: No. 6 (28 hours)**

Examination methods:

- **2-3 INTERMEDIATE TEXTS**
- **FINAL TEXTS (PRATICAL AND ORAL)**