



STRATIGRAPHY

Enrollment year	2017/2018
Academic year	2018/2019
Regulations	DM270
Academic discipline	GEO/02 (STRATIGRAPHIC AND SEDIMENTOLOGICAL GEOLOGY)
Department	DEPARTMENT OF EARTH AND ENVIRONMENTAL SCIENCES
Course	GEOLOGICAL SCIENCES
Curriculum	PERCORSO COMUNE
Year of study	2°
Period	(04/03/2019 - 14/06/2019)
ECTS	6
Lesson hours	58 lesson hours
Language	
Activity type	ORAL TEST
Teacher	RONCHI LUIGI AUSONIO - 6 ECTS
Prerequisites	The students must held the course Introduction to Geology before attending Geologia 1
Learning outcomes	<p>The course aims to teach how to describe, classify and interpret sedimentary rocks in term of genetic processes and environments. In addition it aim to teach basic concepts about sediment textures, production, transport and sedimentation, main tract of depositional facies linked to different depositional environments. At the end the student is expected to know how to write a technical report on a sedimentary sequence of a thin section of a sedimentary rock. To know the basic principles of stratigraphy and the stratigraphic units. To learn the concept of unconformities and the topics of dating rocks (relative and absolute) and the correlation principles. To read, interpret, measure and draw geological surfaces (stratigraphic or tectonic) on a simplify cartography.</p>

The whole course is divided in 2 modules.

Module 2 - stratigraphy (6 CFU)

Meso-microscopic analysis and classification of sedimentary rocks.

Diagenesis.

The laws of stratigraphy. Basic concepts of facies and their analysis.

Unconformities. Litho-bio- chrono-magneto-stratigraphy, and basic concepts of other stratigraphic approaches. Exercises of logging and drawing stratigraphic columns and correlation.

Stratigraphic unconformities. The concept of Time in stratigraphy.

Exercises on dipping of lines and surfaces, stratigraphic contacts, drawing of simplified geological sections

Teaching methods

The course is made by lectures, laboratory work and field work (2-4 days)

**Recommeneded or required
readings**

Nichols G. (1999) – Sedimentology and stratigraphy. Blackwell, 355 pp.
Tucker M. (2001) – Sedimentary petrology. Blackwell 262 pp.
Tucker M. (2012) - Geologia del sedimentario. Dario Flaccovio ed. 366 pp.

Ricci Lucchi F. (1980) Sedimentologia. Edizioni CLUEB, Bologna, 3 volumi, 993 pp.

Bosellini A. (1991) - Introduzione allo studio delle rocce carbonatiche. Italo Bovolenta editore, 317 pp.

- Bosellini A., Mutti E., Ricci Lucchi F. "Rocce e successioni sedimentarie", UTET.

- Tucker M. "Geologia del sedimentario: Rocce, strutture sedimentarie, ambienti de posizionali" Dario Flaccovio Editore

The course ends with a practical examination devoted to analyze and classify a thin section under the optical microscope, and an oral examination starting with the analysis of several rock samples and their interpretation in term of depositional environment.

Slides used for lectures are available online on KIRO

