
COURSE: APPLIED STRATIGRAPHY and SEDIMENTOLOGY

ACADEMIC YEAR: 2019-2020

TYPE OF EDUCATIONAL ACTIVITY: (Basic, Characterizing, Affine, Free choice, Other): **Basic**

TEACHER: **Sergio Longhitano**

e-mail: *segio.longhitano@unibas.it*

website:

phone: *+39 0971205865*mobile (optional): *+39 340617653*

Language: *English*

ECTS: (lessons e
tutorials/practice) **6**
*(4 of lectures and 2 of lab
activities)*n. of hours: (lessons e
tutorials/practice) **56**
*(32 of lectures and 24 of lab
activities)*Campus: Potenza
Dept./School: *Department of
Sciences*
Program: *Geosciences and
Georisources (LM74)*Semester: *winter*
01/10/2019,
20/12/2020 –
20/01/2020

EDUCATIONAL GOALS AND EXPECTED LEARNING OUTCOMES

Review of the basic and advanced principles of Stratigraphy and fundamental concepts on the identification of the Sedimentary Rocks and their importance on the detection, exploitation and protection of the Georesources; overview on the main depositional environments composing the most common types of depositional systems; main sedimentary processes; methodological practice on some of the main techniques of acquirement, analysis and interpretation of stratigraphic and sedimentological data, from both field and subsurface datasets.

PRE-REQUIREMENTS

BSc on Geological Sciences and on Environmental Engineering or comparable

SYLLABUS

The course aims at treating major aspects and essential elements on modern applications and perspectives of Stratigraphy and Sedimentology as tools to identify, exploit and safeguard the main Georesources. It focuses on traditional and innovative techniques and how they may be used in the reconstruction of the geological history of sedimentary basins and in solving geological problems or in the identification of Georesources. Each lecture reviews historical backgrounds, includes a synopsis of principles and methodologies, and discusses recent developments and applications. Lectures are followed by selected case histories that demonstrate the applications and efficacy of Stratigraphy and Sedimentology and related techniques applied to the study of the Georesources.

TEACHING METHODS

Frontal lessons, seminars, video projections, field activity, laboratory and computer exercises

EVALUATION METHODS

Written/practice and oral exams

TEXTBOOKS AND ON-LINE EDUCATIONAL MATERIAL

- Nichols G., 2009. *Sedimentology & Stratigraphy*. John Wiley & Sons, Inc., 432 p.
 - Posamentier H.W. & Walker R.G., 2006. *Facies Models Revisited*. SEPM (Society for Sedimentary Geology), 531 p.
 - Selley R.C., 2000. *Applied Sedimentology*, Academic Press, 543 p.
 - Koutsoukos E.A.M., 2005. *Applied Stratigraphy*. Springer, 488 p.
 - Stow D.A.V. 2010. *Sedimentary Rocks in the Field (a colour guide)*. Manson Publishing, 323 p.
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INTERACTION WITH STUDENTS

Chat and public meetings planned based on e-mail or phone contacts

EXAMINATION SESSIONS (FORECAST)¹

<i>February</i>	<i>2020</i>	<i>Wednesday 12</i>
<i>March</i>	<i>2020</i>	<i>Wednesday 11</i>
<i>May</i>	<i>2020</i>	<i>Wednesday 13</i>
<i>June</i>	<i>2020</i>	<i>Wednesday 10</i>
<i>July</i>	<i>2020</i>	<i>Wednesday 15</i>
<i>September</i>	<i>2020</i>	<i>Wednesday 16</i>
<i>October</i>	<i>2020</i>	<i>Wednesday 14</i>
<i>November</i>	<i>2020</i>	<i>Wednesday 18</i>
<i>December</i>	<i>2020</i>	<i>Wednesday 16</i>

SEMINARS BY EXTERNAL EXPERTS YES NO

FURTHER INFORMATION

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