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**COURSE: APPLIED STRATIGRAPHY and SEDIMENTOLOGY**

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ACADEMIC YEAR: 2018-2019

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

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TEACHER: *Dott. Sergio Longhitano*

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Language: *English*

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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*  
*01/10/2018,*  
*20/12/2018 –*  
*20/01/2019*

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**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.*

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**PRE-REQUIREMENTS**

*BSc on Geological Sciences and on Environmental Engineering or comparable*

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**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 be used in the reconstruction of the geological history of sedimentary basins and in solving geological problems or in 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.*

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**TEACHING METHODS**

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

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**EVALUATION METHODS**

*Written/practice and oral exams*

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**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*

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

<i>February</i>	<i>2019</i>	<i>Tuesday 12</i>
<i>March</i>	<i>2019</i>	<i>Tuesday 12</i>
<i>May</i>	<i>2019</i>	<i>Wednesday 15</i>
<i>June</i>	<i>2019</i>	<i>Tuesday 11</i>
<i>July</i>	<i>2019</i>	<i>Tuesday 9</i>
<i>September</i>	<i>2019</i>	<i>Tuesday 10</i>
<i>October</i>	<i>2019</i>	<i>Tuesday 8</i>
<i>November</i>	<i>2019</i>	<i>Tuesday 12</i>
<i>December</i>	<i>2019</i>	<i>Tuesday 10</i>

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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.