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COURSE: Advanced Software Engineering

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ACADEMIC YEAR: 2018/2019

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TYPE OF EDUCATIONAL ACTIVITY: Basic

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TEACHER: Giuseppe Scanniello

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e-mail: giuseppe.scanniello@unibas.it

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web: <http://www2.unibas.it/gscanniello/>

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phone: 0971 205881

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mobile (optional):

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Language: Italian

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ECTS: 6

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n. of hours: 48

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Campus: Potenza  
Dept./School: Engineering School  
Program:

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Semester: second

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#### EDUCATIONAL GOALS AND EXPECTED LEARNING OUTCOMES

Knowing how to build models of systems with a step by step process. Knowing how to produce documents during the various stages of a software development process and modify them to produce higher part of software processes Iterative and incremental. Knowing how to use the UML to model software. Knowing how to use an engineering approach for the advanced design and maintenance of software. Knowing how to deal with software projects. .

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#### PRE-REQUIREMENTS

Able to solve problems of simple and complex programming tasks using both procedural approaches and object oriented paradigms with appropriate selection and / or realization of efficient data structures.

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#### SYLLABUS

Advanced concepts related to software engineering tasks. software management and evolution, organizational and economic aspects of software, Engineering project management, cost estimation, human resource handling, software quality management, Product and process quality, software metrics, process improvement.

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#### TEACHING METHODS

Frontal Lessons and class works for a total of 48.  
Students will be also asked to carry out home works.

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#### EVALUATION METHODS

To verify the acquired knowledge, there will be written and oral exams. Homework will be given and assessed in order to have a deeper evaluation of the students' acquired knowledge. Students will be asked to accomplish assignments in class. All the teaching activities will contribute to have a general evaluation of the students acquired knowledge.

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#### TEXTBOOKS AND ON-LINE EDUCATIONAL MATERIAL

Object Oriented Software Engineering Using UML Patterns and Java;  
C. Wholin et al., Experimentation in Software Engineering;  
Digital material will be available for the students on Moodle

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#### INTERACTION WITH STUDENTS

In person, while office hours, by email or instant messaging. The lecturer will also use the e-learning platform to share files and to communicate information to the student (e.g., forum and so on).

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

2019-02-05; 2019-02-26; 2019-07-02; 2019-07-16; 2019-09-17; 2019-12-17

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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.