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COURSE: Software Engineering Complements

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TEACHER: Giuseppe Scanniello

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Language: Italian

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ECTS: 6

n. of hours: 48

Academic year: 2015-2016

Campus: Potenza

Semester: 2

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#### TOPICS

Concepts of software engineering, process engineering software and related phases, activities and deliverables (programming in the large)

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#### TEACHING METHODS (please tick one or more options)

Theoretical lessons 48

Tutorials in classroom

Tutorials in laboratory

Project works

Technical visits

Other activities (please specify) \_\_\_\_\_

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#### TEXTBOOKS

Object Oriented Software Engineering Using UML Patterns and Java

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#### ON-LINE EDUCATIONAL MATERIAL

web address: Moodle

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#### 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 to the analysis, testing, debugging and maintenance of the software.

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#### REQUIREMENTS

Able to solve problems of simple programming (programming in the small) using both procedural approaches and object oriented paradigms with appropriate selection and / or realization of efficient data structures.

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#### EVALUATION METHODS (please tick one or more options)

Intermediate verifications

Written examination

Discussion of a project work

Practical test

Oral examination

Other methods (please specify) \_\_\_\_\_

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#### DETAILED CONTENT

Basic concepts, definitions and issues of Software Engineering. Models of software development. Analysis and requirements specification. Design and software architecture.

Object-oriented modeling; Unified Modeling Language ( UML ) class diagram, object diagram, use case diagram, sequence diagram, collaboration diagram, statechart diagram, activity diagram, component diagram, deployment diagram; Introduction to the Rational Unified Process.

Software testing; levels of testing; testing process and documents; main techniques of black box testing and white box; testing of object-oriented systems.

Notes on software project management, software configuration management, software quality, software metrics and software maintenance.

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#### EXAMINATION SESSIONS (FORECAST)

7-7-2016

7-21-2016

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Università degli Studi della Basilicata  
Scuola di Ingegneria

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9-13-2016

12-12-2016

2-7-2017

2-28-2017

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SEMINARS BY EXTERNAL EXPERTS    YES     NO

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FURTHER INFORMATION

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