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COURSE: Foundation Dynamics (second part of the course on Soil and Foundation Dynamics)

TEACHER: Vincenzo Caputo

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| LANGUAGE | Italian |
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| ECTS: 3 (out of 6) |
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| ACADEMIC YEAR: 2014/2015 |
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| Campus: Potenza |
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| Semester: I |
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#### TOPICS

“Foundation Dynamics” is the second part of the Course on Soil and Foundation Dynamics. It teaches the fundamentals of foundation design under seismic loading within the general framework of structural design and describes the evolution of seismic codes in the field of structural and geotechnical engineering in Italy and Europe.

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#### TEACHING METHODS

Lectures and a tutorial on Foundation Design

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#### TEXTBOOKS

Course handouts

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#### LEARNING OUTCOMES

Learning the basic skills for appropriate foundation design under seismic loading within the framework of the seismic codes in force in Italy and Europe, including the planning of geotechnical investigations required for an adequate modelling of soil-structure interaction.

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#### REQUIREMENTS

Fundamentals of geotechnical and structural engineering.

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#### EVALUATION METHODS

Oral exam. The tutorial carried out during the course will also be discussed.

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#### DETAILED CONTENT

Basic principles of structural dynamics – Modal analysis using response spectra – Pseudostatic approach – Evolution of seismic codes in both structural and geotechnical fields – Comparison between “old” and “new” Italian codes (D.M. 11.03.1988 and D.M. 14.01.2008). Planning geotechnical investigations and foundation analysis according to the “new” Italian Code.

Tutorial: An example of foundation design under seismic loading

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#### FURTHER INFORMATION

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