



COURSE: Mechanics and Dynamics of Structures: Module of "Dynamics of Structures"

TEACHER: : Maria Anna De Rosa

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website:

Language: Italian

ECTS: 6

n. of hours: 54

Academic year: 2015-2016

Campus: Potenza

Semester: I

TOPICS - Dynamic behaviour of discrete systems with one or n degrees of freedom: free vibration frequencies and vibration modes, resonances. The presence of damping. Dynamic behaviour of one-dimensional continuous systems: the equations of motion for Euler-Bernoulli beams and for Timoshenko beams. Discretization methods for continuous systems, and finite element approaches for the dynamic analysis of trusses and frames

TEACHING METHODS (please tick one or more options)

Theoretical lessons

Tutorials in classroom

Tutorials in laboratory

Project works

Technical visits

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

TEXTBOOKS

Notes from the teacher

ON-LINE EDUCATIONAL MATERIAL

web address: \_\_\_\_\_

LEARNING OUTCOMES

Dynamic analysis of one-dimensional structures and Single and Multi-Degree-of-Freedom Systems: detection of free vibration frequencies and free vibration modes. Finite element analysis of trusses and frames

REQUIREMENTS

Strength of materials

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) \_\_\_\_\_

DETAILED CONTENT

SEMINARS BY EXTERNAL EXPERTS YES  NO

FURTHER INFORMATION