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UNIVERSITY OF ALBA IULIA

Basics of Seismic Engineering

Adina – Ana Mureşan

Basics of Seismic Engineering
Tuesday, May 17th, 2022, 10 a.m. – 12 p.m.

Language of instruction: English
Name of lecturer: Adina – Ana Mureşan

Form of instruction	Number of teaching days	Number of teaching hours per day	Form of evaluation (if any)	Certification
Lecture	1	2	None	None

COURSE AIMS:

- General aspects regarding building design in seismic areas.
- General aspects on seismic design codes.
- General aspects on dynamic models.

COURSE CONTENTS (for each workshop):

- General aspects on earthquakes: how earthquakes occur, types of seismic waves.
- Rules for structural configurations in seismic areas.
- Analysis methods of the seismic loads.

TEACHING METHODS:

- Presentation.
- Case studies.

LEARNING OUTCOMES:

- Understanding the seismic response of different types of structures.
- Knowledge of seismic design codes.

LEARNING OUTCOMES VERIFICATION AND ASSESSMENT CRITERIA (if any):

- Not available.

RECOMMENDED READING (English language only):

- EN 1998-1, Eurocode 8: *"Design of structures for earthquake resistance". Part 1: „General rules, seismic actions and rules for buildings"*.
- A. Chopra, *"Dynamics of structures"*, John Wiley and Sons, 2006.
- James Kelly, *"Resistant Earthquake Design with Rubber"*, Second Edition, Springer, 1997.