



UNIVERSITY OF NICOSIA ΠΑΝΕΠΙΣΤΗΜΙΟ ΛΕΥΚΩΣΙΑΣ

University of Nicosia, Cyprus

Course Code Arch-432	Course Title Fundamentals of Earthquake Engineering	ECTS Credits 4
Department Architecture	Semester Fall/Spring	Prerequisites Arch-212
Type of Course Elective	Field Structures	Language of Instruction English
Level of Course 1 st Cycle	Year of Study 4th	Lecturer(s) Tonia Sophocleous Lemonari
Mode of Delivery face-to-face	Work Placement N/A	Co-requisites None

Objectives of the Course:

The main objectives of the course are to:

- Introduce state-of-the art research in the area of seismic control
- Make students aware of the various seismic resisting models (emphasis on adaptable models) and seismic control systems
- Provide students with deep knowledge for developing building configurations able to effectively resist earthquake motion.
- Thoroughly discuss the earthquake resisting design practices.

Learning Outcomes:

After completion of the course students are expected to be able to:

- Research in state-of-the art advances in the areas of earthquake technology systems for seismic control.
- Develop advanced queries of the development of effective techniques for minimizing the severe and often tragic consequences of earthquakes.
- Design and develop conceptual proposals for applications in seismic resisting philosophy.

Course Contents:

- Introduction
- Earthquake Design Fundamental Principles
- Earthquake Effects on Buildings
- Past, Present and Future of Seismic Resisting Structures
- Seismic Design: Structural Configurations
- Seismic Resisting Construction Technology Systems
- Kinetic Structures; Construction Detail
- Mechanical Properties for Seismic Design Structures

Learning Activities and Teaching Methods:

Lectures, Lab Presentations, Assignments.

Assessment Methods:

Pin-ups and Discussion, Projects, Final Presentation.

Required Textbooks/Reading:

Authors	Title	Publisher	Year	ISBN
Andrew Charleson	SEISMIC DESIGN FOR ARCHITECTS. OUTWITTING THE QUAKE	Elsevier; Architectural Press	2008	ISBN: 978-0-7506-8550-4

Recommended Textbooks/Reading:

Authors	Title	Publisher	Year	ISBN
Farzad Naeim	The Seismic Design Handbook	Chapman&Hall	1989	0-412-07891-0
Wolfgang Schueller	Building Support Structures: Analysis and Design with SAP2000 Software	Computer and Structures Inc.	January 2008	ISBN-10: 0923907750 ISBN-13: 978-0923907754