



UNIVERSITY OF NICOSIA

ΠΑΝΕΠΙΣΤΗΜΙΟ ΛΕΥΚΩΣΙΑΣ

University of Nicosia, Cyprus

Course Code ARCH-111	Course Title Intro to Structures	ECTS Credits 4
Department Architecture	Semester Fall	Prerequisites none
Type of Course Major	Field Structures	Language of Instruction English
Level of Course 1st Cycle	Year of Study 1st	Lecturer(s) Tonia Sophocleous-Lemonari
Mode of Delivery face-to-face	Work Placement N/A	Co-requisites None

Objectives of the Course:

- Make students aware of the principles of structural design.
- Discuss the structural physical quantities of strength and stability of structural systems.
- Thoroughly discuss the basic physical laws of structural bodies' motion.
- Introduce the strategies of structural design to control the form of structures
- Thoroughly discuss ways of manipulating inspiration through Structural Realities
- Make students aware of the limitations that codes of practice imply for structural analysis.

Learning Outcomes:

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

- Research in state-of-the art areas in basic forms of structural members used in structures.
- Critically compare and evaluate different structural behavior of basic elements.
- Propose and develop applications using physical models of simple structural composed forms.
- Develop advanced queries on structural design fundamental principles.
- Critically assess structural design fundamental principles
- Enhance and fine-tune structural communication language.

Course Contents:

- Primary classifications
- Primary structural elements
- Primary structural units and aggregations
- Fundamental Structural Phenomena, Structural Stability
- Tension
- Compression
- Bending
- Torsion
- Bearing
- Funicular Arches and related forms
- Funicular Cables and related forms

Learning Activities and Teaching Methods:

Lectures, Lab Presentations, Practical Examples and Model making.

Assessment Methods:

Homework, Projects, Final Exam.

Required Textbooks/Readings:

Authors	Title	Publisher	Year	ISBN
Matthys Levy & Mario Salvadori	Why Buildings Fall Down	W. W. Norton & Co.		ISBN-10: 039331152X ISBN-13: 978-0393311525

Recommended Textbooks/Reading:

Authors	Title	Publisher	Year	ISBN
J.E.Gordon	Structures or Why things don't fall down	Penguin Science		978-0-14-013628-9
Harry F.Kaufman	A STRUCTURES PRIMER	Prentice Hall		ISBN-013230256X, ISBN-9780132302579
Daniel Lewis Schodek	Structures, 6/E	Prentice Hall		ISBN-10: 0131789392, ISBN-13: 9780131789395
Ronald E. Shaeffer	Elementary Structures for Architects and Builders	Prentice Hall		ISBN-10: 0130928771, ISBN-13: 9780130928771
Henry Petroski	INVENTION BY DESIGN How Engineers get from thought to think	Harvard University Press		ISBN-10: 0674463684, ISBN-13: 978-0674463684