University of Nicosia, Cyprus

Course Code	Course Title	ECTS Credits
ARCH-211	Statics I	4
Department	**Semester**	**Prerequisites**
Architecture	Spring	ARCH111
Type of Course	**Field**	**Language of Instruction**
Major	Structures	English
Level of Course	**Year of Study**	**Lecturer(s)**
1st Cycle	2nd	Tonia Sophocleous-Lemonari
Mode of Delivery	**Work Placement**	**Co-requisites**
face-to-face	N/A	None

Objectives of the Course:

- Make students aware of engineering mechanics theory and application.
- Develop students' problem-solving skills
- Provide the necessary knowledge to students to design their objects in order to remain in equilibrium.
- Present most of the physical quantities in mechanics that can be expressed mathematically by means of scalars and vectors.
- Discuss the concept of moments and forces that cause a body to move.
- Cover in detail basic aspects of introductory problems on Free-Body diagrams as a mastering skill required for a complete solution of any equilibrium problem.

Learning Outcomes:

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

- Design and develop applications of structural trussed systems so that they remain at rest
- Form the habit of tabulating the necessary data while focusing on the physical aspects of the problem in mechanics and its associated geometry.
- Develop advanced queries for the role of design to maintain equilibrium for structures
- Master the principles of Statics, gaining enough confidence and judgment to manipulate structural realities, through the development of his or her own procedure for solving structural problems.
- Enhance and fine-tune state of the art research application examples.
- Develop the skill to reduce any general analysis and design problems from its physical description to a model or a symbolic representation to which the principles of mechanics may be applied.

Course Contents:

- Equilibrium of a particle
- Equilibrium of a Rigid Body
- Force System Resultants
- Force Vectors
- General principles of Mechanics
- Internal Forces
- Moments
- Structural Analysis

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
Mario Salvatori	Structure in Architecture: The Building of Buildings	Prentice Hall	2003	ISBN-10: 0138541187, ISBN-13: 978-0138541187

Recommended Textbooks/Readings:

Authors	Title	Publisher	Year	ISBN
Russell C. Hibbeler	Engineering Mechanics Statics and Dynamics	Prentice Hall	2003	ISBN-0136077909, ISBN-13: 978-0136077909
Russell C. Hibbeler	Structural Analysis	Prentice Hall		ISBN-10: 0130418250 ISBN-13: 978-0130418258
G. G. Schierle	Structures and Design	University Readers	2003	9781934269374, 978-1934269374
James R.Underwood and Michele Chiuini	Structural Design: A Practical Guide for Architects"			ISBN-10: 0471789046, ISBN-13: 978-0471789048
Neil Thomas and Aran Chadwick,	Liquid Threshold: Atelier One, 20 Years of Structural Engineering	ACTAR pub		ISBN: 9780956256300.