

Course guide

290611 - ESTRUCI14 - Forces and Stresses

Last modified: 05/07/2024

Unit in charge: Vallès School of Architecture
Teaching unit: 753 - TA - Department of Architectural Technology.
Degree: DEGREE IN ARCHITECTURE STUDIES (Syllabus 2014). (Compulsory subject).
Academic year: 2024 **ECTS Credits:** 4.0 **Languages:** Catalan

LECTURER

Coordinating lecturer: JORDI PAYOLA LAHOZ
Others: Primer i segon quadrimestre:
 DAVID GARCIA CARRERA - 1
 JORDI PAYOLA LAHOZ - 1

DEGREE COMPETENCES TO WHICH THE SUBJECT CONTRIBUTES

Specific:

EAB11G. Applied knowledge of numerical calculus, analytic and differential geometry and algebraic methods.
 ET13G. Adequate knowledge of solid, continuum and soil mechanics and the plastic, elastic and strength behaviour of heavy building materials.

Generical:

CG4G. An understanding of structural, construction and engineering design problems related to building design and techniques for solving them.
 CG5G. Knowledge of the physical problems, technologies and functions of buildings so as to provide them with comfortable indoor conditions and protection from climate factors.

TEACHING METHODOLOGY

LEARNING OBJECTIVES OF THE SUBJECT

Recognize links, stresses and tensions in isostatic steel structures

STUDY LOAD

Type	Hours	Percentage
Hours large group	22,0	22.00
Self study	56,0	56.00
Hours medium group	22,0	22.00

Total learning time: 100 h



CONTENTS

Syllabus

Description:

Analysis and study of material resistance.

Full-or-part-time: 44h

Theory classes: 22h

Practical classes: 22h

GRADING SYSTEM

BIBLIOGRAPHY

Basic:

- Francis, A.J.. Introducción a las estructuras para arquitectura e ingeniería. México: Limusa, 1984. ISBN 9681816056.
- Gordon, J.E. Estructuras o por qué las cosas no se caen. Madrid: Celeste, 1999. ISBN 8482111906.
- Timoshenko, Stephen, 1878-1972. Resistencia de materiales. Madrid: Espasa-Calpe, 1944-1945.
- Salvadori, Mario, 1907-1997. Estructuras para arquitectos. Buenos Aires: La Isla, 1978.
- Brufau Niubó, Robert. Estructures I : resistència de materials. Apunts. Etsav, 1996.
- Gordon, J. E. The Science of structures and materials. New York, [NY]: Scientific American Library, A división of HPHLP, cop. 1988. ISBN 0716750228.