

Course guide

290606 - FISICII14 - Mechanics

Last modified: 21/06/2023

Unit in charge: Vallès School of Architecture
Teaching unit: 748 - FIS - Department of Physics.
753 - TA - Department of Architectural Technology.

Degree: DEGREE IN ARCHITECTURE STUDIES (Syllabus 2014). (Compulsory subject).

Academic year: 2023 **ECTS Credits:** 6.0 **Languages:** Catalan

LECTURER

Coordinating lecturer: JOAN PUIGDOMENECH FRANQUESA

Others: DAVID GARCÍA CARRERA
DAVID LÓPEZ LÓPEZ

DEGREE COMPETENCES TO WHICH THE SUBJECT CONTRIBUTES

Specific:

EAB7G. Adequate knowledge of the principles of general mechanics, statics, mass geometry and vector and tensor fields applied to architecture and urbanism.

Generical:

CE9. Adequate knowledge of the physical problems, technologies and functions of buildings so as to provide them with comfortable indoor conditions and protection from climate factors.

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

Introduction to the quantification of efforts. Functioning of structures. Recognize the environmental implications of structures. Use of the appropriate technical vocabulary. Recognize innovation in architecture linked to the field of structures.

STUDY LOAD

Type	Hours	Percentage
Hours medium group	22,0	17.19
Self study	84,0	65.63
Hours large group	22,0	17.19

Total learning time: 128 h



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Syllabus

Description:

This is a traditional subject common in the different architectural and engineering universities. Available good bibliographic references are used to develop it. In fact, this subject is the first step for different structural subject in which the student has to get the degree.

Full-or-part-time: 66h

Theory classes: 33h

Practical classes: 33h

GRADING SYSTEM

BIBLIOGRAPHY

Basic:

- Hibbeler, R. C; Cera Alonso, José de la. Mecánica vectorial para ingenieros : dinámica. 10ª ed. México [etc.]: Pearson Educación, cop. 2004. ISBN 9702605008.
- Meriam, J. L. Estática. 2a ed. Barcelona [etc.]: Reverté, DL 1976. ISBN 84-291-4128-6.
- Riley, William F; Sturges, Leroy D. Ingeniería mecánica. Barcelona [etc.]: Reverté, 1995-1996. ISBN 842914255X.
- Hibbeler, R. C; Cordero Pedraza, Carlos R; León Cárdenas, Javier. Ingeniería mecánica : estática. México [etc.]: Prentice-Hall Interamericana, cop. 1996. ISBN 9688806013.
- Meriam, J. L; Kraige, L.G. Mecánica para ingenieros. 3a ed. Barcelona [etc.]: Reverté, cop. 1998-1999. ISBN 978-84-291-4257-0.

Complementary:

- Salu, Yehuda. Physics for architects. 2nd ed. [Charleston, South Carolina: CreateSpace], cop. 2008. ISBN 9781463708115.