

**Información del Plan Docente**

<b>Academic Year</b>	2017/18
<b>Faculty / School</b>	110 - Escuela de Ingeniería y Arquitectura
<b>Degree</b>	470 - Bachelor's Degree in Architecture Studies
<b>ECTS</b>	6.0
<b>Year</b>	3
<b>Semester</b>	Second semester
<b>Subject Type</b>	Compulsory
<b>Module</b>	---

**1.General information****1.1.Introduction****1.2.Recommendations to take this course****1.3.Context and importance of this course in the degree****1.4.Activities and key dates****2.Learning goals****2.1.Learning goals****2.2.Importance of learning goals****3.Aims of the course and competences****3.1.Aims of the course****3.2.Competences****4.Assessment (1st and 2nd call)****4.1.Assessment tasks (description of tasks, marking system and assessment criteria)****5.Methodology, learning tasks, syllabus and resources****5.1.Methodological overview**

The learning process that is designed for this subject is based on the following:

The course is divided into 15 participatory master classes taught by teachers with multimedia support to be provided in due time students . We have also organized a total of seven practical sessions of two hours each 15 sessions and other problems in the form of conferences / seminars, in which students will face difficulties similar to those of test situations.

## 5.2.Learning tasks

The program that the student is offered to help you achieve the expected results includes the following activities ...

Review of Linear elasticity . Introduction to M.E.F.

Reviewing bars Bernoulli and Timoshenko. Associated finite elements .

Barrasa structures ) Typology . b ) Lattices. Flat and three-dimensional . c ) Structures arcaded .

Plates and sheets. Associated finite elements .

a) plates . Forgings.

b ) Blades .

c ) Membranes . hyperbolic paraboloid and other more sophisticated ways .

d ) Finite elements for plate and sheet

e) Stability of structures

## 5.3.Syllabus

Review of Linear elasticity . Introduction to M.E.F.

Reviewing bars Bernoulli and Timoshenko. Associated finite elements .

Barrasa structures ) Typology . b ) Lattices. Flat and three-dimensional . c ) Structures arcaded .

Plates and sheets. Associated finite elements .

a) plates . Forgings.

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c ) Membranes . hyperbolic paraboloid and other more sophisticated ways .

d ) Finite elements for plate and sheet

e) Stability of structures

## 5.4.Course planning and calendar

Schedule sessions and presentation of works The timing of the actual classes of theory and problems , as well as computer practice sessions , will be the schedule established by the School of Engineering and Architecture. Each teacher will inform tutoring schedules .

## 5.5.Bibliography and recommended resources

\*La estructura como arquitectura. Formas, detalles y simbolismo. Andrew Charleson. Editorial Reverte

\*La estructura y el proyecto. David García. Escola Sert

\*L'art des structures. Aurelio Muttoni. PPUR presses polytechniques

\*Estructuras para arquitectos. M. Salvadori & R. Heller. Nobuko

\*The function of form. F. Moussavi. ACTAR, Harvard Graduate School of Design

\*La obra de ingeniería como obra de arte. Javier Manterola. LAETOLI