

30155 - Structures Calculus

Información del Plan Docente

Academic Year	2018/19
Subject	30155 - Structures Calculus
Faculty / School	179 - Centro Universitario de la Defensa - Zaragoza
Degree	457 - Bachelor's Degree in Industrial Organisational Engineering 563 - Bachelor's Degree in Industrial Organisational Engineering
ECTS	6.0
Year	4
Semester	First semester
Subject Type	Optional
Module	---

1.General information

1.1.Aims of the course

1.2.Context and importance of this course in the degree

1.3.Recommendations to take this course

2.Learning goals

2.1.Competences

2.2.Learning goals

2.3.Importance of learning goals

3.Assessment (1st and 2nd call)

3.1.Assessment tasks (description of tasks, marking system and assessment criteria)

4.Methodology, learning tasks, syllabus and resources

4.1.Methodological overview

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

The course is planned to facilitate continuous and active student learning. Learning resources to be used to achieve it are:

-Theoretical Classes given by the teacher to whole group. In these, theoretical concepts of the subject will be illustrated with examples to help understand and in which students are challenged to participate, reasoning about theoretical concepts exposed.

-classes Problems. In these classes the contents of the theory classes are strengthened by performing carefully selected problems to cover all relevant aspects. Practical sessions organized so that students become familiar with spreadsheet

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programs. Individual realization of problems, jobs and public exhibitions independently.
-Tutorías In which the student will help resolve the doubts raised during learning.
-Other Learning activities scheduled.

4.2.Learning tasks

- Theoretical classes.
- Classes about calculation programs.
- Classes about problems of the subject.
- Group work sessions.
- Tutorials.
- Conferences Given by invited staff.
- Visits to a work.

4.3.Syllabus

Summary results of *Resistance Materials* subject.

Introduction to the theory of structures. Stability and hyperstaticity.

Basic theorems and applications.

Technical Building Code (CTE), Basic Structural Safety Document (DB-SE).

Technical Building Code (CTE), Basic Structural Safety Document Actions in the building (DB-SE_AE).

Isostatic structures. Articulated structures.

Statically indeterminate structures.

Matrix calculation of bar structures.

4.4.Course planning and calendar

The available class sessions will be distributed in theoretical sessions, taught by the teacher, computer practices and public presentations by students about topics related to contents of subject. To help achieve the necessary skills in English, these presentations will be held in English.

The evaluation of the subject will be based on several exams, evaluation of practices and public presentations. In addition, students who don't pass such evaluation, two final exams will be held in official competitions.

If possible, a visit to a work will be made. This activity is common to the three subjects of the module. Lectures given by invited staff can be scheduled too.

Key dates will be announced by the teacher, both in class and through the platform moodle support.

4.5.Bibliography and recommended resources

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