

29821 - Strenght of Materials

Syllabus Information

Academic Year: 2019/20

Subject: 29821 - Strenght of Materials

Faculty / School: 110 - Escuela de Ingeniería y Arquitectura

326 - Escuela Universitaria Politécnica de Teruel

Degree: 440 - Bachelor's Degree in Electronic and Automatic Engineering

444 - Bachelor's Degree in Electronic and Automatic Engineering

ECTS: 6.0

Year: 3

Semester: First semester

Subject Type: Compulsory

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 teaching methodology is structured in four levels:

- Theoretical classes where the main subject contents are presented and discussed
- Classes for solving problems where practical applications of the theoretical concepts are developed and solved
- Computer lab sessions where the theoretical concepts are applied
- Development of a practical task based on a real application

4.2.Learning tasks

There will be the following activities:

- CLASSROOM TEACHING: 2.4 ECTS (60 hours)
 - Theoretical classes (T1) (30 hours)
 - Classes for solving problems (T2) (15 hours)
 - Computer lab sessions (T3) (15 hours)
- OFF-SITE TEACHING: 3.6 ECTS (90 hours)

- Development of a practical task (T6) (15 hours)
- Student personal study-time (T7) (72 hours)
- Assessments (T8) (3 hours)

4.3.Syllabus

The course will address the following topics:

1. Introduction to the Mechanics of solids and structures
2. Axial stress/strain
3. Torsion of sections
4. Shear and bending of beams
5. Compound bending
6. Determinate and indeterminate structural problems
7. Buckling of struts
8. Thin plates

4.4.Course planning and calendar

The course calendar is defined by the University of Zaragoza. Further information concerning the timetable, classroom, office hours, assessment dates and other details regarding this course will be provided on the first day of class or please refer to the EINA website (<http://eina.unizar.es>) and EUPT website (<https://eupt.unizar.es/>).

In addition, a detailed schedule of activities (computer lab sesión, deadlines, ...) will be available on the website of this course (<http://moodle.unizar.es/>).

The practical task should be presented before the exam. The deadline is fixed by the corresponding professor.

Every professor fixes its tutorship time.

4.5.Bibliography and recommended resources

http://biblos.unizar.es/br/br_citas.php?codigo=29821&year=2019