

## 28918 - Strength of materials and structural analysis

### Syllabus Information

**Academic Year:** 2020/21

**Subject:** 28918 - Strength of materials and structural analysis

**Faculty / School:** 201 - Escuela Politécnica Superior

**Degree:** 583 - Degree in Rural and Agri-Food Engineering  
437 - Degree in Rural and Agri-Food Engineering

**ECTS:** 6.0

**Year:** 2

**Semester:** Second 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 methodology followed in this course is oriented towards the achievement of the learning objectives. A wide range of teaching and learning tasks are implemented, such as:

- Lectures,
- Problem-solving Sessions,
- Computer lab sessions and
- Practical sessions.

#### 4.2.Learning tasks

The course includes the following learning tasks:

- Lectures. The teacher explains the theoretical content of each session. One of the objectives of this activity will be the promoting of the participation of the students and cooperative learning.
- Problem-solving sessions. Students, working individually or in groups, gain knowledge and skills by working to respond to problems and questions. A report of the problems resolved by students will be required.
- Computer lab sessions. Students use specific structural calculation software.



Evaluation																		
Off-site actovity																		
Autonomous work	4	4	4	4	4	4	4	4	7	4	7	4	2	2	4	4	7	
Group work													3	2				
TOTAL	8	8	8	8	8	8	8	8	7	8	7	8	9	8	8	8	7	

#### 4.5. Bibliography and recommended resources

- BB** Riley, William F.. Ingeniería mecánica : estática / William F. Riley, Leroy D. Sturges Barcelona [etc.] : Reverté, cop.1995
- BB** Rodríguez-Avial Azcunaga, Fernando. Problemas resueltos de resistencia de materiales / Fernando Rodríguez-Avial Azcunaga . - 3a. ed. Madrid : Librería Editorial Bellisco, 1989
- BB** Vázquez Fernández, Manuel. Resistencia de materiales / Manuel Vázquez . - 3a. ed. Madrid : Noela, 1994
- BC** Garrido Garcia, José Antonio. Resistencia de materiales / José A. Garrido García, Antonio Foces Mediavilla Valladolid : Secretariado de Publicaciones, Universidad de valladolid, 1994
- BC** Hibbeler, Russell C.. Statics and mechanics of materials / R.C. Hibbeler . New York : Macmillan Publishing Company; Toronto : Collier Macmillan Canada ; New York [etc.] : Maxwell Macmillan International, cop. 1993 [english friendly]
- BC** Mecánica vectorial para ingenieros. Estática / Ferdinand P. Beer ... [et al.] ; revisión técnica, Javier León Cárdenas, Hidalgo Cavazos . 9ª ed. México D. F. : McGraw-Hill/Interamericana, cop. 2010
- BC** Ortíz Berrocal, Luis. Resistencia de materiales / Luis Ortíz Berrocal . 2a ed. Madrid [etc.] : McGraw-Hill, D.L. 2002
- BC** Rodriguez-Avial Azcunaga, Fernando. Resistencia de materiales / Fernando Rodriguez-Avial Azcunaga . - 4a. ed. Madrid : Bellisco, 1990
- BC** Timoshenko, Stephen P.. Resistencia de materiales. Parte 1, Teoría elemental y problemas / S. Timoshenko . - 16a. ed Madrid : Espasa-Calpe, 1989

The updated recommended bibliography can be consulted in:  
<http://psfunizar10.unizar.es/br13/egAsignaturas.php?codigo=28918>