

## 28720 - Civil Engineering: Health and Safety

### Información del Plan Docente

|                  |   |
|------------------|---|
| Academic Year    | 2017/18   |
| Faculty / School | 175 - Escuela Universitaria Politécnica de La Almunia |
| Degree           | 423 - Bachelor's Degree in Civil Engineering          |
| ECTS             | 6.0   |
| Year             | 3   |
| Semester         | First semester  |
| Subject Type     | Compulsory  |
| Module           | ---   |

### **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**

Presentation general methodology

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

Strong interaction between the teacher/student. This interaction is brought into being through a division of work and

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responsibilities between the students and the teacher. Nevertheless, it must be taken into account that, to a certain degree, students can set their learning pace based on their own needs and availability, following the guidelines set by the teacher.

The current subject (the teacher should put THE NAME OF THE SUBJECT here) is conceived as a stand-alone combination of contents, yet organized into three fundamental and complementary forms, which are: the theoretical concepts of each teaching unit, the solving of problems or resolution of questions and laboratory work, at the same time supported by other activities

The organization of teaching will be carried out using the following steps:

- **Theory Classes** : Theoretical activities carried out mainly through exposition by the teacher, where the theoretical supports of the subject are displayed, highlighting the fundamental, structuring them in topics and or sections, interrelating them.

- **Practical Classes** : The teacher resolves practical problems or cases for demonstrative purposes. This type of teaching complements the theory shown in the lectures with practical aspects.

- **Individual Tutorials** : Those carried out giving individual, personalized attention with a teacher from the department. Said tutorials may be in person or online.

### 5.2.Learning tasks

Programmed learning activities

The programme offered to the student to help them achieve their target results is made up of the following activities...

Involves the active participation of the student, in a way that the results achieved in the learning process are developed, not taking away from those already set out, the activities are the following:

- **Face-to-face generic activities** :

**Theory Classes** : The theoretical concepts of the subject are explained and illustrative examples are developed as support to the theory when necessary.

**Practical Classes** : Problems and practical cases are carried out, complementary to the theoretical concepts studied.

- **Generic non-class activities** :

Study and understanding of the theory taught in the lectures.

Understanding and assimilation of the problems and practical cases solved in the practical classes.

Preparation of seminars, solutions to proposed problems, etc.

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Preparation of the written tests for continuous assessment and final exams.

The subject has 6 ECTS credits, which represents 150 hours of student work in the subject during the trimester, in other words, 10 hours per week for 15 weeks of class.

A summary of a weekly timetable guide can be seen in the following table. These figures are obtained from the subject file in the Accreditation Report of the degree, taking into account the level of experimentation considered for the said subject is moderate

| Activity         | Weekly school hours |
|------------------|---------------------|
| Lectures         | 3                   |
| Practics         | 1                   |
| Other Activities | 6                   |

Nevertheless the previous table can be shown into greater detail, taking into account the following overall distribution:

- 40 hours of lectures, with 50% theoretical demonstration and 50% solving type problems.
- 6 hours of written assessment tests, one hour per test.
- 4 hours of PPT presentations.
- 90 hours of personal study, divided up over the 15 weeks of the 2 nd semester.

There is a tutorial calendar timetable set by the teacher that can be requested by the students who want a tutorial.

### 5.3.Syllabus

#### Section 1.Health and Safety Management

- 1.- Basic concepts
2. Labour risk prevention law
3. Prevention Services
4. Coordination of business activities
5. Construction work. Part 1
6. Subcontracting in construction
7. Offences and Penalties

#### Section 2. Basic safety requirements

8. Planning the coordination of construction Works.

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9. Collective Protection
  - 10.-Personal protection equipment
  11. Signalling
  12. Work Equipment
  13. Noise, Vibrations, Electric Risk, Asbestos
  14. Handling loads
  15. Construction Worksites
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16. Particular risks in civil engineering construction
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17. Particular risks in civil engineering construction: Demolitions, Digging, foundations, trenches, roads, streets, railways, gas pipes, masonry works, tunnels and installations.
  18. Contents of Health and Safety study
  19. First Aid

### 5.4.Course planning and calendar

Class hall sessions & work presentations timetable

The dates of the final exams will be those that are officially published at <http://www.eupla.es/secretaria/academica/examenes.html>.

The written assessment tests will be related to the following topics:

- **Test 1** : Topic 1-3
  
- **Test 2** : Topic 1-8
  
- **Test 3** : Topic 9-19

### 5.5.Bibliography and recommended resources

- Cortés Díaz, José María. Técnicas de prevención de riesgos laborales : seguridad e higiene del trabajo / José María Cortés Díaz . - 5a. ed. Madrid : Tébar, 2002
- Manual para la formación en prevención de riesgos laborales : programa formativo para el desempeño de las funciones de nivel básico / autores, Angel J. Gallego Morales [et al.] ; coordinador, José M. Viñas Armada ; director, José Vida Soria . - 3a. ed. Valladolid : Lex Nova, 2005
- Pérez Merlos, Ramón.. Seguridad práctica en obras de construcción/ Ramón Pérez Merlos. 1ª edition. Totana (Murcia): Etosa, 2005
- Beguería Latorre, Pedro-Antonio.. Método para la coordinación de seguridad y salud en construcción/Pedro-Antonio Beguería Latorre.. 1ª edición. Madrid: Fundación Escuela de la Edificación,2002.
- Anduiza Arriola, Rafael.. El coordinador de seguridad/ Rafael Anduiza Arriola.. 1ª edición Alicante:Fundación del Colegio Oficial de Aparejadores y Arquitectos Técnicos de Alicante, 2004
- Sanchez Rivero, J.M. El coordinador de seguridad y salud / J.M, Sanchez Rivero.. 1ª edition Madrid: Confemetal, 2006
- Castro. M.A.. Manual de Prevención de Riesgos en la construcción/M.A. Castro.. 1ª edition Madrid: Tecnos,2004.

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| <b>Material</b>                    | <b>Format</b>    |
|------------------------------------|------------------|
| Topic theory notes, Topic problems | Paper/repository |
| Topic theory notes                 | Digital/Moodle   |
| Topic presentations                | E-Mail           |
| Related links                      |                  |
| Educational software               | Web page         |