

## 28910 - Statistics

### Syllabus Information

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**Academic Year:** 2021/22

**Subject:** 28910 - Estadística

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

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

**ECTS:** 6.0

**Year:** 2

**Semester:** First semester

**Subject Type:** Basic Education

**Module:**

## 1. General information

### 1.1. Aims of the course

The subject and its expected results respond to the following approaches and objectives:

It is intended, with the teaching of this subject, to provide tools that serve as a basis to build and / or study certain statistical models related to the Degree.

## 2. Learning goals

## 3. Assessment (1st and 2nd call)

## 4. Methodology, learning tasks, syllabus and resources

### 4.1. Methodological overview

Theory classes are expository. It will be developed according to the theoretical program. In the classes of problems, the methodology is fully participatory. For its realization is helpful consultation recommended both basic and additional bibliography.

Classes in group work practices for which implementation problems are solved is enhanced. Autonomous and individual work is essential for the student.

### 4.2. Learning tasks

The course includes the following learning tasks:

- Lectures and practice sessions solving problems in the classroom.

At the beginning of the semester, it provides the student teaching material for proper development of the classes.

### 4.3. Syllabus

The course will address the following topics:

- Exploratory data analysis.
- Calculation of probabilities.
- Models of discrete and continuous distribution.
- Sampling and estimation.

- Confidence intervals.
- Hypothesis testing.
- Variance analysis.

#### 4.4. Course planning and calendar

##### Schedule sessions and presentation of works

| Type of activity / Week   | 1         | 2         | 3         | 4         | 5         | 6         | 7         | 8         | 9         | 10        | 11        | 12        | 13        | 14        | 15        | Total      |
|---------------------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|------------|
| In-class activity         |           |           |           |           |           |           |           |           |           |           |           |           |           |           |           | <b>60</b>  |
| Theory                    | 3         | 3         | 3         | 3         | 3         | 3         | 3         | 2         | 1         | 1         | 1         | 1         | 1         | 1         | 1         | <b>30</b>  |
| Problems                  | 1         | 1         | 1         | 1         | 1         | 1         | 1         | 2         | 3         | 3         | 3         | 3         | 3         | 3         |           | <b>27</b>  |
| Practice                  |           |           |           |           |           |           |           |           |           |           |           |           |           |           | 3         | <b>3</b>   |
| Exámenes                  |           |           |           |           |           |           |           |           |           |           |           |           |           |           |           |            |
| Evaluation                |           |           |           |           |           |           |           |           |           |           |           |           |           |           |           |            |
| Not in-class<br>Actividad |           |           |           |           |           |           |           |           |           |           |           |           |           |           |           |            |
| Individual task           | 6         | 6         | 6         | 6         | 6         | 6         | 6         | 6         | 6         | 6         | 6         | 6         | 6         | 6         | 6         | <b>90</b>  |
| Group work                |           |           |           |           |           |           |           |           |           |           |           |           |           |           |           |            |
| <b>TOTAL</b>              | <b>10</b> | <b>10</b> | <b>10</b> | <b>10</b> | <b>10</b> | <b>10</b> | <b>10</b> | <b>10</b> | <b>10</b> | <b>10</b> | <b>10</b> | <b>10</b> | <b>10</b> | <b>10</b> | <b>10</b> | <b>150</b> |

#### 4.5. Bibliography and recommended resources

- BB** Johnson, Richard Arnold. Probabilidad y estadística para ingenieros de Miller y Freund / Richard A. Johnson ; traducción, José de la Cera Alonso ; revisión técnica, Juan Antonio Torre Marina . - [3a. ed. en español] México [etc.] : Prentice-Hall Hispanoamericana, cop. 1997
- BB** Mendenhall, William. Probabilidad y estadística : para ingeniería y ciencias / William Mendenhall, Terry Sincich ; traducción Roberto Escalona ; revisión técnica Marcial Gil Rico Rico . - [1ª ed. en español] México [etc.] : Prentice Hall Hispanoamericana, cop. 1997
- BB** Peña Sánchez de Rivera, Daniel. Estadística : modelos y métodos. Vol. 2, Modelos lineales y series temporales / Daniel Peña Sánchez de Rivera . - 2a. ed. Madrid : Alianza, 1989
- BB** Peña Sánchez de Rivera, Daniel. Estadística : modelos y métodos. vol.1, Fundamentos / Daniel Peña Sánchez de Rivera . - 1a. ed., 2a. reimp. Madrid : Alianza, 1988
- BB** Walpole, Ronald E.. Probabilidad y estadística / Ronald E. Walpole, Raymond H. Myers . - 3a. ed. en español México, D. F. : McGraw-Hill/Interamericana, cop. 1992 (imp. 1999)

The updated recommended bibliography can be consulted in:  
<http://psfunizar10.unizar.es/br13/egAsignaturas.php?codigo=28910>