230087 - PIE - Probability and Statistics

Coordinating unit: 230 - ETSETB - Barcelona School of Telecommunications Engineering
Teaching unit: 749 - MAT - Department of Mathematics
Academic year: 2019
Degree: BACHELOR'S DEGREE IN TELECOMMUNICATIONS TECHNOLOGIES AND SERVICES ENGINEERING (Syllabus 2015). (Teaching unit Compulsory)
ECTS credits: 6
Teaching languages: Catalan

Teaching staff

Coordinator: Josep M. Aroca
Others: Miquel À. Fiol
Josep Fàbrega
Anna Lladó

Prior skills

Calculus of one and several variables. Linear algebra.

Degree competences to which the subject contributes


Transversal:
07 AAT N2. SELF-DIRECTED LEARNING - Level 2: Completing set tasks based on the guidelines set by lecturers. Devoting the time needed to complete each task, including personal contributions and expanding on the recommended information sources.

Teaching methodology

- Lectures.
- Application classes.
- Exercises.

Learning objectives of the subject

Study load

<table>
<thead>
<tr>
<th>Total learning time: 150h</th>
<th>Hours large group:</th>
<th>65h</th>
<th>43.33%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Self study:</td>
<td>85h</td>
<td></td>
<td>56.67%</td>
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</tbody>
</table>

Teaching languages: Catalan
# 1. Basic probability theory

**Description:**

**Learning time:** 15h
- Theory classes: 15h

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# 2. Random variable

**Description:**

**Learning time:** 13h
- Theory classes: 13h

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# 3. Several random variables

**Description:**

**Learning time:** 14h
- Theory classes: 14h

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# 4. Statistics I

**Description:**

**Learning time:** 13h
- Theory classes: 13h
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5. Statistics II

<table>
<thead>
<tr>
<th>Learning time:</th>
<th>10h</th>
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<tbody>
<tr>
<td>Theory classes:</td>
<td>10h</td>
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</tbody>
</table>

Description:
Fitting lines. Regression in one and several variables. Method of the least squares, orthogonality principle. Linear models. ANOVA. Non parametric tests. Bayesian statistics.

Qualification system
Parcial exams: 40%
Final exam: 60%

Bibliography

Basic: