### 300020 - PIE - Probability and Statistics

**Coordinating unit:** 300 - EETAC - Castelldefels School of Telecommunications and Aerospace Engineering  
**Teaching unit:** 749 - MAT - Department of Mathematics  
**Academic year:** 2018  
**Degree:** BACHELOR'S DEGREE IN TELECOMMUNICATIONS SYSTEMS ENGINEERING (Syllabus 2009). (Teaching unit Compulsory)  
BACHELOR'S DEGREE IN NETWORK ENGINEERING (Syllabus 2009). (Teaching unit Compulsory)  
**ECTS credits:** 6  
**Teaching languages:** Catalan, Spanish

### Teaching staff

**Coordinator:** Definit a la infoweb de l'assignatura.  
**Others:** Definit a la infoweb de l'assignatura.

### Prior skills

X

### Requirements

X

### Degree competences to which the subject contributes

**Specific:**
1. CE 1 TELECOM. Students will acquire the ability to solve mathematical problems for engineering. An aptitude for applying knowledge of linear algebra, geometry, differential geometry, differential and integral calculus, differential equations and partial differential equations, numerical methods, numerical algorithms, statistics and optimisation. (CIN/352/2009, BOE 20.2.2009)

**Transversal:**
2. SELF-DIRECTED LEARNING - Level 1. Completing set tasks within established deadlines. Working with recommended information sources according to the guidelines set by lecturers.
3. TEAMWORK - Level 1. Working in a team and making positive contributions once the aims and group and individual responsibilities have been defined. Reaching joint decisions on the strategy to be followed.

### Teaching methodology

X

### Learning objectives of the subject

X
### Study load

<table>
<thead>
<tr>
<th></th>
<th>Hours</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total learning time:</td>
<td>150h</td>
<td></td>
</tr>
<tr>
<td>Hours large group:</td>
<td>36h</td>
<td>24.00%</td>
</tr>
<tr>
<td>Hours medium group:</td>
<td>12h</td>
<td>8.00%</td>
</tr>
<tr>
<td>Hours small group:</td>
<td>6h</td>
<td>4.00%</td>
</tr>
<tr>
<td>Guided activities:</td>
<td>12h</td>
<td>8.00%</td>
</tr>
<tr>
<td>Self study:</td>
<td>84h</td>
<td>56.00%</td>
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</table>
### Content

<table>
<thead>
<tr>
<th>(ENG) Introducción a la combinatoria</th>
<th>Learning time: 17h</th>
</tr>
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<tbody>
<tr>
<td></td>
<td>Theory classes: 3h</td>
</tr>
<tr>
<td></td>
<td>Practical classes: 1h</td>
</tr>
<tr>
<td></td>
<td>Laboratory classes: 0h</td>
</tr>
<tr>
<td></td>
<td>Guided activities: 2h</td>
</tr>
<tr>
<td></td>
<td>Self study : 11h</td>
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<table>
<thead>
<tr>
<th>(ENG) Conceptos básicos de la probabilidad</th>
<th>Learning time: 24h 30m</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Theory classes: 4h 30m</td>
</tr>
<tr>
<td></td>
<td>Practical classes: 2h</td>
</tr>
<tr>
<td></td>
<td>Laboratory classes: 1h</td>
</tr>
<tr>
<td></td>
<td>Guided activities: 2h</td>
</tr>
<tr>
<td></td>
<td>Self study : 15h</td>
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<table>
<thead>
<tr>
<th>(ENG) Variables aleatorias</th>
<th>Learning time: 30h</th>
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<tbody>
<tr>
<td></td>
<td>Theory classes: 9h</td>
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<tr>
<td></td>
<td>Practical classes: 3h</td>
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<tr>
<td></td>
<td>Laboratory classes: 1h</td>
</tr>
<tr>
<td></td>
<td>Guided activities: 2h</td>
</tr>
<tr>
<td></td>
<td>Self study : 15h</td>
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<table>
<thead>
<tr>
<th>(ENG) Vectores aleatorios</th>
<th>Learning time: 27h 30m</th>
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<tbody>
<tr>
<td></td>
<td>Theory classes: 7h 30m</td>
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<tr>
<td></td>
<td>Practical classes: 2h</td>
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<td></td>
<td>Laboratory classes: 2h</td>
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<tr>
<td></td>
<td>Guided activities: 2h</td>
</tr>
<tr>
<td></td>
<td>Self study : 14h</td>
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</tbody>
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**Description:**

- (ENG) Introducción a la combinatoria
- (ENG) Conceptos básicos de la probabilidad
- (ENG) Variables aleatorias

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**Learning time:**

- Theory classes: 3h
- Practical classes: 1h
- Laboratory classes: 0h
- Guided activities: 2h
- Self study : 11h

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**Theory classes:**

- 3h
- 4h 30m
- 9h
- 7h 30m
- 9h

**Practical classes:**

- 1h
- 2h
- 2h
- 2h
- 2h

**Laboratory classes:**

- 0h
- 1h
- 1h
- 2h
- 2h

**Guided activities:**

- 2h
- 2h
- 2h
- 2h
- 2h

**Self study:**

- 11h
- 15h
- 15h
- 14h

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**Description:**

- x
- x
- x
- x
### Qualification system

XX

### Regulations for carrying out activities

X

### Bibliography

#### Basic:


#### Complementary: