300021 - IX - Network Interconnection Techniques

**Coordinating unit:** 300 - EETAC - Castelldefels School of Telecommunications and Aerospace Engineering

**Teaching unit:** 744 - ENTEL - Department of Network Engineering

**Academic year:** 2017

**Degree:** BACHELOR'S DEGREE IN TELECOMMUNICATIONS SYSTEMS ENGINEERING (Syllabus 2009). (Teaching unit Compulsory)
BACHELOR'S DEGREE IN NETWORK ENGINEERING (Syllabus 2009). (Teaching unit Compulsory)
BACHELOR'S DEGREE IN AEROSPACE SYSTEMS ENGINEERING/BACHELOR'S DEGREE IN TELECOMMUNICATIONS SYSTEMS ENGINEERING - NETWORK ENGINEERING (AGRUPACIÓ DE SIMULTANIEITAT) (Syllabus 2015). (Teaching unit Compulsory)
BACHELOR'S DEGREE IN AEROSPACE SYSTEMS ENGINEERING/BACHELOR'S DEGREE IN NETWORK ENGINEERING (Syllabus 2015). (Teaching unit Compulsory)

**ECTS credits:** 6

**Teaching languages:** Catalan, Spanish

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**Teaching staff**

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

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

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**Prior skills**

X

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**Requirements**

X

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**Degree competences to which the subject contributes**

**Specific:**

1. CE 17 TELECOM. Conocimiento y utilización de los conceptos de arquitectura de red, protocolos e interfaces de comunicaciones.(CIN/352/2009, BOE 20.2.2009.)
2. CE 19 TELECOM. Conocimiento de los métodos de interconexión y encaminamiento, así como los fundamentos de la planificación, dimensionado de redes en función de parámetros de tráfico.(CIN/352/2009, BOE 20.2.2009.)

**General:**

7. EFFICIENT USE OF EQUIPMENT AND INSTRUMENTS - Level 1: Using instruments, equipment and software from the laboratories of general or basic use. Realising experiments and proposed practices and analyzing obtained results.

**Transversal:**

3. SELF-DIRECTED LEARNING - Level 1. Completing set tasks within established deadlines. Working with recommended information sources according to the guidelines set by lecturers.
4. EFFICIENT ORAL AND WRITTEN COMMUNICATION - Level 1. Planning oral communication, answering questions properly and writing straightforward texts that are spelt correctly and are grammatically coherent.
5. THIRD LANGUAGE. Learning a third language, preferably English, to a degree of oral and written fluency that fits in with the future needs of the graduates of each course.
6. 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.
8. EFFECTIVE USE OF INFORMATION RESOURCES - Level 1. Identifying information needs. Using collections, premises and services that are available for designing and executing simple searches that are suited to the topic.
300021 - IX - Network Interconnection Techniques

Teaching methodology

X

Learning objectives of the subject

X

Study load

<table>
<thead>
<tr>
<th>Total learning time: 150h</th>
<th>Hours large group: 26h</th>
<th>17.33%</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>Hours medium group: 13h</td>
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<tr>
<td></td>
<td>Hours small group: 13h</td>
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<tr>
<td></td>
<td>Guided activities: 14h</td>
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<tr>
<td></td>
<td>Self study: 84h</td>
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### 300021 - IX - Network Interconnection Techniques

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<thead>
<tr>
<th>Content</th>
<th>Learning time</th>
<th>Description</th>
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<tbody>
<tr>
<td><strong>(ENG) INTRODUCTION</strong></td>
<td>5h</td>
<td>XX</td>
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<td><strong>Learning time:</strong></td>
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<tr>
<td>Theory classes: 2h</td>
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<tr>
<td>Practical classes: 1h</td>
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<td>Laboratory classes: 0h</td>
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<td>Guided activities: 0h</td>
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<tr>
<td>Self study: 2h</td>
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<tr>
<td><strong>Description:</strong></td>
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<tr>
<td><strong>(ENG) LOCAL AREA NETWORKS</strong></td>
<td>30h</td>
<td>XX</td>
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<td><strong>(ENG) ETHERNET (IEEE 802.3)</strong></td>
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<td><strong>(ENG) WIRELESS LOCAL AREA NETWORKS</strong></td>
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<td><strong>Description:</strong></td>
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</table>
## (ENG) LAN INTERNETWORKING

**Description:**
XX

**Learning time:** 57h  
- Theory classes: 10h  
- Practical classes: 3h  
- Laboratory classes: 8h  
- Guided activities: 4h  
- Self study: 32h

## (ENG) MULTIPLE ACCESS Protocols

**Description:**
XX

**Learning time:** 17h  
- Theory classes: 4h  
- Practical classes: 1h  
- Laboratory classes: 0h  
- Guided activities: 2h  
- Self study: 10h
### Planning of activities

| (ENG) LABORATORI DE XARXES D'ÀREA LOCAL | Hours: 2h  
Laboratory classes: 2h |
| (ENG) LABORATORI DE DISPOSITIUS D'INTERCONEXIÓ | Hours: 4h  
Laboratory classes: 4h |
| (ENG) LABORATORI DE STP | Hours: 2h  
Laboratory classes: 2h |
| (ENG) LABORATORI DE VLAN | Hours: 2h  
Laboratory classes: 2h |
| (ENG) LABORATORI DE WLAN | Hours: 2h  
Laboratory classes: 2h |
| (ENG) EXAMEN GLOBAL DE LABORATORI | Hours: 1h  
Laboratory classes: 1h |
| (ENG) GROUP-WISE PROBLEM RESOLUTION | Hours: 7h  
Guided activities: 7h |

#### Specific objectives:

XX

| (ENG) PROJECTE DE XARXA | Hours: 6h  
Guided activities: 6h |

### Individual Test Exercises (Subnetting)

| INDIVIDUAL TEST EXERCISES (SUBNETTING) | Hours: 1h  
Guided activities: 1h |

#### Description:
Conducting a test of a collection of exercises (subnetting).

#### Support materials:
Collection of exercises.
### Descriptions of the assignments due and their relation to the assessment:

Individual test in class.

### Specific objectives:

Demonstrate the degree of learning and consolidation of knowledge used in the collection of exercises.

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### Qualification system

XX

### Regulations for carrying out activities

X

### Bibliography

#### Basic:


#### Complementary:


#### Others resources: