Course guide
330235 - XC - Communication Networks

Unit in charge: Manresa School of Engineering
Teaching unit: 750 - EMIT - Department of Mining, Industrial and ICT Engineering.
Degree: BACHELOR’S DEGREE IN ICT SYSTEMS ENGINEERING (Syllabus 2010). (Compulsory subject).
Academic year: 2022 ECTS Credits: 6.0 Languages: Catalan, Spanish, English

LECTURER

Coordinating lecturer: FRANCISCO DEL AGUILA LOPEZ

Others:

DEGREE COMPETENCES TO WHICH THE SUBJECT CONTRIBUTES

Specific:
1. Knowledge of the architecture of communications networks and their application as well as the ability to design, implement and manage communications networks, especially computer networks.
2. The ability to describe, program, use, evaluate and optimize communication protocols and interfaces for the different levels of a network architecture
3. Knowledge of and the ability to use existing tools and instrumentation for the analysis, design, development and verification of electronic, computer and communication systems
4. Knowledge and ability to use existing tools and instrumentation for the analysis, design, development and verification of electronic, computer and communications systems
5. The ability to perform the typical activities of the degree, taking into account the corresponding standards, rules and regulations.

Transversal:
6. EFFICIENT ORAL AND WRITTEN COMMUNICATION - Level 3. Communicating clearly and efficiently in oral and written presentations. Adapting to audiences and communication aims by using suitable strategies and means.
7. TEAMWORK - Level 3. Managing and making work groups effective. Resolving possible conflicts, valuing working with others, assessing the effectiveness of a team and presenting the final results.
8. EFFECTIVE USE OF INFORMATION RESOURCES - Level 3. Planning and using the information necessary for an academic assignment (a final thesis, for example) based on a critical appraisal of the information resources used.
9. 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.

TEACHING METHODOLOGY

LEARNING OBJECTIVES OF THE SUBJECT

STUDY LOAD

<table>
<thead>
<tr>
<th>Type</th>
<th>Hours</th>
<th>Percentage</th>
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<tbody>
<tr>
<td>Hours small group</td>
<td>30,0</td>
<td>20.00</td>
</tr>
<tr>
<td>Hours large group</td>
<td>30,0</td>
<td>20.00</td>
</tr>
<tr>
<td>Self study</td>
<td>90,0</td>
<td>60.00</td>
</tr>
</tbody>
</table>

Total learning time: 150 h
## CONTENTS

### (ENG) Títol del contingut 1: XARXES DE COMUNICACIÓ

**Full-or-part-time:** 12h  
Theory classes: 4h  
Self study : 8h

### (ENG) Títol del contingut 2: CAPA D'ENLLAÇ

**Full-or-part-time:** 34h  
Theory classes: 6h  
Laboratory classes: 8h  
Self study : 20h

### (ENG) Títol del contingut 3: XARXES D'AREA LOCAL

**Full-or-part-time:** 27h  
Theory classes: 4h  
Laboratory classes: 6h  
Self study : 17h

### (ENG) Títol del contingut 4: XARXES SENSE FILS

**Full-or-part-time:** 55h  
Theory classes: 40h  
Laboratory classes: 4h  
Self study : 11h

### (ENG) Títol del contingut 5: LA CAPA DE XARXA

**Full-or-part-time:** 31h  
Theory classes: 8h  
Laboratory classes: 6h  
Self study : 17h

### (ENG) Títol del contingut 6: LA CAPA DE TRANSPORT

**Full-or-part-time:** 27h  
Theory classes: 4h  
Laboratory classes: 6h  
Self study : 17h
## ACTIVITIES

### (ENG) TÍTOL DE L'ACTIVITAT 1: CLASSE EXPOSITIVA I DE PROBLEMES

**Full-or-part-time:** 26h  
Theory classes: 26h

### (ENG) TÍTOL DE L'ACTIVITAT 2: ESTUDI DE CONTINGUTS

**Full-or-part-time:** 20h  
Self study: 20h

### (ENG) TÍTOL DE L'ACTIVITAT 3: CLASSE DE LABORATORI

**Full-or-part-time:** 80h  
Laboratory classes: 30h  
Self study: 50h

### (ENG) TÍTOL DE L'ACTIVITAT 4: PROVES

**Full-or-part-time:** 24h  
Theory classes: 4h  
Self study: 20h

## GRADING SYSTEM

## BIBLIOGRAPHY

**Basic:**
  [Consultation: 31/05/2022].  
  ISBN 8420541109.