340362 - SEAX-C9X44 - Network Security and Administration

Coordinating unit: 340 - EPSEVG - Vilanova i la Geltrú School of Engineering
Teaching unit: 744 - ENTEL - Department of Network Engineering
Academic year: 2018
Degree: BACHELOR'S DEGREE IN INFORMatics ENGINEERING (Syllabus 2010). (Teaching unit Compulsory)
BACHELOR'S DEGREE IN ELECTRONIC SYSTEMS ENGINEERING (Syllabus 2010). (Teaching unit Optional)
ECTS credits: 6
Teaching staff
Coordinator: Guasch Murillo, Daniel
Others: Guasch Murillo, Daniel
Vidal Ferré, Rafael

Teaching languages: Catalan, Spanish

Opening hours
Timetable:

Prior skills

Requirements

Degree competences to which the subject contributes

Specific:
1. CEFC18. Knowledge of legislation and regulation of computing at national, european and international level.
2. CEFC5. Knowledge, management and maintenance of systems, computing services and applications.
3. CEFC8. Ability to analyze, to design, to construct and to maintain applications in a well built, secure and efficient way choosing the most adequate paradigms and languages.
4. CEIC6. Ability to understand, implement and manage security and safety of computing systems.
5. CEIC8. Ability to design, deploy, administer and manage computer networks.
6. CEIS1. Ability to develop, to maintain and evaluate programming services and systems which satisfy all requirements of user having a reliable and efficient behavior, being comprehensible to develop and maintain and observe to current rules, applying theory, principals, methods, practices of programing engineering.
7. CEIS2. Ability to assess customer needs and specify software requirements to meet these needs, reconciling conflicting goals by finding acceptable compromises within limitations arising from the cost, time, existence of systems already developed and from organizations themselves.
8. CESI1. Ability to integrate solutions for Information and Communications Technology and business processes to meet information needs of organizations, enabling them to reach their goals effectively and efficiently, thus giving them competitive advantages.
9. CESI2. Ability to determine the requirements of information and communication systems of an organization paying...
attention to safety aspects according to security and compliance with regulations and legislation.

10. CET11. Ability to understand the environment of an organization and its needs in the field of information technology and communications.

11. CET14. Ability to select, design, deploy, integrate and manage network and communications infrastructure in an organization.

12. CET15. Ability to select, to develop, integrate and manage information systems which satisfy organization necessities with identified costs and quality criteria.

13. CET16. Ability to design systems, applications and services based on network technologies, including internet, website, e-commerce, multimedia, interactive services and mobile computing.

### Teaching methodology

### Learning objectives of the subject

### Study load

<table>
<thead>
<tr>
<th>Total learning time: 150h</th>
<th>Hours large group: 30h</th>
<th>20.00%</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>Hours medium group: 0h</td>
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<tr>
<td></td>
<td>Hours small group: 30h</td>
<td>20.00%</td>
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<tr>
<td></td>
<td>Guided activities: 0h</td>
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<tr>
<td></td>
<td>Self study: 90h</td>
<td>60.00%</td>
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</tbody>
</table>
| Network access servers | Learning time: 4h  
<table>
<thead>
<tr>
<th></th>
<th>Theory classes: 4h</th>
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</thead>
<tbody>
<tr>
<td><strong>Description:</strong></td>
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<td></td>
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<tr>
<td><strong>Related activities:</strong></td>
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<tr>
<td><strong>Specific objectives:</strong></td>
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</tbody>
</table>
| (ENG) Servidors d'accés a les dades | Learning time: 4h  
<table>
<thead>
<tr>
<th></th>
<th>Practical classes: 4h</th>
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</thead>
</table>
## Planning of activities

| Description: | Hours: 8h  
Guided activities: 4h  
Theory classes: 4h |
<table>
<thead>
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<tbody>
<tr>
<td>Support materials:</td>
<td></td>
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<tr>
<td>Descriptions of the assignments due and their relation to the assessment:</td>
<td></td>
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<tr>
<td>Specific objectives:</td>
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</tbody>
</table>

| Hours: 4h  
Theory classes: 4h |
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<tbody>
<tr>
<td>Description:</td>
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<tr>
<td>Support materials:</td>
</tr>
<tr>
<td>Descriptions of the assignments due and their relation to the assessment:</td>
</tr>
<tr>
<td>Specific objectives:</td>
</tr>
</tbody>
</table>

### Routing

| Hours: 16h  
Guided activities: 8h  
Theory classes: 8h |
<table>
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<tbody>
<tr>
<td>Description:</td>
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<tr>
<td>Support materials:</td>
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<tr>
<td>Descriptions of the assignments due and their relation to the assessment:</td>
</tr>
<tr>
<td>Specific objectives:</td>
</tr>
</tbody>
</table>

### Addressing

| Hours: 8h  
Guided activities: 4h  
Theory classes: 4h |
<table>
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<tbody>
<tr>
<td>Description:</td>
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<tr>
<td>Support materials:</td>
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<tr>
<td>Descriptions of the assignments due and their relation to the assessment:</td>
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<tr>
<td>Specific objectives:</td>
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</tbody>
</table>
## Network Security and Administration

### Descriptions of the assignments due and their relation to the assessment

<table>
<thead>
<tr>
<th>Hours: 8h</th>
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<tbody>
<tr>
<td>Guided activities: 4h</td>
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<tr>
<td>Theory classes: 4h</td>
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</tbody>
</table>

### Specific objectives

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### Network diagnostics

<table>
<thead>
<tr>
<th>Hours: 16h</th>
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<tr>
<td>Guided activities: 4h</td>
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<tr>
<td>Theory classes: 12h</td>
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### Support materials

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### Network diagnostics

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### Specific objectives

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### Support materials

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### Network diagnostics

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### Specific objectives

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### Support materials

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### Network diagnostics

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### Specific objectives

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### Support materials

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### Network diagnostics

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### Specific objectives

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### Support materials

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## Support materials:

## Descriptions of the assignments due and their relation to the assessment:

## Specific objectives:

### Cluster of disks in network

<table>
<thead>
<tr>
<th>Hours: 8h</th>
<th>Guided activities: 4h</th>
<th>Theory classes: 4h</th>
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</thead>
</table>

### Description:

### Support materials:

### Descriptions of the assignments due and their relation to the assessment:

### Specific objectives:

### File service

<table>
<thead>
<tr>
<th>Hours: 8h</th>
<th>Guided activities: 4h</th>
<th>Theory classes: 4h</th>
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</thead>
</table>

### Description:

### Support materials:

### Descriptions of the assignments due and their relation to the assessment:

### Specific objectives:

### Private cloud

<table>
<thead>
<tr>
<th>Hours: 8h</th>
<th>Guided activities: 4h</th>
<th>Theory classes: 4h</th>
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</table>

### Description:

### Support materials:
Web service
Description:
Support materials:
Descriptions of the assignments due and their relation to the assessment:
Specific objectives:

Web service

Hours: 8h
Guided activities: 4h
Theory classes: 4h

Description:
Support materials:
Descriptions of the assignments due and their relation to the assessment:
Specific objectives:

Qualification system

Regulations for carrying out activities
Bibliography

Basic: