Course guide
330227 - SA - Analogue Systems

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

LECTURER

Coordinating lecturer: JOSE FONT TEIXIDO

Others:

DEGREE COMPETENCES TO WHICH THE SUBJECT CONtributes

Specific:
1. An understanding and mastery of the foundations of linear systems and the associated transforms and functions, electrical circuits theory, electronic circuits, the physical principle of semiconductors and logic families, electronic and photonic devices, and their use in solving engineering problems.
2. Ability to specify, analyze, design, implement, evaluate and document analog circuits, using techniques and descriptions in the temporal, frequency and transformed domains of Laplace.
3. (ENG) Coneixement de les diferents alternatives per a l’alimentació d’equips i subsistemes electrònics, incloent l’energia fotovoltaica, així com de les seves principals característiques, especialment en entorns de baixa potència disponible.
4. Knowledge of the fundamentals and applications of electronic power circuits.
5. Knowledge and ability to use existing tools and instrumentation for the analysis, design, development and verification of electronic, computer and communications systems.
6. The ability to perform the typical activities of the degree, taking into account the corresponding standards, rules and regulations.
7. Ability to model and simulate systems in the field of the degree and apply the results to problem solving within this field.

Transversal:
8. 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.
9. 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.
10. TEAMWORK - Level 2. Contributing to the consolidation of a team by planning targets and working efficiently to favor communication, task assignment and cohesion.

TEACHING METHODOLOGY

LEARNING OBJECTIVES OF THE SUBJECT

STUDY LOAD

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<thead>
<tr>
<th>Type</th>
<th>Hours</th>
<th>Percentage</th>
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<tbody>
<tr>
<td>Hours large group</td>
<td>45,0</td>
<td>30.00</td>
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<tr>
<td>Self study</td>
<td>90,0</td>
<td>60.00</td>
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<tr>
<td>Hours small group</td>
<td>15,0</td>
<td>10.00</td>
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Total learning time: 150 h

CONTENTS

(ENG) Títol del contingut 1: DISPOSITIUS ELECTRÒNICS

Full-or-part-time: 40h
Theory classes: 12h
Laboratory classes: 4h
Self study : 24h

(ENG) Títol del contingut 2: DISSENY AMB AO

Description: .
Full-or-part-time: 40h
Theory classes: 12h
Laboratory classes: 4h
Self study : 24h

(ENG) Títol del contingut 3: 

Description: .
Full-or-part-time: 30h
Theory classes: 9h
Laboratory classes: 3h
Self study : 18h

(ENG) Títol del contingut 4: ALIMENTACIÓ D’EQUIPS ELECTRÒNICS

Description: .
Full-or-part-time: 40h
Theory classes: 12h
Laboratory classes: 4h
Self study : 24h

ACTIVITIES

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

Full-or-part-time: 40h
Theory classes: 40h
<table>
<thead>
<tr>
<th><strong>(ENG) TÍTOL DE L’ACTIVITAT 2: ESTUDI DE CONTINGUTS</strong></th>
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<tbody>
<tr>
<td><strong>Full-or-part-time:</strong> 30h</td>
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<td><strong>Self study:</strong> 30h</td>
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<tr>
<th><strong>(ENG) TÍTOL DE L’ACTIVITAT 3: CLASSE DE LABORATORI</strong></th>
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<tr>
<td><strong>Full-or-part-time:</strong> 45h</td>
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<td><strong>Laboratory classes:</strong> 15h</td>
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<tr>
<td><strong>Self study:</strong> 30h</td>
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<tr>
<th><strong>(ENG) TÍTOL DE L’ACTIVITAT 4: REALITZACIÓ D’EXERCICIS</strong></th>
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<tr>
<td><strong>Full-or-part-time:</strong> 20h</td>
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<td><strong>Self study:</strong> 20h</td>
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<th><strong>(ENG) TÍTOL DE L’ACTIVITAT 5: EXAMEN</strong></th>
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<td><strong>Full-or-part-time:</strong> 15h</td>
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<tr>
<td><strong>Theory classes:</strong> 5h</td>
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<tr>
<td><strong>Self study:</strong> 10h</td>
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**GRADING SYSTEM**

**BIBLIOGRAPHY**

**Basic:**

**Complementary:**

**RESOURCES**

**Other resources:**
- Collection of Analogue Systems problems.