Course guide
820064 - PI - Facilities Projects

Unit in charge: Barcelona East School of Engineering
Teaching unit: 717 - DEGD - Department of Engineering Graphics and Design.

Degree:
BACHELOR’S DEGREE IN CHEMICAL ENGINEERING (Syllabus 2009). (Optional subject).
BACHELOR’S DEGREE IN ELECTRICAL ENGINEERING (Syllabus 2009). (Optional subject).
BACHELOR’S DEGREE IN ENERGY ENGINEERING (Syllabus 2009). (Optional subject).
BACHELOR’S DEGREE IN INDUSTRIAL ELECTRONICS AND AUTOMATIC CONTROL ENGINEERING (Syllabus 2009). (Optional subject).
BACHELOR’S DEGREE IN MECHANICAL ENGINEERING (Syllabus 2009). (Optional subject).

Academic year: 2022  ECTS Credits: 6.0  Languages: Spanish

LECTURER

Coordinating lecturer: JOSÉ LUIS RODRÍGUEZ ESPANTOSO
Others: Primer quadrimestre:
JOSE LUIS RODRIGUEZ ESPANTOSO - T11

DEGREE COMPETENCES TO WHICH THE SUBJECT CONTRIBUTES

Specific:
1. Study the feasibility of a proposed project.

Transversal:
2. 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.
3. SELF-DIRECTED LEARNING - Level 3. Applying the knowledge gained in completing a task according to its relevance and importance. Deciding how to carry out a task, the amount of time to be devoted to it and the most suitable information sources.

TEACHING METHODOLOGY

The subject uses the expository methodology in 15%, individual work in 25%, group work in 20% and project-based learning in 60%.

LEARNING OBJECTIVES OF THE SUBJECT

Learn to make different Facilities Engineering Projects from a practical perspective, covers design, the rules, calculations, plans and budgets inherent to these embodiments.

STUDY LOAD

<table>
<thead>
<tr>
<th>Type</th>
<th>Hours</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hours small 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>
<tr>
<td>Hours large group</td>
<td>30,0</td>
<td>20.00</td>
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</tbody>
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Total learning time: 150 h
CONTENTS

(ENG) - Chapter 1. INTRODUCTION A LEGAL AND REGULATORY BASIC INDUSTRIAL

Description:
Review of the professional attributions of engineering graduates of the industrial branch.
Professional civil liability.
Life cycle of industrial safety technical projects.
Legislative hierarchy and normalization
Maintenance of the installations
CE marking

Full-or-part-time: 16h
Theory classes: 2h
Self study: 14h

(ENG) - Chapter 2. LIGHTING PROJECTS

Description:
Basic concepts of lighting technology. Types of lamps and luminaires. Regulations on light levels. Typical electrical diagrams for lighting lights. Lighting projects using the DIALUX computer application.
Emergency lighting.

Full-or-part-time: 20h
Theory classes: 4h
Self study: 16h

(ENG) - Chapter 3. LOW VOLTAGE ELECTRIFICATION PROJECTS

Description:

Full-or-part-time: 20h
Theory classes: 4h
Self study: 16h

(ENG) - Chapter 4. VENTILATION PROJECTS

Description:
Know the regulations that regulate the ventilation of spaces for health. Dimension networks of ducts and necessary fans, and know the typical auxiliary elements of a ventilation installation (gates, terminal elements, filters, etc.).

Full-or-part-time: 22h
Theory classes: 4h
Guided activities: 11h
Self study: 7h
(ENG) - Chapter 5. PROJECTS OF DHW INSTALLATIONS BY SOLAR ENERGY

Description:
Core items. Hydraulic diagrams Calculations of demand for domestic hot water and dimensioning of the solar installation required. Scripts of minimum contents of this type of projects.

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

GRADING SYSTEM
Continuous evaluation of the student's work. The study and autonomous work of the student is evaluated, as well as in a group, both face-to-face and non-face-to-face, applied to all training activities:
· Two partial exams: 15% + 15%
· Lighting work: 15%
· Ventilation work: 15%
· Team project: 40%

The note of the specific competition will be the weighted result of the previous ones.

The subject does not have a re-evaluation test.

RESOURCES
Other resources:
Industrial Safety Regulations:
https://industria.gob.es/Calidad-Industrial/seguridadindustrial/instalacionesindustriales/Paginas/index.aspx
Technical building Code:
https://www.codigotecnico.org/
Notes in ATENA