310514 - Industrial Techniques and Processes in Construction

Coordinating unit: 310 - EPSEB - Barcelona School of Building Construction
Teaching unit: 732 - OE - Department of Management
Academic year: 2018
Degree: MASTER'S DEGREE IN BUILDING CONSTRUCTION MANAGEMENT (Syllabus 2015). (Teaching unit Optional)
ECTS credits: 5
Teaching languages: Spanish

Coordinator: Lourdes Perpiñán Pérez

Prior skills
Numerical ability.
Utilization of calculus software.
Analytical ability.
Innovation and teamwork.

Requirements
Engineering notions.
Calculus and algebra notions.

Teaching methodology
Theoretical classes where the professor will teach the theoretical and practical contents of the subject.
Practical class: The students, in work groups, must solve the problems explained at class and expound them in front of the class.

Learning objectives of the subject
Provide to the students the bases of the industrial organization, taking into account theoretical and practical scenarios

Study load

<table>
<thead>
<tr>
<th></th>
<th>Total learning time: 125h</th>
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<tbody>
<tr>
<td>Hours large group:</td>
<td>15h 12.00%</td>
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<tr>
<td>Hours medium group:</td>
<td>5h 4.00%</td>
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<tr>
<td>Hours small group:</td>
<td>5h 4.00%</td>
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<td>Guided activities:</td>
<td>10h 8.00%</td>
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<td>Self study:</td>
<td>90h 72.00%</td>
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## Content

<table>
<thead>
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<th>Learning time: 8h</th>
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<tbody>
<tr>
<td>Theory classes: 4h</td>
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<td>Practical classes: 4h</td>
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**Description:**
- Methods utilized for the planning and planning of projects.
  - Project (definition, examples and cycle of life).
  - Schedule of activities.
  - Restrictions (causes, typologies, nomenclature and formalisation).
  - Definition, representation and examples of potential problems.
  - Definition, representation and examples of compound problems.

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**Description:**
- To know the differences between the different plans of production (aggregated or more detailed).
- Apply the different methods of calculation.
- Know the concepts of planning, supplies, calculation of needs.

**Content:**
- Master plan of production.
- Aggregated planning: models and techniques for the resolution and examples.
- Detailed planning: list of materials, matrix of type quantities, MRP and examples.

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<th>Learning time: 2h</th>
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<td>Theory classes: 2h</td>
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**Description:**
- Brief introduction to the management of transactions.
  - Productive system.
  - Production, business and market.
  - Classification of the productive systems.
  - Decisions in the productive systems.
  - Logistical and management systems.
Learning time: 8h
   Theory classes: 4h
   Practical classes: 4h

Description:
Vision of the deterministic model of management of stocks.
- Concept and classification of stocks.
- Associated costs to the management of stocks.
- Management of stocks by point of order and regular provisioning.
- Harris-Wilson model.
- Uniform sales.
- Multiple items subjected to a restriction.
- Non-homogeneous demand.

Qualification system
Continuous evaluation about the practical exercises which will be worked at class (25%).
Midterm exam (25%).
Final work (50%).

Bibliography