220563 - Supply Chain Management

Coordinating unit: 205 - ESEIAAT - Terrassa School of Industrial, Aerospace and Audiovisual Engineering
Teaching unit: 732 - OE - Department of Management
Academic year: 2019
Degree: MASTER'S DEGREE IN MANAGEMENT ENGINEERING (Syllabus 2012). (Teaching unit Compulsory)
ECTS credits: 5
Teaching languages: Catalan, Spanish

Teaching staff

Coordinator: ALBERT SUÑE TORRENTS
Others: Arcusa Postils, Ignasi
Sánchez García, José Luis

Degree competences to which the subject contributes

Specific:
2. Apply quantitative and experimental methods for making decisions in situations where intangibles appear
3. Apply theories and inherent principles in the production and logistics area in order to analyze uncertainty complex situations and make decisions using engineering tools.
4. Ability to apply knowledge to solve problems in new environments or unfamiliar environments within broader contexts (or multidisciplinary) related to engineering.
5. Self-learning capacity to independent continuous training.
6. Ability to effectively communicate their findings, knowledge and concluding reasons to skilled and unskilled audiences, clearly and unambiguously.
7. Ability to integrate knowledge and formulate judgments with the aim of making decisions based on information that, with incomplete or limited include reflecting on social and ethical responsibilities linked to the application of their knowledge and judgments.
8. Ability to understand the impact of engineering solutions in a global and social context.
9. Ability to operate and lead multidisciplinary and multicultural groups, with negotiation skills, group work, relationships in an international setting, and conflict resolution.

General:

7. Ability to integrate knowledge and formulate judgments with the aim of making decisions based on information that, with incomplete or limited include reflecting on social and ethical responsibilities linked to the application of their knowledge and judgments.
6. Ability to effectively communicate their findings, knowledge and concluding reasons to skilled and unskilled audiences, clearly and unambiguously.
8. Ability to understand the impact of engineering solutions in a global and social context.
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Teaching methodology

The course is developed by the use of three types of methodology:

- Lecture sessions.
- Case study debates and problem-solving sessions (case studies and exercises).
- Self-study for doing exercises and activities.

In the lecture sessions, lecturers will introduce the theoretical basis of the concepts, methods and results and illustrate them with examples appropriate to facilitate their understanding.

In the case study debates and problem solving sessions, lecturers will guide students in applying theoretical concepts to solve problems and cases, always using critical reasoning. We will propose that students solve exercises in and outside the classroom, to promote contact and use the basic tools needed to solve problems.

Students, independently, need to work on the materials provided by lecturers and the outcomes of the sessions of exercises/problems, in order to fix and assimilate the concepts.

Lecturers provide the curriculum and monitoring of activities (by ATENEA).

Learning objectives of the subject

The course Supply Chain Management introduces students to the concepts, principles and techniques related to the order fulfilment process, the planning process, the design of the logistics chain process, the purchasing and procurement process, and the supplier's selection and development process.

Study load

<table>
<thead>
<tr>
<th>Total learning time: 125h</th>
<th>Hours large group:</th>
<th>8h</th>
<th>6.40%</th>
</tr>
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<tbody>
<tr>
<td></td>
<td>Hours medium group:</td>
<td>15h</td>
<td>12.00%</td>
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<tr>
<td></td>
<td>Guided activities:</td>
<td>22h</td>
<td>17.60%</td>
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<tr>
<td></td>
<td>Self study:</td>
<td>80h</td>
<td>64.00%</td>
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</tbody>
</table>
### Content

<table>
<thead>
<tr>
<th>Module 1: Logistic system design</th>
<th>Learning time: 62h 30m</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>Theory classes: 4h</td>
</tr>
<tr>
<td></td>
<td>Practical classes: 7h 30m</td>
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<tr>
<td></td>
<td>Guided activities: 11h</td>
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<tr>
<td></td>
<td>Self study : 40h</td>
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</tbody>
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**Description:**
- Introduction to integral logistic
- Localization
- Transportation
- Storage
- Outsourcing of logistic activities
- Logistics management

<table>
<thead>
<tr>
<th>Module 2: Managing the supply chain</th>
<th>Learning time: 62h 30m</th>
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<tbody>
<tr>
<td></td>
<td>Theory classes: 4h</td>
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<td>Self study : 40h</td>
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</tbody>
</table>

**Description:**
- Push flow supply chains
- Pull flow supply chains
- Stocks optimization
- Demand planning
- Material and resources requirement planning
- Purchasing Management
- Selecting and developing suppliers

### Qualification system

The final mark depends on the following assessment criteria:

- Continuous assessment exam 1, weight: 40%
- Continuous assessment exam 2, weight: 40%
- In-class activities, weight: 10%
- Team project, weight: 10%

At the end of the course, there will be an overall recovery examen to improve unsatisfactory results in the continuous assessment exams. This overall exam weight will be 80%. 
Bibliography

Basic:


Complementary:
