220551 - Innovation and Technology Policy

Coordinating unit: 205 - ESEIAAT - Terrassa School of Industrial, Aerospace and Audiovisual Engineering
Teaching unit: 732 - OE - Department of Management
Academic year: 2017
Degree: MASTER'S DEGREE IN MANAGEMENT ENGINEERING (Syllabus 2012). (Teaching unit Compulsory)
ECTS credits: 5
Teaching languages: Catalan, Spanish

Teaching staff

Coordinator: ROSA MARIA DRUGUET TANTIÑA
Others: Druguet Tantiña, Rosa Maria
Pagan Espinosa, Pedro

Degree competences to which the subject contributes

Specific:

1. Apply theories and inherent principles in the general direction of an organization with the aim of analyzing uncertainty complex situations and make decisions using engineering tools.
2. Plan, organize, implement, lead and manage engineering projects, especially projects of innovation (R + D + I) and process improvement.
3. Manage activities with relevant content of projects and / or operations that technology and organization have to interact effectively and efficiently

General:

4. Ability to apply knowledge to solve problems in new environments or unfamiliar environments within broader contexts (or multidisciplinary) related to engineering.
5. 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.
7. Self-learning capacity to independent continuous training.
8. Ability to understand the impact of engineering solutions in a global and social context.
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Teaching methodology

The course is divided into three parts:

- Theory classes
- Practical Working Sessions (Oral or written submissions of related subjects about Scientific, Technical or nowadays news)
- Self-study for doing exercises and activities.

In the theory classes, teachers will introduce the theoretical basis of the concepts, methods and results and illustrate them with examples appropriate to facilitate their understanding.

In the practical classes (in the classroom), teachers guide students in applying theoretical concepts to solve problems, always using critical reasoning. We propose that students solve exercises in and outside the classroom.

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

Learning objectives of the subject

The course Innovation and Technology Policy introduces students to the concepts, principles and fundamentals of innovation's management as the most important way to be competitive in today's global market. It's pointed out technological innovation cause student's engineering knowledge and today's especial relevance of technical and scientific advances.

Study load

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

<table>
<thead>
<tr>
<th>Module 1: Theory</th>
<th>Learning time: 63h</th>
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<tbody>
<tr>
<td></td>
<td>Theory classes: 4h</td>
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<tr>
<td></td>
<td>Practical classes: 8h</td>
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<td>Guided activities: 11h</td>
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<td>Self study: 40h</td>
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Description:
1. Identifying references
2. How to organize?
3. How to find ideas?
4. How to plan projects?
5. How to run projects?
6. How to finance innovation?
7. What are the profits?

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<tr>
<th>Module 2: Practice</th>
<th>Learning time: 62h</th>
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<tbody>
<tr>
<td></td>
<td>Theory classes: 4h</td>
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<td>Practical classes: 7h</td>
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<td>Guided activities: 11h</td>
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<td>Self study: 40h</td>
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Description:
1. Model of competitive strategies
2. Definition and planning of an innovation project

## Qualification system

Exam 1, weight 25%
Exam 2, weight 35%
Presentations, weight 20%
Project, weight 20%

All students unable to attend the mid-semester exams, or failing it, will have the option of repeating it with the final exam.

## Bibliography

Basic:


Others resources: