220566 - Project Management

Coordinating unit: 205 - ESEIAAT - Terrassa School of Industrial, Aerospace and Audiovisual Engineering
Teaching unit: 758 - EPC - Department of Project and Construction Engineering
Academic year: 2019
Degree: MASTER'S DEGREE IN MANAGEMENT ENGINEERING (Syllabus 2012). (Teaching unit Compulsory)
ECTS credits: 7  Teaching languages: Catalan, Spanish

Teaching staff
Coordinator: VÍCTOR LÓPEZ GRIMAU
Others: BEATRIZ AMANTE GARCÍA

Degree competences to which the subject contributes

Specific:
1. To analyze the risks and consequences of proposed solutions in the various organizational sub-systems and their social and environmental contexts.
3. 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.
4. Manage activities with relevant content of projects and / or operations that technology and organization have to interact effectively and efficiently.
5. Plan, organize, implement, lead and manage engineering projects, especially projects of innovation (R + D + I) and process improvement.

General:
6. Ability to apply knowledge to solve problems in new environments or unfamiliar environments within broader contexts (or multidisciplinary) related to engineering.
7. Self-learning capacity to independent continuous training.
8. Ability to effectively communicate their findings, knowledge and concluding reasons to skilled and unskilled audiences, clearly and unambiguously.
220566 - Project Management

Teaching methodology

The course is divided into three parts:

Theory classes
Practical classes
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 cases / projects / problems, always using critical reasoning. We propose that students solve cases 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 teachers and the outcomes of the sessions of exercises/problems, in order to fix and assimilate the concepts. The teachers provide the curriculum and monitoring of activities (by ATENEA).

Learning objectives of the subject

Project management is the discipline of planning, organizing, securing and managing resources to bring about the successful completion of specific project goals and objectives. The aim of this course is to provide guidelines to address any difficulties successfully and reach goals.

Study load

<table>
<thead>
<tr>
<th>Total learning time: 175h</th>
<th>Hours large group:</th>
<th>10h</th>
<th>5.71%</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>Hours small group:</td>
<td>30h</td>
<td>17.14%</td>
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<td></td>
<td>Guided activities:</td>
<td>23h</td>
<td>13.14%</td>
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<tr>
<td></td>
<td>Self study:</td>
<td>112h</td>
<td>64.00%</td>
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## Content

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<tr>
<th>Module 1: Project Management Processes for a Project</th>
<th>Learning time: 36h 30m</th>
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<tbody>
<tr>
<td><strong>Description:</strong></td>
<td>Theory classes: 6h</td>
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<tr>
<td>Project Management Processes</td>
<td>Practical classes: 7h 30m</td>
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<tr>
<td>Project Management Process groups</td>
<td>Self study: 23h</td>
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<tr>
<td>Processes interactions</td>
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<td>Project Management Process Mapping</td>
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<tr>
<th>Module 2: Project Integration Management and Project Time and Scope Management</th>
<th>Learning time: 36h 30m</th>
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<tr>
<td><strong>Description:</strong></td>
<td>Theory classes: 6h</td>
</tr>
<tr>
<td>- Introduction:</td>
<td>Laboratory classes: 7h 30m</td>
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<tr>
<td>Process Flow Diagrams</td>
<td>Self study: 23h</td>
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<td>Major Project Documents</td>
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<td>- Project Integration Management</td>
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<tr>
<td>Develop Project Charter</td>
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<td>Develop Preliminary Project Scope Statement</td>
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<td>Develop Project Management Plan</td>
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<td>Direct and Manage Project Execution</td>
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<td>Monitor and Control Project Work</td>
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<td>Integrated Change Control</td>
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<td>Close Project</td>
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<td>- Project Scope Management</td>
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<tr>
<td>Scope Planning</td>
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<tr>
<td>Scope Definition</td>
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<tr>
<td>Create WBS</td>
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<td>Scope Verification</td>
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<tr>
<td>Scope Control</td>
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<tr>
<td>- Project Time Management</td>
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<tr>
<td>Activity Definition</td>
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<td>Activity Sequencing</td>
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<td>Activity Resource Estimating</td>
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<td>Activity Duration Estimating</td>
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<td>Schedule Development</td>
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<tr>
<td>Schedule Control</td>
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**Description:**
- Project Cost Management
  - Cost Estimating
  - Cost Budgeting
  - Cost Control
- Project Quality Management
  - Quality Planning
  - Perform Quality Assurance
  - Perform Quality Control
- Project Human Resource Management
  - Human Resource Planning
  - Acquire Project Team
  - Develop Project Team
  - Manage Project Team
- Project Communication Management
  - Communications Planning
  - Information Distribution
  - Performance Reporting
  - Manage Stakeholders

**Learning time:** 51h 30m  
- Theory classes: 9h  
- Laboratory classes: 7h 30m  
- Guided activities: 2h  
- Self study: 33h

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# Module 4: Project Risk Management

**Description:**
- Risk Management Planning
- Risk Identification
- Qualitative Risk Analysis
- Quantitative Risk Analysis
- Risk Response Planning
- Risk Monitoring And Control

**Learning time:** 51h 30m  
- Theory classes: 9h  
- Laboratory classes: 7h 30m  
- Guided activities: 2h  
- Self study: 33h
Qualification system

The final grade depends on the following assessment criteria:

Mid-semester exam 1, weight 20%
Mid-semester exam 2, weight 20%
Tests and questions, weight 10%
Project evaluation: document(s) 25%
Project evaluation: individual work 15%
Project evaluation: Oral presentation 10%

All students unable to attend the mid-semester exams, they must attend the final exam. The students failing the mid-semester exams will have the option of repeating them in the final exam.

Bibliography

Basic:

Complementary:

Others resources:
Hyperlink
ATENEA

Entorn col·laboratiu BSCW
Resource