<table>
<thead>
<tr>
<th>Credits and contact hours:</th>
<th>10 credits / 10 hours (3 hours in lectures, 7 h. individual work hours per week)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Instructor’s name:</td>
<td>Luis Fernando Alarcón</td>
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<tr>
<td>Course coordinator’s name</td>
<td>Luis Fernando Alarcón</td>
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<tr>
<td>Course Catalog Description:</td>
<td>This course aims at professional applications of project planning and control. The course covers a wide range of tools and methods. During the class, the students will conduct a real project field study and different case studies. They will observe the practice of diverse projects and control tools during the course, including computer methods.</td>
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<tr>
<td>Prerequisite Courses:</td>
<td>EYP1113 Probability and Statistics</td>
</tr>
<tr>
<td>Co-requisite Courses:</td>
<td>None.</td>
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<tr>
<td>Status in the Curriculum:</td>
<td>Required</td>
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</table>
| Course Learning Outcomes: | 1. Knowing the organization, administration, context and stages in which projects are conducted.  
2. Knowing the role of engineers in project development.  
3. Organizing a project administration team.  
4. Planning engineering projects.  
5. Planning projects resources.  
6. Monitoring and control of projects, and applying computer tools for project planning and control. |
b. Designing and conducting experiments: to analyze and interpret data.  
c. Designing a system, component, or process.  
d. Identifying, formulating, and solving engineering problems.  
e. Broad education necessary for global, economic, environmental and societal context.  
f. Techniques, skills, and modern tools for engineering practice. |
Topics covered:

1. Project characteristics and development.
   1.1. Project planning and administration.
   1.2. Historical development.
   1.3. The systems concept and project planning and control.
   1.4. Planning and control process.
   1.5. Planning applications.
2. Definition of the project or task.
   2.1. Information and analysis. Work Breakdown Structure. Activities and events.
   2.2. Organization of the activities. Estimate of the activities’ duration and cost. Plans and programs.
3. Basic planning techniques.
   3.1. Bar chart. Logic diagrams and planning.
   3.2. Critical path method.
   3.3. Precedence method.
   3.4. Computer tools.
5. Resource analysis.
   5.1. Feasibility of a plan.
   5.2. Resources leveling.
   5.3. Scheduling with resource constraints.
8. Project monitoring and control.
   8.2. The S curve.
   8.3. Variance analysis.
   8.4. Future plan.
   8.5. Corrective actions.
   8.6. Information systems.