220574 - Quantitative Research Methods

Degree competences to which the subject contributes

Specific:
2. Develop and present a research proposal according to the criteria of the international scientific community.

Generical:
1. Ability to effectively communicate their findings, knowledge and concluding reasons to skilled and unskilled audiences, clearly and unambiguously.

Teaching methodology

The course is divided into three parts:
Sessions of content explanation
Practice sessions
Authonomous work on exercises and activities

In the content explanation sessions the teachers will convey to the students the fundamentals of the techniques of quantitative data analysis, together with examples of applications in industrial engineering research.
In the practice sessions the students will learn to use the tools (i.e., software) of quantitative data analysis through examples of research in industrial engineering.
In the authonomous work sessions students will work on exercises of application of similar difficulty than the ones introduced in the practical sessions.

Learning objectives of the subject

The course of quantitative research methods introduces students to the concepts, principles and fundamentals of scientific research with quantitative data in industrial engineering, presenting the fundamentals of the data analysis techniques, and the use of quantitative data analysis tools.

Study load

<table>
<thead>
<tr>
<th>Total learning time: 75h</th>
<th>Hours large group:</th>
<th>8h</th>
<th>10.67%</th>
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<tbody>
<tr>
<td></td>
<td>Hours medium group:</td>
<td>3h</td>
<td>4.00%</td>
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<td></td>
<td>Guided activities:</td>
<td>16h</td>
<td>21.33%</td>
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<td>Self study:</td>
<td>48h</td>
<td>64.00%</td>
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The assessment of the course will have two parts:

- Final exam (50%)
- Proposed exercises (50%)

**Qualification system**

The final exam will be individual, and the exercises in groups.