Degree competences to which the subject contributes

Basic:

CB1. Students will be able to demonstrate their knowledge of a field of study that builds on secondary education and is usually found at a level that, while supported by advanced textbooks, also includes aspects that involve knowledge of the latest developments in the field of study.

CB2. Students will be able to apply their knowledge to their work or vocation in a professional manner and demonstrate that they possess the competencies that are typically demonstrated by elaborating and defending arguments and solving problems in the field of study.

Specific:

CE6. An adequate understanding of business concepts, the institutional and legal framework of companies, and business organisation and management.

CE14. Knowledge of and a capacity for project organisation and management. Knowledge of the organisational structures and the functions of the automobile industry.

Generic:

CG3. Knowledge of basic and technological subjects that will enable students to learn new methods and theories and that will endow them with the versatility needed to adapt to new situations.

CG7. A capacity for analysing and assessing the social and environmental impact of technical solutions.

CG10. The ability to work in a multilingual and multidisciplinary environment.

Transversal:

1. ENTREPRENEURSHIP AND INNOVATION - Level 1. Showing enterprise, acquiring basic knowledge about organizations and becoming familiar with the tools and techniques for generating ideas and managing organizations that make it possible to solve known problems and create opportunities.

2. SUSTAINABILITY AND SOCIAL COMMITMENT - Level 1. Analyzing the world’s situation critically and systemically, while taking an interdisciplinary approach to sustainability and adhering to the principles of sustainable human development. Recognizing the social and environmental implications of a particular professional activity.

3. EFFICIENT ORAL AND WRITTEN COMMUNICATION - Level 1. Planning oral communication, answering questions properly and writing straightforward texts that are spelt correctly and are grammatically coherent.

4. TEAMWORK - Level 1. Working in a team and making positive contributions once the aims and group and individual responsibilities have been defined. Reaching joint decisions on the strategy to be followed.

5. EFFECTIVE USE OF INFORMATION RESOURCES - Level 1. Identifying information needs. Using collections, premises and services that are available for designing and executing simple searches that are suited to the topic.

6. SELF-DIRECTED LEARNING - Level 1. Completing set tasks within established deadlines. Working with recommended information sources according to the guidelines set by lecturers.

7. THIRD LANGUAGE. Learning a third language, preferably English, to a degree of oral and written fluency that fits in with the future needs of the graduates of each course.
The subject aims to provide basic knowledge about road mobility and the development of a product aimed at customer satisfaction and minimising the social and environmental impact.

The learning objectives include the following:
- Knowing and understanding the fundamentals of road transport.
- Knowing and understanding the concept of sustainability and sustainable design.
- Knowing and understanding examples of sustainable design practices.
- Knowing, understanding and applying the process of design and development of a product for launching on the market.

## Study load

<table>
<thead>
<tr>
<th>Total learning time: 75h</th>
<th>Hours large group:</th>
<th>30h</th>
<th>40.00%</th>
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<tbody>
<tr>
<td></td>
<td>Hours medium group:</td>
<td>0h</td>
<td>0.00%</td>
</tr>
<tr>
<td></td>
<td>Hours small group:</td>
<td>0h</td>
<td>0.00%</td>
</tr>
<tr>
<td></td>
<td>Guided activities:</td>
<td>0h</td>
<td>0.00%</td>
</tr>
<tr>
<td></td>
<td>Self study:</td>
<td>45h</td>
<td>60.00%</td>
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### Teaching methodology

MD1 Master class or lecture (EXP)
MD2 Problem solving and case study (RP)
MD6 Large-scale project or assignment (PA)
### Content

#### Topic 1: Road transport

**Description:**
The concept of mobility. Road transport. Types and characteristics. Applicable legislation.

**Related activities:**
Specific work on content (Activity 1).

**Specific objectives:**
Knowledge of road transport. Understanding of the sector. Knowledge of basic European and national legislation.

**Learning time:** 25h
- Theory classes: 10h
- Self study: 15h

#### Topic 2: Sustainability

**Description:**
The concept of sustainability. The principles of sustainable development. The main social and environmental impacts of the car. Sustainable design practices.

**Related activities:**
Specific work on content (Activity 2).

**Specific objectives:**
Understanding, analysis and application of the concept of sustainability in the automotive sector.

**Learning time:** 25h
- Theory classes: 10h
- Self study: 15h

#### Topic 3: Product Design and Development

**Description:**

**Related activities:**
Specific work on content (Activity 3).

**Specific objectives:**
Knowledge and understanding of the processes of design and development of a product.

**Learning time:** 25h
- Theory classes: 10h
- Self study: 15h
### Planning of activities

| Activity 1: Road transport | Hours: 16h  
Theory classes: 1h  
Self study: 15h |
<table>
<thead>
<tr>
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<tbody>
<tr>
<td><strong>Description:</strong></td>
<td>An assignment on road transport chosen from those proposed by the professor. The assignment must be presented in public.</td>
</tr>
<tr>
<td><strong>Support materials:</strong></td>
<td>On the Atenea virtual campus</td>
</tr>
</tbody>
</table>
| **Specific objectives:** | Development of techniques and reasoning strategies for analysis.  
Written and oral communication.  
Teamwork.  
A third language.  
Competent use of information resources.  
Social commitment and sustainability.  
Innovation. |

| Activity 2: Sustainability | Hours: 16h  
Theory classes: 1h  
Self study: 15h |
<table>
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<tr>
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<tr>
<td><strong>Description:</strong></td>
<td>An assignment on road transport sustainability chosen from those proposed by the professor. The assignment must be presented in public.</td>
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| **Specific objectives:** | Development of techniques and reasoning strategies for the analysis.  
Written and oral communication.  
Teamwork.  
A third language.  
Competent use of information resources.  
Social commitment and sustainability.  
Innovation. |

| Activity 3: Product design and development | Hours: 16h  
Theory classes: 1h  
Self study: 15h |
|---------------------------|-------------------|
Activity 1: 20% of the mark
Activity 2: 35% of the mark
Activity 3: 35% of the mark
Class attendance and participation: 10% of the mark

Qualification system

Students must attend 70% of the classes to pass the subject.

Bibliography

Basic:


Others resources: