Course guide

330537 - LMN - Legislation and Regulatory Framework

Unit in charge: Manresa School of Engineering
Teaching unit: 750 - EMIT - Department of Mining, Industrial and ICT Engineering.

Degree: BACHELOR'S DEGREE IN AUTOMOTIVE ENGINEERING (Syllabus 2017). (Optional subject).

Academic year: 2022 ECTS Credits: 3.0 Languages: Catalan, Spanish

LECTURER

Coordinating lecturer: Vives Costa, Jordi
Others: Alberto Fernández Benítez

DEGREE COMPETENCES TO WHICH THE SUBJECT CONTRIBUTES

Specific:
CE12. Knowledge and use of materials resistance principles and ability to calculate structures of a vehicle.
CE14. Knowledge of and a capacity for project organisation and management. Knowledge of the organisational structures and the functions of the automobile industry.

General:
CG1. Ability to write and develop projects in the field of automotive engineering for the construction, renovation, repair, maintenance, recycling, manufacture, installation, assembly or operation of: structures, mechanical equipment, energy installations, electrical and electronic installations, plants and industrial plants and manufacturing and automation processes.
CG10. The ability to work in a multilingual and multidisciplinary environment.
CG11. Ability to write and develop projects for vehicles and/or their components.
CG7. Ability to handle specifications, regulations and mandatory standards, as well as the specific legislation applicable to this area.

Transversal:
CT2. SUSTAINABILITY AND SOCIAL COMMITMENT: Being aware of and understanding the complexity of the economic and social phenomena typical of a welfare society, and being able to relate social welfare to globalisation and sustainability and to use technique, technology, economics and sustainability in a balanced and compatible manner.
CT3. TEAMWORK: Being able to work in an interdisciplinary team, whether as a member or as a leader, with the aim of contributing to projects pragmatically and responsibly and making commitments in view of the resources that are available.
CT4. EFFECTIVE USE OF INFORMATION RESOURCES: Managing the acquisition, structuring, analysis and display of data and information in the chosen area of specialisation and critically assessing the results obtained.

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.
CB3. That students have the ability to gather and interpret relevant data (usually within their area of study) to make judgments that include a reflection on relevant social, scientific or ethical issues.
CB4. Students can transmit information, ideas, problems and solutions to a specialized and non-specialized audience.
TEACHING METHODOLOGY

MD1 Master class or conference (EXP)
MD2 Problem solving and case studies (PR)
MD5 Project, activity or reduced workload (PR)
MD7 Evaluation activities (EV)

LEARNING OBJECTIVES OF THE SUBJECT

The course aims to provide basic knowledge about the regulations to be complied with as well as the procedures to be followed in the processes to obtain:
- the approval of a vehicle
- the type-approval of functional units
- the approval of components and/or parts of a vehicle
- the major reform of a vehicle

STUDY LOAD

<table>
<thead>
<tr>
<th>Type</th>
<th>Hours</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hours small group</td>
<td>15,0</td>
<td>20.00</td>
</tr>
<tr>
<td>Self study</td>
<td>45,0</td>
<td>60.00</td>
</tr>
<tr>
<td>Hours large group</td>
<td>15,0</td>
<td>20.00</td>
</tr>
</tbody>
</table>

Total learning time: 75 h

CONTENTS

Content 1 - Vehicle classification criteria. The vehicle identification documents.

Description:
Definitions, classification and regulatory criteria for vehicle fleet regulation.
Degrees of completion: 1st and 2nd phase manufacturers.
The Technical Data Sheet, the MOT Card and the Road Traffic Licence.

Specific objectives:
Know the legislative framework that classifies, orders and regulates the different types of vehicles.
Knowing the identification and control documentation associated with a vehicle.

Related activities:
Specific work on content (Activity 1)
Individual Test (Activity 5)

Related competencies:
CG6. Ability to handle specifications, regulations and mandatory standards, as well as the specific legislation applicable to this area.
CG1. Ability to write and develop projects in the field of automotive engineering for the construction, renovation, repair, maintenance, recycling, manufacture, installation, assembly or operation of: structures, mechanical equipment, energy installations, electrical and electronic installations, plants and industrial plants and manufacturing and automation processes.

Full-or-part-time: 10h
Theory classes: 2h
Laboratory classes: 2h
Self study: 6h
Content 2 - Approvals

Description:
Type-approval and regulatory acts. EU directives and regulations on type-approval.
Procedure for the approval of complete vehicles.

Specific objectives:
Knowing the regulatory framework for approvals of vehicles and their components

Related activities:
Specific work on content (Activity 2)
Individual Test (Activity 5)

Related competencies:
CG11. Ability to write and develop projects for vehicles and/or their components.
CG7. A capacity for analysing and assessing the social and environmental impact of technical solutions.
CG1. Ability to write and develop projects in the field of automotive engineering for the construction, renovation, repair, maintenance, recycling, manufacture, installation, assembly or operation of: structures, mechanical equipment, energy installations, electrical and electronic installations, plants and industrial plants and manufacturing and automation processes.
CE14. Knowledge of and a capacity for project organisation and management. Knowledge of the organisational structures and the functions of the automobile industry.
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Full-or-part-time: 20h
Theory classes: 4h
Laboratory classes: 4h
Self study: 12h
Content 3 - The vehicle modifications

Description:

Specific objectives:
Knowing the regulatory framework that governs vehicle refurbishment and its adaptation to certain uses.

Related activities:
Specific work on content (Activity 3)
Individual Test (Activity 5)

Related competencies:
CG11. Ability to write and develop projects for vehicles and/or their components.
CG6. Ability to handle specifications, regulations and mandatory standards, as well as the specific legislation applicable to this area.
CG7. A capacity for analysing and assessing the social and environmental impact of technical solutions.
CG1. Ability to write and develop projects in the field of automotive engineering for the construction, renovation, repair, maintenance, recycling, manufacture, installation, assembly or operation of: structures, mechanical equipment, energy installations, electrical and electronic installations, plants and industrial plants and manufacturing and automation processes.
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Full-or-part-time: 20h
Theory classes: 4h
Laboratory classes: 4h
Self study: 12h
Content 4 - Calculation and justification of reforms

Description:

Specific objectives:
To know the basis of calculation for the justification of reforms.

Related activities:
Specific activity on contents (Activity 4)
Individual Test (Activity 5)

Related competencies:
CG11. Ability to write and develop projects for vehicles and/or their components.
CG6. Ability to handle specifications, regulations and mandatory standards, as well as the specific legislation applicable to this area.
CG7. A capacity for analysing and assessing the social and environmental impact of technical solutions.
CG1. Ability to write and develop projects in the field of automotive engineering for the construction, renovation, repair, maintenance, recycling, manufacture, installation, assembly or operation of: structures, mechanical equipment, energy installations, electrical and electronic installations, plants and industrial plants and manufacturing and automation processes.
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Full-or-part-time: 25h
Theory classes: 5h
Laboratory classes: 5h
Self study: 15h

GRADING SYSTEM
10 % Activity 1
20 % Activity 2
10 % Activity 3
40 % Activity 4
20 % Activity 5
RESOURCES

Hyperlink:

Other resources:
On the ATENEA digital campus