Course guide
220215 - 220215 - Transportation and Materials Handling Engineering

Unit in charge: Terrassa School of Industrial, Aerospace and Audiovisual Engineering
Teaching unit: 712 - EM - Department of Mechanical Engineering.
Degree: MASTER'S DEGREE IN INDUSTRIAL ENGINEERING (Syllabus 2013). (Compulsory subject).
Academic year: 2022
ECTS Credits: 2.5
Languages: Catalan

LECTURER
Coordinating lecturer: JAVIER SALUEÑA BERNA
Others: Orta Roca, Jordi
Huguet Ballester, David

DEGREE COMPETENCES TO WHICH THE SUBJECT CONTRIBUTES
Specific:
1. Knowledge of methods and techniques of transportation and industrial maintenance.

TEACHING METHODOLOGY
It is divided into three parts:
- Lectures that teachers will introduce the main concepts and recommend the reading of different documents available in the web.
- Small group sessions where teachers guide students in applying theoretical concepts (exercises and problems) and the use of specific software for traffic simulation.
- The third group of activities is self-study (individual study, reading documents, resolution of problems...)

LEARNING OBJECTIVES OF THE SUBJECT
Ability to select the most appropriate means of transport for raw materials and manufactured products.
Knowledge of the construction features and operating facilities and equipment maintenance.
Understanding the parameters that influence the flow of traffic from road vehicles.

STUDY LOAD

<table>
<thead>
<tr>
<th>Type</th>
<th>Hours</th>
<th>Percentage</th>
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<tbody>
<tr>
<td>Hours large group</td>
<td>15,0</td>
<td>24.00</td>
</tr>
<tr>
<td>Hours small group</td>
<td>7,5</td>
<td>12.00</td>
</tr>
<tr>
<td>Self study</td>
<td>40,0</td>
<td>64.00</td>
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</tbody>
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Total learning time: 62.5 h
CONTENTS

Introduction to transportation engineering. Basic characteristics of transportation modes. Idea of transportation cost

**Full-or-part-time:** 20h
Theory classes: 8h
Self study: 12h

Introduction to the theory of traffic. Simulation

**Full-or-part-time:** 22h 30m
Laboratory classes: 7h 30m
Self study: 15h

Materials handling in the industry

**Full-or-part-time:** 20h
Theory classes: 7h
Self study: 13h

GRADING SYSTEM

1 Assessment: 35%. Supervised individual exercise (written exam) of one hour, during the timetable.
2nd Assessment: 40%. Supervised individual exercise (written exam) for one hour on the date set by the exam.
Delivery of exercises: 25%. Evaluation of submitted works (2) (An individual exercise and another 10% in group 2 or 3 people, 15%).

In the first evaluation it will be possible to redirect the result if the result is unsatisfactory (less than 5) presenting a recovery on the day of the second evaluation, in the same time.

BIBLIOGRAPHY

Basic: