Course guides
220215 - 220215 - Transportation and Materials Handling Engineering

Last modified: 29/05/2020

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: 2020 **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 differents 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

Type	Hours	Percentage
Self study	40,0	64.00
Hours large group	15,0	24.00
Hours small group	7,5	12.00

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 exercices 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:
- Astals, Francesc. Enginyeria del transport [on line]. Barcelona: Edicions UPC, 2007 [Consultation: 07/07/2017]. Available on: http://hdl.handle.net/2099.3/36827. ISBN 9788483019054.
- Astals, Francesc. Almacenaje, manutención y transporte interno en la industria [on line]. Barcelona: Edicions UPC, 2009 [Consultation: 07/07/2017]. Available on: http://hdl.handle.net/2099.3/36835. ISBN 9788498803839.