# uc3m Universidad Carlos III de Madrid

## Transport Engineering

Academic Year: (2019 / 2020) Review date: 27-05-2019

Department assigned to the subject: Mechanical Engineering Department

Coordinating teacher: OLMEDA SANTAMARIA, ESTER

Type: Compulsory ECTS Credits: 6.0

Year: 1 Semester: 1

## REQUIREMENTS (SUBJECTS THAT ARE ASSUMED TO BE KNOWN)

Machine Kinematics, Machine design and fundamental Mechanics

#### **OBJECTIVES**

After completing the course, students will have acquired general skills related to the field of transport, as well as specific engineering knowledge on transport vehicles by road and rail. Moreover, the sutdent will learn about the transport sector from the point of view of management and calculation of traffic parameters.

#### **DESCRIPTION OF CONTENTS: PROGRAMME**

- 1.- INTRODUCTION TO TRANSPORTATION.
- 2.- TRAFFIC ENGINEERING. MACROSCOPIC MODELS.
- 3.- TRAFFIC ENGINEERING. MICROSCOPIC MODELS.
- 4.- CONTACT PNEUMATIC-SHOES AND WHEEL-RAIL.
- 5.- EXTRAVIARY TRANSPORTATION.
- 6.- TRAVEL OPERATIONS OF TRAVELERS.
- 7.- ROAD SAFETY.
- 8.- INTERMODAL TRANSPORTATION.
- 9.- TRANSPORT OF DANGEROUS GOODS.
- 10.- NOISE IN THE TRANSPORTATION.

### LEARNING ACTIVITIES AND METHODOLOGY

The activities used for the training of this subject are based mainly on theoretical classes in which the lectures of the subject are carefully developed, accompanied by sessions of problems taught in the classroom. A series of laboratory practices (2) serve to put in the student's judgment particualr aspects exposed in the classroom. Finally, visits are made to companies in the sector in order that the student knows first hand some aspects related to the subject. Visits and their number depend each academic year on the number of students enrolled. When there is an opportunity, speakers from the sector will be invited.

## ASSESSMENT SYSTEM

40% exam

60% continous evaluation

For the extraordinary exam the most favorable grade between the criterion of ordinary and extraordinary qualification test will be used. additional practical work (assignment) can be presented in the extraordinary call.

It is required that the grade of the exam is superior to 3,5 in order to pass.

% end-of-term-examination: 60 % of continuous assessment (assignments, laboratory, practicals...): 40