

Academic Year: ( 2021 / 2022 )

Review date: 16-07-2020

Department assigned to the subject:

Coordinating teacher: SERRANO YAÑEZ-MINGOT, PABLO

Type: Compulsory ECTS Credits : 3.0

Year : 1 Semester : 1

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

It is required to have some basic knowledge of statistics and probability, plus some programming skills.

**OBJECTIVES**

Critical analysis of a simulation tools capabilities, in particular with respect to telematics engineering problems.  
Analysis and evaluation of the results from a simulation tool.

**DESCRIPTION OF CONTENTS: PROGRAMME**

Fundamentals of simulation for telematics. Variables to consider, modules, simulation time handling.  
Core elements of a discrete-event simulator tool: event handling, time advance.  
Development of a simulation project, presentation and defense.  
Simulation environments for discrete-event simulation.

**LEARNING ACTIVITIES AND METHODOLOGY**

Classroom lectures, exposing the fundamentals of simulations.  
Laboratory classes, where the focus is set on developing simulation tools and on their use.

**ASSESSMENT SYSTEM**

80% continuous assessment based on laboratories, consisting on the development of a simulation tool and the use of a simulation framework.

20% final exam

<b>% end-of-term-examination:</b>	20
<b>% of continuous assessment (assignments, laboratory, practicals...):</b>	80

**BASIC BIBLIOGRAPHY**

- Averill M. Law Simulation Modeling and Analysis, McGraw-Hill, 2015