
Academic Year: (2020 / 2021)**Review date: 01-07-2020**

Department assigned to the subject: Department of Statistics**Coordinating teacher: NOGALES MARTIN, FCO. JAVIER****Type: Compulsory ECTS Credits : 6.0****Year : 3 Semester : 1**

STUDENTS ARE EXPECTED TO HAVE COMPLETED

Basic knowledge of mathematics and statistics

COMPETENCES AND SKILLS THAT WILL BE ACQUIRED AND LEARNING RESULTS.

1. Know how to model and implement optimization methods and simulation techniques in decision-making problems in business.
2. Learn about the conditions to be satisfied by solutions of optimization problems.
3. Learn to use tools of modern optimization and simulation techniques in an efficient way.

DESCRIPTION OF CONTENTS: PROGRAMME

1. Introduction: process modeling in decision-making problems
2. Linear Models: modeling, applications, Simplex method
3. Discrete Models: applications, binary variables, logic constraints, algorithms
4. Non-linear Models: applications, optimality conditions, algorithms for machine learning
5. Case Studies

LEARNING ACTIVITIES AND METHODOLOGY

Theory (3 ECTS), Practice (3 ECTS).

50% lectures with teaching materials available on the Web. The other 50% practical sessions (computer labs).

% end-of-term-examination:	50
% of continuous assessment (assignments, laboratory, practicals...):	50