

Academic Year: (2023 / 2024)

Review date: 02-06-2023

Department assigned to the subject: Business Administration Department

Coordinating teacher: ALVAREZ GIL, MARIA JOSEFA

Type: Electives ECTS Credits : 6.0

Year : Semester :

DESCRIPTION OF CONTENTS: PROGRAMME

1. Digital tools aiding Location and Transport decisions
 - Conditioning factors
 - Geographic Information systems
 - Software packages
 - Autonomous vehicles and connected cars
 - 2.- Automated inventory and warehouse management; digital layout systems Inventories and their functions
 - Digital inventory management
 - Digital tools for warehouse management
 - Software apps for layout decisions.
 - 3.Industrial Internet of the Things (IIOT) and Industry 4.0 : short term programming, scheduling and preventive maintenance
 - What is IIOT?
 - Types of short term programming and scheduling
 - Software tools
 - Preventive maintenance and reliability: software apps.
 - 4.-Internet of Things and Supply Chain Pros and cons of IOTs
 - Real time information and cloud sharing
 - Negotiation power with suppliers and customers
- Costs and profits

LEARNING ACTIVITIES AND METHODOLOGY

AF1. THEORETICAL-PRACTICAL CLASSES. They will present the knowledge that students should acquire. They will receive the class notes and will have basic texts of reference to facilitate the follow-up of the classes and the development of the subsequent work. Exercises, practical problems on the part of the student will be solved and workshops and evaluation tests will be carried out to acquire the necessary skills.

AF2. TUTORIES. Individualized assistance (individual tutorials) or group (collective tutorials) to students by the teacher.

AF3. INDIVIDUAL OR GROUP STUDENT WORK.

MD1 THEORY CLASS. Exhibitions in the teacher's class with support of computer and audiovisual media, in which the main concepts of the subject are developed and the materials and bibliography are provided to complement the students' learning.

MD2. PRACTICES. Resolution of practical cases, problems, etc. raised by the teacher individually or in groups.

MD3. TUTORIES. Individualized assistance (individual tutorials) or group (collective tutorials) to students by the teacher. For subjects of 6 credits, 4 hours will be dedicated with 100% of attendance.

ASSESSMENT SYSTEM

In order to assess the knowledge, skills and abilities attained by students on the course, we will use two options: a continuous assessment mechanism and a regular comprehensive examination. Students will have a period of 30 calendar days to confirm which of these options they will follow. Those who opt for continuous assessment will not have the option of taking the regular comprehensive exam. Likewise, those who opt for the single assessment by means of an ordinary comprehensive examination will not have to take the tests of the continuous assessment modality.

There are two types of tests in the continuous assessment mode: multiple-choice exercises (2) and

group work (2).

Regarding the 2 group work deliveries, with theoretical-practical content, each one can offer a maximum score of 25% of the total mark for the subject. The evaluation criteria will be distributed together with the necessary material to be able to carry out the assignments.

VERY IMPORTANT NOTE Passing the course requires passing each and every one of these four tests, without considering the option of averaging grades between one test and another. In other words, each of the four tests must be passed. In order to pass each test, a mark higher than or equal to 50% of the maximum possible mark for that test must be obtained.

For those who do not pass the minimum evaluation in any of the four tests mentioned above, there is the possibility of taking a complementary theoretical-practical test focused on the sections not passed in the continuous evaluation. This complementary test will be held at the same time as the ordinary comprehensive examination.

All students who opt for the continuous assessment modality must take these four tests. In the hypothetical case that a student does not pass one or more of the tests after taking the complementary test, it will be considered that the subject has not been sufficiently passed and the student will have to take the final or extraordinary exam with the whole subject. (In other words, partial passes will not be kept).

The ordinary comprehensive exam is designed to cater for those who have not opted for continuous assessment. Its content will be the syllabus seen during the course and the exams will consist of two sections: Theory and Practical. The weighting of each of them in the composition of the final grade is as follows: THEORY 50% and PRACTICAL 50%.

The maximum score to be obtained in the ordinary comprehensive exam may never exceed the limits established in the UC3M regulations in this respect. The ordinary comprehensive exam is not the way to improve the final grade of the subject.

Percentage weight of the Ordinary Comprehensive Examination: 0 Percentage weight of the rest of the evaluation: 100

Students who do not pass the course in either of these two options have the possibility of taking the final exam, or EXTRAORDINARY exam, on the date set by the University. This exam covers the content of the subject taught during the course and the maximum mark to be obtained may never exceed the limits established in the UC3M regulations in this respect.

This final or extraordinary exam is also a mechanism to improve the grade of those students who have already passed the subject with a grade of "A" and wish to demonstrate that they can opt for the best grade. In these cases, the subject coordination office will specify the characteristics of the test to be taken to those interested.

% end-of-term-examination:	0
% of continuous assessment (assignments, laboratory, practicals...):	100

BASIC BIBLIOGRAPHY

- Heizer, J., Render, B. and Munro, C. Operations Management: Sustainability and Supply Chain Management , Pearson, 2019