

## Industry 4.0: Direction and management

Academic Year: ( 2021 / 2022 )

Review date: 09-06-2021

Department assigned to the subject: Business Administration Department

Coordinating teacher: ALVAREZ GIL, MARIA JOSEFA

Type: Electives ECTS Credits : 6.0

Year : 4 Semester :

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

There are no pre-requirements

### OBJECTIVES

Students are asked to:

CB1. have demonstrated that they possess and understand knowledge in an area of study that starts at the base of general secondary education, and is usually found at a level that, while supported by advanced textbooks, also includes some aspects that involve knowledge from the forefront of your field of study

CB2. they know how to apply their knowledge to their work or vocation in a professional way and possess the competences that are usually demonstrated through the elaboration and defense of arguments and the resolution of problems within their area of study

CB3. have the ability to collect and interpret relevant data (usually within their area of study) to make judgments that include reflection on relevant issues of a social, scientific or ethical nature

CG1. Know in depth the bases of the scientific discipline of business administration (business concept, institutional and legal framework, organization and management techniques).

CT2. They are able to correctly expose and write a topic or compose a speech in a logical order, supplying accurate information and in accordance with established grammatical and lexical norms.

CT3. Be able to assess the reliability and quality of the information and its sources using such information in an ethical manner, avoiding plagiarism, and in accordance with the academic and professional conventions of the study area.

CT5. Know and be able to manage interpersonal skills on initiative and responsibility, negotiation, emotional intelligence, etc. as well as calculation tools that allow consolidating the basic technical skills that are required in all professional fields.

CE3. Know the operation of the different functional departments of a company (production, marketing, human resources, finance, etc.), and carry out with ease any management work in them.

CE11. Know and know how to apply the existing planning tools in the company that competes in the digital age.

RA1. Have acquired advanced knowledge and demonstrated an understanding of the theoretical and practical aspects and of the working methodology in the field of business administration and digital technology with a depth that reaches the forefront of knowledge

RA3. Have the ability to collect and interpret data and information on which to base their conclusions, including, when necessary and pertinent, reflection on issues of a social, scientific or ethical nature in the field of business in the digital age.

### DESCRIPTION OF CONTENTS: PROGRAMME

- Tema 1: Introducción al concepto Industria 4.0: aplicabilidad a la industria y los servicios
- Tema 2: La arquitectura digital de la empresa: núcleo y fronteras
- Tema 3: Nuevos modelos de negocio
- Tema 4: Los datos: la nueva materia prima empresarial
- Tema 5: La revolución digital en las tecnologías de procesos. Los escenarios IIoT
- Tema 6: Diseño digital de bienes y servicios
- Tema 7: Sistemas ERP
- tema 8: Digitalización y globalización

## LEARNING ACTIVITIES AND METHODOLOGY

- AF1. CLASES TEÓRICO-PRÁCTICAS. En ellas se presentarán los conocimientos que deben adquirir los alumnos. Estos recibirán las notas de clase y tendrán textos básicos de referencia para facilitar el seguimiento de las clases y el desarrollo del trabajo posterior. Se resolverán ejercicios, prácticas problemas por parte del alumno y se realizarán talleres y pruebas de evaluación para adquirir las capacidades necesarias.
- AF2. TUTORÍAS. Asistencia individualizada (tutorías individuales) o en grupo (tutorías colectivas) a los estudiantes por parte del profesor.
- AF3. TRABAJO INDIVIDUAL O EN GRUPO DEL ESTUDIANTE.
- MD1. CLASE TEORÍA. Exposiciones en clase del profesor con soporte de medios informáticos y audiovisuales, en las que se desarrollan los conceptos principales de la materia y se proporcionan los materiales y la bibliografía para complementar el aprendizaje de los alumnos.
- MD2. PRÁCTICAS. Resolución de casos prácticos, problemas, etc. planteados por el profesor de manera individual o en grupo.
- MD3. TUTORÍAS. Asistencia individualizada (tutorías individuales) o en grupo (tutorías colectivas) a los estudiantes por parte del profesor. Para asignaturas de 6 créditos se dedicarán 4 horas con un 100% de presencialidad.

## ASSESSMENT SYSTEM

En la modalidad de evaluación continua se desarrollan dos tipos de pruebas:

- a.- 2 tests de respuesta múltiple con contenido práctico, con una puntuación máxima de 15% de la nota total de la asignatura cada uno (puntuación total máxima:30%)
- b.- 2 entregas de trabajos en grupo, con contenidos teórico-prácticos, con una puntuación máxima de 30% de la nota total de la asignatura cada uno (puntuación total máxima: 60%)
- c.-El aprendizaje global individual se evalúa con un examen teórico tipo test que cubre todo el contenido de la asignatura (10%)
- Nota Final =  
= (Promedio Notas de evaluaciones continuas de Práctica x 0,3) + (Promedio Notas de evaluaciones continuas de Trabajos x 0,6) + (nota examen final x 0,1)
- Respecto a los exámenes final y extraordinario, su contenido será el temario visto durante el curso y los exámenes se compondrán de Teoría y Práctica. El peso de cada una de ellas en la composición de la nota final es el siguiente:  
TEORÍA 50% y PRÁCTICA 50 %.

To evaluate the knowledge, skills and abilities achieved by students of the course, we will use a continuous evaluation mechanism and a final exam.

In the continuous assessment mode, two types of tests are developed:

- a.- 2 multiple-choice tests with practical content, each with a maximum score of 15% of the total grade for the subject (maximum total score: 30%)
- b.- 2 deliveries of team work, with theoretical/practical content, with a maximum score of 30% of the total grade for the subject each (maximum total score: 60%)
- c.-Individual global learning is assessed with a multiple choice theory exam that covers the entire content of the subject (10%)
- Final Note =  
= (Average marks of continuous evaluations of Practice x 0.3) + (Average marks of continuous evaluations of team Work x 0.6) + (final exam mark x 0.1)
- Regarding the final and extraordinary exams, their content will be the agenda seen during the course and they will consist of Theory and Practice. The weight of each of them in the composition of the final grade is as follows:  
THEORY 50% and PRACTICE 50%.

<b>% end-of-term-examination:</b>	10
<b>% of continuous assessment (assigments, laboratory, practicals...):</b>	90

## BASIC BIBLIOGRAPHY

- Alec Ross The industries of the future, Simon and Schuster , 2016
- Klaus Schwab The fourth industrial revolution , world economic forum, 2016

## ADDITIONAL BIBLIOGRAPHY

- aa vv lecturas varias proporcionadas por la profesora, copy red, 2017, 2018