

Academic Year: (2019 / 2020)

Review date: 08-05-2020

Department assigned to the subject: Mechanical Engineering Department

Coordinating teacher: DURAN HERAS, ALFONSO

Type: Basic Core ECTS Credits : 6.0

Year : 2 Semester : 2

Branch of knowledge: Engineering and Architecture

REQUIREMENTS (SUBJECTS THAT ARE ASSUMED TO BE KNOWN)

No prerequisites

OBJECTIVES

By the end of this subject, students will be able to have:

1. knowledge and understanding of the scientific and mathematical principles underlying the branch of industrial engineering;
2. awareness of the wider multidisciplinary context of engineering, applying knowledge of mathematics, statistics, economics and other scientific fields to the analysis of business situations.
3. the ability to apply their knowledge and understanding to analyse engineering products, processes and methods;
4. an understanding of methodologies, and an ability to use them in the analysis of business situations;
5. the ability to select and use appropriate methods in the management of the companies;
6. an awareness of the non-technical implications of engineering practice within the management of the companies;
7. function effectively as an individual and as a member of a team;
8. demonstrate awareness of the health, safety and legal issues and responsibilities of engineering practice, the impact of engineering solutions in a societal and environmental context, and commit to professional ethics, responsibilities and norms of engineering practice;
9. demonstrate an awareness of project management and business practices, such as risk and change management, and understand their limitations.

DESCRIPTION OF CONTENTS: PROGRAMME

1. Concept of the firm
 - * Key concepts.
 - * Typology.
 - * Institutional and legal framework.
 - * Management activities. Main functional areas. The Operations subsystem.
2. Financial management
 - 2.1. Accounting. Analysis of financial statements
 - * The Balance Sheet.
 - * The Income Statement.
 - 2.2. Investment decisions
 - * Analysis of investment projects.
 - * Mutually exclusive projects.
 - 2.3. Financing decisions
 - * Financing sources.
 - * Debt financing, equity financing.
3. Analysis of the company's economic environment to support decision making
 - 3.1. Supply and demand. Perfect and imperfect competition.
 - 3.2. Social and environmental framework of the business firm. Government intervention.
4. Strategic management

- * The strategic analysis process.
- * Major analysis tools.
- * The management function.
- * Business processes and cross-functional integration
- * Entrepreneurship.

5. Marketing and sales management

- * Marketing fundamentals.
- * The four basic marketing aspects. Marketing Mix.
- * The marketing plan.

6. Human resource management

- * Main functions.
- * Leadership and motivation.
- * Organizational structure.

7. Role of engineering and engineers in business administration.

LEARNING ACTIVITIES AND METHODOLOGY

Lectures, exercises, practical sessions, cases and assignments to be carried out by the students and discussed during the sessions, readings assigned by the instructor or identified by the students.

ASSESSMENT SYSTEM

60% Final written exam.

40 % Continuous evaluation. Partial exams will be held, approximately in the tentative weeks indicated in the schedule. Optionally, complementary evaluation system. May apply sampling based grading.

Minimum grade required in the final exam: 4

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

BASIC BIBLIOGRAPHY

- Instructor provided material: Slides, exercises... URLs and other Internet resources provided by the instructor., Through Aula Global..

ADDITIONAL BIBLIOGRAPHY

- Cuervo García, Alvaro Introducción a la administración de empresas, Civitas.
- Lipsey, Richard G. An introduction to positive economics, Weidenfeld and Nicolson.
- Richard A. Brealey, Stewart C. Myers Alan J. Marcus Fundamentals of Corporate Finance, McGraw-Hill.
- Veciana, José María La creación de empresas : un enfoque gerencial, La Caixa.