Introduction to business

Academic Year: (2022 / 2023) **Review date: 15-05-2022**

Department assigned to the subject: Mechanical Engineering Department

Coordinating teacher: ASIMAKOPOULOS , GRIGORIOS

Type: Compulsory ECTS Credits : 6.0

Year : 5 Semester : 1

REQUIREMENTS (SUBJECTS THAT ARE ASSUMED TO BE KNOWN)

No pre-requirements.

OBJECTIVES

The main objectives for this course are to familiarize future engineers with the concept of private companies and their institutional and legal framework, as well as with the essentials of business management. In addition, it will convey the relevant role of engineering and engineers in business management.

Specific capabilities:
- Understand the concept of a company as a system, its various constituent subsystems and their interrelationships.
- Position engineering within the overall business activities, and understand the engineer's role in the management of the companies.
- Appropriate understanding of the company's institutional and legal framework.
- Identify, for each major functional area, its scope and the main approaches and techniques used in this area.
- Identify the main business processes, and the need for their cross-functional integration.
- Analyze how economic or sustainability constraints restrict viable options for approaching and solving technical challenges

Generic capabilities:
- Analysis of unstructured situations and decisions, with incomplete and not fully reliable information and multiple, conflicting objectives.
- Qualitative reasoning and argumentation. Written expression of this qualitative reasoning
- Ability to apply knowledge of mathematics, statistics, economics and other scientific fields to the analysis of business situations.
- Ability to communicate with non-technical executives, applying the appropriate vocabulary and structuring tools.

DESCRIPTION OF CONTENTS: PROGRAMME

1. The Firm: Types and objectives
1.1. Concept and nature of the firm. The entrepreneur and the firm.
1.2. Business processes and business functions
1.3. The role of engineering and engineers in Business Administration
1.4. Type of companies and legal forms

2. Value creation: environment and competitive advantage
2.1. Value creation and firm¿s goals
2.2. The business environment and competence
2.3. Firm¿s internal analysis and value chain
2.4. Competitive strategy and business models

3. Financial management
3.1. Accounting and Firms¿ economic and financial structure
3.2. Ratios and financial leverage analysis
3.3. Investment analysis: NPV and IRR

4. The production function
4.1. Production systems
4.2. Costs control and operating leverage
4.3. Tools for Project management

5. Marketing and sales management
5.1. The marketing Plan
5.2. Segmentation and positioning
5.3. The marketing mix variables

6. The management function.
6.1. The role of management
6.2. Human resource management
6.3. Team management

7. Entrepreneurship and innovation: Technology-based companies
7.1. Concept and types of innovation
7.2. Innovation Management. Strategies for the protection and exploitation of technology
7.3. Technological entrepreneurship. Technology-based companies

LEARNING ACTIVITIES AND METHODOLOGY

Lectures, exercises, business plan, 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

Continuous evaluation (40%).
Final exam (60%).
It is compulsory to achieve minimum 4 points over 10.

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

BASIC BIBLIOGRAPHY

- S Rudansky-Kloppers, B Erasmus, J Strydom, JA Badenhorst-Weiss, y otros (eds.) Introduction to Business Management, Oxford University Press, 2013

ADDITIONAL BIBLIOGRAPHY

- Navas López, J.E. y Guerras Martín, L.A. Fundamentals of strategic management, Thomson, 2013