

Academic Year: ( 2019 / 2020 )

Review date: 15-05-2020

Department assigned to the subject: Mechanical Engineering Department

Coordinating teacher: HERNANDEZ PAZ, VIRGINIA

Type: Compulsory ECTS Credits : 3.0

Year : 4 Semester :

Branch of knowledge: Engineering and Architecture

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

No pre-requirements are needed

## 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.
- Appropriate understanding of the company's institutional and legal framework.
- 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
- Position engineering within the overall business activities, and understand the engineer's role in the management of the companies.

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. Introduction. Basic concepts in the business management
  - 1.1. Concept and nature of the firm. The entrepreneur and the firm
  - 1.2. Firm's goals and strategies
  - 1.3. Business processes and business functions.
  - 1.4. Firm Types and legal forms
2. Financial management
  - 2.1. Firm's economic-financial structure
  - 2.2. Ratios and financial leverage analysis.
  - 2.3. Investment analysis. NPV and IRR.
3. Operations management
  - 3.1. Types of productive systems
  - 3.2. Cost analysis and leveraged buyout.
4. Marketing and sales management
  - 4.1. Marketing plan
  - 4.2. Segmentation and positioning
  - 4.3. Marketing mix decisions

- 5. Management
- 5.1. Management function.
- 5.2. Organizational structures
- 5.3. Management of 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.

<b>% end-of-term-examination:</b>	60
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<b>% of continuous assessment (assignments, laboratory, practicals...):</b>	40
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#### 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

- Schilling, M Strategic Management of Technological Innovation, McGraw Hil, 2017