COURSE DESCRIPTION

1. Introduction

Business decision making involves the analysis of the information available, which is frequently presented in the form of quantitative data. This course introduces a general framework to think about managerial problems. We analyze the decision-making process and its impact on organizations. The course covers paradigmatic case studies of firms who, through their decisions, put themselves in a better or worse position to reach their goals.

2. Objectives

The course’ main goal is the analysis of managerial decision making from a general management perspective. In this course, the student is expected to get experience in business-oriented quantitative analysis and familiarity with the elementary techniques of data analysis. The course takes advantage of the technical notes, cases and assignments to present a range of situations which illustrate how the quantitative analysis contributes to describe and predict customer and worker's behaviour.

3. Learning Outcomes

A general problem-solving scheme that can be used to think about managerial problems. Parameters determining the quality of an organization. Triple evaluation of the consequences (economic and non-economic) of a decision.

Students will be able to:

- Summarize a dataset.
- Define statistical concepts such as correlation or goodness of fit.
- Explain what a linear regression analysis is and apply it when it is appropriate.
- Choose the variables that are more appropriate for predicting purposes.
- Test significance in a linear regression context.
- Obtain sales forecasts using various methods.
- Design a data analysis in a big data context.

4. Competencies

This course develops the following competences:

- Ability to diagnose interdependent situations.
- Assimilation of heuristics and simple decision rules for complex situations.
• Ability to assess the three possible results of a decision (extrinsic, intrinsic and transcendent) and design action plans accordingly.
• Development of habits tending to correct decisions.
• Strategic competences: industry analysis, positioning, competitive advantage.
• Executive competences: distinctive competence, professional development, operative learning.
• Leadership competences: organizational mission, identification, evaluative learning.

5. Content and Methodology

The main topics covered by this course are:
  • Simple linear regression.
  • Multiple linear regression.
  • Forecasting with time series data.
  • Classification.
  • Sentiment analysis.
  • Recommendation systems.

The course is based on in-class discussion of real business situations and lectures that will present the different elements of the model.

6. Course evaluation

Class participation (50%) and a final report to be submitted at the end of the course (50%).