[DA] DECISION ANALYSIS

Introduction

Welcome to the Decision Analysis course of the first module of IESE's Global Executive MBA. The course deals with decision making under both uncertainty and time effects. It is important to understand that the world in which we all make decisions is not deterministic. Hence, the importance of concepts like probability or time value of money to guide us in the decision making process. But also, the importance of acknowledging certain systematic mistakes or biases in our decision-making psychology. My job is therefore to equip you with some instruments and some general frameworks to think about the process of decision-making. Your job is to construct and use your own model. If you do so you will have a greater chance of success in your managerial activity.

Objectives

- Decision-making under Uncertainty. Decision Trees, Expected Value, Sensitivity Analysis and the Value of Information.
- Time and Decision-making. The concept of discounted expected value. How to work on decisions with both time implications and uncertainty.
- Introduction to Simulation and how to handle multiple simultaneous uncertainties.
- The Psychology of Decisions. Systematic Biases or Mistakes in our Judgement.

Content

The course covers a variety of analytical tools to deal with uncertainty, such as decision trees or probability distributions. We will also review some common biases that can creep into every strategic choice and that often lead to poor decisions. We also deal with the time-value of money and the available tools to make sound economic decisions over long time horizons (NPV, IRR).

Methodology

The course uses cases, simulations, exercises and readings to generate an enriching in-class discussion of the topics outlined above. The lectures during the course will develop some specific topics in higher detail.

Activities of this course include:
- Sessions: class sessions and meetings with the teacher (13,5hrs)

- Team discussions (12hrs)
- Personal Study (35hrs)
- Final Exam: (2hrs)

Evaluation

Class Participation: 40%
Final Exam: 60%

Competences

Basic Competences

CB6. Possess and understand knowledge that provides a basis or opportunity to be original in the development and / or application of ideas, often in a research context.

CB7. The students know how to apply the knowledge acquired and their ability to solve problems in new or unfamiliar environments within broader (or multidisciplinary) contexts related to their area of study CB8. The students can integrate knowledge and face the complexity of formulating judgments based on information that, being incomplete or limited, includes reflections on social and ethical responsibilities linked to the application of their knowledge and judgments.

CB9. Students know how to communicate their conclusions and the knowledge and ultimate reasons that support them to specialized and non-specialized audiences in a clear and unambiguous way.

General Competences:

CG1-To explain and discuss business situations in a rigorous, effective way using both formal and informal procedures, and providing relevant information to support their observations and conclusions.

CG4-To understand and apply the mechanisms that generate an atmosphere of cooperation, communication, and trust among the members of a team or organization.

CG7-To distinguish and categorize relevant information effectively for business decision making.

CG9-To interpret the global context in order to analyze and judge the threats and opportunities facing the organization.

Specific Competences:

CE1-To apply a structured, rigorous analysis process of business situations that encompasses all the dimensions of the business (personnel, strategy, finance, etc.) and concludes with the preparation of a reasonable, feasible action plan.

CE2-To write organized, concise, and clear executive reports for analysis and decision making in business situations.

CE4-To use quantitative tools judiciously, such as simulations, probabilistic inference, and optimization models, in unstructured, uncertain business environments to assist in decision making.

CE5-To identify and estimate stakeholders' level of risk-aversion in order to understand its impact on their decisions.