University of International Business and Economics
International Summer School

MGT 210 Managerial Decision Making

Instructor: Gregory P. Prastacos
Credit: 2 units

Students

Undergraduate/Postgraduate

Teaching Language

This course is taught in English.

Methods of Instruction

Lecture, Case study, excises, projects

Classroom Capacity

30-40

Evaluation

2 Homework and 1 case analysis

About the Instructor

Dr. Gregory P. Prastacos is a Professor and Dean of Management School at Institute of Stevens Technology in New Jersey of USA. He used to be the President of Athens University of Economics and Business in Greece from 2007 to 2011. He worked as a Professor of Management Science at the Department of Management Science and Technology, and the Director of the MBA International Program. He has been educated at Columbia University (USA), where he received a B.Sc. in Computer Science, an M.Sc. in Computer Science, and a Ph.D. in Operations Research. He has previously been on the faculties of the Wharton School of the University of Pennsylvania, and of the Graduate School of Business of Columbia University, and has held visiting appointments at the University of Bern in Switzerland, the University of Paris-Dauphine in France, the International Institute of Applied Systems Analysis (IIASA) in Austria, and the National Center for Scientific Research (CNRS) in France. Now he is the Dean and Professor of Howe School of Technology Management at Stevens Institute of Technology, Hoboken, NJ, USA.

Professor Prastacos' research, professional and teaching interests are in the areas of Management Science, Information Technology, and their use for Business Transformation in the Information Society. He has published 7 books (some of them in their 4th edition), and more than 80 papers in academic journals and edited volumes. His work has appeared in journals such as Management Science, Operations Research, Omega, J. Operational Research Society, European Management Journal, Long Range Planning, Information & Management, Interfaces, Computers & Operations Research, Annals of Operations

Research, RAIRO, International J. of Production Economics, J. of Knowledge Management, Applied Economics, and others. For his work on the logistics of perishable inventory management he has been awarded the 1st Management Science Achievement Award (Edelman Prize) by the Institute of Management Sciences (TIMS, currently INFORMS). For his work on financial management modelling, he has been awarded the 1st prize of the Hellenic OR Society. His work on competency modelling has been used worldwide as a basis for successful HR practice. His work on absorptive capacity has also been selected among the best papers of the Academy of Management. Recently (2008) he has received the Medal for Achievement in OR by INFORMS. At AUEB he has received several teaching excellence and exceptional contribution awards.

Professor Prastacos is also the Founding Director of the Management Sciences Laboratory (MSL, www.msl.aueb.gr) of the University, a leading ISO-certified research centre in Europe, conducting research and advisory work in the areas of operations management, innovation and knowledge management, business transformation and strategy, entrepreneurship, and human resources management. Some of the recent projects undertaken by MSL include the evaluation of innovation as a strategic factor in the technological development of Greece for the General Secretariat of Research (2002-2004), the development of a competencies framework for a major bank (2003-2005), the design of efficient supply chains for reverse logistics for the biggest lubricant manufacturer of Greece (2003-2005), the development of knowledge management platforms between Mediterranean European Institutions (2001-2004), the development of risk management tools and methodologies for the Bank of Greece (2001-2003), etc.

Professor Prastacos is on the review or editorial board of several academic journals, and serves on a number of national and international committees. He has previously served on the BoD of the Hellenic Management Association (EEDE), on the BoD of the Hellenic OR Society (HELORS), on the Scientific Council of the Greek National Economic Research Institute, as well as on the BoD of a number of companies. He is an elected Fellow of the Washington Academy of Sciences, a member of the Academic Council of Athens College, a member of Syndicate Academia of NMIMS University in India, and has been an evaluator and auditor to the European Commission (DG V, XII, XIII). He is a frequent speaker to conferences, and an advisor to government organizations and private industry.

Course Description

Decision-Making is one of the most important functions of management. In today's business environment it is characterized by continuous change, large amounts of data, and the huge penetration of information and telecommunications technology. In this environment, decision making is increasingly based on the use and analysis of data, through the development of "models", and the use of user-friendly, PC-based computer packages. Many of these models try to come up with an optimal decision, under the assumptions provided.

This is what this course is all about. The emphasis of the course will be on understanding the methodology for making decisions, understanding and formulating complex problems, as they appear in today's business environment, developing the appropriate decision models, and using them for effective decision making. Three major categories of decision models are covered: Linear Programming, Integer Programming and Decision Analysis. In each unit, the student is exposed to a number of applications, as well as a specific case study.

In addition to developing models, the student is exposed to computer packages, based on Excel, to use in order to solve the problems.

Syllabus

1. Introduction to Decision Making in the Information Age. Introduction to modeling and to decision making processes. Overview of success cases.
2. How to avoid bad decisions: the decision making process. Allocating resources – introduction to Linear Programming.
3. Allocating resources among competing activities. Introduction to Linear programming. Formulation and applications in Business. Using Excel/Solver to solve LP problems. Discuss the Amaltheia case study for investment decisions.
4. Managing a supply chain. Introduction to Integer Programming. Formulation and applications in Business. Prepare for the Baby Chips case to be prepared for next class.

5. Discussion of the Baby Chips case.
6. Strategizing under uncertainty. Introduction to Decision Analysis. Formulation and applications in Business.
7. Using Precision Tree to solve Decision Analysis problems. Introduction of Sensitivity Analysis and Risk profile analysis. Discuss the Warner Lambert case study.
8. Discussion of cases. Overview and questions.

Required Text

"Managerial Decision Making: Theory and Practice", by Gregory P. Prastacos, Tsinghua University Press, 2009, ISBN: 978-7-302-20679-8.