



80-685-09 - Applications of Game Theory

Winter 2011 :J01

Zaccour, Georges

MAINTENANCE:

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a.m. to 6 a.m.
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Introduction

Description

The course is a general introduction to non-cooperative and cooperative static and dynamic game theory. The main concepts are defined rigorously and illustrated by a series of examples, exercises and applications to different problems in management which are of interest to the participants.

Objectives

The objectives pursued are the following:

- Introduce the students to the different concepts of game theory and their potential applicability in management
- Provide to the students the necessary background to access the ever growing game theory literature in all business administration areas.
- Help the students develop a critical thinking with respect to the role played by game theory in our understanding and solving managerial problems.
- Provide to the student an opportunity to develop a research project in his/her field of interest.

Contact information

Professor : Georges Zaccour

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Secretary : Diane Brousseau

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Availability:Office hours : Monday to Friday from 8:00 a.m. to 12:00 p.m. and from 1:00 p.m. to 4:30 p.m.

Learning material

Bibliography

- Articles distributed during the sessions

Assignments and examinations

Mid-Term Exam (30%)

Date: 2011-03-03

Assignments (4) (40%)

Final Exam (30%)

Date: 2011-04-21

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List of sessions

Session 1 : Non-cooperative Static Games (January 6, 2011)

Session 2 : Non-cooperative Static Games (January 13, 2011)

Session 3 : Non-cooperative Static Games (January 20, 2011)

Session 4 : Repeated games and Nash equilibrium refinements (January 27, 2011)

Session 5 : (Repeated games and Nash equilibrium refinements (February 3, 2011)

Session 6 : Cooperative games (February 10, 2011)

Session 7 : Negotiation and bargaining solutions (February 17, 2011)

Session 8 : Mid-Term Exam (March 3, 2011)

Description

Mid-Term Exam

Session 9 : Introduction to Optimal Control Theory and Dynamic Programming (March 10, 2011)

Session 10 : Introduction to Optimal Control Theory and dynamic programming (March 17, 2011)

Session 11 : Differential Games (March 24, 2011)

Session 12 : Differential Games (March 31, 2011)

Session 13 : Differential Games (April 7, 2011)

Session 14 : Final Exam (April 21, 2011)

Last updated: 2011-04-01 14:18
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