

Strategy and complexity (intensive course)

EM023M2CA1

Program

PGE
Visitants

UE

Strategy and complexity

Semester

A

Discipline

Strategy

Contact hours

27 H

Number of spots

45

Open to visitors

Yes

Language



Coordinator

List of lecturers

Lecturer(s)	Email	Contact hours - lecture
Charles MASON	bambuzlr@uwyo.edu	27 h

Pedagogical contribution of the course to the program

No educational contribution associated with this course for this program.

Description

We will discuss a variety of important concepts in the application of game theory and the economics of uncertainty. These include decision making under uncertainty, risk attitudes, extensions to the traditional model, Nash equilibrium, backward induction and subgame perfect equilibrium. We will also explore some relatively new uses of game theory and uncertainty, including behavioral economics.

Teaching methods

Face-to-face

- Lectures

In group

- Exercises
- Oral presentations

Interaction

- Discussions/debates

Others

No items in this list have been checked.

Learning objectives

Cognitive domain

Upon completion of this course, students should be able to

- - (level 1) **recognize** incentives confronting decision-makers
 - - (level 2) **summarize** motives and likely behavior
 - - (level 3) **predict** outcomes from strategic interactions
 - - (level 3) **solve** for optimal behavior in situations with risk or strategic interactions
 - - (level 4) **analyze** implications of strategic or risky environments
 - - (level 5) **evaluate** influence of risk, strategic interactions
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Affective domain

Upon completion of this course, students should be able to

None affective domain have been associated with this course yet

Outline

A. Decision-making under uncertainty

topic : Decision-making under Uncertainty: introduction

of lectures : 2

Chapter(s) : HR 1; ST 1, 2.1; RT: 19.4

topic : Risk attitudes

of lectures : 2

Chapter(s) : HR 2; ST 2.2

topic : Insurance and portfolio demand

of lectures : 2

Chapter(s) : HR 3; ST 2.3, 2.4

topic : Using information

of lectures : 1

Chapter(s) : HR 5; ST 19.4.3

topic : Anomalies and extensions to the traditional model

of lectures : 3

Chapter(s) : HR 1; RT 1, 5-8

B. Game Theory

topic : Preliminaries
of lectures : 1
Chapter(s) : D: 1, 2; ST: 3

topic : Strategies
of lectures : 4
Chapter(s) : D: 4, 5, 6; G: 1; ST: 3, 4, 5, 6

topic : Dynamic Games
of lectures : 3
Chapter(s) : D: 6, 7, 8; G: 2, 3; ST: 7, 8, 9, 10

topic : Moral Hazard
of lectures : 2
Chapter(s) : G: 3.1; ST: 12

topic : Adverse selection
of lectures : 2
Chapter(s) : G: 3.2, 4.1; ST: 12

topic : Signaling
of lectures : 2
Chapter(s) : G: 4.2, 4.3; D: 7, 8, 9

topic : Applications
of lectures : 3
Chapter(s) : D: 10, 11, 12, 13

No prerequisite has been provided

Knowledge in / Key concepts to master

Instructor approval

Teaching material

Mandatory tools for the course

No items in this list have been checked.

Documents in all formats

No items in this list have been checked.

Moodle platform

No items in this list have been checked.

Software

- Pack Office (Word, Excel, PowerPoint, Access)

Additional electronic platforms

No items in this list have been checked.

Recommended reading

Main reading material

Richard Thaler, *The Winner's Curse* (RT) ; Dixit and Nalebuff, *The Art of Strategy* (D); Gibbons, *Game Theory for Applied Economists* (G); Tadelis, *Game Theory* (ST);

Additional literature

Machina, M., "Choice Under Uncertainty: Problems Solved and Unsolved," *Journal of Economic Perspectives* 1(1), Summer 1987, 121-154 ; Kahneman, D., Knetsch, J., and R. Thaler, "The Endowment Effect, Loss Aversion, and Status Quo Bias," *Journal of Economic Perspectives* 5(1), 1991, 193-206 ; Tversky, A., and R. Thaler, "Preference Reversals," *Journal of Economic Perspectives* 4(2), 1990, 201-211 ; Lowenstein, G. and R. Thaler, "Intertemporal Choice," *Journal of Economic Perspectives* 3(4), 1987, 181-93.

EM Research: Be sure to mobilize at least one resource

Textbooks, case studies, translated material, etc. can be entered

No reading material has been provided.

Assessment

List of assessment methods

Intermediate assessment / continuous assessment 1Other (date, pop quiz, etc.) : -

Written / Group / English / Weight : 33 %

Details : a written group assignment Group assignments will be due the following Thursday

Intermediate assessment / continuous assessment 2Other (date, pop quiz, etc.) : -

Oral / Individual / English / Weight : 33 %

Details : face-to-face individual discussions related to the group assignment Individual discussions will be scheduled for the start of the second week of the course

Final evaluationOther (date, pop quiz, etc.) : -

Written / Individual / English / Weight : 34 %

Details : Final examination will be done online, to be submitted by the Monday after the course ends

