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CURSO: Graduação em Economia – 1º semestre de 2019

DISCIPLINA: Game Theory

PROFESSOR: Leandro Gorno

IDIOMA: Inglês

CARGA HORÁRIA: 30h

RECOMENDÁVEL: Teoria da probabilidade, Calculo III, Microeconomia II

HORÁRIO E SALA DE ATENDIMENTO: TBD

## PLANO DE ENSINO

### 1. Ementa

Strategic games. Dominance. Rationalizability. Nash equilibrium. Mixed strategies. Games in extensive form. Backward induction. Subgame perfection. Repeated games. Bargaining. Bayesian games. Extensive games of imperfect information.

### 2. Objetivos da disciplina

This course aims to cover the fundamentals of non-cooperative game theory with perfect and imperfect information.

### 3. Objetivos centrais de aprendizagem

Understand the basic concepts in the field and apply them to model and analyze situations of economic relevance.

### 4. Relação da disciplina com o debate contemporâneo

Non-cooperative game theory studies the interaction of strategic agents and how their individual incentives translate into social outcomes. As such is relevant to think about a vast array of real-world problems involving multiple actors with diverse agendas and interests.

### 5. Procedimentos de ensino (metodologia)

I will teach game theory by developing the fundamental concepts in increasing order of sophistication, while providing examples and economic applications.

### 6. Conteúdo programático detalhado

<b>Datas</b>	<b>Tópico</b>
	Introduction.
	Strategic games and dominance.
	Rationalizability.
	Nash equilibrium.
	Mixed strategies.
	Games in extensive form.
	Backward induction.
	Subgame perfection.
	<b>- 1st exam -</b>
	Repeated games.
	Bargaining.
	Bayesian games.
	Extensive games with imperfect information.
	<b>- 2nd exam -</b>
	<b>- Make up exam -</b>

## 7. Procedimentos de avaliação

There will be a midterm and a final exam. The final grade will be a weighted average of the two exams with weights 50% for the midterm and 50% for the final. All topics covered in the course may be evaluated in the final.

## 8. Bibliografia Obrigatória

We will mainly rely on lecture notes and slides. As a complement, I recommend Osborne (2003) and also Gibbons (1992). A very nice treatment, though somewhat more advanced, treatment is Osborne and Rubinstein (1993).

## 9. Bibliografia Complementar

Robert Gibbons. Game Theory for Applied Economists. Princeton University Press, 1992.

Martin J. Osborne. An Introduction to Game theory. Oxford University Press, 2003.

Martin J. Osborne and Ariel Rubinstein. An Introduction to Game theory. The MIT Press, 1993.

#### **10. Minicurrículo do(s) Professor(s)**

Leandro Gorno possui graduação em Licenciatura em Economía pela Universidad de Buenos Aires (2003), mestrado em Economia pela Universidad de San Andrés (2006) e doutorado em Ph.D. in Economics pela Princeton University (2013). Atualmente é Professor Assistente do Fundação Getúlio Vargas - Matriz.

#### **11. Link para o Currículo Lattes**

<http://lattes.cnpq.br/2086199766903206>