Universidad de Chile
Engineering School

Advanced Microeconomics (Fall 2020)
Course Outline

Instructor: Diana MacDonald

Textbooks:

- "A Course in Game Theory" by Martin Osborne and Ariel Rubinstein

- "Microeconomics Theory" by Andreu Mas-Colell and Michael Whinston

Part I: General Equilibrium

- Exchange Economy and Robinson Crusoe's Economy

- Equilibrium and Welfare Properties

- Existence and Uniqueness

Part II: Strategic Games with Perfect Information

- Strategic Form Games

- Dominated Strategies, Rationalizability, and Elimination of Dominated Strategies

- Best Response and Nash Equilibrium

- Correlated Equilibrium

- Applications: Cournot's and Bertrand's Models of Oligopoly

Part III: Dynamic Games with Perfect Information

- Extensive Form Games

- Strategic Form Representation of Extensive Form Games

- Backward Induction and Subgame Perfect Nash Equilibrium

- Applications: Stackelberg's Model of Oligopoly, Bargaining, Strategic Moves and Credibility

Part IV: Repeated Games

- Finite and Infinite Games

- Trigger Strategy

- Folk Theorem

- Applications: Collusion

Part V: Static Games with Imperfect Information

- Incomplete Information

- Bayesian Games and Bayesian Equilibrium

- Applications: Cournot's with Imperfect Information, Moral Hazard and Adverse Selection

Part VI: Dynamic Games with Imperfect Information

- Beliefs and Sequential Equilibrium

- Signaling Games

- Applications: Education as Signal of Ability