IE 443
ECONOMIC MODELS FOR DECISION AND POLICY ANALYSIS

Syllabus
Fall 2024-2025

Course Information
Instructor: Dr. Yusuf Kenan PAKYARDIM
Timing: TBD
Location: TBD
Office hours: by appointment via email

Aim and Scope
The aim of the course is to provide students with basic knowledge about analytical tools and models that are frequently used in economic decision and policy analysis processes by firms and individuals in various economic environments. The course is mainly based on a range of topics from Microeconomic Theory. In addition to basic economic decision processes of a single agent, the course also includes topics related to strategic decision making processes. In strategic decision making processes, more than one intelligent agents interact such that outcome of the decision made by one agent depends not only its own decision but also on the decisions made by the other agents. In addition, throughout the course, analytical and theoretical studies will be supported by real life examples to give insight into the subjects.

Course Materials
Lecture notes and necessary reading list will be provided before each class. The course will not follow any single textbook. However, following textbooks will be used as reference:

Nicholson, Walter, and Christopher M. Snyder. *Intermediate Microeconomics and its Application*. Cengage Learning, 2021

Osborne, Martin J. "*An Introduction to Game Theory*". Vol. 3. No. 3. New York: Oxford university press, 2004.

Dixit, Avinash K., and Susan Skeath. *Games of Strategy: Fourth international student edition*. WW Norton & Company, 2015

Course Content

- Choice Theory & Utility
  - Binary preference relations
  - Representation of preference relations by Utility function
- Consumer Demand
  - Indifference curves and budged set
  - Utility maximization
  - Derivation of demand functions and its analysis
- Production and Cost
  - Production economics
  - Cost concepts: total cost, marginal cost etc.
  - Economies of scale and its strategic implications
- Competitive Strategy and Introduction to Game Theory
  - Dominant strategy & Nash equilibrium
  - Sequential form games & Backward induction
- Monopoly & Market Entry
  - Strategic pricing
- Competitive Markets
  - Perfect competitions, short-run & long-run implications
  - Imperfect competition & Oligopolistic models
    - Cournot model
    - Stackelberg model & first-mover advantages
- Bayesian Games
- Auction & Biddings
  - Various forms of auctions
  - Bidding strategy
  - Winner curse
  - Revenue equivalence
- Markets with Asymmetric Information
  - Moral Hazard
  - Adverse Selection

Grading (Tentative)

Quizzes:	5%
Assignments:	15%
Midterm Exam:	35%
Final Exam:	45%