UEC20: Economics

Course Description
This university-level economics course focuses on fundamental microeconomics concepts at an early undergraduate level. The course is divided into three sections. Section one focuses on the consumer by first introducing the concepts of utility functions, indifference curves, and firm supply, then culminating in the study of market equilibrium and price determination. Standard issues such as taxation, consumer and producer surplus, and Slutsky and Hicksian decompositions are covered. The second section focuses on the producer, introducing the concepts of production function, profit maximization, and the dual problem of cost minimization, factor demand functions, cost curves, competitive market price setting, and monopolistic markets. The third section focuses on the following advanced microeconomic topics: net present value; basic game theory and the prisoner’s dilemma; elements of general equilibrium theory, including the Edgeworth box, Pareto efficiency, and elements of welfare theory; and market failures, including externalities and public goods.

Learning Objectives
Upon successful completion of the UEC20 Economics course, students will develop an analytical framework for approaching microeconomic questions including:

- How do people decide whether and when to purchase a new car or a new cellular phone?
- How do firms decide whether to hire new employees, or to lay off some of their existing employees?
- Why do some industries emerge and grow, while others decline?
- Why have housing prices been more volatile in some geographic regions than in others?
- Do changes in gasoline prices affect consumers’ behavior or their well-being?
- Should monopoly firms be regulated or left alone?
- Would an increase in the minimum wage help or harm workers?
- Are policies that benefit employers harmful to employees?
- When two people bargain to make a deal what offers are likely to result in the most beneficial agreement?

Course Themes

- **Introduction to microeconomics**
- **Individuals and consumers**
  - Budgets
  - Preferences
  - Utility
  - Choice
  - Demand
  - Intertemporal choice
  - Asset markets
  - Consumer welfare
  - Aggregating demand
- **Firms**
  - Technology
  - Profit maximization
  - Cost minimization
  - Cost curves
  - Supply
  - Aggregating supply
  - Imperfect competition
- **Game theory**
• General equilibrium
  - Exchange
  - Production
  - Welfare

• Market failure
  - Externalities
  - Public goods
  - Incomplete information

Key Assignments
Each semester, the letter grade in the course will be determined based on performance on the following types of assignments:

• In class participation: Students are expected to participate in in-class discussion sections, and are expected to have a functioning graphics tablet for presenting problems and asking questions during discussion sections. Each student is expected to facilitate a discussion of course readings several times throughout the year. Students will contribute to and be part of an active learning environment.

• Homework assignments: Students will complete regular homework assignments (written and/or electronic) to demonstrate their mastery and knowledge of the material covered in each week’s lectures and discussion sections.

• Writing assignments: Students will be required to complete several short writing assignments during the year to test in-depth understanding of economic concepts and the ability to integrate knowledge of course concepts to formulate and answer questions, or comment on issues or problems of economic nature.

• Midterm and final exams: There will be comprehensive, proctored midterm and final exams each semester. These exams will include material covered in lecture, discussion, homework and writing assignments.