ECON 3110: Advanced Microeconomics Theory

2022 Fall Session	
Total Class Sessions: 25	Instructor: Staff
Class Sessions Per Week: 5	Classroom: TBA
Total Weeks: 5	Office Hours: TBA
Class Session Length (Minutes): 145	Language: English
Credit Hours: 4	

Course Description:

This course is a further study based on the intermediate microeconomics theory. The goal of this course is to introduce you a more mathematical rigorous presentation of the basic concepts and theories in intermediate microeconomics. It mainly focuses on the comprehensive application of mathematical analysis tools and economic models to analyze some economic problems of the contemporary society, including choice and demand, production and supply, competitive markets, and market failure, social welfare functions, general equilibrium and optimization problems.

Advanced Microeconomics theory is more mathematical rigorous than previous intermediate microeconomics course. It is quite necessary to equip yourself with enough mathematics tools and techniques.

Prerequisite: Introduction to Microeconomics Theory, Intermediate Microeconomics Theory

Learning objectives:

Upon successful completion of this course, students will be able to:

- Understand microeconomics theories mentioned in this course and further pursuit in higher level

- Be familiar with the usage of theoretical tools in other topics in economics and finance

- Apply microeconomics theories to construct models and analyze the related economic issues

Course Materials:

Walter Nicholson and Christopher Snyder, *Microeconomic Theory: Basic Principles and Extensions*, South-Western Cengage Learning, 2017.

Hugh Gravelle, Ray Rees, *Microeconomics*, 3rd edition, Pearson Education Ltd, 2004

Course Assignments and Assessment:

Attendance:

Attendance at all class sessions is required. You have to notify the instructor in advance of your absence. If you fail to attend class on a regular basis, your final course grade will be lowered. Likewise, you should arrive to class on time. Tardiness is disruptive and disrespectful to me and

to your classmates. Please make every effort to arrive punctually.

Quizzes:

There will be five quizzes in total. Short, in-class quizzes will test your comprehension of course materials. You are supposed to make adequate preparation before each quiz. You are not allowed to consult your classmates or read your textbook or handout during the quizzes. You should be well-prepared before the class.

Exams:

There will be two midterm exams and one final exam during the course. In the exams, you are responsible to explain theoretical concepts, answer problem questions related to theoretical concepts, make graphical representations, solve short numerical exercises. The exams will be close-book. Also, you are not allowed to communicate with your classmates. Students are required to take all exams, and there are NO MAKE-UP EXAMS.

Attendance	10%
Quizzes	15%
Midterm Exams 1	20%
Midterm Exams 2	20%
Final Exam	35%
Total	**100%**

Grading Scale (percentage):

A+	A	A-	B+	B	B-	C+	C	C-	D+	D	D-	F
98-100	93-97	90-92	88-89	83-87	80-82	78-79	73-77	70-72	68-69	63-67	60-62	<60

Academic Integrity:

Students are encouraged to study together, and to discuss lecture topics with one another, but all other work should be completed independently.

Students are expected to adhere to the standards of academic honesty and integrity that are described in the Chengdu University of Technology's *Academic Conduct Code.* Any work suspected of violating the standards of the *Academic Conduct Code* will be reported to the Dean's Office. Penalties for violating the *Academic Conduct Code* may include dismissal from the program. All students have an individual responsibility to know and understand the provisions of the *Academic Conduct Code*.

Special Needs or Assistance:

Please contact the Administrative Office immediately if you have a learning disability, a medical issue, or any other type of problem that prevents professors from seeing you have learned the course material. Our goal is to help you learn, not to penalize you for issues which mask your learning.

Course Schedule:

Week	Topics	Assignments
1	• Introduction to The Course • Review economic models and mathematics for microeconomics • Preferences and utility Utility Trades and substitution The mathematics of indifference curves Utility functions for specific preferences • Utility maximization and choice Indirect utility function The lump sum principle Expenditure minimization Properties of expenditure functions	• Quiz 1
2	• Income and substitution effects Demand functions Changes in income Changes in a good's price The individual's demand curve Compensated demand curves and functions Demand elasticities Consumer surplus • Demand relationships among goods Substitutes and complements Substitutability with many goods Composite commodities Home production, attributes of goods, and implicit prices	• Quiz 2 • Review • Midterm exam 1
3	• Production functions Marginal productivity Isoquant maps and the rate of technical substitution Returns to scale The elasticity of substitution Four simple production functions Technical progress • Cost functions	• Quiz 3

	Cost-minimizing input choices Cost functions Shifts in cost curves Short-run, long-run distinction	

4	• Profit maximization
	    The nature and behavior of firms
	    Marginal revenue
	    Short-run supply by a price-taking firm
	    Profit functions
	    Profit maximization and input demand
	• The partial equilibrium competitive model
	    Market demand
	    Short-run price determination
	    Long-run analysis and equilibrium
	    Shape of the long-run supply curve
	    Producer surplus in the long run
	    Tax incidence analysis
		• Quiz 4
		• Review
		• Midterm exam 2

5	• General equilibrium and welfare
	    A graphical model of general equilibrium with two goods
	    Comparative statics analysis
	    General equilibrium modeling and factor prices
	    A mathematical model of exchange
	    Computable general equilibrium models
	• Externalities and public goods
	    The definition of externalities
	    Externalities and allocative inefficiency
	    Solutions to negative externality problems
	    Attributes of public goods
	    Public goods and resource allocation
	    Lindahl pricing of public goods
	    Voting and resource allocation
	    A simple political model
	    Voting Mechanisms
		• Quiz 5
		• Review
		• Final exam