Fall 2018 **Prof. Janet Kohlhase**
University of Houston

ECON 7341– Section 16322
MICROECONOMIC THEORY I
Meets TTh 1-2:30 in M212 (McElhinney Building)

Office: 201B McElhinney (M)
hours: TTh 5:00-6:00pm or by appointment 713-743-3799
email: jkohlhase@uh.edu
web pages: http://www.uh.edu/~kohlhase (general information)
http://www.uh.edu/blackboard (class website, use Blackboard Learn; password access)

TA: Jose Mota, a second year Ph.D. student in economics, office 207 McElhinney Hall, email jmotaaquino@uh.edu, office hours by appointment.

Overview: This course is the first in a sequence of two advanced microeconomic theory courses offered in the graduate economics curriculum at the University of Houston. This course provides an in-depth coverage of the modern microeconomic theory of economic choices made by individual consumers and firms. The course also examines non-strategic markets such as perfect competition (both partial and general equilibrium versions) and monopoly. Topics covered include special classes of preferences and production functions, choice under uncertainty, measures of welfare at various levels—consumer, one market, and many markets in general equilibrium. The course uses mathematical methods typically used in microeconomic theory such as optimization, constrained optimization (including the Kuhn-Tucker Theorem), the envelope theorem, and comparative statics. The second micro course (Econ 7342) will develop models of asymmetric information, strategic behavior and interactions among agents and groups of agents.

Logistics: Class time consists of two parts, lectures and labs. The lectures are held TTh 1-2:30 and are taught by me. The lab is held on Fridays from 10:30am-noon in the economics conference room, room 212M, and is taught by the teaching assistant (TA). Typically the TA will go over homework in the Friday labs, and students may be asked to present solutions too. Occasionally I may use the period for extra lectures, as needed. In addition, I may have to schedule 2-3 makeup lectures given my schedule in September, October and November. I expect you to attend all lectures and labs and to be an active participant in each. Homework and other course materials will be posted on our class Blackboard website.

Required Textbook:

(JR) G.A. Jehle and P.J. Reny***, Advanced Microeconomic Theory***, 3rd edition, Financial Times Prentice Hall (an imprint of Pearson), 2011, ISBN-13: 978-0-273-73191-7.

Highly Recommended Textbook:

(MWG) A. Mas-Colell, M.D. Whinston and J.R. Green***, Microeconomic Theory,*** Oxford University Press, 1995, ISBN-10: 019507340.

Other Useful Textbooks:
Micro Theory:

(V) H. Varian, ***Microeconomic Analysis***, 3rd. ed., Norton, 1992. A shorter treatment of PhD-level microeconomic theory than the above two books.

Kreps, David. ***A Course in Microeconomic Theory***, Princeton University Press, 1990. A more "chatty" text than the above three books.

(NS) W. Nicholson and C. Snyder, ***Microeconomic Theory: Basic Principles with Extensions,*** 11th ed., Southwestern/Cengage Learning, 2008, 2012. Micro theory at the "masters-level." Easier than the above three books, a good transition book between undergrad intermediate and graduate advanced courses. Earlier editions (some with only Nicholson as the author) are also fine. This book is more advanced than Nicholson's undergrad intermediate text, *Intermediate Microeconomics.*

Math related:

K. Sydsaeter, A. Strom and P**.** Berck, ***Economists Mathematical Manual***, 4th ed**.** Springer, 2005. A short book defining most of the mathematical notation you will encounter in micro theory.

(SS) E. Silberberg and W. Suen, ***The Structure of Economics: a Mathematical Analysis***, 3rd ed., Irwin McGraw-Hill, 2001. Very good on constrained optimization and comparative statics.

(SB) C. P. Simon and L. Blume, ***Mathematics for Economists***, Norton, 1994. Good on optimization, concave functions, homogeneous functions.

(CW) A. C. Chiang and K. Wainwright, ***Fundamental Methods of Mathematical Economics***, 4th ed., McGraw-Hill Irwin, 2005 (or any edition; earlier editions authored solely by Chiang). The classic math-econ book written at a lower level than ***SS*** and ***SB.***

Course Evaluation: 30% Midterm (tentative date: Thursday October 18, 2018 in class)
55% Final Exam (exact date: Tuesday December 11, 2018, 2-5pm)
15% Homework sets

The exams will consist of problems and will be closed-book, closed-note and given in class. About ten homework sets will be assigned during the semester and each will be assigned a specific due date. Completing the homework is an important part of the course, and will help you better understand the course material.

Course Policies: All exams and homeworks are mandatory. Unapproved absence from any exam counts as a zero. No late assignments accepted. Any late homework receives a score of zero. Original hard copies (but no xeroxes) of homeworks are required; no electronic submissions will be accepted. You may form homework study-groups (in fact I encourage you to do so), but each student must turn in her/his own homework sets. Each homework set turned in must be unique and original. You are expected to do your own work on the exams. No makeup exams. Any absence from an exam for medical reasons must be documented by your physician. Any other absence from an exam must be approved by me *in advance* in writing.

All exams and homeworks are covered by the Honesty code of the University of Houston (see UH Academic Honesty guidelines at URL):

http://publications.uh.edu/content.php?catoid=30&navoid=11256

Course Preparation: Students should have a working knowledge of multivariate calculus, matrix algebra, formal logic and probability; also be competent in intermediate microeconomics with calculus.

Learning Outcomes:

--Students will learn through lectures, labs, homework, exams and readings to master microeconomic theory to a level that enables students to critically analyze research articles published in leading applied economic theory journals.

--Students will learn the methods of microeconomic theory that, in conjunction with other core classes, will provide the foundation for independent research in many fields of economics.

--Students will develop their mathematical and analytical skills to the level expected in the second graduate microeconomics, Econ 7342, and master microeconomic theory to a level that enables them to pass the Ph.D. qualifying exams in microeconomic theory

UH Resources:

Students with Disabilities: The University of Houston System complies with Section 504 of the Rehabilitation Act of 1973 and the Americans with Disabilities Act of 1990, pertaining to the provision of reasonable academic adjustments/auxiliary aids for students with a disability. In accordance with Section 504 and ADA guidelines, the University of Houston strives to provide reasonable academic adjustments/auxiliary aids to students who request and require them. Students seeking accommodation in this course should contact the instructor after obtaining the appropriate documentation through the UH Center for Students with Disabilities (http://www.uh.edu/csd/)**.**

Counseling and Psychological Services: Counseling and Psychological Services (CAPS) can help students who are having difficulties managing stress, adjusting to college, or feeling sad and hopeless. You can reach CAPS (www.uh.edu/caps) by calling 713-743-5454 during and after business hours for routine appointments or if you or somebody you know is in crisis. No appointment is necessary for the "Let's Talk" program, a drop-in consultation service at convenient locations and hours around campus. http://www.uh.edu/caps/outreach/lets_talk.html

Course Outline (may be revised over the semester)

Topic	Readings
1. ***Introduction and Review of Competitive and Monopoly Markets***	Math review (on your own): JR & MWG—mathematical appendices; SS ch. 1 Markets: JR ch. 4, NS chs. 12 &14
2. Producer Theory	
a. Production Technology	JR 3.1-3.2 MWG 5a-5b V ch.1 SB chs. 20 & 21
b. Cost Minimization and Conditional Factor Demands	JR 3.3 MWG 5c-5d V chs. 4 & 5
c. Duality—Technology and Costs	JR 3.4 MWG 5c-5d V ch.6
d. Profit Maximization, Profit Functions and Supply	JR 3.5 MWG 5c-5d V chs. 2 & 3
3. ***Consumer Theory***	
a. Preferences and Utility	JR 1.1-1.2 MWG ch. 1; 3a-3c
b. Consumer Choice and Marshallian Demand	JR 1.3 MWG ch. 2; 3d CW pp.402-418 (Kuhn-Tucker)
c. Indirect Utility, Expenditure Functions and Hicksian Demand	JR 1.4-1.5 MWG 3e
d. Properties of Demands; Duality—Utility and Expenditure, Slutsky Equation	JR 1.5, 2.1-2.2 MWG 3f-3h
e. Individual Measures of Welfare Change	JR 4.3.1

f. Revealed Preference	JR 2.3 MWG 1.2-1.3
4. ***Consumer Choice under Uncertainty***	JR 2.4 MWG ch. 6 Machina (1987)
5. ***Partial Equilibrium, Efficiency and Welfare*** Comparing Competitive and Monopoly Outcomes, Pareto Optimality	JR ch.4 MWG ch. 10; 12a-12b
6. Simple General Equilibrium (GE), Efficiency and Welfare in exchange economies Edgeworth Box, Exchange Economies, the Core, Existence of Competitive Equilibrium, Pareto Optimality in GE, Fundamental Welfare Theorems	JR 5.1, 5.2 V ch. 17, 21.1 MWG 15, 16c-f
7. Topics in General Equilibrium Production, Uncertainty, Externalities	JR 5.3, 5.4, V ch.18, 24.4 MWG 16g

Articles (more may be assigned during the semester):

Machina, Mark (1987), "Choice Under Uncertainty: Problems Solved and Unsolved," *Journal of Economic Perspectives*, vol. 1:121-154.