MEMORANDUM

TO: Sandra Williams, Director Academic Support Services
THROUGH: Larry Oliver, Associate Dean Liberal Arts
FROM: Yoosoon Chang, Department Head Economics
SUBJECT: Changes in Econ 630
DATE: December 4, 2007

The Department of Economics requests a change in the number of credit hours for Econ 630. This request reflects our wish to increase the credit hours from three to four; faculty teaching this course require an additional contact hour to cover these additional topics in game theory, as reflected in our new course description. There is one change in the course description; game theory has been added to reflect the course content in this second core PhD micro theory course.
Texas A&M University
Departmental Request for a Change in Course
Undergraduate • Graduate • Professional
• Submit original form and attachments •

1. This request is submitted by the Department of Economics

2. Course prefix, number and complete title of course: Econ 630 - Microeconomic Theory II

Attach a brief supporting statement for changes made to items 3a thru 3d, and 5 below.

3. Change requested
   a) Prerequisite(s): From __________________________ To __________________________
   b) Withdrawal (reason) __________________________
   c) Cross-list with __________________________

   Cross-listed courses require the signature of both department heads.

   d) Change in course title and description. Enter complete current course title and current course description; complete proposed course title and proposed course description in items 4 and 5.

   e) Change in credit/contact hours. Complete item 6b. Underline change(s). Attach a course syllabus.


5. Complete proposed course title and proposed course description (not to exceed 50 words): Microeconomic Theory II - Advanced treatment of consumer and production theory; game theory; general equilibrium and welfare analysis.

6. a) As currently in course inventory:

   Prefix | Course # | Title (excluding punctuation)
   ------ | -------- | ---------------------------
   Econ   | 630     | MICROECONOMIC THEORY II

   Lect. | Lab | SCH Subject Matter Content Code | Admin. Unit | FICE Code
   ----- | ---- | ----------------------------- | ----------- | ------------
   030003 | 45060100010810 | 003632 | Level

b) Change to:

   Prefix | Course # | Title (excluding punctuation)
   ------ | -------- | ---------------------------
   Econ   | 630     | MICROECONOMIC THEORY II

   Lect. | Lab | SCH Subject Matter Content Code | Admin. Unit | Acad. Year | FICE Code
   ----- | ---- | ----------------------------- | ----------- | ---------- | ------------
   040004 | 4506010001081008 | 003632 | Level | 6

Approval recommended by:

Yeezon Chang 11-07
Head of Department Date

Chair, College Review Committee

Emily Davidson 11-26-07
Date

Dean of College

11-26-07

11-26-07

Dean of College

11-26-07

Submitted to Coordinating Board by:

Director of Academic Support Services

Date

Effective Date

Questions regarding this form should be directed to Sandra Williams at 845-8836.
OAR/AS – 04/07

2 of 4 C18
INSTRUCTOR: Rajiv Sarin

OFFICE HOURS: Monday and Wednesday 4:30 - 6:00, Allen 3059

TEACHING ASSISTANT: Yu Zhang, 3050 Allen

YU’S REVIEW SESSIONS: Friday 11:00-1:00, Allen 1002

YU’S OFFICE HOURS: Monday and Wednesday 1:30-3:00

COURSE DESCRIPTION: Topics in this micro theory course are partitioned into two distinct learning units covering, in the first half and unit of the course, game theoretic modeling of economic agents and, in the second unit, general equilibrium and welfare economics. More specifically, in the first unit, we will study rational decision-making and focus on situations in which the choices of each agent (or player) may affect the payoffs obtained by all players. That is, we shall study rational choice in games. We shall look at static and dynamic games of complete and incomplete information. In each case we will develop a suitable solution concept (or prediction). Applications of each type of game and solution concept in economics will be given. Emphasis on the applications will be on studying oligopoly, bargaining, and auctions. The second half of the course covers topics mainly in general equilibrium theory, welfare economics, social choice theory, public goods, externalities, optimal contract theory, and mechanism design theory. The purpose of this unit is to introduce some advanced theories and analytical tools as well as the types of questions that are used and answered in each area. These topics are important since they are either basic analytical tools that are used in many fields of economics or basic economic theories that will be needed in your future study and research.

GRADING: You will be evaluated on the basis of homework problems (20%) and two unit-specific examinations, equally weighted (40%) and scheduled as follows: Unit One Exam (Wednesday, February 28) covering game theory and applications and Unit Two Exam (Wednesday, April 23) covering general equilibrium and welfare economics. In preparation for these exams, the graded homeworks and lecture notes provided in class and also available online will be exceedingly helpful. Review sessions scheduled every Friday with my teaching assistant, although optional, will present learning opportunities for which absences will exact high opportunity costs. Take advantage of them. The grading scale is as follows: 90-100 = A; 80-89 = B; 70-79 = C; 60-69 = D; 59 and below = F.


COURSE CALENDAR

UNIT ONE
Week One: January 14 and 16
Games, alternate representations, and strategies, pure, mixed, and behavioral. Readings: MWG, chapter 7.

Week Two: January 21 and 23

Week Three: January 28 and 30

Week Four: February 4 and 6
Applications to oligopoly and auctions. Readings: MWG, chapter 8.

Week Five: February 11 and 13
Extensive form games, backward induction and subgame perfection, applications to oligopoly and alternate offer bargaining. Readings: MWG, chapter 9.

Week Six: February 18 and 20
Week Seven: February 25 and 27
Signaling games and weak perfect Bayesian equilibrium.
EXAM ONE: Wednesday, February 28

UNIT TWO
Week Eight: March 3 and 5
Review of modern economics and mathematics: Nature and role of modern economics, the standard analytical framework of modern economics, key assumptions commonly adopted in microeconomics, roles of mathematics, language and methods of mathematics, continuity and concavity of functions, separating hyperplane theorem, unconstrained and constrained optimization, correspondences (point to set mappings), fixed point theorems, KKM lemma, and maximum theorem.
General equilibrium theory: introduction, general equilibrium model, and perfectly competitive markets.
Readings: MWG, mathematical appendix, chapters 10 and 15.

Week Nine: March 17 and 19
General equilibrium theory: exchange economies, general equilibrium with production, and some examples.
The positive theory of equilibrium: the existence of competitive equilibrium for single-valued excess demand function. Readings: MWG, chapters 10, 15, and 17.

Week Ten: March 24 and 26
The positive theory of equilibrium: the existence of competitive equilibrium for excess demand correspondence, and computation of competitive equilibrium; uniqueness, stability of general equilibrium, existence of equilibrium of abstract economy. Readings: MWG, chapter 15.

Week Eleven: March 31 and April 2
The normative theory of equilibrium: basic welfare properties, Pareto efficiency, the First Theorems of Welfare Economics, equilibrium with transfer payments. Second Theorem of Welfare Economics, welfare functions, characterizations of efficient social outcomes. Readings: MWG, chapters 10 and 16.

Week Twelve: April 7 and 9
Foundations for competitive equilibrium: economic core, fairness of allocations, and social choice theory.
Externalities: Consumption externality (preference externality), production externality, competitive equilibrium with externalities, Pigovian taxes, voluntary negotiation a la Coase, compensatory tax/subsidy, creating a missing market with property right. Readings: MWG, chapters 11, 18, and 21.

Week Thirteen: April 14 and 16

Week Fourteen: April 21 and 23
EXAM TWO, Wednesday, April 23

UNIVERSITY REGULATIONS:

AGGIE HONOR CODE

"An Aggie does not lie, cheat, or steal or tolerate those who do."

Upon accepting admission to Texas A&M University, a student immediately assumes a commitment to uphold the Honor Code, to accept responsibility for learning, and to follow the philosophy and rules of the Honor System. Students will be required to state their commitment on examinations, research papers, and other academic work. Ignorance of the rule does not excuse any member of the TAMU community from the requirements or the processes of the Honor System.
For additional information, please visit: www.tamu.edu/aggiehonor/

ADA Policy Statement

The Americans with Disabilities Act (ADA) is a federal anti-discrimination statute that provides comprehensive civil rights protection for persons with disabilities. Among other things, this legislation requires that all students with disabilities be guaranteed a learning environment that provides for reasonable accommodation of their disabilities. If you believe you have a disability requiring an accommodation, please contact the Department of Student Life, Services for Students with Disabilities, in Cain Hall or call 845-1637.