

COURSE SYLLABUS ***Spring, 2018***

Course: ECON 632-600: Microeconomic Theory IV

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Lectures: TR 11:30 am–12:45 pm
Bush Academic Building West 3095

Office Hours: TR 10:15 am-11:15 am or by appointment
Bush Academic Building West 3090

Text: The textbooks are: (1) *Auction Theory*, by V. Krishna; (2) *Two-Sided Matching: A Study in Game-Theoretic Modeling and Analysis*, A. E. Roth and M. Sotomayor. The lectures, however, will be mainly based on my lecture notes.

Grade : You will be evaluated on the basis of a series of homework problems, one presentation, and two exams. Homework will be handed out periodically. Your grade will be calculated using the method list below.

Homework:	25%
Presentation:	25%
Exam:	50%

Course Objectives: This course is a continuation of ECON 631. This course will cover the topics in two hot research subfields in microeconomics: auction theory and matching theory, which is a development and extension of general mechanism design theory, and usually referred to as market design that is considered as microeconomic engineering design. It is widely used in reality. In recent years, the research frontiers have promoted the development of auction mechanism design from single goods to multiple products, and the design of matching mechanism has been applied to many aspects, such as school choice, organ matching and so on.

University Education Goal: Texas A&M University has identified student learning outcomes that describe our institutional commitment to your educational goals. These include the ability to demonstrate critical thinking, effective communication, and social, cultural, and global competence. Please see: http://provost.tamu.edu/essentials/pdfs/copy_of_UndergraduateLearningOutcomesFinal.pdf.

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 Disabilities Services, currently located in the Disabilities Building at the Student Services at White Creek complex on West Campus or call 979 - 845-1637. For additional information visit <http://disability.tamu.edu>

Academic Integrity Statements: “An Aggie does not lie, cheat, or steal or tolerate those who do.”

Prerequisites: ECON 630 and ECON 631 or have the permission from me.

Tentative Topics Outline:

Part I. The auction theory: private value auctions, independent private values auctions, revenues equivalence principle, auctions with interdependent values, revenue ranking principle efficiency and the English auction, mechanism design with interdependent values, multiple object auctions.

Readings: Chapters 1-10 of Krishna and Chapters 18 of my lecture notes *Microeconomic Theory*.

Part II. The matching theory: two side matching, one-to-one matching, many-to-one matching, many-to-many matching; one side matching, house market problem, house allocation problem; application.

Readings: Chapters 19 of my lecture notes *Microeconomic Theory*.