Plan for the Class as of January 11

While we may have a guest lecturer or a trip to an auction, typical classes will involve a lecture and one or two short student presentations. Class preparation will involve some assigned reading and some optional reading. The student presentations will be a summary of some part of the optional reading. Over the course of the semester, each student will have chances to make such presentations. Students are encouraged to volunteer for presentations on topics of particular interest to them. In the absence of a volunteer, I will assign a non-volunteer.

There will be a mid-term, tentatively scheduled for February 28 covering material covered through February 21. Students will write a term paper on a mutually agreeable topic related to auctions. Proposals for paper topics are due March 21, but can be presented earlier. Students will discuss their papers in our last class on April 25. Class attendance is expected. There is a conference at DIMACS on the Busch Campus in Piscataway on March 22 and 23 dealing with models of auctions with transaction costs. Attendance is free for Rutgers graduate students. Students are encouraged, but not required, to attend. There will be no final exam. A student’s grade will depend upon class participation including presentations, the midterm, and the term paper.

There is no text, but there is a lot of reading. I will try to supply copies to the class at least of required papers and copies of optional papers at least to volunteer presenters. I will try to see to it that copies of relevant books are made available in the library. The tentative schedule below and the tentative readings on the following pages are indeed quite tentative. The actual schedule and assignments will evolve and not be finalized until the week before the class.

Tentative Schedule for the Class

January 17  Introduction to Class and to Auctions
January 24  High Theory of Auctions
January 31  Modeling Auctions
February 7  Vickrey Auctions
February 14  Rule Bending and Cheating in Auctions
February 21  Sociology of Auctions
February 28  Midterm Exam; Sequential Auctions
March 7  Visit to an Auction?
March 14  Spring Break
March 21  Transaction costs in auctions
March 22, 23  DIMACS Conference on Models of Auctions with Transaction Costs
March 28  Auctions of multiple items
April 4  Industrial Procurement Auctions
April 11  Electricity Procurement Auctions
April 18  Selected Auction Topics: Charity Auctions, Discrete bids, Subsidizing
April 25  Wrap-up Class, Discussion of Student Papers
Tentative Readings

1/17 Introduction to auctions

Required

Optional

1/24 The High Theory of Auctions

Required

Optional
1/31 Modeling Auctions
Required

Optional

2/7 Vickrey Auctions
Required

Optional

2/14 Rule Bending and Cheating in Auctions
Required
“Bending and Breaking the Auction Rules”

Optional
2/21 Sociology of Auctions
Required

Optional

2/28 Sequential Auctions
Required

Optional

3/21 Transaction Costs in Auctions
Required

Optional
3/28 Auctions of Multiple Items
Required
Aleksandar Pekec and Michael H. Rothkopf, “Combinatorial Auction Design,”

Optional
Cramton, Peter, Yoav Shoam, and Richard Steinberg, Combinatorial Auctions,
Sunju Park and Michael H. Rothkopf, “Auctions with Bidder-Determined
Combinations,” European Journal of Operations Research 161, pp. 399-415,
2005.
Michael H. Rothkopf, "Bidding in Simultaneous Auctions with a Constraint on
Michael H. Rothkopf, Aleksandar Pekec and Ronald M. Harstad, "Computationally
Manageable Combinational Auctions," Management Science 44, pp. 1131-1147,
1998.
Michael H. Rothkopf, “Thirteen Reasons the Vickrey-Clarke-Groves Process is Not

4/4 Procurement Auctions
Required
Michael H. Rothkopf and Andrew B. Whinston, “On E-Auctions for Procurement
Hohner et al., 2003, “Combinatorial and Quantity Discount Auctions with Mutual
Benefits,” Interfaces 33, 23-35.
Sandholm, et al., 2006, “Changing the Game in Strategic Sourcing at Proctor & Gamble:
Expressive Competition Enabled by Optimization, Interfaces 36, 55-68.

Optional
Metty, et al., 2005, Reinventing the Supplier Negotiation Process at Motorola, Interfaces
35, 7-23.
Sheffi, 2004, “Combinatorial Auctions in the Procurement of Transportation Services,”
Interfaces 34, 245-252.
Stark, Robert, “Unbalanced Highway Contracting” Operational Research Quarterly 25,
pp. 373-388, 1974. (and related material)
4/11 Electricity Procurement Auctions
Required

Optional


4/18 Selected Topics on Auctions
Required

Optional
References:

Publications with which Professor Rothkopf was involved:

Papers:


Book Chapters

Other Publications

Reports and drafts:

Other References:
R8 Hohnner et al., 2003, “Combinatorial and Quantity Discount Auctions with Mutual Benefits,” Interfaces 33, 23-35.
R13 Metty, et al., 2005, Reinventing the Supplier Negotiation Process at Motorola, Interfaces 35, 7-23.