SI 646 Course Syllabus: Information Economics

Instructor: Yan Chen

Time and Location: Thursday 1:00-4:00 pm, 2185 North Quad

Office Hours: Thursday 4:00-5:00 pm, and by appointment, 4348 North Quad

Learning Objectives: This course is a half-semester module, Information Economics. My goal is to give you a strong grounding in the economics of information goods and services. We will analyze strategic issues faced by for-profit and not-for-profit organizations: pricing, bundling, versioning, network externalities and rights management. My teaching objectives are:

- To provide you with a framework for understanding information problems that involve the allocation of scarce information resources;
- To familiarize you with the analysis of information problems through the application of economic principles (e.g., rationality, efficiency);
- To prepare you to analyze realistic, incompletely specified problems of the sort that confront consultants, product and pricing managers, entrepreneurs, policy makers, and others.

Prerequisite: Students should have completed SI 563 (Game Theory) or equivalent.

Assignments: Two problem sets and a final paper. You are expected to read the assigned papers before class and come prepared with one or more questions or comments. Please submit your questions and comments through Canvas by 5 PM on the Wednesday before each class. Reading questions and comments, as well as contributions to in-class discussions will count towards your grade (10%).

Grading:

<table>
<thead>
<tr>
<th>Assignment</th>
<th>Due Date</th>
<th>% of Grade</th>
<th>Late Penalty</th>
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<tr>
<td>2 problem sets</td>
<td>1 week from release</td>
<td>60%</td>
<td>2 points for every 24 hours</td>
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<tr>
<td>Final Paper</td>
<td>1 week from release</td>
<td>30%</td>
<td>2 points for every 24 hours</td>
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<tr>
<td>Reading questions and comments</td>
<td>Wednesday 5:00 p.m.</td>
<td>10%</td>
<td>1 point for every 24 hours</td>
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Original Work Policy

Collaboration: I strongly encourage collaboration while working on homework problems. Active learning is effective. Collaboration will be especially valuable in summarizing the reading materials and picking out the key concepts. You must, however, write your homework submission on your own, in your own words, before turning it in. If you work with someone on the homework before writing it, you must list any and all collaborators on your written submission.

Plagiarism: All written submissions must be your own, original work. Original work for narrative questions is not mere paraphrasing of someone else’s completed answer: you must not share written answers with each other at all. At most, you should be working from notes you took while participating in a study session. Largely duplicate copies of the same assignment will receive an equal division of the total point score from the one piece of work. You may incorporate selected excerpts from publications by other authors, but they must be clearly marked as quotations and must be attributed. If you build on the ideas of prior authors, you must cite their work. You may obtain copy editing assistance, and you may discuss your ideas with others, but all substantive writing and ideas must be your own, or be explicitly attributed to another. See the Rackham Graduate policy on Academic and Professional Integrity for the definition of plagiarism, and associated consequences: http://www.rackham.umich.edu/policies/academic_and_professional_integrity/statement_on_academic_integrity/.

Accommodations for Students with Disabilities

If you think you need an accommodation for a disability, please let me know at your earliest convenience. Some aspects of this course, the assignments, the in-class activities, and the way we teach may be modified to facilitate your participation and progress. As soon as you make me aware of your needs, we can work with the Office of Services for Students with Disabilities (SSD) to help us determine appropriate accommodations. SSD (734-763-3000; http://ssd.umich.edu/) typically recommends accommodations through a Verified Individualized Services and Accommodations (VISA) form. I will treat any information you provide as private and confidential.

Readings: Papers will be accessible from Canvas. The following books are recommended.


- Avinash K. Dixit and Barry J. Nalebuff. Thinking Strategically: The Competitive Edge in Business, Politics, and Everyday Life. This is a fun book that covers the major solution concepts in game theory in a journalistic style.
• Watson, Joel. *Strategy: an Introduction to Game Theory*. This is the textbook for SI 563, which treats the solution concepts in a more rigorous way.

Week 1. Introduction to Economics of Information

Objective: What types of useful questions can we answer with information economics? How can we make decisions with incomplete information? What is the value of obtaining more information?

Shapiro and Varian: ch. 1; Varian: ch. 35.

Week 2. Pricing

Objective: What value do individuals get from information? What are they willing to pay? How should information providers who want compensation for the distribution and/or use of their information set prices?

Shapiro and Varian: ch. 2;


Week 3. Network Externalities

Objective: What are the implications for competition, efficiency and new product innovation when information goods or services are characterized by network externalities?

Shapiro and Varian: ch. 7


Week 4. Bundling

Objective: How should an information provider in competition with others configure the information goods or services she offers? Digital information is relatively easy to unbundle and re-bundle. If providers have imperfect information about what information consumers want, what strategies can they follow to learn about customer preferences?

Shapiro and Varian: ch. 3 pp. 73-78


Case study: Bundling Academic Journals:


Week 5. Rights Management

Objective: Creating information content requires effort, and effort is costly. At least some creators will create less if they cannot obtain compensation for their efforts. Digital rights management is a family of approaches to protect the rights of creators to obtain compensation. Yet many claim that unprotected sharing does not harm creators, and may even benefit them. What do we know currently about basic models of rights management, and their impacts on compensation to creators?

Shapiro and Varian: ch. 4


Case study: File Sharing


**Week 6. Crowdsourcing: Contests, Tournaments and All-Pay Auction Mechanisms**


**Week 7. Sponsored-Search Auctions**

