NetSci 7XXX – Network Economics

Seminar for Doctoral Students

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Draft Course Proposal

Course Description

This class will cover seminal works in the economics of information and networks including the Nobel Prize winning ideas of Akerlof, Arrow, Spence, Stiglitz, and von Hayek. It will proceed through (i) concepts of information, its value and measurement (ii) search and choice under uncertainty (iii) signaling, screening, and how rational actors use information for private advantage (iii) strategy given network effects (iv) two-sided (or multi-sided) network effects, organizational information processing, learning and social networks (v) other micro and macroeconomic effects such as matching markets. Although primarily a theory class, it should be of interest to any student applying information economics and network economics in academic, commercial, or government policy contexts. Prerequisites are a graduate course in microeconomics and mathematics at the level of introductory calculus and statistics. Students will produce a major paper suitable for publication or inclusion in a thesis.

Course Objectives
After completion of *Network Economics*, students will be able to apply principles of information economic and network thinking in the contexts of markets, organizational behavior, and public policy. In particular, students will be able to demonstrate the following competencies:
- To familiarize students with information economic methods involving efficiency, rationality, and choice under uncertainty.
- To design incentive compatible information disclosure mechanisms to uncover (signal or screen) information.
- To provide an economic perspective on network effects.
- To understand the contributions of information economics to contracting and intellectual property policy.