
Executive Summary: IDSc 6442

Course Name: E-Sourcing and E-Auctions
Course Number: IDSc 6442 **Credits:** 2 credits
Prerequisites: IDSc 6040 or 6050

Description

The course will cover fundamentals of auction and exchange mechanisms. It will provide an immersion experience via three projects that use live-case based simulation approach to understand competitive market dynamics from the perspective of: Bidders, Auctioneers, and Exchange participants. Focus is on the concepts of design and maintenance of electronic auctions as intermediaries that facilitate exchange of goods and services. Design of exchange mechanism requires understanding of incentives and facilitating these incentives via electronic mechanisms. The underlying theory of exchange mechanism comes from the theory of auctions and negotiations. However, online environment, availability of tools for competitive intelligence, and application of exchange environments in B2B environments need to take environmental and context information in the design of such mechanisms.

Objectives

1. Understand the basic form of the four basic types of auction mechanisms: English, Dutch, First Price Sealed Bid, Vickery Auctions.
2. Explore variations & the effect of variations such as availability of multiple units and/or items.
3. Understand the impact of information transparency regarding price and bidder.
4. Understand the impact of environmental factors such as non competitive environments, learning, and life cycle of a mechanism.
5. Computational elements in mechanism design (data mining and smart agent design)
6. Explore real world and simulated cases.

Learning Outcomes

1. Demonstrate knowledge of:
 - Mechanism principals and their effect on incentives
 - Analysis and design of participant strategies
 - Mechanism rules and enforcement issues
 - Computational issues in mechanism design
 - Technological impact on mechanism design and operations
2. Demonstrate an introductory level of skill in:
 - Design of exchange mechanisms from economic, behavioral and computational perspectives
 - Analysis of outcomes and mapping to a mechanism's environment
 - Analysis of tradeoffs
 - Design of smart agents and tools for participant assistance
3. Demonstrate an appreciation for:
 - Behavioral aspects of exchange mechanisms
 - Organizational and environmental constraints
 - Collusive behavior and non competitive environments
 - Online negotiation mechanisms