Class timing: *Mondays and Wednesdays*, 2:00 to 3:30 PM

Instructor: **Debasis Mishra**

1. Auction theory

   - Private value auctions (7 lectures)

     – Benchmark model

     – Reserve prices

     – Risk averse bidders

     – Budget constraints (second-price auction)

     – Asymmetric bidders: two bidder case

   - Interdependent value auctions (6 lectures)

     – Equilibria in first-price and second-price auctions

     – Equilibrium in English auction

     – Revenue comparison

     – The Linkage principle

     – Single crossing and efficiency

2. Mechanism design

   - Foundations: the revelation principle (2 lectures)

   - The VCG mechanisms: combinatorial auctions (3 lectures)

   - Optimal auction design (4 lectures)

   - Dissolving a partnership: bilateral trading impossibilities (4 lectures)

TEXTBOOK: Classnotes will be provided. Following books are good references.

EVALUATION: Evaluation will be based on mid-term exam, final exam, and referee reports of research papers.

- *Auction theory* by **Vijay Krishna**.

- *Game theory* by **Michael Maschler, Eilon Solan, and Shmuel Zamir**.

- *An introduction to the theory of mechanism design* by **Tilman Borgers**.

Evaluations:

- Paper reading and referee reports: **20 %**

- Midterm: **20 %**

- Final: **60%**