Course Code	ECO313
Course Name	Market Design
Credits	4
Course Offered to	UG
Course Description	The theory of auctions has been one of the most important successes of applied game theory. It has become a central institution for resource allocation in real world markets; instrumental in allocating resources as varied as natural resources, spectrum rights, electricity generating capacity and more. This course aims to prepare the students to be able to analyze auctions and internet marketplaces using tools from economics and game theory.

Pre-requisites

Pre-requisite (Mandatory)	Pre-requisite (Desirable)	Pre-requisite(other)
Game Theory		

Post Conditions

CO1	CO2	CO3	CO4
Students can analyze bidder behavior in standard auction formats for selling single and multiple units of a good.	Students understand and be able to work with the analystical framework of mechanism design which is the underlying science.	Students can discuss the most important considerations that go into practical auction design.	

Weekly Lecture Plan

Week Number	Lecture Topic	COs Met	Assignment/Labs/Tutorial
1,2	Auctions in a Private Values Environment, Revenue Equivalence Principle	CO1	
3,4	Mechanism Design and Revenue Maximizing Auctions	CO2	
3,4	VCG Mechanism and Bilateral Trade	CO2	
5	Collusion in Auctions	CO3	
6,7	Multi-unit Auctions of Homogenous Goods	CO1	
8	Double Auctions	CO1	
9	Matching Markets and Deferred Acceptance Algorithm	CO2	
10, 11	Combinatorial Auctions	CO1	
12,13	Student Presentations	CO3	

Assessment Plan

Type of Evaluation	% Contribution in Grade
Assignments	50
Endterm	30
Student Presentation	20

Resource Material

Type	Title
Textbook	1. Vijay Krishna, Auction Theory, Academic Press
Textbook	2. Paul Milgrom, Putting Auction Theory to Work, Cambridge University Press
Textbook	3. Cramton, Shoham, Steinberg, Combinatorial Auctions, MIT Press
	4. Assigned Papers