



# INTRODUCTION TO MARKET STRUCTURES

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**PRE-REQUISITES** : Calculus and little bit of familiarity with optimization

**INTENDED AUDIENCE** : PG and UG (Advanced), BTech

## **COURSE OUTLINE :**

This course deals with the study of market structures in economics. The study of market structures helps us to understand the pricing of goods and services in the market. Based on toy models, we will study how the price of a good changes with the changes in the market structure.

This course can be considered as economic application of game theory. The main tool used to address the questions is game theory. A small component of the course will also be devoted to game theory.

The different strategies used by the firms to out compete the rivals, avoid competitions, etc will be introduced in the course.

## **ABOUT INSTRUCTOR :**

Prof. Amarjyoti Mahanta is Assistant Professor at the Department of Humanities & Social Sciences at IIT Guwahati. He earned his PhD degree from Jawaharlal Nehru University New Delhi. His research interests lie in the field of Industrial Organization, Auction Theory, and Applied Game Theory and Evolutionary game Theory. He has published in international journals like Journal of Economics, Economics Bulletin, Seoul Journal of Economics and Indian Growth and Development Review.

## **COURSE PLAN :**

**Week-1** :Introduction to Industrial Organization, Consumer behavior and Derivation of Demand curve

**Week-2**:Production and Cost curves

**Week-3**:Competitive Market

**Week-4**:Monopoly

**Week-5**:Game Theory: Static games of complete information (Nash equilibrium)

**Week-6**:Dynamic games of complete information ( Subgame perfect Nash equilibrium)

**Week-7**:Cournot Competition

**Week-8**:Bertrand Competition

**Week-9**:Stackelberg Games

**Week-10**:Product Differentiation

**Week-11**:Entry Deterrence

**Week-12**:Bundling and Tying