**ECON 431**

**ECONOMICS FOR ENGINEERS**

**(ENGINEERING ECONOMY)**

**COURSE DESCRIPTION**

Introduction to Engineering Economy, Fundamentals of Microeconomics, Elements of Microeconomic Analysis, Demand Supply and Price, Market Dynamics, Engineering Decesion Making, Cost and Benefit Analysis, Standard Costing, Capacity Analysis and Production, Make versus Purchase Analysis, Money, Principles of Money Time Relations, Application of Money Time Relations

**COURSE OUTLINE**

1. Introduction to Engineerin Economy ............................................(1 week)

What is Engineering Economy, Why Economics for Wngineers, What is Economics

1. Fundamentals of Microeconomics .............................................(1 week)

Scarcity, Productive Resources of the World, Choises, Utility, Trade Off, Possibility Graphs

1. Elements of Microeconomic Analysis ........................................(1 week)

Market, Economic Transaction, Agents of Economic Transaction, Sides of Economic Transaction, Organisation of Competitive Markets

1. Demand Supply and Price ........................................................(1 week)

Individual and Market Demand, Individual and Market Supply, Market Equilibrium

1. Market Dynamics ....................................................................(1 week)

Change in Demand, Change in Supply, Some variables of Market, Changes in Demand and Supply

1. Engineering Decesion Making .................................................(1 week)

Basic Principles of Engineering Decesion Making, Project Decesions, Investment Decesions

1. Cost and Benefit Analysis ..........................................................(1 week)

The Cost Concept, Cost Elements, Revenue, Breakeven Point, Opportunity Cost, Recovery Time

1. Standard Costing .......................................................................(1 week)

Direct Cost, Indirect Cost, Overhead Cost, Stndard Cost, Profit Forecasting

1. Capacity Analysis Production ...................... ...............................(1 week)

What is Production Line, Flow of Capacity, How to Increase the Capacity, Capacity Problems

1. Make versus Purchase Analysis ...................................................(1 week)

Whether to stop the production or to establish a new production line, Decesion Making about Production

1. Money ......................................................................................(1 week)

What is Money, Functions of Money, Quality of Money, Money as Capital

1. Principles of Money Time Relations ...........................................(1 week)

Interest Concept, Simple Interest, Compound Interest, Nominal and Effective Interest Rates, Cash Flows, Concept of Equivalence

1. Applications of Money Time Relations ......................................(1 week)

Minimum Atractive Rate of Return, The Present Worth, The Future Worth