

MECH2301	ENGINEERING ECONOMICS	L	T	P	S	J	C
		3	0	0	0	0	3
Pre-requisite	None						
Co-requisite	None						
Preferable exposure	None						

**Course Description:**

*An introduction to engineering economics. Fundamental economic concepts, cost concepts, preparation of accounts, ; break-even analysis, depreciation, types and principles of organization, Management principles and leadership styles.*

**Course Educational Objectives:**

- Define the basic terms of economics and analyze law of demand and elasticity of demand
- Explain cost concepts and interpret financial statements
- Apply break even analysis concept in business organization and understand the methods of calculating the depreciation of the assets.
- Discuss the structures and advantages of different forms of business organization
- Elaborate the principles of Management.

**UNIT 1****Introduction to Economics****8 hours**

**Introduction to Economics:** Classification, nature and scope of economics, market economy, Utility, value, wealth, consumption, wants necessities, comforts and luxuries.

**Demand:** Law of demand, types of elasticity of demand, Measurement of price elasticity of demand, factors affecting elasticity of demand, simple problems.

**UNIT 2****Costing and Accounting****8 hours**

**Costing:** Cost concepts, elements of cost, methods of distribution of overhead costs, Simple problems.

**Accounts:** Journal and Ledger, Preparation of Trading, profit and loss account and balance sheet (outlines only).

**UNIT 3****Break Even Analysis****8 hours**

**Break-Even Analysis** –Representation of BEA Mathematically and Graphically, Assumptions and Limitations, simple problems

**Depreciation:** Depreciation methods - Simple problems.

**UNIT 4****Principles of Organization****8 hours**

**Forms of Business Organization:** Single trader, partnership and public limited company

**Principles of Organization:** Types of organization; Span of management; Authority, delegation and decentralization, difference between authority and power, line and staff

authority

**UNIT 5****Principles of Management****8 hours**

**Principles of Management**, Management, a science or art - Management, a profession, Importance of management, roles of a manager;; Functions of management. Leadership: Difference between a leader and a manager, characteristics of leadership, functions of a leader, simple case studies.

**Textbooks:**

1. Engineering Economics by Tarachand, 14th edition, Personal, Professional, Publications, tidbits , 2019
2. Managerial Economics And Financial Analysis ; Author, Aryasri ; Publisher, McGraw Hill Education (India) Pvt Limited

**References:**

1. Industrial Engineering and Management. by O. P. Khanna. Edition, 4, revised. Publisher, Dhanpat Rai, publications, 2007.
2. Economics For Engineers 2e by H L Bhatia, S N Maheshwari, Vikas Publishing House Pvt. Ltd
3. Engineering Economics by Panneerselvam R, PHI Learning Private Limited, 2012

**Course Outcomes:**

At the end of the course, the student will be able to

1. Interpret and summarize the country's economy and market economics, as an entrepreneur.
2. Analyze various cost concepts, accounting concepts and financial management techniques for preparing effective profit and loss statements and Final statements.
3. Examine and analyze break even evaluation concepts for identification of minimum production volume for survival and to gain profits
4. Interpret the various hierarchial structures in the organisations, understand the delegation and decentralization.
5. Examine and analyze break even evaluation concepts for identification of minimum production volume for survival and to gain profits.

**CO-PO Mapping:**

	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO 10	PO 11	PO 12	PSO 1	PSO 2	PSO 3
<b>CO1</b>	1	0	0	0	3	0	0	0	0	1	0	0			
<b>CO2</b>	3	0	0	2	0	0	0	1	0	0	0	0			
<b>CO3</b>	1	0	0	0	0	2	0	0	0	0	0	0			
<b>CO4</b>	0	0	1	0	1	0	0	0	0	0	0	0			
<b>CO5</b>	0	2	0	0	0	0	2	0	1	0	1	0			

Note: 1 - Low Correlation 2 - Medium Correlation 3 - High Correlation

**APPROVED IN:****BOS : 21-4-2023****ACADEMIC COUNCIL: 16-05-2023****SDG No. & Statement:**

SDG 4: Ensure all-inclusive and thorough education with equity to all persons and always promote learning opportunities.

**SDG Justification:**

SDG 4: The modules and topics mentioned in this course are designed to ensure all-inclusive and thorough education with equity to all persons and always promote learning opportunities.