

DEPARTMENT OF HUMANITIES AND SOCIAL SCIENCES
II B.E. (4YDC)
HU 22005/24005/25005/27005: ECONOMICS FOR ENGINEERS

| HOURS PER WEEK | | | CREDITS | | MAXIMUM MARKS | | | | |
|----------------|---|---|---------|----|---------------|---------|-----------|---------|-------------|
| L | T | P | Th | Pr | THEORY | | PRACTICAL | | TOTAL MARKS |
| | | | | | CW | END SEM | SW | END SEM | |
| 3 | - | - | 3 | - | 30 | 70 | - | - | 100 |

PRE-REQUISITES: NIL COURSE**OBJECTIVES:-**

1. To develop the optimizing skills of technology-use in engineering problems
2. To articulate economic analytical skills so as to contextualize the solutions of engineering problems.
3. To explore the potential of students in economic perspective of engineering professional goals.
4. To make sense of need of entrepreneurship and understand the financial reports of a business.

COURSE OUTCOMES: after completion of course, the students will be able to:

1. Explain economic cyclic flow and estimate the demand and demand elasticity for a product.
2. Plan the production and analyze the production-cost-profit relation and select the suitable project for investment.
3. Estimate price and the equilibrium for a firm/organization in different competitive market situations.
4. Prepare and review the financial statements of an accounting entity.
5. Identify the problems, see the opportunity, and ideate the solution to the problems

COURSE CONTENT:

UNIT 1. Nature and scope of economics, Economic cyclic flow, Central Economic problems, macro and microeconomics, concept, determinants and law of demand and supply, Elasticity of demand, Equilibrium price, consumer surplus and equilibrium.

UNIT 2. Production, cost and revenue: Production function, laws of return to variable proportion, Laws of return to scale, cost concepts, cost functions and their inter relation, Revenue Concepts and functions, break- even analysis, Time value of money and Investment analysis- NPV and IRR.

UNIT 3. Pricing and Market: Price determination and firm's equilibrium under perfect competition and monopoly, price discrimination under monopoly, imperfect competitions – monopolistic competition, collusive and non-collusive oligopoly.

UNIT 4. Entrepreneur, entrepreneurship and start-up, small medium and large-scale enterprise, characteristics of an entrepreneur, forms of business organization, phases of startup, problems, opportunities, Design thinking and Ideation. Business model.

UNIT 5. Accountancy: Accountancy and bookkeeping, GAAP, Assets, Liabilities and Capital, types of accounts, Journal, Ledger, Trial Balance and Financial Statements, Financial Ratio Analysis.

ASSESSMENT: Through End-Sem. Theory Exam, Theory sessionals, Mid-Sem Tests, and Assignments

Books & Reference Recommendation:

1. Jhingal M.L., Economics of development and Planning, Vrinda Publication (40th Ed./latest).
2. Ahuja H. L., Advance economic theory, S Chand Publication, (21st Ed./Latest)
3. Riggs, Bedworth and Randhawa, Engineering Economics, Tata McGraw-Hill, (4th Ed./latest)
4. Principles of accountancy, Nirmal Jain,
5. Entrepreneurship by Rajeev Roy, 2nd edition