

**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
3	-	-	3	-	CW	END SEM	SW	END SEM	100
					30	70	-	-	

**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; choose appropriate production technology (combination of production factors); and estimate feasible range of production.
3. Analyze the production-cost-profit relation and select the suitable project for investment
4. Estimate price and the equilibrium for a firm/organization in different competitive market situations.
5. Review, summarize and compare the financial statements of an accounting entity and able to apply financial ratio technique for financial analysis.
6. 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 micro economics, 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, IRR, ARR and payback period method.

**UNIT 3.** Pricing and Market: Price determination and firm's equilibrium under perfect competition and monopoly, price-output determination under monopolistic competition, kinked demand curve, collusive and non-collusive oligopoly.

**UNIT 4.** Entrepreneur, entrepreneurship and start-up, characteristics of an entrepreneur, forms of business organization, phases of startup, small medium and large scale enterprise, 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 (40<sup>th</sup> Ed./latest).
2. Ahuja H. L., Advance economic theory, S Chand Publication, (21<sup>st</sup> Ed./Latest)
3. Riggs, Bedworth and Randhawa, Engineering Economics, Tata McGraw-Hill, (4<sup>th</sup> Ed./latest)
4. Principles of accountancy, Nirmal Jain,
5. Entrepreneurship by Rajeev Roy, 2<sup>nd</sup> edition