

## 19HS1601 – ENGINEERING ECONOMICS AND MANAGEMENT

<b>Course Category:</b>	Humanities and Social Sciences													<b>Credits:</b>	3	
<b>Course Type:</b>	Theory													<b>Lecture-Tutorial-Practical:</b>	3-0-0	
<b>Prerequisites:</b>	---													<b>Continuous Evaluation:</b>	30	
														<b>Semester End Evaluation:</b>	70	
														<b>Total Marks:</b>	100	
Upon successful completion of the course, the student will be able to:																
<b>Course Outcomes</b>	<b>CO1</b>	<b>Understand</b> the nature and Scope of Engineering Economics													L2	
	<b>CO2</b>	<b>Use</b> Economic analysis in the decision making													L3	
	<b>CO3</b>	<b>Use</b> various cost concepts, Break-even analysis and Marginal costing													L3	
	<b>CO4</b>	<b>Choose</b> best from alternative investment opportunities													L1	
	<b>CO5</b>	<b>Prepare</b> cost sheets suitable to specific industries.													L6	
<b>Contribution of Course Outcomes towards achievement of Program Outcomes</b>		<b>PO1</b>	<b>PO2</b>	<b>PO3</b>	<b>PO4</b>	<b>PO5</b>	<b>PO6</b>	<b>PO7</b>	<b>PO8</b>	<b>PO9</b>	<b>PO10</b>	<b>PO11</b>	<b>PO12</b>	<b>PSO1</b>	<b>PSO2</b>	
	<b>CO1</b>		2						3	2	1	3	1		3	
	<b>CO2</b>		2						3	2	1	3	1		3	
	<b>CO3</b>		2						3	2	1	3	1		3	
	<b>CO4</b>		2						3	2	1	3	1		3	
	<b>CO5</b>		2						3	2	1	3	1		3	
		<b>L- Low</b>					<b>M-Medium</b>					<b>H-High</b>				
<b>Course Content</b>																
<b>UNIT-1</b>	<b>INTRODUCTION TO ECONOMICS:</b> Economics, Flow in an economy, Law of Supply and Demand, Concept of Engineering Economics, Types of efficiency, definition and scope of engineering economics, Micro Economics and Macro Economics.													<b>CO1</b>		
<b>UNIT-2</b>	<b>ECONOMIC ANALYSIS:</b> Introduction, examples for simple economic analysis, material selection for a product/ substitution of raw material, design selection for a product, building material selection, process planning/ process modification. Cash flow diagrams, Present value and discounting.													<b>CO2</b>		
<b>UNIT-3</b>	<b>COST ANALYSIS AND MARGINAL COSTING:</b> Elements of costs, Opportunity cost, Life cycle cost, fixed vs. Variable costs, Explicit costs vs. Implicit costs, Recurring vs. Nonrecurring costs. Break-even Analysis (BEA)-Determination of Break-Even Point (simple problems) - Managerial Significance and limitations of BEA. Marginal Costing introduction, Application of Marginal costing in terms of cost control.													<b>CO3</b>		
<b>UNIT-4</b>	<b>CAPITAL BUDGETING AND INVESTMENT FEASIBILITY STUDIES:</b> Phases of capital budgeting, Net present value (NPV), Internal Rate of Return (IRR), Discounted payback period (DPP), Equivalent uniform annual cost (EUAC), Benefit/cost ratio (BCR). Managing Project Resources Flow, Financial Sources, Project Cost Capital & Operating, Return on investment (ROI), Project Feasibility studies, Project Evaluation.													<b>CO4</b>		
<b>UNIT-5</b>	<b>PROJECT COSTING FOR SPECIFIC INDUSTRIES:</b> Project Cost Reduction methods, Projects Procurement Process, Project Stores, Computerization. Methods of Costing - Unit costing, job costing, and process costing													<b>CO5</b>		
<b>Learning Resources</b>																
<b>Text Books</b>	1. R.Panneerselvam, Engineering Economics, PHI Learning Pvt. Ltd., 2020. 2. P.Chandra, Planning Analysis: Selection Implementation & Review, Tata McGraw Hill, 2009.															
<b>Reference Books</b>	1. V.N Vazirani and M.M Ratwani, MEFA, Cengage Learning India Pvt. Ltd., 2012. 2. K.N.Jha, Construction Project Management: Theory and Practice, Pearson Education, 2015.															
<b>e- Resources &amp; other digital material</b>	1. <a href="https://nptel.ac.in/courses/105/104/105104178/">https://nptel.ac.in/courses/105/104/105104178/</a>															