

HU302 Engineering Economics										
L	T	P	Credit	Area		CWS	PRS	MTE	ETE	PRE
3	0		3	HMC		25	--	25	50	-

Objective: To enable the students to understand the economic theories which may be applied to maximize return and the economic environment in which they have to operate.

Syllabus							Contact Hours	
Unit-1	Introduction: Nature and significance of economics, Goods and Utility, Basic Concept of Demand and Supply, Elasticity of Demand-Price elasticity of Demand, Cross elasticity of Demand.							4
Unit-2	Production Function, Production Process and Factors of Production, Market – Introduction to Monopoly, Perfect Competition, Oligopoly and Monopolistic Competition, Cost Concepts- Opportunity Cost, Total Cost, Average Cost; Marginal Cost; Life Cycle cost, Sunk Cost; Preparation of Cost Sheet Profit Maximization- numerical problem.							6
Unit-3	Money- its evaluation and function, Bank- Commercial Bank and Central Bank and brief idea about function of banking system: Tax and Subsidy, Type of Tax- Direct and Indirect, Monetary and fiscal policy, Inflation and Business cycle, International trade, terms of Trade, Gain from International Trade, Free Trade vs. Protection, Dumping, Balance of Payment.							4
Unit-4	Role of Science, Engineering and Technology in Economic Development: Seven salient Features of the Indian Economy; Inclusive Growth; relevance for the Indian Economy; Globalisation & opening up of the Indian Economy; GDP- definition and Its measurement; How knowledge of engineering and technology may be used to improve life at slums; Green Revolution and White revolution. Reasons for their success and can we replicate them							6
Unit-5	Appropriate Technology & Sustainable Development. Entrepreneurship: Macro environment for promotion of entrepreneurship: How environment has changed after advent of IT and Globalisation.							4
Unit-6	Elementary Economic Analysis: Interest formulas and their Applications; Calculations of economic equivalence, Bases for Comparison of Alternatives: Present Worth Method, Future worth method, Annual equivalent, Internal Rate of Return; Business Risk; Factors which should be taken care while deciding price of the product in the market							6
	Total							30

Reference Books:	
1	G.J. Thuesen, & W.J. Fabrycky, Engineering Economy, Pearson Education, 2007, ISBN 013028128X
2	William G. Sullivan, Elin M. Wicks, C. Patrick Koelling, Engineering Economy, Prentice Hall, (First Indian reprint). 2009, ISBN 0131486497
3	Donald G. Newman, Jerome P. Lavelle & Ted G. Eschenbach, Engineering Economic Analysis, Oxford University Press, USA, 2004, ISBN 0195168070
4	Seema Singh, Economics for Engineering Students, IK International Publishing House Pvt. Ltd, 2014, ISBN 8190777041
5	Pravin Kumar. Fundamentals of Engineering Economics. 2012. Wiley
6.	Panneerselvam. Engineering Economics. 2013. PHI

Course Outcomes

CO1	Define the basic concept of micro and macroeconomics, engineering economics and their application in engineering economy.
CO2	Evaluate numerically the effects of changes in demand and supply on price determination of products and services.
CO3	The macroeconomic environment and financial systems of the country and its impact on business, society and enterprise.
CO4	The ability to account for time value of money using engineering economy factors and formulae.
CO5	Knowledge of mathematics, economics and engineering principles to solve engineering problems and to analyze decision alternatives in engineering projects considering upon depreciation, taxes and inflation.
CO6	To apply the economics concepts to engineering applications

CO-PO/PSOMatrix

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3
CO1	3	3	3	2	2	0	0	0	0	0	0	2	2	1	1
CO2	3	3	2	3	1	0	0	0	0	0	0	1	2	1	1
CO3	3	3	3	3	1	0	0	0	0	0	0	2	3	3	2
CO4	3	3	3	3	1	0	0	0	0	0	0	1	3	3	2
CO5	2	2	2	2	2	0	0	0	0	0	0	1	2	2	2