

Books:-

S.No.	Name of Books/ Author/Publisher
6.	Comprehensive Biotechnology by M. Moo- Young. 4-volume set Publisher: Pergamon Press
7.	Environmental Chemistry AK. De. Publisher: New Age Publications (Academic) India)
8.	Introduction to Biodeterioration by D. Allsopp and K.J. Seal. Publisher ELBS/Edward Arnold.
9.	Microbiology by Bernard D. Davis, Renato Dulbecco, Herman N. Eisen and Harold S. Ginsberg. Publisher:Lippincott Williams & Wilkins
10.	Waste Water Engineering - Treatment and Reuse by Metcalf, Eddy and G. Tchobanoglous. Publisher: Tata McGraw Hill

Details of course:- Engineering economics (SEC)

Course Title	Course Structure			Pre-Requisite
	L	T	P	
Engineering Economics (BT 307)	3	0	0	

Course Objective:

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

Course Outcome (CO):

- I. Elucidate the Nature and significance of economics, Preparation of Cost Sheet Profit Maximisation- numerical problem.
- II. Demonstrate Money its evaluation and function in Bank, Commercial Bank and Central Bank and brief idea about function of banking system,
- III. Elucidate the Role of Science, Engineering and Technology in Economic Development.
- IV. Explain the Elementary Economic Analysis such as the Interest formulas and their applications.

S.No.	Content	Contact Hours
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, Production - 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 Maximisation- numerical problem.	10
2	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.	10
3	Role of Science, Engineering and Technology in Economic Development: Seven salient Feature 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 slum; Green Revolution and White revolution. Reasons for their success and can we replicate them. Appropriate Technology & Sustainable Development. Entrepreneurship: Macro environment for promotion of entrepreneurship: How environment has changed after advent of IT and Globalisation.	12
4	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.	10
Total		42

Books:-

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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