

**PEK3E001 ENGINEERING ECONOMICS***Theory L/T (Hours per week):2/1, Credit: 3***Module I (12 hours)**

Engineering Economics- Nature, Scope, Basic problems of an economy, Micro Economics and Macro Economics.

Demand- Meaning of demand, Demand function, Law of Demand and its exceptions, Determinants of demand, Elasticity of demand & its measurement (Simple numerical problems to be solved ), Supply-Meaning of supply, Law of supply and its exception, Determinants of supply, Elasticity of supply, Determination of market equilibrium (Simple numerical problems to be solved).

Production-Production function, Laws of returns: Law of variable proportion, Law of returns to scale

**Module II (12 hours)**

Cost and revenue concepts, Basic understanding of different market structures, Determination of equilibrium price under perfect competition (Simple numerical problems to be solved), Break Even Analysis-linear approach (Simple numerical problems to be solved).

Banking -Commercial bank, Functions of commercial bank, Central bank, Functions of Central Bank.

Inflation-Meaning of inflation, types, causes, measures to control inflation.

National Income-Definition, Concepts of national income, Method of measuring national income.

**Module III (12 hours)**

Time value of money- Interest - Simple and compound, nominal and effective rate of interest, Cash flow diagrams, Principles of economic equivalence.

Evaluation of engineering projects-Present worth method, Future worth method, Annual worth method, Internal rate of return method, Cost benefit analysis for public projects .

Depreciation- Depreciation of capital asset, Causes of depreciation, Methods of calculating depreciation (Straight line method, Declining balance method), After tax comparison of project.

**Text Books**

1. Riggs, Bedworth and Randhwa, "Engineering Economics", McGraw Hill Education India
2. Principles of Economics, Deviga Vengedasalam; Karunagaran Madhavan, Oxford University Press.
3. Engineering Economy by William G.Sullivan, Elin M.Wicks, C. Patric Koelling, Pearson
4. R.Paneer Seelvan, " Engineering Economics", PHI
5. Ahuja,H.L., "Principles of Micro Economics" , S.Chand & Company Ltd
6. Jhingan,M.L., "Macro Economic Theory"
7. Macro Economics by S.P.Gupta, TMH