

Elements of Economics

Course Objectives

- Students will demonstrate their knowledge of the fundamental and technical concepts of economics
- Students will apply the basic theories of economics in critical thinking and problem solving.
- Students will demonstrate an awareness of their role in the global economics environment
- Students will be able to make decisions wisely using cost-benefit analysis

Course outcomes (COs)

After completing this course satisfactorily, a student will be able to

- Understand how households (demand) and businesses (supply) interact in various market structures to determine price and quantity of a good produced.
- Understand the links between household behavior and the economic models of demand.
- Represent demand, in graphical form, including the downward slope of the demand curve and what shifts the demand curve.
- Understand the links between production costs and the economic models of supply
- Understand how different degrees of competition in a market affect pricing and output

Unit I

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).

Unit II

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.

Unit III

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.

Unit IV

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.

Text Books

- ✓ *Riggs, Bedworth and Randhwa, "Engineering Economics", McGraw Hill Education India*
- ✓ *Principles of Economics, Deviga Vengedasalam; Karunagaran Madhavan, Oxford University Press*
- ✓ *Engineering Economy by William G.Sullivan, Elin M.Wicks, C. Patric Koelling, Pearson*
- ✓ *R.Paneer Seelvan, "Engineering Economics", PHI*

References

- ✓ *Ahuja, H.L., "Principles of Micro Economics", S.Chand & Company Ltd*
- ✓ *Macro Economics by S.P.Gupta, TMH*