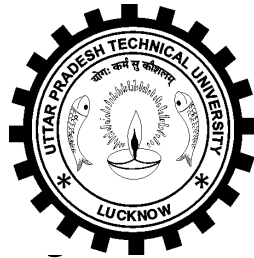


U.P. TECHNICAL UNIVERSITY, LUCKNOW



Syllabus

[Compulsory Subjects for all B.Tech. Courses]

1. EHU 301/EHU-401 : INDUSTRIAL PSYCHOLOGY
2. EHU-302/EHU-402 : INDUSTRIAL SOCIOLOGY
3. EHU-501 : ENGINEERING & MANAGERIAL ECONOMICS
4. EHU-601 : INDUSTRIAL MANAGEMENT

EHU-501 : Engineering & Managerial Economics

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Unit-I

Introduction : Meaning, Nature and Scope of Economics, Meaning of Science, Engineering and Technology. Managerial Economics and its scope in engineering perspective.

Unit-II

Basic Concepts

Demand Analysis, Law of Demand, Determinates of Demand, Elasticity of Demand-Price, Income and cross Elasticity. Uses of concept of elasticity of demand in managerial decision.

Unit-III

Demand forecasting

Meaning, significance and methods of demand forecasting, production function, Laws of returns to scale & Law of Diminishing returns scale. An overview of Short and Long run cost curves – fixed cost, variable cost, average cost, marginal cost, Opportunity cost.

Unit-IV

Market Structure

Perfect Competition, Imperfect competition – Monopolistic, Oligopoly, duopoly sorbent features of price determination and various market conditions.

Unit-V

National Income, Inflation and Business Cycles

Concept of N.I. and Measurement. Meaning of Inflation, Type causes & prevention methods, Phases of business cycle.

Reference Books

1. Koutsoyiannis A : Modern Microeconomics, ELBS.
2. Managerial Economics for Engineering : Prof. D.N. Kakkar
3. Managerial Economics : D.N. Dwivedi
4. Managerial Economics : Maheshwari.

EHU-302/EHU-402 : Industrial Sociology

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Unit-I

Industrial Sociology : Nature and Scope of Industrial Sociology-Development of Industrial Sociology.

Unit-II

Rise and Development of Industry : Early Industrialism – Types of Productive Systems – The Manorial or Feudal system – The guild system – The domestic or putting-out system – and the factory system – Characteristics of the factory system – causes and Consequences of industrialization.

Unit-III

Industrialization in India. Industrial Poling Resolutions – 1956.

Unit-IV

Contemporary Issues : Grievances and Grievance handling Procedure.

Industrial Disputes : courses, strikes & lockouts, Industrial Relations Machinery Bi-partite & Tri-partite Agreement, Labour courts & Industrial Tribunals, Code of Discipline, Standing order.

References :

1. GISBERT PASCAL, Fundamentals of Industrial sociology, Tata McGraw Hill Publishing Co., New Delhi, 1972.
2. SCHNEIDER ENGNO V., Industrial Sociology 2nd Edition, McGraw Hill Publishing Co., New Delhi, 1979.
3. MAMORIA C.B. And MAMORIA S., Dynamics of Industrial Relations in India.
4. SINHA G.P. and P.R.N. SINHA, Industrial Relations and Labour Legislations, New Delhi, Oxford and IBH Publishing Co., 1977.

EHU-301/EHU-401 : Industrial Psychology

LTP

200

Unit-I

Introduction to Industrial Psychology – Definitions & Scope. Major influences on industrial Psychology- Scientific management and human relations schools Hawthorne Experiments

Unit-II

Individual in Workplace

Motivation and Job satisfaction , stress management. Organizational culture, Leadership & group dynamics.

Unit-III

Work Environment & Engineering Psychology-fatigue. Boredom, accidents and safety.
Job Analysis, Recruitment and Selection – Reliability & Validity of recruitment tests.

Unit –IV

Performance Management : Training & Development.

References :

1. Miner J.B. (1992) Industrial/Organizational Psychology. N Y : McGraw Hill.
2. Blum & Naylor (1982) Industrial Psychology. Its Theoretical & Social Foundations CBS Publication.
3. Aamodt, M.G. (2007) Industrial/Organizational Psychology : An Applied Approach (5th edition) Wadsworth/Thompson : Belmont, C.A.
4. Aswathappa K. (2008). Human Resource Management (fifth edition) New Delhi : Tata McGraw Hill.

EHU-601 : Industrial Management

LTP

300

Unit-I

Introduction : Concept, Development, application and scope of Industrial Management.

Productivity : Definition, measurement, productivity index, types of production system, Industrial Ownership.

Unit-II

Management Function : Principles of Management- Management Tools – time and motion study, work simplification- process charts and flow diagrams, Production Planning, Specification of Production requirements.

Unit-III

Inventory control : Inventory, cost, Deterministic models, Introduction to supply chain management.

Unit-IV

Quality control : Meaning, process control, SQC control charts, single, double and sequential sampling, Introduction to TQM.

Unit-V

Environmental Issues : Environmental Pollution – various management techniques to control Environmental pollution – Various control acts for Air, Water, Solid waste and Noise pollution.

Reference Books

1. Khanna O.P. : Industrial Engineering
2. T.R. Banga : Industrial Engineering and Management
3. Sharma B.R. : Environmental and Pollution Awareness.