DEPARTMENT OF BUSINESS & INDUSTRIAL MANAGEMENT

APPLIED OPERATION RESEARCH

Objective:

The course is designed to present the scope of various quantitative methods with enough specification so that the manager understands the reasoning behind the methods and is able to interpret their results.

Contents:

Linear programming , Formulation of linear optimization Models , Simplex and Transportation models ,Sensitivity testing and duality , Dynamic programming and its applications , Integer programming and combination models , Network analysis , Shortest route and other network models , waiting lines and its applications , simulation and its applications , goal programming and its application to business .

Growth of urbanization and problems of transportation ; Transport challenges and limitations ; Government activities in transportation ,Transportation systems-Planning, Operation ; Transportation Modes and their selection ,sequential Travel demand forecasting models ,Future developments in transportation ; Motor vehicle Act 1988 and its impact on urban transport system ; Emission norms.

Reference:

1. Gupta M P ,and Sharma J K , Operations research for management . New Delhi , latest edition
2. Sharma J K , Operations research : Theory and Applications , New Delhi , Macmillan India , latest edition
3. Kapoor V K , Operations research , new Delhi , sultan chand publications , latest edition
4. Gupta M P .Metropolitan Transportation system , New Delhi , national 1983
5. Dickey J.W Metropolitan Transportation Planning New Delhi , Tata McGraw Hill , Latest edition .

DEPARTMENT OF BUSINESS & INDUSTRIAL MANAGEMENT

LOGISTICS AND SUPPLY CHAIN MANAGEMENT

Objectives:

· Developing an understanding of the significance of logistics and supply chain management to achieve effective supply and distribution management.
· Develop a capacity for analysing supply chain problems on a functional, business and company-wise basis.
· Become acquainted with the realities of operating different types of production/distribution firms.

Course:

· Introduction to supply chain management (SCM), (Evolution of SCM, Functional integration of logistics and operations, Coordination of material, financial and information flows)
· Performance Measures for SCM
· Issues in marketing and customer service
... (Efficient customer response
· Planning for Uncertainty
· Product Costing for Uncertainty
· Forecasting Issues in Supply Chain Management
· Network Modeling & Strategic Lead Time Management
· Product and Process Design for SCM
· Order Processing and Inventory Control for SCM
· Transportation and Third Party Logistics
· From Vertical Integration to Virtual Integration
· SCM and Information Technology
· Transiting from Made-To-Stock to Build-To-Order
· Inter-firm Integration: Implementation Issues
· Supply Chain Management in the Indian Environment

Reference:

1.Bhatt Sridhar ," Essentials of logistics and supply chain management " , Himalaya publishing House, 2007 .

2.D Simchi-Levi, P Kaminsky and E Simchi-Levi; Designing & Managing the Supply Chain; McGraw-Hill/Irwin, 2002.*
3. Chopra, S. and Meindl, P, Supply Chain Management: Strategy, Planning and Operation, Pearson Education Asia, 2001.
4. Shapiro, J. S., Modeling the Supply Chain, Duxbury Press, 2001.
5. Magee, J.F., Copacino, W.C. and Rosenfield, D.B., Modern Logistics Management, Wiley, New York, 1995.
6. Dornier, P., Ernst, R., Fender M. and Kouvelis, P., Global Operations and Logistics: Text and Cases, Wiley, New York, 1998.
7. Tayur, S., Ganeshan, R. and Magazine, M., Quantitative Models for Supply Chain Management, Kluwer Academic Publishers, 1999.

DEPARTMENT OF BUSINESS & INDUSTRIAL MANAGEMENT

PRODUCTION PLANNING AND CONTROL

Objectives :

This course is meant to familiarize the students with various techniques useful for production planning and control.

Contents :

Introduction to PPC , Basic Approaches to aggregate production scheduling , quantitative approaches to Aggregate Planning , Evaluation of Decision system and Rules for aggregate planning , Aggregate Production Inventory Policies ,Materials Requirement Planning , Batch planning and shop Loading , Safety stock policies , Mass production Flow line design system , Order delivery and Production control ,Job scheduling – Flow Shop , Job shop scheduling .

World Class Manufacturing environment ,Imperatives for success in Technology ,System approach in change in mind set ,Strategic decisions in manufacturing management ,Technology principles advocated by Eliyahn Goldtfratt.

Reference:

1.Burbidge , John L Principles of Production Control . London , Donald and Evans , latest edition

2.Caubang Ted C , Readings on Production Planning and Control . Geneva ILO

3.Greene , James H , Production and Inventory control Handbook , New York ,McGraw Hill , latest edition .

DEPARTMENT OF BUSINESS & INDUSTRIAL MANAGEMENT

TOTAL QUALITY MANAGEMENT

Objectives :

The objective of this course is to acquaint the students with to make clear to candidates the basic concept of Total Quality (TQ) From design assurance to service assurance ; to give emphasis on international quality certification systems – ISO 9000 and other standards and their applicability in design , manufacturing ,quality control and services , to closely interlink management of quality , reliability and maintainability for total product assurance to focus on quality of services in contemporary environment .

Contents :

Basic concept of Total quality (TQ) , Evolution of Total quality management ; Components of TQ loop, Conceptual approach to S.Q.C , Acceptance sampling and inspection plans , statistical process control ,Process capability studies ,Humanistic aspects of TQM, Management of QC and Z.D .Programmers ,Quality Improvement teams ; Q-7 tools ; Fault Tree Analysis ,Quality costs ,Taguchi loss Function , Functional linkages of quality with Reliability and maintainability analysis ;(FTA/FMEA)and optimum maintenance decisions ; Total Productive maintenance (TPM) ; Quality audits ,Lead assessment and ISO – 9000 standards ; Marketing aspects of T.Q ; Total quality of services ; Total quality and safety ;Six Sigma .

Reference:

1. Carruba, Eugene R and Gorden, Ronald D. Product Quality Principles: Integrating Design Assurance and Quality Assurance, New York, McGraw Hill, 1991.

2. Grant, Eu-gene L and Leavenworth, Richards. Statistical Quality Control, McGraw Hill, New York, 1991.

3. Ireson, W. G. and Coombas, C.P. Handbook of Reliability Engineering and Management, New York, McGraw Hill, 1988.