7302   Management Science

Objectives

The Objectives of this course is to develop an understanding of basic management science techniques and their role in managerial decision making.

Course Contents

1. Evolution of Management Science, Linear Programming - Basic concepts, Model Formulation, Solution Methods, Duality, Sensitivity Analysis

2. Transportation and Assignment models Introduction to some Basic, Quantitative Methods Packages.

3. Integer Programming Branch and Bound Algorithm, Goal Programming (Formulation only), Game theory

4. Queuing theory, Inventory Management Techniques

5. PERT/CPM; Decision Theory and Decision Trees, Simulation.

Suggested Readings

1. *Budnik, Frank S., Dennis Mcleavey, Richard Mojena Principles of Operations Research, 2nd ed., Richard Irwin, lllinois-All India Traveller Bookseller, New Delhi, l995*

2. *Gould, F J. etc. Introduction to Management Science. Englewood Cliffs, New Jersey, Prentice Hall Inc., 1993*

3. *Mathur, K and Solow, D. Management Science. Englewood Cliffs, New Jersey, Prentice Hall Inc., 1994.*

4. *Narag A S. Linear Programming and Decision Making. New Delhi, Sultan Chand, 1995.*

5. *Sharma, J K. Operations Research: Theory and Applications. New Delhi, Macmillian India Ltd., 1997.*

6. *Taha, H A. Operations Research - An Introduction. New York, Mc-Millan, 1989.*

7. *Theirouf, R J and Klekamp, R C. Decision Making Through Operations Research. New York, John Wiley, 1989.*

The list of cases and specific references including recent articles will be announced in the class at the time of launching of the course.