Course Name : Operations Research
Course Code : MGT50
Course Hours : 03
Semester : 5th
Total Weeks : 16/18
Total Hours : 48/54

Week 1-2
Introduction to Quantitative Analysis
- Problem Solving and Decision Making
- Quantitative Analysis and Decision Making
- The Quantitative Analysis Approach
- Models of Cost, Revenue and Profit
- Solving Problems Using Computer Software

Week 3-4
Problem Formulation
- Decision Making without Probabilities
- Decision Making with Probabilities
- Decision Analysis with Sample Information
- Utility and Decision Making
- Solving Problems Using Computer Software

Week 5-6-7
Linear Programming Model (LP)
- Introduction
- Problem Formulation
- Graphical Solution to LP Problem
- Four Special Cases in LP
- Solving Maximization Problems with Simplex Method
- Solving Minimization Problems
- Solving Problems Using Computer Software

Week 8-9-10
Transportation and Assignment Model
- Introduction
- A Network Model and LP Formulation for a Transportation problem
- Transportation Simplex method
- A Network Model and LP Formulation for an Assignment Problem
- Hungarian Method for Solving an Assignment Problem
- Solving Problems Using Computer Software

Week 11-12
Network Model
- Introduction

- Minimal Spanning Tree Technique
- Maximal Flow Technique
- Shortest Route Technique
- PERT/CPM
- Solving Network Models Using Computer Software

Week 13-14
Forecasting
- Introduction
- Type of Forecasts
- Scatter Diagram
- Measures of Forecasting Accuracy

Main Text

Other References