MSE-383 Operations Research

Credit Hours: 3-0

Pre-requisites: None

Course Objectives

- To know about general overview of the Operations research Modeling Approach, Deriving Solutions from the Model,

- Introduction to linear programming, the theory of the simplex model, the revised simplex model.

Course Contents

- Overview of the Operations research Modeling Approach

- Deriving Solutions from the Model

- Introduction to linear programming, the theory of the simplex model, the revised simplex model

- Duality theory and sensitivity analysis, the transportation and analysis problems, network optimization models

- The minimum spanning tree problems, the maximum flow problem, the minimum cost flow problem

- A network model for minimizing a projects time-cost tradeoff, non linear programming, Multivariable optimization

Course Outcome

- Students will have an overview of the Operations research Modeling Approach, Deriving Solutions from the Model, Introduction to linear programming,

- The theory of the simplex model, the revised simplex model.

Suggested Books

- Hillier and Lieberman, *Introduction to Operations Research, 8th Edition, 2005, McGraw Hill Publications.*

- Hamdy A. Taha, *Operations Research: An Introduction 7th Edition, Prentice Hall, 2002.*