

IN 118 RISET OPERASIONAL (2 SKS)

Tujuan :

- Peserta mata kuliah akan dapat memahami pemodelan dan representasi, teknik-teknik, serta optimalisasi penyelesaian pemrograman linier
- Menggunakan program TORA

Materi :

- Peraturan kuliah, silabus/materi, aturan penilaian, dll
- Introduction to linier Programming
 - Two variable LP Model
 - Graphical LP solution
 - Graphical Sensitivity Analysis
 - Computer Solution of LP Problems
- The Simplex Method
 - LP Solution Space in Equation Form
 - Transition from Graphical to Algebraic Solution
 - The Simplex Method
 - Artificial Starting Solution
 - Special Cases in Simplex Method Application
- Duality and Sensitivity Analysis
 - Definition of the Dual Problem
 - Primal-Dual Relationship
 - Economic Interpretation of Duality
- Transportation Model and Its Variants
 - Definition of the Transportation model
 - Nontraditional Transportation model
 - The transportation algorithms
 - The assignment model
 - The Transshipment model
- Network model
 - Network definition
 - Minimal spanning tree algorithms
- Shortest route problem
 - Maximal flow model
 - Minimum – cost capacitated flow problem
 - CPM and PERT

Prasyarat : -

Pustaka :

- Hamdy A. Taha, Operational Research 7th Edition, Prentice Hall, Inc,2003
- Wayne L. Winston, Operational Research Applications & Algorithms