

Course Name:
System Engineering

Course Number:
20191

Credit:
2

Prerequisite:

Course Content (outline):

- Introduction, model classification, linear programming formulation, geometrical method, classification of mathematical programming models.
- Solving linear program, simplex method.
- Sensitivity analysis, shadow prices, reduced costs, variation in the objective coefficients and the right-hand-side values.
- Definition of the dual problem, finding the dual in general, duality properties.
- Network models, minimum cost network flow problem, special network models, shortest path, maximal flow, transportation, and critical path method, solving the minimum cost flow problem.

References:

- Applied Mathematical Programming, Bradley, Hax, and Magnanti

• برنامه ریزی ریاضی کاربردی ترجمه: هدایت ذکایی آشتیانی و حسین تقی زاده کاخک