

Optimization - Video course

COURSE OUTLINE

This course covers lessons in geometry of LPP and its graphical solution, integer programming, PERT, shortest path algorithm, multi objective decision making, multi attribute decision making.

COURSE DETAIL

S.No	Topic
1	Optimization - Introduction
2	Formulation of LPP
3	Geometry of LPP and Graphical Solution of LPP
4	Solution of LPP : Simplex Method
5	Big - M Method
6	Two - Phase Method
7	Special Cases in Simple Applications
8	Introduction to Duality Theory
9	Dual Simplex Method
10	Post Optimality Analysis
11	Integer Programming - I
12	Integer Programming - II
13	Introduction to Transportation Problems



NP-TEL

NPTEL

<http://nptel.ac.in>

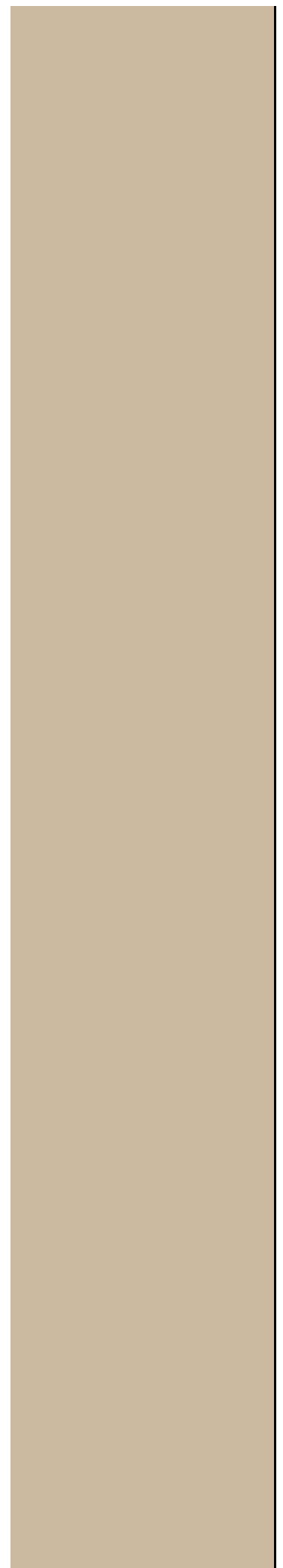
Mathematics

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14	Solving Various types of Transportation Problems
15	Assignment Problems
16	Project Management
17	Critical Path Analysis
18	PERT
19	Shortest Path Algorithm
20	Travelling Salesman Problem
21	Classical optimization techniques : Single variable optimization
22	Unconstrained multivariable optimization
23	Nonlinear programming with equality constraint
24	Nonlinear programming KKT conditions
25	Numerical optimization : Region elimination techniques
26	Numerical optimization : Region elimination techniques (Contd.)
27	Fibonacci Method
28	Golden Section Methods
29	Interpolation Methods
30	Unconstrained optimization techniques : Direct search method
31	Unconstrained optimization techniques : Indirect search method



32	Nonlinear programming : constrained optimization techniques
33	Interior and Exterior penalty Function Method
34	Separable Programming Problem
35	Introduction to Geometric Programming
36	Constrained Geometric Programming Problem
37	Dynamic Programming Problem
38	Dynamic Programming Problem (Contd.)
39	Multi Objective Decision Making
40	Multi attribute decision making