Curriculum Plan (EVEN SEM 2025-26): B.Sc. (PS) IV Sem

DSE-2(iii): Linear Programming

Teacher'S Profile

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Marks Distribution	**Theory**	90 Marks
	Internal Assessment	30 Marks
		Assignments -12 Marks
		Test - 12 Marks
		Attendance - 6 Marks
	Continuous Assessment	40 Marks
Classes Assigned	**Lectures**	3 Per Week
	Tutorial	1 Per Week

Essential Readings	1. Thie, Paul R., & Keough, G. E. (2014). An Introduction to Linear Programming and Game Theory. (3rd ed.). Wiley India Pvt. Ltd. 2. Taha, Hamdy A. (2017). Operations Research: An Introduction (10th ed.). Pearson.

Week	Topics
1st Week (02 JAN-10 JAN)	Standard form of the LPP, graphical method of solution
2nd Week (12 JAN-17 JAN)	Basic feasible solutions and convexity.
3rd Week (19 JAN-24 JAN)	Introduction to the simplex method: Optimality criterion and unboundedness
4th Week (26 JAN-31 JAN)	Simplex tableau and examples.
5th Week (2 FEB-7 FEB)	Artificial variables, Introduction to duality
6th Week (9 FEB-14 FEB)	Formulation of the dual problem with examples.
7th Week (16 FEB-21 FEB)	Definition of transportation problem, finding initial basic feasible solution using Northwest-corner method
8th Week (23 FEB-28 FEB)	Least-cost method, and Vogel approximation method
9th Week (9 MAR-14 MAR)	Algorithm for solving transportation problems (Only minimization, balanced and non-degenerate transportation problems to be done)
10th Week (16 MAR-21 MAR)	Hungarian method of solving assignment problem.
11th Week (23 MAR -28 MAR)	Hungarian method of solving assignment problem.
12th Week (30 MAR-4 APR)	Introduction to game theory, rectangular games.
13th Week (6 APR-11 APR)	Mixed strategies, Dominance principle
14th Week (13 APR-18 APR)	Formulation of game to primal and dual linear programming problems.
15th Week (20 APR-25 APR)	Formulation of game to primal and dual linear programming problems.
16th Week (27 APR-30 APR)	REVISION