Curriculum Plan: Generic IV (Maths) II Year (Semester IV) Linear Programming (2025-26) EVEN SEM

Teacher Profile:
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Marks Distribution	**Theory**	90 Marks
	Internal Assessment	30 Marks
	CA	40
	Total Marks	160
Classes Assigned	**Lectures**	3 per week
	Tut	1 per week

Reference	**[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	**Topic**
1st week	Standard form of the LPP, Graphical method of solution.
2nd week	Basic feasible solutions, and convexity.
3rd week	Introduction to the simplex method**:** Optimality criterion and unboundedness.
4th week	Simplex tableau and examples, Artificial variables.
5th week	Introduction to duality.
6th week	Formulation of the dual problem with examples
7th week	Definition of transportation problem.
8th week	finding initial basic feasible solution using North west corner method.
9th week	finding initial basic feasible solution Least-cost method.
10th week	finding initial basic feasible solution Vogel approximation method.
11th week	Algorithm for solving transportation problem
12th week	Hungarian method of solving assignment problem
13th week	Introduction to game theory.
14th week	rectangular games, Mixed strategies, Dominance principle.
15th week	Formulation of game to primal and dual linear programming problems.