

Government Engineering College-Dahod
Mechanical Department
Re-MID SEMESTER EXAM SYLLABUS – 2025

Semester: 5th

Exam Date: 30-09-2025

Subject Name: **Operation Research**

Code: **3151910**

Sr. No.	Content	CO
1.	Operations Research: Origin of Operation Research, Historical Standpoint, Methodology, Different Phases, Characteristics, Scope and Application of Operations Research. Linear Programming Problem: Introduction, Requirement of LP, Basic Assumptions, Formulation of LP, General Statement of LP, Solution techniques of LP: Graphical Methods, Analytical Methods: Simplex, Big M and Two Phase, Special Case of LP Problem, Graphical Sensitivity Analysis. Introduction of Primal and Dual Problems, Economic Interpretation. Introduction of Goal and Integer Programming	CO-1 CO-2
2.	Transportation and Assignment: Transportation Problems definition, Linear form, Solution methods: North west corner method, least cost method, Vogel's approximation method. Degeneracy in transportation, Modified Distribution method, Unbalanced problems and profit maximization problems. Transshipment Problems. Assignment Problems and Travelling sales man Problem.	CO-3
3.	Project Management: Introduction to PERT and CPM, Critical Path calculation, float calculation and its importance. Cost reduction by Crashing of activity.	CO-5


Subject Coordinator