UNIT - I
Introduction: Definition of system, Types of systems, System approach, System analysis and types of systems, Techniques of water resources system analysis.


UNIT - II
Linear programming –I: Formulation of linear programming models, graphical method, simplex method, application of Linear programming in water resources.

UNIT - III
Linear programming –II:
Revised simplex method, duality in linear programming, sensitivity and post optimality analysis.

UNIT - IV
Dynamics programming: Belman’s principles of optimality forward and backward recursive dynamic programming, curse of dimensionality, application of dynamic programming for resource allocation.

UNIT - V
Water Resources Economics: Basics of Engineering economics, Discount factors, Uniform annual series, Amortization, Comparison of alternate plans. Principles of Economics analysis, Conditions of project optimality, benefit cost analysis socio economic intuitional and pricing of water resources.

TEXT BOOKS:

REFERENCES:
1. Operational Research by Taha, Printice Hall of India publishers.
2. Water Resources project Economic by Kuiper E.