

GUJARAT TECHNOLOGICAL UNIVERSITY

M.E Semester: 2

Water Resources Management t

Subject Name Water Resources Planning

Sr.No	Course content
1.	River valley development projects, estimation of available water resources and demand patterns, Fixing objectives, Data required for project formulation, Study of various alternatives, Feasibility, Planning of multipurpose projects, Economics of water resources projects, Benefit-cost analysis, case discount flow methods, Dynamics of project analysis
2	Economic planning by project purpose, Methods of allocation, cost to various purposes of project, Reservoir capacity, reservoir working tables, Reservoir operation for optimum benefits, simulation techniques, Water law and policies, Interstate and international problems, Economic, environmental and social impact on water resources projects, Risk and uncertainty considerations in water resources planning, financing of water development projects..

List of Experiments:

1. Use of Theodolite
2. Total Station for preparation of contour Maps
3. Use of Plannimeter for Calculation of area of contour maps
4. Preparation of area elevation and capacity elevation curve
5. To find out the capacity of Reservoir from capacity elevation curve

Reference Books:

1. Economics of water resources planning – L. Douglas James
2. Water resources engineering – Linsley & Franzini
3. Water resources project economics - Edward Kuiper
4. Water resources development - Edward Kuiper
5. Principles of Water Resources Planning – S. Goodman
6. Management of water projects - OECD
7. Water Resources Planning – N.S.Grigg
8. Water Resources Planning and Management – Helweg O. G
9. Water Resources Planning -Mahapatra