

Water Resources Engineering - Video course

Precipitation, Infiltration and Evapotranspiration Lectures) (8

- Forms of precipitation, measurement, depth-area-duration and intensity duration- frequency relations
- Evaporation -- process, measurement, and estimation
- Infiltration -- process, measurement, and estimation
- Evapotranspiration -- measurement and estimation

Runoff and Hydrographs Lectures) (8

- Rainfall Runoff correlations, Flow duration curve, Mass curve, Droughts and floods
- Factors affecting flow hydrograph, Unit hydrograph, its analysis, and S-curve hydrograph, Synthetic and instantaneous unit hydrographs

Statistical analysis, Hydrologic Routing Lectures) (7

- Risk, reliability, and safety factor, Flood frequency studies, Flood forecasting, Rational method, Time Area curves, Design flood
- Channel and flood routing

Groundwater hydrology Lectures) (5

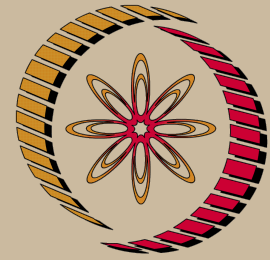
- Flow equations -- Confined and unconfined flow
- Well hydraulics -- Steady and unsteady flow, Well losses, Specific capacity

Irrigation Engineering Lectures) (6

- Water requirement of crops
- Hydrologic aspects of irrigation system design

Hydrologic design Lectures) (6

- Design of culverts, detention ponds, storm water drains
- Economics of Water Resources systems



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