

Hydro Power Engineering

Course Contents

Sl. No.	Particulars	Contact Hours
1.	Energy Resources and types of generation	1
2.	Hydrological analysis: stream gauging, stage discharge curves, peak flow estimation, mass curves and Flow duration curves	5
3.	Estimation of power potential	3
4.	Peak load and base load stations	1
5.	Firm and secondary power	1
6.	Pondage and storage	1
7.	Choice of power plants and their classification	1
8.	Components of hydropower plants: intakes, desilting tank, tunnel, penstock, forebay tank, surge tank, power channels etc., powerhouse	8
9.	Special problem of Himalayan regions – silt and land slight	4
10.	Types of turbines and their characteristics and provision for testing	6
11.	Preliminary dimensioning of powerhouse	2
12.	Power plant equipment, instrumentation and controls	4
13.	Economic considerations: pricing of electricity, regulatory aspects, investment planning	4
14.	Policies and laws	2