Course Type	Course Code	Name of Course	L	T	P	Credit
DP	CEC308	**Water Resources Engineering Laboratory**	0	0	2	2

Course Objective
To familiarize with the various fundamental aspects of fluids, their behavior and the applications of fluid mechanics and machines as well as open channel flow.
Learning Outcomes
Upon successful completion of this course, students will: • Understand the basic concepts of Fluid mechanics. • Develop practical understanding of the basic theories in Fluid mechanics and Open Channel flow. • Understand the working principle of hydraulic machines. • To understand the concepts of hydrology.

Unit No.	Topics to be Covered	Laboratory	Learning Outcome
1	Verification of Bernoulli's theorem	1	Understanding the principle of conservation of energy
2	Determination of Coefficient of discharge of Venturimeter & Orifice meter	1	To know different methods to measure discharge through pipes
3	Determination of losses in pipe flow	2	Understanding the nature of pressure loss occurring through pipes for real fluids.
4	Determination of Coefficient of discharge for notches	2	Knowledge on various methods for flow measurement in open channels
5	Study of hydraulic jump in open channel flow	1	To understand the methods of energy dissipation used in hydraulic structures.
6	Performance studies on Turbines	2	To know the working principle and efficiency of turbines
7	Performance studies on Pumps	2	Understanding the working principle and efficiency of different type of pumps
8	Measurement of Infiltration by Infiltrometer and evaporation by Pan evaporimeter	1	To understand the process of infiltration and evaporation and their quantification
9	Determination of hydrograph after precipitation in Hydrology system equipment	1	To know the process and method of measuring runoff after precipitation by hydrograph.
10	Evaluation	1	Evaluating the understanding of student regarding the lab course.

Text Books / References:

1. Manual for Water Resources Engineering Laboratory