## **Approval: 9th Senate Meeting**

Course Number: CE 304P

Course Name: Hydraulics Engineering Lab

**Credits:** 0-0-2-1

Prerequisites: CE 251 - Hydraulics Engineering

**Intended for:** UG

**Distribution:** Discipline Core

Semester: Odd/Even

**Preamble:** The students are exposed to the principles of fundamental hydraulics. They will be exposed to the concept of hydraulic energy, and flow measurements. They will also be exposed to the hands on experiments in various flow measurement devices, and energy loss structures.

**Course Outline:** The list of experiments has been designed to cover the basic hydraulic principles which they have undergone during theory course:

- Bernoulli's Theory
- Impacts of jets
- Energy losses in pipes
- Guleph Permeameter
- Hydraulics Jump
- Pipe Surges and water hammer
- Centrifugal pump characteristics
- Flow over weirs
- Flow measurements in open channel