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Department of Chemical Engineering	
Fluid Mechanics Lab. (64238)	
Total Credits	**1**
major compulsory	
Prerequisites	P1 : Fluid Mechanics (64231) OR Fluid Mechanics (64333)

Course Contents

This lab introduces students to fluid properties under different practical conditions. This includes practical experiments on stickiness. Students will also study types of flow, its measurement, speed curves and pressure drop. Other topics include the study of relevant equipment including pumps and turbines.

	Intended Learning Outcomes (ILO's)	Student Outcomes (SO's)	Contribution
1	Design&conduct experiments, as well as to analyze &interpret data.	B	70 %
2	communicate effectively	G	10 %
3	use the techniques, skills &modern engineering tools necessary for engineering practice	K	10 %
4	show An understanding of professional &ethical responsibility	F	10 %

Textbook and/ or Refrences

Notes and labs manual

Assessment Criteria	Percent (%)
Mid. Term Exam	15 %
Quizzes	5 %
Laboratory Work	55 %
Final Exam	25 %

Course Plan

Week	Topic
1	Introduction: How to Write Laboratory Report, and safety rules in labs
2	Calibration of Pressure Gauge
3	Pressure measurement
4	Lecture (Theoretical background)
5	Flow Through A Venturi Meter
6	Flow Through Orifice And Nozzle
7	Lecture (Theoretical background)
8	Flow Measurement
9	Measurement of Impact Forces of Fluid Jets
10	Midterm Exam
11	Lecture (Theoretical background)
12	Measurement of Flow Friction Losses A Long A Pipe
13	Measurement of Minor Losses A Long A Pipe-Flow
14	Lecture (Theoretical background)
15	Pumps in series and parallel
16	Discussion