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Department of Mechanical Engineering	
Thermal Laboratory (67426)	
Total Credits	**1**
major compulsory	
Prerequisites	P1 : Heat Transfer (67415) OR Heat Transfer I (67420)

Course Contents

Laboratory experiments related to heat transfer, thermodynamics and thermal processes.

	Intended Learning Outcomes (ILO's)	Student Outcomes (SO's)	Contribution
1	Ability to conduct experiments and analyze interpret data related to heat transfer and fluid mechanics as pumps , turbine and airconditioning	B	50 %
2	Be able to use the devices of the lab properly and write scientific report	K	40 %
3	Be able to work in team	D	10 %

Textbook and/ or Refrences

Laboratory handout and sheets

Assessment Criteria	Percent (%)
Mid. Term Exam	20 %
Quizzes	10 %
Laboratory Work	40 %
Final Exam	30 %

Course Plan

Week	Topic
2	Experiment No. 1: linear heat conduction along simple bar
3	Experiment No. 2: linear heat conduction along composite bar
4	Experiment No. 3: radial conduction
5	Experiment No. 4: heat conduction of fluids
6	Experiment No. 5: Pelton Turbine
7	Experiment No. 6: Francis Turbine
8	Experiment No. 7: Air conditioning
9	Experiment No. 8: Steam Engine I
10	Experiment No. 9: Steam Engine II
11	Experiment No. 10: Cooling Tower