

ME 391 Mechanical Engineering (Auto)

Credit: 1 (0-3-0)

Semester 1 Year 2016
Section 770001

Prerequisite: None

Instructor: Chainarong Chaktranond

Teaching time: Wed: 9.00 – 11.00

Consulting time: Wed 13.30 – 16.30 or make an appointment via email (cchainar@engr.tu.ac.th)

Objectives:

- To have knowledge and understanding in significant number, experimental error analysis, data analysis, and present the results.
- To able to write scientific report about experiments of fluid mechanics, thermodynamics, and solid mechanics.

Course descriptions:

Additional experiments in the fields of power plant engineering, heat transfer, automatic control system, mechanical vibrations and gas dynamics.

List of Laboratory:

Week	Topics	Place
17 Aug	Lab introduction	Computer room
24 Aug	Experimental error analysis, and data analysis	Computer room
31 Aug	Introduction to write scientific report	Lecture building
7 Sep	Fluid friction lab	Automotive workshop
14 Sep	Air flow lab	Automotive workshop
21 Sep	Conduction heat lab	Automotive workshop
28 Sep	Convection heat lab	Automotive workshop
5 Oct	Mid-term exam (2 nd – 13 th Oct)	
12 Oct	Mid-term exam (2 nd – 13 th Oct)	
19 Oct	Radiation heat lab	Automotive workshop
26 Oct	Pelton turbine lab	Automotive workshop
2 Nov	Torsion lab	Automotive workshop
9 Nov	Multi-pump test lab	Automotive workshop
16 Nov	Fatigue lab	Automotive workshop
23 Nov		
30 Nov	Lab exam	Lecture building
	Final exam (6 th – 28 th Dec)	

Evaluation:

Practice (attendant, discipline, punctuality) and reports
Final Examination
Total

70 Pts
30 Pts
100 Pts

Grade

Score	GRADE
≥ 80	A
76 – 79	B+
71 – 75	B
66 – 70	C+
61 – 65	C
56 – 60	D+
51 – 55	D
≤ 50	F

Material courses:

- Lab instruction by instructor
- Graph, paper for report, calculator etc. by student