

ME 4131 - THERMAL ENVIRONMENTAL ENGINEERING LABORATORY SCHEDULE
Fall 2009

Week	Date	Lecture Date	Lecture Topic	Lab	Report	Report Due	
						# of Weeks	Date
1	Sep. 8 - Sep. 11	Sep. 8 JR TK	Introduction to class and experimentation used in course	Read Appendix A: Data Acquisition prior to lab. Lab tour, introduction to data acquisition system	N/A	N/A	N/A
2	Sep. 14 - Sep. 18	Sep. 15 JR	Solar energy, solar radiation instrumentation and measurement	Solar Radiation Measurements Part 1: Instrumentation	Datasheet	1	Sep. 23, 24
3	Sep. 21 - Sep. 25	Sep. 22 JR	Continue solar radiation material	Solar Radiation Measurements Part 2: ASHRAE Clear Day Predictions Read Appendix D: Solar Radiation prior to lab.	Informal	1	Sep. 30, Oct. 1
4	Sep. 28 - Oct. 2	Sep. 29 JR	Performance of flat plate solar collectors	Steady State Analysis of Flat Plate Solar Collectors	Formal	2	Oct. 14, 15
5	Oct. 5 - Oct. 9	Oct. 6 TK	Fan performance and duct air flow measurements	Air Handling System Characterization	Datasheet	1	Oct. 14, 15
6	Oct. 12 - Oct. 16	Oct. 13 JR	Heat exchanger performance	Heat Exchanger Analysis	Informal	1	Oct. 21, 22
7	Oct 19 - Oct. 23	Oct. 20 TK	Particulate filtration, particle sampling and measurement	Filter Particle Removal Efficiency	Informal	1	Oct. 28, 29
8	Oct. 26 - Oct. 30	Oct. 27 JR	Psychrometrics, psychrometric chart, mass/energy balance eqs	Air Psychrometrics: Heating and Humidifying	Informal	1	Nov. 4, 5
9	Nov. 2 - Nov. 6	Nov. 3 TK	Refrigeration: thermodynamic cycle analysis	Walk-in Cooler Part 1: Steady State Analysis	Datasheet	1	Nov.11,12
10	Nov. 9 - Nov. 13	Nov. 10 TK	Refrigeration: instrumentation and measurement	Walk-in Cooler Part 2: Transient Analysis	Formal	1	Nov. 4, 5
11	Nov. 16 - Nov. 20	Nov. 17 TK	Water chiller construction and instrumentation	Performance of a Small Refrigeration System	Datasheet	2	Nov. 23
12	Nov. 23- Nov.27	N/A	THANKSGIVING NO LECTURE -- NO LAB	N/A	N/A	1	N/A
13	Nov.30 – Dec. 4	Dec. 1 JR	Mixing of outdoor and return air, mixed air dampers, stratification	Mixing of Outdoor and Recirculated Air	Informal	1	Dec. 9, 10
14	Dec.7 – Dec.11	Dec. 8 TK	Room airflow, local ventilation, flow visualization techniques	Airflow Visualization	Datasheet	1	Dec. 16,17
15	Dec.14 - Dec 18	N/A	NO LECTURE Make-up labs if needed	N/A	N/A	N/A	N/A
16	Dec.21 - Dec. 25	N/A	FINALS WEEK	N/A	N/A	N/A	N/A