Mechanical Engineering 323
Thermodynamics
Winter 2008

Instructor: Professor Mescher, mescher@u.washington.edu, MEB 324
Office Hours: Mondays 2:30 – 4:00 pm; Tuesdays 8:30 – 10:00 am.

Assistants: Juan Pinzon, jucapiri@u.washington.edu, MEB 152
Office Hours: Wednesdays 2:30 – 4:00 pm and Thursdays 2:00 – 3:30 pm.

Boyd Fackler, kboydf@u.washington.edu, MEB 151
Office Hours: Wednesdays and Thursdays 9:00 – 10:30 am.

Textbook: Cengel, Y. A. and Boles, M. A., *Thermodynamics, An Engineering Approach*, Sixth edition, McGraw Hill (2008).

Schedule: MEB 246: MTWF 10:30 - 11:20 am; MOR 230: Tuesdays 12:30-2:20 pm.

Grading: Two midterm exams each @ 25%, Homework total 20%, Final exam 30%.

Website: https://courses.washington.edu/mengr323/
Homework assignments and solutions will be posted here.

Policy: All laboratory experiments, reports, and exams must be completed to receive a final grade for the course. In fairness to all students, an individual may not take an exam outside the scheduled time due to the individual's workload or travel plans. Homework must be turned in during the class period on Fridays. Late homework that is handed in at the main office will not be accepted. If you need an extension on homework due to unusual circumstances, ask Professor Mescher at least one day prior to the deadline, then turn homework into the main office with a time stamp on Monday.

Homework assignment due dates:

Chapter 1 problems: Friday Jan. 11

Chapter 2 problems: Friday Jan. 18

Chapter 3 and 4 problems: Friday Jan. 25

Chapter 5 problems: Friday Feb. 1

Chapter 6 problems: Friday Feb. 8

Chapter 7 problems: Friday Feb. 15

Chapter 9 problems: Friday Feb. 22

Chapter 10 problems: Friday Feb. 29

Chapter 11 and 13 problems: Friday March 7

Chapter 14 and 15 problems: Friday March 14

Monday	Tuesday	Tuesday	Wednesday	Friday
Jan. 7 Chapter 1 Introduction	**Jan. 8** Chapter 1 Introduction	**Jan. 8** Chapter 2 Energy analysis	**Jan. 9** Chapter 2 Energy analysis	**Jan. 11** Chapter 2 Energy analysis
Jan. 14 Chapter 2 Energy analysis	**Jan. 15** Chapter 3 Properties	**Jan. 15** Example problems	**Jan. 16** Chapter 3 Properties	**Jan. 18** Chapter 3 Properties
Jan. 21 **Holiday**	**Jan. 22** Chapter 4 Closed System	**Jan. 22** Example problems	**Jan. 23** Chapter 4 Closed System	**Jan. 25** Chapter 5 Control Volume
Jan. 28 Chapter 5 Control Volume	**Jan. 29** Chapter 5 Control Volume	**Jan. 29** ***Exam*** Chapters 1-4	**Jan. 30** Chapter 6 Second Law	**Feb. 1** Chapter 6 Second Law
Feb. 4 Chapter 6 Second Law	**Feb. 5** Chapter 7 Entropy	**Feb. 5** ***Power Plant*** Data Collection	**Feb. 6** Chapter 7 Entropy	**Feb. 8** Chapter 7 Entropy
Feb. 11 Chapter 7 Entropy	**Feb. 12** Chapter 7 Entropy	**Feb. 12** Example problems	**Feb. 13** Chapter 7 Entropy	**Feb. 15** Chapter 9 Gas Power Cycle
Feb. 18 **Holiday**	**Feb. 19** Chapter 9 Gas Power Cycle	**Feb. 19** ***Exam*** Chapter 5-7	**Feb. 20** Chapter 9 Gas Power Cycle	**Feb. 22** Chapter 9 Gas Power Cycle
Feb. 25 Chapter 10 Vapor Power Cycle	**Feb. 26** Chapter 10 Vapor Power Cycle	**Feb. 26** ***Power Plant*** Data Analysis	**Feb. 27** Chapter 10 Vapor Power Cycle	**Feb. 29** Chapter 10 Vapor Power Cycle
March 3 Chapter 11 Refrigeration Cycle	**March 4** Chapter 11 Refrigeration Cycle	**March 4** ***Air-Conditioning*** Data Collection	**March 5** Chapter 13 Gas Mixtures	**March 7** Chapter 14 Gas-Vapor Mixture
March 10 Chapter 14 Gas-Vapor Mixture	**March 11** Chapter 14 Gas-Vapor Mixture	**March 11** ***Air-Conditioning*** Data Analysis	**March 12** Chapter 15 Chemical Reaction	**March 14** Chapter 15 Chemical Reaction

Comprehensive Final Exam with primary emphasis on applications, Chapters 9-11 and 13-15.

MEB 246: 8:30-10:20 am Monday, March 17, 2008.