

Mechanical Engineering 323
Thermodynamics
Winter 2012

- Instructor:** Professor Mescher, mescher@u.washington.edu, MEB 324
Office Hours: Tuesdays 2:30-5:30 pm.
- Assistants:** Samantha Adamski, sja23@uw.edu, MEB 236
Office Hours: Wednesdays 12:20 – 2:20 pm and Thursdays 11:20 am – 12:20 pm.
- Daniel Hancock, quisp@u.washington.edu, MEB 236
Office Hours: Mondays and Fridays 11:30 am – 12:30 pm, Wednesdays 2:30 - 3:30 pm.
- Textbook:** Cengel, Y. A. and Boles, M. A., *Thermodynamics, An Engineering Approach*, Sixth edition, McGraw Hill (2008).
- Schedule:** MEB 248: MTWF 10:30 - 11:20 am; MEB 246: Tues. 12:30-2:20 pm.
- Grading:** Two midterm exams each @ 20%, Homework and Lab total 30%, 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. 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.

Homework assignment due dates:

- Chapter 1 problems: Friday Jan. 6
- Chapter 2 problems: Wednesday Jan. 11
- Chapter 3 and 4 problems: Friday Jan. 20
- Chapter 5 problems: Monday Jan. 30
- Chapter 6 problems: Friday Feb. 3
- Chapter 7 problems: Friday Feb. 10
- Chapter 9 problems: Tuesday Feb. 21
- Chapter 10 problems: Tuesday Feb. 28
- Chapter 11 and 13 problems: Monday March 5
- Chapter 14 and 15 problems: Friday March 9

Monday	Tuesday	Tuesday	Wednesday	Friday
Jan. 2 Holiday	Jan. 3 Chapter 1 Introduction	Jan. 3 Chapter 2 Energy analysis	Jan. 4 Chapter 2 Energy analysis	Jan. 6 Chapter 2 Energy analysis
Jan. 9 Chapter 2 Energy analysis	Jan. 10 Chapter 3 Properties	Jan. 10 <i>Power Plant</i> Data Collection	Jan. 11 Chapter 3 Properties	Jan. 13 Chapter 3 Properties
Jan. 16 Holiday	Jan. 17 Chapter 4 Closed System	Jan. 17 Example problems	Jan. 18 Chapter 4 Closed System	Jan. 20 Chapter 5 Control Volume
Jan. 23 Chapter 5 Control Volume	Jan. 24 Chapter 5 Control Volume	Jan. 24 <i>Exam</i> Chapters 1-4	Jan. 25 Chapter 6 Second Law	Jan. 27 Chapter 6 Second Law
Jan. 30 Chapter 6 Second Law	Jan. 31 Chapter 7 Entropy	Jan. 31 <i>Air-Conditioning</i> Data Collection	Feb. 1 Chapter 7 Entropy	Feb. 3 Chapter 7 Entropy
Feb. 6 Chapter 7 Entropy	Feb. 7 Chapter 7 Entropy	Feb. 7 Example problems	Feb. 8 Chapter 7 Entropy	Feb. 10 Chapter 9 Gas Power Cycle
Feb. 13 Chapter 9 Gas Power Cycle	Feb. 14 Chapter 9 Gas Power Cycle	Feb. 14 <i>Exam</i> Chapters 5-7	Feb. 15 Chapter 9 Gas Power Cycle	Feb. 17 Chapter 10 Vapor Power Cycle
Feb. 20 Holiday	Feb. 21 Chapter 10 Vapor Power Cycle	Feb. 21 <i>Power Plant</i> Data Analysis	Feb. 22 Chapter 10 Vapor Power Cycle	Feb. 24 Chapter 10 Vapor Power Cycle
Feb. 27 Chapter 11 Refrigeration Cycle	Feb. 28 Chapter 11 Refrigeration Cycle	Feb. 28 <i>Air-Conditioning</i> Data Analysis	Feb. 29 Chapter 13 Gas Mixtures	March 2 Chapter 14 Gas-Vapor Mixture
March 5 Chapter 14 Gas-Vapor Mixture	March 6 Chapter 14 Gas-Vapor Mixture	March 6 Chapter 15 Chemical Reaction	March 7 Chapter 15 Chemical Reaction	March 9 Example problems

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

MEB 248: 8:30-10:20 am Monday, March 12, 2012.