MEC ENG 40 Thermodynamics (CCN 27930)

Fall 2019, Monday, Wednesday, and Friday, 9 am to 10 am Wednesday August 28th to Friday December 13th, 2019

Instructor:	Dr. David Rich Email: <u>davidrich@berkeley.edu</u> , <u>rich@reaxengineering.com</u> Office Hours and Location: Following class, Hesse Hall		
GSIs:	Mook Kang	Zhenyuan Liu	
	Email: <u>hmkang@berkeley.edu</u> Office hours and location: TBD	Email: <u>zhenyuan@berkeley.edu</u> Office hours and location: TBD	
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Text:	Cengel & Boles, Thermodynamics: An Engineering Approach		
Lecture:	M, W, F, 9-10, 1 LeConte		
Discussions:	We 5:00 pm – 6:00 pm Barrows 170 Th 5:00 pm – 6:00 pm Wheeler 222		
	Tu 1:00 pm – 2:00 pm Barrows 12	6	
Final Exam:	Exam Group 16 Thurs 12/19/19 7–10 pm		
Website:	bCourses		
Grading:	Homework (Weekly) 1	5%	
	Midterms (2) 5	0%	
	Final 3	5%	
Homework:	Homework is assigned online through bCourses . It will be scheduled weekly and		
	due one week from assigned date		
Midterm:	1idterm: 2 mid-terms (1 hour) closed book and notes. One sheet of notes prepared for the exam are permitted.		
Final:	1 final (3 hours) closed book and notes. Two sheets of notes prepared for the		
	exam are permitted. Comprehensive.		

Cheating: Don't do it. If you are unclear what constitutes cheating, ask your GSI. As a member of the campus community, you are expected to demonstrate integrity in your academic endeavors and will be evaluated on your own merits. The consequences of cheating and academic misconduct — including a formal discipline file, possible loss of future internship, scholarship, or employment opportunities, expulsion, and denial of admission to graduate school — are simply not worth it.

Students with a Disability: If you need special accommodations in this class, please inform the course administrator.

Day	Date (2019)	Action
Wednesday	28-Aug	Chpt. 1 Introduction and Basic Concepts
Friday	30-Aug	Chpt. 1 Introduction and Basic Concepts
Monday	2-Sep	Academic and Administrative Holiday (Labor Day)
Wednesday	4-Sep	Chpt. 2 Energy, Energy Transfer and Analysis
Friday	6-Sep	Chpt. 2 Energy, Energy Transfer and Analysis
Monday	9-Sep	Chpt. 3 Properties of Pure Substances
Wednesday	11-Sep	Chpt. 3 Properties of Pure Substances
Friday	13-Sep	Chpt. 3 Properties of Pure Substances
Monday	16-Sep	Chpt. 4 Energy Analysis of Closed Systems
Wednesday	18-Sep	Chpt. 4 Energy Analysis of Closed Systems
Friday	20-Sep	Chpt. 4 Energy Analysis of Closed Systems
Monday	23-Sep	Chpt. 5 Mass and Energy Analysis of Control Volumes
Wednesday	25-Sep	Chpt. 5 Mass and Energy Analysis of Control Volumes
Friday	27-Sep	Chpt. 5 Mass and Energy Analysis of Control Volumes
Monday	30-Sep	Chpt. 6 Second Law of Thermodynamics
Wednesday	2-Oct	Chpt. 6 Second Law of Thermodynamics
Friday	4-Oct	Midterm 1
Monday	7-Oct	Chpt. 7 Entropy 1
Wednesday	9-Oct	Chpt. 7 Entropy 1
Friday	11-Oct	Chpt. 8 Exergy
Monday	14-Oct	Chpt. 8 Exergy
Wednesday	16-Oct	Chpt. 9 Gas Power Cycles
Friday	18-Oct	Chpt. 9 Gas Power Cycles
Monday	21-Oct	Chpt. 10 Vapor and Combined Power Cycles
Wednesday	23-Oct	Chpt. 10 Vapor and Combined Power Cycles
Friday	25-Oct	Chpt. 11 Refrigeration
Monday	28-Oct	Chpt. 11 Refrigeration
Wednesday	30-Oct	Review
Friday	1-Nov	Midterm 2
Monday	4-Nov	Chpt. 13 Gas Mixtures
Wednesday	6-Nov	Chpt. 13 Gas Mixtures
Friday	8-Nov	Chpt. 14 Gas Vapor Mixtures and HVAC
Monday	11-Nov	Academic and Administrative Holiday
Wednesday	13-Nov	Chpt. 14 Gas Vapor Mixtures and HVAC
Friday	15-Nov	Chpt. 14 Gas Vapor Mixtures and HVAC
Monday	18-Nov	Chpt 12. Thermodynamic Property Relations
Wednesday	20-Nov	Chpt 12. Thermodynamic Property Relations
Friday	22-Nov	Chpt 12. Thermodynamic Property Relations
Monday	25-Nov	Chpt. 15 Chemical Reactions
Wednesday	27-Nov	Non-Instructional Day
Friday	29-Nov	Academic Holiday (and Thursday 28-Nov)
Monday	2-Dec	Chpt. 15 Chemical Reactions
Wednesday	4-Dec	Chpt. 15 Chemical Reactions
Friday	6-Dec	Classes End - Review
Monday	9-Dec	Reading/Review/Recitation Week
Wednesday	11-Dec	Reading/Review/Recitation Week
Friday	13-Dec	Reading/Review/Recitation Week
Monday	16-Dec	Start of Final Exam Week
Thursday	19-Dec	Final 7-10 PM