MEC ENG 40 Thermodynamics (CCN 28439)

Spring 2021, Monday, Wednesday, and Friday, 11 am to 12 pm
Wednesday January 20th to Tuesday May 11th, 2021

Instructor: Dr. David Rich
Email: davidrich@berkeley.edu, rich@reaxengineering.com
Office Hours: Tu 3-4 with Jyh-Yuan Chen and by appointment.

GSI: Neil Ramirez
Email: neil.ramirez@berkeley.edu

Text: Cengel & Boles, *Thermodynamics: An Engineering Approach (any Edition)*

Lecture: M, W, F, 11 am - 12 pm
Piazza: piazza.com/berkeley/spring2021/me40

Discussions: Tu 11 am – 12 pm
Tu 12 pm – 1 pm
Th 3 pm – 4 pm

Final Exam: Exam Group 8 Tuesday May 11th, 2021 7–10 pm

Website: bCourses – Meceng 40 001 – Lec 001

Grading (TBD):

Homework (Weekly)	15%
Midterms	50%
Discussion	5%
Final	30%

Homework: Homework is assigned online through **bCourses**. It will be scheduled weekly and due one week from assigned date.

Midterm: 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.

Zoom Links

David Rich's Personal Meeting Room
By appointment and after class
https://berkeley.zoom.us/j/9177129639
Meeting ID: 917 712 9639
One tap mobile
+12133388477,,9177129639# US (Los Angeles)
+16692192599,,9177129639# US (San Jose)

Neil Ramirez's Personal Meeting Room
By appointment
https://berkeley.zoom.us/j/96136576866?pwd=SWtGZlNEWklVMXdGeENnbm10bnZxZz09
Meeting ID: 961 3657 6866
Passcode: 334093
One tap mobile
+12133388477,,96136576866#,,,,,,0#,,334093# US (Los Angeles)
+16692192599,,96136576866#,,,,,,0#,,334093# US (San Jose)

Jyh-Yuan CHEN's Personal Meeting Room
Office Hours Tuesday 3-4 PM
https://berkeley.zoom.us/j/7042591671?pwd=b3ZxVklxbkxsLyt1N0tSN1dqTktIUT09
Meeting ID: 704 259 1671
Passcode: 801158
One tap mobile
+12133388477,,7042591671#,,,,,,0#,,801158# US (Los Angeles)
+16692192599,,7042591671#,,,,,,0#,,801158# US (San Jose)

Topic: Discussion Session Tu 11-12
https://berkeley.zoom.us/j/96659418745?pwd=S0Q1TUM4cTRudXVpZStmbXVZRXNEdz09
Meeting ID: 966 5941 8745
Passcode: 917703
One tap mobile
+16699006833,,96659418745#,,,,,,0#,,917703# US (San Jose)
+12133388477,,96659418745#,,,,,,0#,,917703# US (Los Angeles)

Discussion Session Tu 12-1
https://berkeley.zoom.us/j/96365919905?pwd=UVpuY00yeHVsUmF5N0RyM2tlOEZIQT09
Meeting ID: 963 6591 9905
Passcode: 079436
One tap mobile
+16692192599,,96365919905#,,,,,,0#,,079436# US (San Jose)
+16699006833,,96365919905#,,,,,,0#,,079436# US (San Jose)

Discussion Session Th 3-4
https://berkeley.zoom.us/j/96227778354?pwd=RndUL0hSbDhnQlNXY21NLzA2dkY2dz09
Meeting ID: 962 2777 8354
Passcode: 681396
One tap mobile
+12133388477,,96227778354#,,,,,,0#,,681396# US (Los Angeles)
+16692192599,,96227778354#,,,,,,0#,,681396# US (San Jose)

Day	Date (2021)	Action
Monday	18-Jan	Academic and Administrative Holiday (MLK)
Wednesday	20-Jan	Chpt. 1 Introduction and Basic Concepts
Friday	22-Jan	Chpt. 1 Introduction and Basic Concepts
Monday	25-Jan	Chpt. 1 Introduction and Basic Concepts
Wednesday	27-Jan	Chpt. 2 Energy, Energy Transfer and Analysis
Friday	29-Jan	Chpt. 2 Energy, Energy Transfer and Analysis
Monday	1-Feb	Chpt. 2 Energy, Energy Transfer and Analysis
Wednesday	3-Feb	Chpt. 3 Properties of Pure Substances
Friday	5-Feb	Chpt. 3 Properties of Pure Substances
Monday	8-Feb	Chpt. 3 Properties of Pure Substances
Wednesday	10-Feb	Chpt. 4 Energy Analysis of Closed Systems
Friday	12-Feb	Chpt. 4 Energy Analysis of Closed Systems
Monday	15-Feb	Academic and Administrative Holiday (Presidents Day)
Wednesday	17-Feb	Chpt. 5 Mass and Energy Analysis of Control Volumes
Friday	19-Feb	Chpt. 5 Mass and Energy Analysis of Control Volumes
Monday	22-Feb	Chpt. 5 Mass and Energy Analysis of Control Volumes
Wednesday	24-Feb	Midterm 1
Friday	26-Feb	Chpt. 6 Second Law of Thermodynamics
Monday	1-Mar	Chpt. 7 Entropy
Wednesday	3-Mar	Chpt. 7 Entropy
Friday	5-Mar	Chpt. 9 Gas Power Cycles
Monday	8-Mar	Chpt. 9 Gas Power Cycles
Wednesday	10-Mar	Chpt. 10 Vapor and Combined Power Cycles
Friday	12-Oct	Chpt. 10 Vapor and Combined Power Cycles
Monday	15-Mar	Chpt. 11 Refrigeration
Wednesday	17-Mar	Chpt. 11 Refrigeration
Friday	19-Mar	Midterm 2
Monday	22-Mar	Academic and Administrative Holiday
Wednesday	24-Mar	Academic and Administrative Holiday
Friday	26-Mar	Academic and Administrative Holiday (Cesar Chavez)
Monday	29-Mar	Chpt. 12. Thermodynamic Property Relations
Wednesday	31-Mar	Chpt. 12. Thermodynamic Property Relations
Friday	2-Apr	Chpt. 12. Thermodynamic Property Relations
Monday	5-Apr	Chpt. 12. Thermodynamic Property Relations
Wednesday	7-Apr	Chpt. 13. Gas Mixtures
Friday	9-Apr	Chpt. 14. Gas Vapor Mixtures and Air Conditioning
Monday	12-Apr	Chpt. 14. Gas Vapor Mixtures and Air Conditioning
Wednesday	14-Apr	Chpt. 14. Gas Vapor Mixtures and Air Conditioning
Friday	16-Apr	Chpt. 14. Gas Vapor Mixtures and Air Conditioning
Monday	19-Apr	Chpt. 15 Chemical Reactions
Wednesday	21-Apr	Chpt. 15 Chemical Reactions
Friday	23-Apr	Chpt. 15 Chemical Reactions
Monday	26-Apr	Chpt. 16 Chemical and Phase Equilibrium
Wednesday	28-Apr	Chpt. 16 Chemical and Phase Equilibrium
Friday	30-Apr	Chpt. 16 Chemical and Phase Equilibrium
Monday	3-May	Reading/Review/Recitation Week
Wednesday	5-May	Reading/Review/Recitation Week
Friday	7-May	Reading/Review/Recitation Week
Monday	10-May	Start of Final Exam Week
Tuesday	11-May	Final Exam Group 8 (7-10 PM)