UNIVERSITY OF CALIFORNIA **ME 40 Thermodynamics**
Mechanical Engineering **Professor C. Fernandez-Pello**
Spring 2017

Lecture: MWF 1:00-2:00, VLSB #2060

Discussion: Tu 12:00-1:00 Donner Lab 155
Fr 9:00-10:00 Etcheverry Hall 3108

Instructor: Professor Carlos Fernandez-Pello, 6105A Etcheverry Hall,
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Office hours: MWF 11:00-12:00 in 6105A Etcheverry Hall, and by appointment

Text: *Thermodynamics: An Engineering Approach, Y.A. Cengel and M. A. Boles, McGraw Hill*

Problem Sets: Weekly, due on Friday

Grading Policy: Homework 20%, Two Mid-terms 40%, Final Exam 40%

Teaching Assistants/GSIs:

Charles Scudiere – cascudiere@berkeley.edu
Office hours: Tu & Th 1:00-3:00 in 136 Hesse Hall

Je Ir Ryu – jryu@berkeley.edu
Office hours: W 2:00-4:00, F 10:00-12:00 in 136 Hesse Hall

Week	Topics	Chapter
1 (1/18)	Introduction and basic concepts of thermodynamics.	1
2 (1/23)	General Energy Analysis	2
3 (1/30)	Thermodynamic properties and states. Property diagrams for phase change. The first law of thermodynamics	3/4
4 (2/6)	The first law of thermodynamics for closed systems, and applications	4
5 (2/13)	The first law of thermodynamics for control volumes. Analysis and applications to practical systems	5
6 (2/20)	The first law of thermodynamics review. **MT 1 (2/24)**	1-5
7 (2/27)	The second law of thermodynamics for enclosed systems and control volumes.	6
8 (3/6)	Entropy, and property diagrams involving entropy. Reversible work and irreversibility. Isentropic processes	7
9 (3/13)	The first and second law of thermodynamics review.	1-7
10 (3/20)	Gas and vapor power cycles	
11 (3/27)	Spring Recess	9,10
12 (4/3)	Refrigeration cycles. Review. **MT 2 (4/7)**	11
13 (4/10)	Gas mixtures	13
14 (4/17)	Gas vapor mixtures. Air conditioning	14
15 (4/24)	Review	
(5/9)	**FINAL 8:00-11:00**	