CALIFORNIA STATE POLYTECHNIC UNIVERSITY, POMONA

Mechanical Engineering Department

Thermodynamics ME 301

Winter 2017

Textbook: “Thermodynamics: An Engineering Approach” (8th edition) by Cengel and Boles

 Text Reading

Meeting Date Topic Assignment

 1 1/4 Introduction 1-1

 2 1/6 Concepts and Definitions 1-2 to 1-10

 3 1/9 Energy 2-1 to 2-4

 4 1/11 Energy; Properties of Pure Substances 2-4 to 2-7; 3-1 to 3-4

 5 1/13 Properties of Pure Substances 3-4 to 3-5

 6 1/16 HOLIDAY ---

 7 1/18 Properties of Pure Substances 3-5, 3-6

 8 1/20 Properties of Pure Substances; 3-6 to 3-8; 4-1

 Energy Analysis of Closed Systems

 9 1/23 Energy Analysis of Closed Systems 4-1, 4-2; 1-11

 10 1/25 Energy Analysis of Closed Systems 4-2

 11 1/27 Energy Analysis of Closed Systems 4-2 to 4-4

 12 1/30 Energy Analysis of Closed Systems 4-4 to 4-5

 13 2/1 Energy Analysis of Closed Systems; 4-5; 5-1

 Energy Analysis of Open Systems

 14 2/3 Energy Analysis of Open Systems 5-2 to 5-4

 15 2/6 MIDTERM #1 (Ch. 1 through Section 4-2) ---

 16 2/8 Energy Analysis of Open Systems 5-4

 17 2/10 Energy Analysis of Open Systems 5-5

 18 2/13 Energy Analysis of Open Systems; 5-5; 6-1 to 6-4

 Second Law of Thermodynamics

 19 2/15 Second Law of Thermodynamics 6-5 to 6-11

 20 2/17 Entropy 7-1, 7-2

 21 2/20 Entropy 7-2

 22 2/22 Entropy 7-3 to 7-6

 23 2/24 Entropy 7-7 to 7-9

 24 2/27 MIDTERM #2 (Section 4-3 through 7-1) ---

 25 3/1 Entropy 7-9 to 7-10, 7-12

 26 3/3 Entropy 7-12

 27 3/6 Entropy; Gas Power Cycles 7-12; 9-1 to 9-3

 28 3/8 Gas Power Cycles 9-8

 29 3/10 Gas Power Cycles; Review 9-8