

**COURSE SYLLABUS**  
**MECH 332 - THERMODYNAMICS - 3 UNITS**  
**California State University, Chico**

**Instructor:** Dr. Webster Johnson (“Dr. J.”), OCNL 418, 898-5579, [wjohnson@csuchico.edu](mailto:wjohnson@csuchico.edu)

**Office hours:** Mon 12:30-2:30 PM, Tu 12-1 PM, Th 12-1 PM.

**Class hours:** MECH 332-01, MWF 10-10:50AM, HOLT 266  
 MECH 332-02 , MWF 11-11:50 AM, HOLT 266

**Prerequisites:** PHYS 204A, Mechanics

**Textbook** *Thermodynamics: Engineering Approach* by Cengel & Boles  
 Campus bookstore: 9th edition (hardcopy 1-term rental or Loose leaf)  
 Internet sources: 7th or 8th editions (hardcopy)

**Exams are open book, but the book must be a hard-copy. E-books are not permitted.**

The ASME student chapter at Chico State prints a booklet of thermodynamic property data. The price for the booklet is \$15.00. Thermodynamic tables are also available on Bb Learn.

**Grading:**

Homework & Activities	20%
Midterm Exams (3)	55%
Final Exam	25%

**Grade Schema**

A	A-	B+	B	B-	C+	C	C-	D+	F
>=	>=	>=	>=	>=	>=	>=	>=	>=	<
93.33	90.00	86.67	83.33	80.00	76.67	73.33	70.00	65.00	65.00

**Homework & Activities**

There will be 10 or 11 homework problem sets assigned during the semester. Problem solutions must be neat, legible, numbered, arranged in assigned order, written on only one side of the paper, and stapled. Fold the problem set lengthwise and write your name, assignment number, and section number on the outside.

Solution analysis must follow a specific methodology, which is outlined in section 1-11 of the textbook and used for all text examples. No homework points will be given for solutions that appear to be copied from a solutions manual.

Unannounced activities will be sporadically assigned in the lectures. They will be typically 10 to 20 minutes long and be due at the end of lecture.

**Examinations:**

There will be three 50-min Midterm Exams and a 110-min Final Exam. The Final Exam will be comprehensive but have emphasis on those topics covered after the last midterm exam.

The exams are open book (hard copy only). Use of a Thermodynamics Property Tables booklet is allowed.. A scientific calculator is permitted but other electronic devices must be put away. The formula sheets provided on Bb Learn are permitted.

**If you know you are going to miss an exam due to illness or other legitimate reason, you must contact me before the exam.** Make-up exams are only allowed for pre-arranged, legitimate absences.

**Cell Phones:**

All alert sounds on your cell phone must be turned off during class. Cell phone use during class will not be tolerated, except for emergency situations (911).

**Academic Integrity:** Students are expected to be familiar with the University's Academic Integrity Policy. Your own commitment to learning, as evidenced by your enrollment at California State University, Chico, and the University's Academic Integrity Policy requires you to be honest in all your academic course work. Faculty members are required to report all infractions to the Office of Student Judicial Affairs. The policy on academic integrity and other resources related to student conduct can be found at: <http://www.csuchico.edu/sjd/integrity.shtml>. Copying solutions from other sources is a form of plagiarism and punishable in accordance with the University Academic Integrity Policy.

**Accessibility Services:** If you need course adaptations or accommodations because of a disability or chronic illness, or if you need to make special arrangements in case the building must be evacuated, please see me during office hours soon as possible. Students with disabilities requesting accommodations must register with Accessibility Resource Center (ARC) to establish a record of their disability. ARC will help you understand your rights and responsibilities under the Americans with Disabilities Act and provide you further assistance with requesting and arranging accommodations. Special accommodations for exams require ample notice to the testing office and must be submitted to the instructor well in advance of the exam date. The ARC website is <http://www.csuchico.edu/arc>.

**Primary Course Objective:** To analyze the performance of thermal-fluid devices and systems by applying the conservation of energy principle (1st Law of Thermodynamics) and the limitations imposed by the 2nd Law of Thermodynamics.

**Schedule** Subject to changes with fair notice

Term Wk	Week of	Topic	Chap	Sections
1	26-Aug	Intro & Basics	1	1.1--1.9, 1.11
2	2-Sep	Energy & 1st Law	2	2.1-2.7
3	9-Sep	Properties	3	3.1-3-8
4	16-Sep	Properties		
5	23-Sep	Closed Systems	4	4.1--4.5
6	30-Sep	Closed Systems		
7	7-Oct	Control Volumes	5	5.1-5.4
8	14-Oct	Control Volumes		
9	21-Oct	2nd Law	6	6.1--6.8
10	28-Oct	2nd Law		
11	4-Nov	Entropy	7	7.1-7-12
12	11-Nov	Entropy		
13	18-Nov	Gas Power Cycles	9	9.1-9.7, 9.11
—	25-Nov	FALL BREAK		
14	2-Dec	Vapor Power Cycles	10	10.1--10.5
15	9-Dec	Vapor Power Cycles		

**Exam Dates**

27-Sep	Exam 1 (1-3)
25-Oct	Exam 2 (4-5)
22-Nov	Exam 3 (6-7)
16-20 Dec	Final (9-10, Comprehensive)