

## **ChE 230 -103 – Chemical Engineering Thermodynamics I Fall 2017**

**Instructor:** Nida Riaz  
Department of Chemical, Biological and Pharmaceutical Engineering  
Email: [nsr22@njit.edu](mailto:nsr22@njit.edu)

**Class Hours:** Wednesday, 6: 00PM – 9: 05 PM, WEST LECT 1  
**Office Hours:** By Appointment

**ChE 230W-103:** Wednesday, 9:10 PM – 10:00 PM, WEST LECT 1  
TA: “Nick” Yung-Hao Tsou  
TA Email: yt99@njit.edu

**Textbook:**  
Introduction to Chemical Engineering Thermodynamics, 8<sup>th</sup> Edition –Smith, Van Ness,  
(ISBN#: 1259696529)  
[If you have the 7<sup>th</sup> Edition - the content, page numbers, homework problems, etc. may vary.]

**Description:**  
Thermodynamics is a science and engineering tool used to describe processes that involve changes in temperature, transformation of energy, and the relationship between heat and work. ChE 230 is one of the three introductory Chemical Engineering courses that form the foundation for fundamental principles. The concepts presented in this course will be recurring throughout your entire ChE career. It is a priority to put in all the necessary effort in learning and understanding the information now.

**Attendance:**  
Attendance is mandatory. You must notify the instructor in advance if possible of any absence by sending an email stating the date and reason for the absence. If you are absent for up to two class periods because of illness or injury, an email message stating the reason for absence will be sufficient. If you are absent from more classes because of illness or injury, verification of a visit to a health care professional may be required.

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**Homework:**

Homework will not be collected. The assigned homework problems are additional problems to work on at home. The homework will not be graded but similar problems will be tested on exams. You are highly recommended to do the homework problems and bring questions to class. The TA will go over homework problems.

**In-Class Activity:**

In-Class Activities will be collected and graded. This class is split up into (1) lecture and (2) in-class activity. The lecture will consist of discussion problem solving. The in-class activity will consist of additional problem solving. The in-class assignment will be collected at the end of the period and graded.

**Quizzes:**

There will be three take-at-home-quizzes during the semester. Quizzes will be conducted on Moodle. There will be no makeup quizzes. Quizzes will test you on concepts as well as problem solving.

Quiz 1: Closes Sep 30

Quiz 2: Closes Nov 4

Quiz 3: Closes Dec 9

**Examinations:**

There will be three 90- minute examinations during the semester and a comprehensive final exam. All exams are open textbook/ instructor lecture notes.

**Course Grading:**

In-Class Activities	7.5%
Quizzes	7.5%
Exam 1	20%
Exam 2	20%
Exam 3	20%
Final Exam	25%
Total	100%

**Final Course Grades:**

85-100%	A
80-84%	B+
75-79%	B
70-74%	C+
65-69%	C
55-64%	D
< 55%	F

**2017 Fall Semester Schedule:**

<b>Class</b>	<b>Date</b>	<b>Sections</b>	<b>Homework</b>
1	Sep 6	Intro & Chapter 1	Chapter 1: 7 <sup>th</sup> Edition: 5, 8, 16, 18, 22 8 <sup>th</sup> Edition: 6, 9, 19, 21, 27
2	Sep 13	Chapter 2	Chapter 2: 7 <sup>th</sup> Edition: 1, 5, 18, 30, 36, 42 8 <sup>th</sup> Edition: 1, 6, 19, 32, 40, 46
3	Sep 20	Chapter 2 & Review	
4	Sep 27	<b>Exam 1</b>	<b>Chapter 1 &amp; 2</b> Quiz 1: Closes Sep 30
5	Oct 4	Chapter 3	Chapter 3: 7 <sup>th</sup> Edition: 6, 9, 18, 22, 24, 35, 38b, 45, 49, 55, 65a 8 <sup>th</sup> Edition: 11, 19, 28, 32, 35, 50, 53b, 60, 67, 73, 82
6	Oct 11	No class	
7	Oct 18	Chapter 4	Chapter 4: 7 <sup>th</sup> Edition: 1b, 3, 7, 9a, 11a, 20, 21c, 45e 8 <sup>th</sup> Edition: 1b, 4, 8, 10a, 12a, 22, 23c, 49e
8	Oct 25	Chapter 4 & Review	
9	Nov 1	<b>Exam 2</b>	<b>Chapter 3 &amp; 4 (Nida will not be here, TA will conduct exam)</b> Quiz 2: Closes Nov 4
10	Nov 8	Chapter 5	Chapter 5: 7 <sup>th</sup> Edition: 3, 9, 18e, 26, 27b, 30, 38, 39b, 47b 8 <sup>th</sup> Edition: 3, 9, 18e, 26, 27b, 30, 38, 39b, 47b
11	Nov 15	Chapter 6	Chapter 6: 7 <sup>th</sup> Edition: 7, 9, 10, 14c, 22, 24, 28, 32, 37, 39, 41, 47, 64, 65, 80 8 <sup>th</sup> Edition: 7, 9, 10, 19, 21, 25, 29, 34, 36, 38, 44, 61, 62, 77
12	Nov 22	<b>NO CLASS</b>	<b>NO CLASS ☺ – Friday Schedule</b>
13	Nov 29	Chapter 6 & Review	
14	Dec 6	<b>Exam 3</b>	<b>Chapter 5 &amp; 6</b> Quiz 3: Closes Dec 9
15	Dec 13	Review	
16	Dec 20	<b>Final Exam</b>	<b>Cumulative</b>