

# AME 414

## Engineering Thermodynamics II

Spring 2020, RTH 109, M, W 12:30 pm - 1:50 pm

**Instructor:** Fokion N. Egolfopoulos, Professor AME Dept.  
Office: OHE 400B  
Tel: 740-0480  
E-mail: egolfopo@usc.edu  
Office Hours: Anytime by appointment

**Teaching Assistant:** Zhenghong Zhou  
E-mail: zhenghoz@usc.edu  
Office Hours: Anytime by appointment

**Text:** *Fundamentals of Thermodynamics*, by  
Borgnakke & Sonntag (8<sup>th</sup> edition)

### WEEKS

1  
2, 3  
4, 5, 6  
6, 7  
8  
9  
10  
11  
12, 13  
14, 15

### TOPICS

Review of AME 310 (Chapters 1-6)  
Second Law of Thermodynamics and Exergy (Chapters 7 & 8)  
Power and Refrigeration systems (Chapters 9 & 10)  
Gas Mixtures (Chapter 11)  
Thermodynamic Relations (Chapter 12)  
Chemical Reactions (Chapter 13)  
Spring Break  
Chemical Reactions (Chapter 13)  
Introduction to Phase and Chemical Equilibrium (Chapter 14)  
Introduction to Equilibrium Electrochemistry (Notes)

<b>Grading:</b>	Midterm Exam #1	February 24 (M)	(12:45 pm - 1:45 pm)	20%
	Midterm Exam #2	March 30 (M)	(12:45 pm - 1:45 pm)	20%
	Final Exam	May 8 (F)	(11:00 am - 1:00 pm)	40%
	Homework Assignments			20%

### **Remarks:**

- Homework assignments will be given every Monday and will be due the following Monday; late work will not be accepted.
- The use of laptops or cell phones to access the internet/e-mail during class and/or exams is not allowed. Such devices are allowed only to access material pertaining to the class.**