Adnan Menderes Üniversitesi
Mühendislik Fakültesi

ME 407 THERMODYNAMICS II (Section: AA01)

Fall 2019
Room 208 (Aydın Menderes Derslikleri)

Tuesday 09:30AM - 12:15AM

***Instructors*:** **Prof. Dr. Yunus ÇERÇİ,** **ycerci@adu.edu.tr**
Res. Asst. Orçun EKİN, **orcun.ekin@adu.edu.tr**

Week 1	***Sep 24***	Chapter 9 Gas Power Cycles
Week 2	***Oct 1***	Chapter 9 Gas Power Cycles
Week 3	***Oct 8***	**Quiz #1** Chapter 9 Gas Power Cycles
Week 4	***Oct 15***	**Quiz #2** Chapter 10 Vapor and Combined Cycles
Week 5	***Oct 22***	**Quiz #3** Chapter 10 Vapor and Combined Cycles
Week 6	***Oct 29***	**Holiday (Republic Day)**
Week 7	***Nov 5***	**Quiz #4** Chapter 10 Vapor and Combined Cycles Chapter
Week 8	***Nov 12***	**Midterm week**
Week 9	***Nov 19***	**Midterm week**
Week 10	***Nov 26***	Chapter 11 Refrigeration Cycles
Week 11	***Dec 3***	**Quiz #5** Chapter 11 Refrigeration Cycles
Week 12	***Dec 10***	Chapter 14 Gas-Vapor Mixtures and Air-Conditioning
Week 13	***Dec 17***	**Quiz #6** Chapter 14 Gas-Vapor Mixtures and Air-Conditioning
Week 14	***Dec 24***	**Quiz #7** Chapter 14 Gas-Vapor Mixtures and Air-Conditioning
Week 15	***Dec 31***	Chapter 15 Chemical Reactions
Nov 11-24: Midterm **Jan 4 - 19: Final Exam** **Jan 20 - 26: Make-up Exam**		

Textbook: (Required)	**Thermodynamics: An Engineering Approach,** 9th ed in SI Units Yunus A. Çengel-Michael A. Boles, McGraw-Hill Education. Pandora Kitapevi, www.pandora.com.tr; (212) 287-3169 İstanbul
Attendance:	At least 80% attendance required.
Grading:	Quizzes **(6)** 25%; Midterm **(1)** 35%, Final Exam **(1)** 40%
Office hours:	**Prof. Yunus ÇERÇİ: Monday 13:30 – 15:30** **Res. Asst. Orçun EKİN: Monday 13:30 – 15:30**
Notes:	• Textbook is required. The course is designed around the textbook, which is mandatory. • All quizzes will start at 09:30 on Tuesdays, and will be about 10 to 30-minutes long. • No make-up quizzes will be given regardless of excuse. You may miss one quiz without any penalty (if you take all quizzes, the lowest grade will be dropped). • Some quizzes and/or the final will be **open-book**. No other reference material will be allowed except a dictionary.

Course Objectives:

The objective of this course is to gain thermodynamics cycles, making cycle calculations by using basic thermodynamics principle, and to analyze the skill of gathering related engineering devices to generate a cycle, the parameters that effect cycle effiency, laws of thermodynamics on ideal gas mixtures, varied moist air processes (like air conditioning processes) by using fundamental relations and charts.

Learning Outcomes:

1. Analyzing air conditioning processes.
2. Incorporating the effect of enhancements such as reheat, superheat, regeneration and intercooling into cycles
3. Applying thermodynamic property changes of real gases and their mixtures to thermodynamic systems.
4. Performing thermodynamic analysis and performance predictions of vapor and combined power cycles.
5. Performing thermodynamic analysis and performance predictions of gas power cycles.