

MENG541 – Advanced Thermodynamics

Department: Mechanical Engineering		
Program Name: Mechanical Engineering		Program Code: 23
Course Code: MENG541	Credits: 3 (3,0)	Year/Semester: 2016 - 2017 Spring
Prerequisite(s): N/A		
Catalog Description: A brief background to the fundamentals of thermodynamics. First law of thermodynamics. Second law of thermodynamics. Introduction to Entropy. Exergy and exergetic analysis for systems. Entropy generation or exergy destruction.		
Course Web Page: http://me.emu.edu.tr/atikol/me541.htm		
Textbook(s): <i>Course notes/presentations are available at the bookstore.</i>		
Reference Books : <ol style="list-style-type: none"> 1. Adrian Bejan, Advanced Engineering Thermodynamics, 3rd Ed., Wiley. 2. Ibrahim Dinçer and Marc A. Rosen, Exergy, 2nd Ed., Elsevier. 3. Yunus A. Çengel and Michael A. Boles, Thermodynamics: An engineering Approach, 8th Ed., Mc Graw Hill. 		
Topics Covered and Class Schedule: (3 hours of lectures per week) Week 1-2 Fundamentals Weeks 3-4 Second Law of Thermodynamics Weeks 5-6 Introduction to Entropy Weeks 7-8 Exergy and Exergy Analysis Weeks 9-10 Mid-Term Examination Weeks 11 Examples of Exergy Analysis Week 12-13 Entropy Generation or Exergy Destruction Weeks 14 Completions of Term-project Presentations Week 15: Final Examination Period		

Term Assignment: Each student is expected to choose a term assignment in which they produce a paper at the end of the semester. Students are also required to make presentations during the semester. <u>Completion of the term assignment is a requirement to pass the course.</u>			
	Method	Dead-Line	Percentage
Assessment	Midterm Exam	N/A	30%
	Term Assignment-1 (Presentation)*	16 th May 2017	10 %
	Term Assignment-2 (Report)**	1 st June 2017	40%
	Homeworks	N/A	20%
Prepared by: Prof. Dr. Uğur Atikol		Date Prepared: February 2017	

* Short presentation on the selected seminar topic (30 mins)

** Submission of the report on the seminar topic in the format of a paper.

NG Policy: Students who do not attend any two of the above assessment activities (such as mid-term exam, term assignment etc.) will be given NG (Nil Grade).