MENG245 – Thermodynamics 1										
Eastern Mediterranean University										
Faculty of Engineering										
		anical Engineering	* 7 /0		app n i a					
	n Code: 23	Program: Mechanical Engineering	Year/Semes	ter: 2021-2022	SPRING					
Course		Course Title:		Credit hours						
MENG2	45	Thermodynamics 1	Lecture	Tut/Lab	Total					
TD 6			3	1	3					
Type of			Hourly Con		(0)					
	neering or A		Basic Sci		(2)					
_	_	rse offered by other programs		evel Mathematic						
	neering or A	Basic Sciences		Engineering Proing Design						
	eral Education			ing Science	(-) (2)					
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	on 5 Subject	Area: mathematics and basic sciences with exp	parimental ave	arianca annronsi	iate to the					
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		opics appropriate to the program, consist	ing of engines	ring and comput	ter sciences					
	-	gn, and utilizing modern engineering too	-	ing and compa	tor serences					
		tion component that complements the tec		t of the curriculu	ım and is					
		ogram educational objectives.								
	-	major engineering design experience that	at							
				onstraints						
		 1) Incorporates appropriate engineering standards and multiple constraints 2) Based on the knowledge and skills acquired in earlier course work. 								
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	<u> </u>	on the knowledge and skins acquired in e	earner course	work.						
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Course Learning Outcomes			Student Outcomes						Assessment	
			2	3	4	5	6	7	Percentages	
1	Understand properties of real substances, such as steam and ideal gases	X								
	Learn how to use tabular data and equations of state	X								
3	Understand and use the process diagrams	X							Midterm Exam: 30% Final Exam: 45%	
4	Understand closed systems and control volumes	X							Quizes: 10% Experiments.: 15%	
5	Understand the first law and its basic applications	X								
6	Understand the second law and its basic applications	X					X			
7	Understand entropy generation	X					X			
	Weight of Student Outcomes	H					M			

Topics Covered and Class Schedule:				
Week 1	Fundamentals			
Week 2	Pure substances			
Week 3	Pure substances			
Week 4	First law of thermodynamics: Closed systems			
Week 5	First law of thermodynamics: Closed systems			
Week 6	First law of thermodynamics: Open systems			
Week 7	First law of thermodynamics: Open systems			
Week 8 & 9	Midterm Examination			
Week 10	Second law of thermodynamics			
Week 11	Second law of thermodynamics			
Week 12	Entropy			
Week 13	Entropy			
Week 14	Exergy			
Week 15	Final Examination			

Laboratory Work						
No.	Experiment Title and Equipment Used	CLO	SO	Percentage		
1	Title: Absolute zero temperature experiment	1	6	5%		
	Equipment: Fast response temperature sensor and pressure connector					
2	Title: Heat engine experiment	6	6	5%		
	Equipment: Piston cylinder arrangement with a mass platform					
	connected to the piston					
3	Title: Electric kettle boiling water experiment (home experiment)	5	6	5%		
	Equipment: The equipment is to be provided by the student					

Important Notes Regarding the Course: University rules and regulations are applied to this course. For details, please see http://mevzuat.emu.edu.tr

Exam and Quiz Policy:

The midterm and final exams, and quizzes are CLOSED book.

Makeups:

- 1. There is no make-up or resit for the Quiz and Labs.
- 2. A student who fails to sit for an examination for a valid reason is given a make-up exam. Within three working days after the examination, students who wish to take a make-up must submit a **written statement** to the course instructor explaining the reason(s) for his/her request.
- 3. Eligibility to take a **Make-Up Exam**:
 - a. Students can only take ONE make-up exam (either the mid-term or the final exam).
 - b. Student must contact the Instructor immediately within "three working days" after the examination when (s)he has missed the mid-term exam or final exam and to discuss with the faculty about the date and time to take the make-up exam.
 - c. Student must secure a "Make-Up Exam Form" from the department Office or from instructor website & fill-out the Form. For each Make-Up Exam, please use separate Form.
 - d. Student must secure the approval from the instructor for taking the Make-Up Exam.
 - e. Failure to take the Make-Up Exam at the agreed date and time will lead to a "NG" Grade for the Make-Up Exam, midterm or final.

NG Policy:

Students who do not attend any two of the above assessment activities (such as lab, mid-term exam, etc.) will be given NG (Nil Grade). Also Students attending less than 70% of the classes and/or labs will be given NG (Nil Grade). Students who obtain less than 50% in the labs will also obtain NG.

Appeals:

Any appeal against the marks of any assessment component must be made to the course instructor in writing within one week following the announcement of the marks. Any appeal concerning a semester grade must be made to the course instructor no later than the end of the registration period of the following semester.