

YILDIZ TECHNICAL UNIVERSITY
DEPARTMENT OF MECHANICAL ENGINEERING

THERMODYNAMICS I – MAK2091

G 6
Fall 2023-2024

Instructor: Asst. Prof. Dr. Merve ÖZTÜRK, merveoz@yildiz.edu.tr
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Week 1	06.10.2023	Chapter 1 - Introduction and Basic Concepts
Week 2	13.10.2023	Chapter 2 – Energy, Energy Transfer and General Energy Analysis
Week 3	20.10.2023	Chapter 3 - Properties of Pure Substances
Week 4	27.10.2023	Chapter 4 - The First-Law Analysis of Thermodynamics for Closed Systems
Week 5	03.11.2023	Chapter 4 - The First-Law Analysis of Thermodynamics for Closed Systems
	04.11.2023	Problem Session - I: Chapters 1, 2, 3 and 4 (at 13:00-15:00, online)
Week 6	10.11.2023	Chapter 5 - The First-Law Analysis of Thermodynamics for Control Volumes
Week 7	17.11.2023	Chapter 5 - The First-Law Analysis of Thermodynamics for Control Volumes
	18.11.2023	Problem Session - II: Chapter 5 (at 13:00-15:00, online)
Week 8		Midterm 1 - Chapters 1, 2, 3, 4 and 5
Week 9	01.12.2023	Chapter 6 - The Second Law of Thermodynamics
Week 10	08.12.2023	Chapter 6 - The Second Law of Thermodynamics
	09.12.2023	Problem Session - III: Chapter 6 (at 13:00-15:00, online)
Week 11	15.12.2023	Chapter 7 - Entropy
Week 12	22.12.2023	Chapter 7 - Entropy
	23.12.2023	Problem Session - IV: Chapter 7 (at 13:00-15:00, online)
Week 13	29.12.2023	Chapter 8 – Exergy + Midterm 2 - Chapters 1, 2, 3, 4, 5, 6, 7 (at first session)
Week 14	05.01.2023	Chapter 8 – Exergy
	06.01.2024	Problem Session - V: Chapter 8 (at 13:00-15:00, online)
		Final Examination

<i>Textbook:</i>	Thermodynamics: An Engineering Approach Yunus Çengel-Michael Boles, McGraw-Hill Education.
<i>Grading:</i>	60% midterm examinations 40% final examination
<i>Notes:</i>	• Textbook is required and the course is prepared from the textbook, which is mandatory. • 70% attendance is mandatory. • Both midterm and final exam will be based on open book. No other reference material will be allowed except for a dictionary. • Most examination questions will come (possibly with some modifications) from the end-of-chapter problems of the textbook. Students are encouraged to solve as many of those problems as possible. • Students are also suggested to study the upcoming topic before the lecture and solve a few questions after the lecture. The course has abstract topics and is difficult to understand, especially for the students whom English is not their mother language. • Cheating, plagiarism, and any other misrepresentations are strictly prohibited. Students violating these rules receive severe sanctions including a failing grade in the course and, depending on the circumstances, possible expulsion from the School.

2023-2024 Fall - Thermodynamics I – Problem Sessions Dates and Times

Problem Session - I: 4 November at 13:00-15:00 Content: Chapter 1-2-3-4

Res. Asst. Emre Arpacı

Attendance Link:

https://teams.microsoft.com/l/meetup-join/19%3ameeting_ZjkwMWNmOWEtMTBmYy00NDcxLTlmZDEtYTZmMGVkYmJhNTJk%40thread.v2/0?context=%7b%22Tid%22%3a%2285602908-e15b-43ba-9148-38bc773a816e%22%2c%22Oid%22%3a%2299407697-da72-40f4-bc1b-a7d86936b2a4%22%7d

Problem Session - II: 18 November at 13:00-15:00 Content: Chapter 5

Res. Asst. Emre Arpacı

Attendance Link:

https://teams.microsoft.com/l/meetup-join/19%3ameeting_NzBhMzAxYTMtZDg1Yy00ZDkyLTg2OTItMzc1MWE3NGY1NTRI%40thread.v2/0?context=%7b%22Tid%22%3a%2285602908-e15b-43ba-9148-38bc773a816e%22%2c%22Oid%22%3a%2299407697-da72-40f4-bc1b-a7d86936b2a4%22%7d

Problem Session - III: 09 December at 13:00-15:00 Content: Chapter 6

Res. Asst. Emre Arpacı

Attendance Link:

https://teams.microsoft.com/l/meetup-join/19%3ameeting_NjAwYWVhYTQ0NmY4OC00MmU4LTlkZDA0ODMxZDk4NjI5N2Ux%40thread.v2/0?context=%7b%22Tid%22%3a%2285602908-e15b-43ba-9148-38bc773a816e%22%2c%22Oid%22%3a%2299407697-da72-40f4-bc1b-a7d86936b2a4%22%7d

Problem Session - IV: 23 December at 13:00-15:00 Content: Chapter 7

Res. Asst. Şafak Metin Kırkar

Attendance Link:

https://teams.microsoft.com/l/meetup-join/19%3ameeting_YjY3MDRjMjEtM2Q0My00ZmU5LWFhMzYtM2VkMmNhZDZjYWNh%40thread.v2/0?context=%7b%22Tid%22%3a%2285602908-e15b-43ba-9148-38bc773a816e%22%2c%22Oid%22%3a%226ef90a1e-ce81-4b65-a576-76e69f1f738a%22%7d

Problem Session - V: 06 January at 13:00-15:00 Content: Chapter 8

Res. Asst. Şafak Metin Kırkar

Attendance Link:

https://teams.microsoft.com/l/meetup-join/19%3ameeting_Nzc5NDM1YWQ0ZDk0ZDcxLWFhMzYtM2VkMmNhZDZjYjIw%40thread.v2/0?context=%7b%22Tid%22%3a%2285602908-e15b-43ba-9148-38bc773a816e%22%2c%22Oid%22%3a%226ef90a1e-ce81-4b65-a576-76e69f1f738a%22%7d