Adnan Menderes Üniversitesi
Mühendislik Fakültesi

ME 410 SOLAR ENERGY (Section: AA01)

Spring 2020
Room 209 (Aydın Menderes Derslikleri)

Monday 13:30PM - 16:15PM

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

Week 1	***Feb 4***	Chapter 1 Solar Radiation
Week 2	***Feb 11***	Chapter 1 Solar Radiation
Week 3	***Feb 18***	**Quiz #1** Chapter 1 Solar Radiation
Week 4	***Feb 25***	Chapter 2 Available Solar Radiation
Week 5	***March 3***	**Quiz #2** Chapter 2 Available Solar Radiation
Week 6	***March 10***	**Quiz #3** Chapter 2 Available Solar Radiation ems
Week 7	***March 17***	**Quiz #4** Chapter 3 Selected Heat Transfer Topics
Week 8	***March 24***	**Midterm week**
Week 9	***March 31***	**Midterm week**
Week 10	***April 7***	Chapter 3 Selected Heat Transfer Topics Chapter
Week 11	***April 14***	Chapter 4 Radiation Characteristic of Opaque Materials
Week 12	***April 21***	**Quiz #5** Chapter 5 Radiation Transmission through Glazing: Absorbed Radiation
Week 13	***April 28***	**Quiz #6** Chapter 6 Flate-Plate Collectors Chapter 7 Concentrating Collectors
Week 14	***May 5***	Chapter 8 Energry Storage
Week 15	***May 12***	**Quiz #7** Chapter 9 Solar Process Loads
March 23 - April 5: Midterm Exam **June 1 - June 14: Final Exam** **June 15 - 21: Make-up Exam**		

Textbook: (Required)	**Solar Engineering of Thermal Processes,** 4th ed. John A. Duffie, William Beckman, John Wiley & Sons Inc. 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% Projects **(1)** (15%)
Office hours:	**Prof. Yunus ÇERÇİ: Monday 09:30 – 11:30** **Res. Asst. Orçun EKİN: Monday 09:30 – 11:30**
Notes:	• Textbook is required. The course is designed around the textbook. • All quizzes will start at 13:30 on Tuesday, 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 midtherm and the final will be **open-book or given fomula sheet**. No other reference material will be allowed except a dictionary.

Course Objectives:

The objective of this course is to provide a basic understanding of fundamental principles of solar energy and practical applications of solar energy, and to learn about how solar energy systems are designed.

Learning Outcomes:

1. Describing the importance of solar energy as one of the renewable energy sources.
2. Recognizing the solar powered water heating and other systems and their operation.
3. Employing calculation methods used in the design and selection of solar powered water.
4. Describing the characteristics and applications of solar energy.
5. Recognizing components and operation of the solar powered systems.