

**Cankaya University
Faculty of Engineering
Mechanical Engineering Department**

**ME 510 Conduction Heat Transfer
Course Policy**

Spring 2017

**Prof.Dr.Nevzat Onur
Office LA20**

Objective

To acquire fundamental understanding and skill in the mathematical formulation, solution and analysis of conduction heat transfer problems. To develop the necessary ability to carry out independent critical study, read and understand advanced scholarly and technical literature in the field and to create viable and effective proposals for the solution of real-world heat conduction problems.

Text Book

Heat Conduction 4th Edition, Y.Yener ,S.Kakac CRC Press 2008

Reference Text Book

Heat Conduction 3e
D.W.hahn and M.N.Ozisik
Wiley 2012

Course Material

The first part of the course covers the formulation of the heat equation in various coordinate systems and the development of analytical methods for steady and transient one- and multidimensional heat conduction.

Analytical methods covered include, fundamental solutions, separation of variables, Laplace method and approximate integral methods. The second part of the course is devoted to the application of heat conduction theory to the solution of specific technical problems.

Course Format

The format of the class consists of lectures, in-class exercises, homework assignments, reading and research assignments, computer laboratory assignments and student presentations. Students must quickly become familiar with the Matlab or Maple programming language.

Homework Assignments

Weekly homework will be assigned to reinforce and expand understanding of the material covered in class.

Reading Assignments

Students will be responsible for reading through and understanding the course textbook in its entirety. Additional readings will be assigned to cover selected special topics or to expand coverage beyond what it is found in the textbook.

Exam

There will be a midterm and a comprehensive final exam.. Exam questions will be similar in form and style to questions asked during in-class exercises and in homework assignments. The likelihood of successful performance in the exam will be significantly increased by sustained, dedicated work by the students on the classwork homework and readings .

Grading

**Grading will be assigned according to the following scheme. Midterm: 30 percent
Homework 20 percent Final Exam : 50 percent**

Office Hours

By appointment .

Code of Ethics

Ethical and professional conduct is expected from everyone. Violations of this code such as academic dishonesty, misrepresentation and plagiarism will not be tolerated. Failing grades will be assigned to any student who is found to engage or participate in unethical behavior.