

## ME-407 HEAT TRANSFER

**Textbook: AN INTRODUCTION TO HEAT TRANSFER, Fifth edition**  
by Frank P. Incropera and David P. DeWitt, John Wiley & Sons 2007  
Reference: Heat Transfer Calculations by Myer Kutz,(Editor) McGraw Hill 2006

WK	TOPICS	PAGES	CH	PROBLEMS*
1	Introduction	2-38	1	1.9; 1.18; 1.30, 1.44
2	Introduction to Conduction	58-82	2	2.8; 2.24; 2.39, 2.42
3	Steady conduction	96-137	3	3.13; 3.22; 3.47; 3.72
4	Fins, common shapes	138-157 202- 212	3, 4	3.124, 3.145; 4.17;4.23
5	<b>Quiz 1</b> Transient Conduction, Lumped system	239-263	5	5.7, 5,18
6	Transient heat transfer in solids	256-290	5	5.7, 5.18, 5.69, 5.37, 5.51
7	Numerical methods, steady	212-235 302-309	4 5	4.45, 4.64, 5.94, 5.115
8	Numerical methods, Transient, <b>Quiz 2</b>	310-318	5	5.92
9	<u>Design Project</u> introduction, Introduction to convection	348-372 382-398	6 7	6.34, 6-32 7.29
10	Forced: external Internal flows	398-412 456-474	7 8	7.33a, 7.47 8.22a, 8.56
11	Natural convection <b>Quiz 3</b>	524-548	9	9.10, 9.30ab, 9.59
12	Radiation	686-739	12	12.17; 12.22
13	Radiation, <u>Project defense</u>	772-799	13	13.1 d, f, h , 13.17, 13.49
14	Heat Exchangers	632-661	11	11.4; 11.38
15	Proj. defense, Review			
	<b>Final</b>			

\*Homework assignments can vary for different course sections

**Homework:** Solutions will be collected for grading once a week. Late submissions will be accepted only under special circumstances and the grade for late submissions will be automatically lowered.

**Grading:** Final grade will be given based on a maximum of 300 points:

Three quizzes:	50 points each,
Homework	40 points
Project (group)+ class performance	20 points
Final exam	90 points

**The NJIT Honor Code and Professional Conduct will be strictly enforced.**