

FUNDAMENTALS OF ENGINEERING MATERIALS

MTSE 601 Fall 2017

Wednesday 6-9 Tier 114

TEXTBOOK "Foundations of Materials Science and Engineering" 5th edition
Ed. by William F. Smith and Javad Hashemi

+Additional material in class notes

Instructor: Dr. George Goergiou

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Office Hours:

Wednesday 4-6

Or after class

Or by appointment

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<u>Date</u>	<u>Text Assignment</u>	<u>Homework</u>
9/6	Chap. 2 Atomic Structure and Bonding	2.17, 2.21, 2.24, 2.28, 2.37, 2.41, 2.50 2.58, 2.59, 2.63, 2.74, 2.75, 2.85, 2.86
9/13	Chap. 3 Crystal and Amorphous Structure in Materials	3.17, 3, 18, 3.21, 3.22, 3.32, 3.34, 3.41 3.58, 3.65, 3.69, 3.72, 3.75, 3.85
9/20	Chap. 4, sec. 1-5 Chap. 5, sec. 1-4 Solidification and Crystalline Imperfections, Diffusion	4.23; 4.27; 4.28; 4.30, 4.31, 4.33, 4.64 5.12; 5.19; 5.22; 5.32, 5.42
9/27	Chap. 6, sec 2-10 Chap. 7, sec. 1-7 Mechanical Properties of Metals	6.50; 6.52; 6.53, 6.62, 6.91 7.10; 7.17, 7.21, 7.29, 7.30, 7.33 7.38, 7.43, 7.44, 7.47
10/4	Chap. 8, sec 1-11 Chap. 9 sec. 1-2 Phase Diagrams Engineering Alloys	8.13, 8.16, 8.23, 8.24, 8.26, 8.45 9.2, 9.59, 9.64, 9.65
October 11	Midterm Exam	Includes weeks 1-5 (Ch 2-8)
10/18	Chap. 9 sec 3-9 Engineering Alloys	9.14, 9.21, 9.24, 9.32, 9.41, 9.43, 9.46. 9.109, 9.111
10/25	Chap. 11 sec. 2-10 Structure and Properties of Ceramics	11.7, 11.10, 11.15, 11.28, 11.29, 11.54 11.70, 11.76, 11.77, 11.104, 11.112

11/1	Chap. 10, sec. 1-4, 6, 8, 10-11	Polymeric Materials	10.9, 10.14, 10.21, 10.45, 10.60, 10.62 10.62, 10.64, 10.66, 10.83, 10.87, 10.138
11/8	Chap. 14, sec.1-9	Electrical Properties Of Materials	14.7, 14.8, 14.18, 14.38, 14.40, 14.70, 14.73, 14.76, 14.81, 14.100
11/15	Chap. 15, sec.1-7 Chap. 16, sec 1-10	Optical Properties Magnetic Properties	15.13; 15.19, 15.32, 15.36, 15.38, 15.41 15.46, 15.49, 16.18, 16.62, 16.65
11/30	Chap. 13	Corrosion and Degradation of Materials	13.31, 13.40, 13.56; 13.58; 13.64, 13.79
12/6	Students' Projects Presentation (The topics will be given after Midterm Exam)		
12/13	Notes	Composite Materials	

FINAL EXAM **Probably Wednesday December 20** **6-9PM**
(Possible Thursday 12/14)

**** November 22 (WEDNESDAY) – NO CLASS (Follows Friday schedule) ****

THANKSGIVING RECESS – NOVEMBER 23-26

READING DAY S -- DECEMBER 14 (Wednesday)

FINAL EXAM PERIOD – DECEMBER 15-21

FINAL GRADE:

Here are the approximate weights to be used for calculating the composite score:

Midterm Exam = 40 %
Final Exam = 45 %
Project = 15 %

The percentages for various letter grades are:

>80 % - A
70-79 % - B, B+
50-69% - C, C+

HOMEWORK IS NOT EXPLICITLY PART OF YOUR GRADE. BUT DOING PROBLEMS IS IMPORTANT. SIMILAR PROBLEMS WILL APPEAR ON THE EXAMS

PROJECT DETAILS AFTER MIDTERM