

MSE 209 INTRODUCTION TO THE SCIENCE AND ENGINEERING OF MATERIALS

Text: Materials Science and Engineering: An Introduction, by W. D. Callister, Jr. (John Wiley & Sons, Inc., ISBN 0-471-13576-3). Available at bookstore.

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(T) Tuesdays
(Th) Thursdays

Schedule for Spring 2005

Date	No.	Topic/Event	Reading Assignment	Deadlines
Jan. 20 (Th)	1	Chapter 1: Course Introduction	Ch. 1	
25 (T)	2	Chapter 2: Atomic Structure and Interatomic Bonding	Ch. 2	Vocabulary quiz #1
27 (Th)	3	Chapter 3: The Structure of Crystalline Solids	Ch. 3.1-3.6	
Feb. 1 (T)	4	Chapter 3: <i>Continued</i>	Ch. 3.11-3.15, 3.17	Vocabulary quiz #2
3 (Th)	5	Chapter 4: Imperfections in Solids	Ch. 4.1-4.9	1 st HW posted
8 (T)	6	Chapter 5: Diffusion	Ch. 5.1-5.3, 5.5, 5.6	Vocabulary quiz #3
10 (Th)	7	Chapter 6: Mechanical Properties of Metals	Ch. 6.1-6.6	1 st HW due 2 nd HW posted
15 (T)	8	Chapter 6: <i>Continued</i>	Ch. 6.7-6.10, 6.12, 6.13	Vocabulary quiz #4
17 (Th)	9	Chapter 7: Dislocations and Strengthening Mechanisms	Ch. 7.1-7.6	2 nd HW due 3 rd HW posted
22 (T)	10	Chapter 7: <i>Continued</i>	Ch. 7.8-7.13	Vocabulary quiz #5
24 (Th)	11	Test on Chapters 1-5		TEST #1 3 rd HW due 4 th HW posted
Mar. 1 (T)	12	Chapter 8: Failure	Ch. 8.1-8.9, 8.11, 8.12, 8.14, 8.15	Vocabulary quiz #6
3 (Th)	13	Chapter 9: Phase Diagrams	Ch. 9.1-9.6	4 th HW due 5 th HW posted

15 (T)	14	Chapter 9: <i>Continued</i>	Ch. 9.7-9.12	Vocabulary quiz #7
17 (Th)	15	Chapter 9: <i>Continued</i>	Ch. 9.13, 9.14, 9.17-9.19	5 th HW due 6 th HW posted
22 (T)	16	Chapter 10: Phase Transformations in Metals	Ch. 10.1, 10.2, 10.3-10.5, 10.7-10.9	Vocabulary quiz #8
24 (Th)	17	Chapter 11: Applications and Processing of Metal Alloys	Ch. 11.1-11.5, 11.7-11.9	6 th HW due 7 th HW posted
29 (T)	18	Chapter 12: Structures and Properties of Ceramics	Ch. 12.1-12.8	Vocabulary quiz #9
31 (Th)	19	Test on Chapters 6-9		TEST #2 7 th HW due 8 th HW posted
Apr. 5 (T)	20	Chapter 13: Applications and Processing of Ceramics	Ch. 13.1-13.3	Vocabulary quiz #10
7 (Th)	21	Chapter 13: <i>Continued</i>	Ch. 13.4, 13.7, 13.10	8 th HW due 9 th HW posted
12 (T)	22	Chapter 14: Polymer Structures	Ch. 14.1-14.6	Vocabulary quiz #11
14 (Th)	23	Chapter 14: <i>Continued</i>	Ch. 14.7-14.12	9 th HW due 10 th HW posted
19 (T)	24	Chapter 15: Characteristics, Applications, and Processing of Polymers	Ch. 15.1-15.5, 15.7	Vocabulary quiz #12
21 (Th)	25	Chapter 15: <i>Continued</i>	Ch. 15.9-15.13, 15.16, 15.20	10 th HW due 11 th HW posted
26 (T)	26	Chapter 18: Electrical Properties	Ch. 18.1-18.13	Vocabulary quiz #13
28 (Th)	27	Chapters 10-15		TEST #3 11 th HW due
May 3 (T)	28	Final Course Evaluation	Ch. 18.15-18.20, 18.22, 18.23, 18.25	
7 (Sat.)	29	Final Exam		Final Exam