MFG 120 - Materials Technology Syllabus Fall 2026 Edison State Community College

WEDNESDAY 8:30-11:15am

Week			Chapter	Assignment DUE DATE	Test	Quiz
1	Wednesday	8/26/2026	1 Intro to Material Science 2 Atomic Structure	**Intro to class**		??? ???
2	Wednesday	9/2/2026	3 Atomic and Ionic arrangement 4 Imperfections in the atomic arrangements	due Ch 1 - 6,7,8,9,10,12,18,23,33,35 due Ch 2 - 4,35,36,45		??? ???
3	Wednesday	9/9/2026	5 Atom and Ionic Movements / hardening 6 Mechancial properties part I	due Ch 3 - 1,3,4,5,11,15,16,20,22,31 due Ch 4 - 32,33,66,69		 ???
4	Wednesday	9/16/2026	7 Mechanical properties part 2 8 Strain Hardening and Annealing	due Ch 5 - 5 due Ch 6 - 3,4,5,8,10,21,30,68,74 (36 bonus)		 ???
5	Wednesday	9/23/2026	9 Principles of Solidification 10 Solid Solutions / Phase Equilibrium	due Ch 7 - 26,27,44,45,46 due Ch 8 - 5,19,43,83,86 Titanic report due	Test 1	??? ???
6	Wednesday	9/30/2026	11 Dispersion strengthen / Eutectic Phase 12 Phase transform / Heat Treat	due Ch 9 - 64,65,66,80,89,90,92,95,96,97,98,99 due Ch 10 - 5,6,9,10,12,22,36,45,66,67		???
7	Wednesday	10/7/2026	13 Heat Treat of Steels and Cast Irons Tool steels, stainless steels	due Ch 11 - 5,16,30 due Ch 12 - 18,23,26,49,57,80,93,110,112,115,117		???
8	Wednesday	10/14/2026	14 Nonferrous alloys Aluminum / Titanium	due Ch 13 - 1,6,8,18,26,42,47,49 + supplemental questions		??? ???
9	Wednesday	10/21/2026	Cast Iron, Cast Steel, Powder Metallurgy Copper and Copper Alloys	due Ch 14 - 4,6,17,32,38, + supplemental questions		??? ???
10	Wednesday	10/28/2026	15 Ceramics Composites	SUPPLEMENTAL QUESTIONS		??? ???
11	Wednesday	11/4/2026	Selection of materials / review	due Ch 15 - 1,2,3,13,21,43,44,46 + supplemental questions	 Test 2	??? ???
12	Wednesday	11/11/2026	16 Polymeric Materials Plastic fabrication	SUPPLEMENTAL QUESTIONS **VETERANS DAY**	LAB 1	??? ???
13	Wednesday	11/18/2026	17 Composites 18 Corrosion and Wear	due Ch 16 - 2,3,4,9,28,36,39,40,41,42 + supplemental questions	LAB 1	
14	Wednesday	11/25/2026	Nanomaterials Methodology of Material Selection	due Ch 17 - 1,2,4,13,14,23,24,25,38,42,43,49,52 due Ch 18 - 20,22,24,25,32,35,39,42,44	LAB 1 Test 3	
15	Wednesday	12/2/2026	REVIEW FOR FINAL LAB PRESENTATIONS			

FINAL EXAM - Wednesday Dec 9th 2026

Every effort has been made to construct this course in a logical manner. ***However,*** some variables (class size, etc.) may cause changes in activities and assignments. Students will be advised well in advance of such activity

MFG 120S
Materials Technology
Edison State Community College
Fall 2026

Instructor Thomas Looker
B.S. Mech Engr Tech,Purdue University,1990, M.S. Engineering Univ Toledo , 2009
Phone (937) - 778 - 7943

Class hours **Wed 8:30-11:15 room 415**
Office hours Mon 3:30 - 5:30pm Tues/Thur 9:45 - 10:30 am Wed 11:00-12:30 and 4:30 - 5:30 pm or by appt tlooker@edisonohio.edu

Grading

Homework	30%
Tests (total of approx. 3)	30%
Final (comprehensive)	15%
Lab	15%
Participation & Quiz's	10%
total	100%

Grading Scale
90-100 A
80-89 B
70-79 C
60-69 D
59 and below F

Homework

Must be 8 - 1/2 by 11 inch paper with NO tearoffs
On time (no late will be accepted without prior approval)
TYPE WRITTEN ON WORD OR OTHER SOFTWARE _ NEAT
Name and date and problem numbers clearly visible
Answer to be given in clear "box" format with all solution steps shown on paper

Copying from one another will result in grade of 0%
Pages SCANNED together and orderly (better grade for neat papers)

Dates to remember

9/7/2026 Labor day - no class

11/26-29/2026 Thanksgiving no class

12/9/2026 Last day of classes

12/9/2026 FINAL EXAM

Textbook TEXT: ESSENTIALS OF MATERIALS SCIENCE & ENGINEERING
4th Edition Askeland / Wright - Cengage

Chapters 1 - 18 Main text

3 tests at roughly 6 chapters each

Edison State Fall 2026 MFG 120 Policy Statements

Regular attendance is extremely important in order that students may benefit from supplementary material presented in class and from class discussions. Further, those who miss class or do not attend, typically are those needing the most help during the classes that they do attend. This situation will not be acceptable to me or to those students who attend every lecture. If a student must miss a class, the student is responsible for checking with a classmate in order to determine what material was covered in his or her absence. The instructor will provide any handouts that were missed, but do not expect the missed class to be reviewed. Students who miss class are responsible for doing the exercises that were completed during the missed class/classes.

Students who miss examinations are responsible for contacting the instructor to schedule the make up examination. Make up examinations must be completed before the next class meeting. I subscribe to the philosophy that education is a two-way street. It's not just my responsibility to teach, but it is also your responsibility to learn. Therefore, I expect that you will do the reading assignments prior to class and come to class prepared to do class exercises, ask questions and enter into discussions. Academic dishonesty in any form will not be tolerated. Copying homework from other individuals will result in receiving no credit for the assignment. Any additional violation will result in a failing grade for the course.

Edison State Community College is committed to providing an environment respectful of students' beliefs. Students are permitted to be absent for up to 3 days each semester based on their faith, religion, or spiritual belief system with no academic penalty. Students must complete the Testing Your Faith Act Accommodations Form, https://www.edisonohio.edu/Registration-and-Records/ and provide a copy to their individual faculty within 14 days from the start of the course. The entire policy can be found in the student handbook at http://stage.edisonohio.edu/digipub/StudentHandbook/index.html.

Student Wellness Center

College is stressful! Feeling burnt out, anxious, frustrated? When challenges arise, it's helpful to have someone to talk to. We have partnerships established with many local mental health providers and can connect you with area resources.

The Student Wellness Center helps students navigate obstacles which might cause issues or create a sense of distress during your school year. Edison State has built a network of health professionals to support students. With these partnerships, the Student Wellness Center can assist students who need support in areas such as:

- o Recovery and Counseling referral
- o Housing
- o Food
- o Physical well-being

Information and education are also provided on the topics of:

- o Alcohol and drug abuse and prevention
- o Sexual assault prevention and awareness
- o Building healthy relationships
- o Inclusion and belonging
- o Survivor support
- o Self-care
- o Anti-Hazing

If you are struggling and need to speak with someone in person, please reach out to Velina Bogart, Coordinator of Student Wellness, at vbogart@edisonohio.edu, 937-778-7854, Room 193 (next door to the Security Office).

Walk in hours on campus are Tuesday, Wednesday, Thursday, 8am-5pm. Hours may vary according to the college schedule or events. You may schedule an appointment by clicking here.

If this is a medical emergency, please call 911. If this is a mental health emergency, please call 988.

Please note that the Charger Station Food Pantry has been relocated to Room 060 (next to the cafeteria).