



STARK STATE COLLEGE

GENERAL SYLLABUS

Course Information

Course Name: Material Science
Course Number: MET123

Required Materials

Textbook(s): Fundamentals of Modern Manufacturing, Mikell P. Groover, 7th ed., Wiley Publishing, ISBN978-1-119-47531-6

Required Readings: None
Additional Materials: None

Course Outline/Calendar

The date of coverage and order of coverage may be modified based on the faculty member and events beyond the control of faculty members that interfere with class times and teaching.

| Week | Chapter/Topic/Lab |
|---------|--|
| Week 1 | Introduction to Material Science |
| Week 2 | Chapter 1: Introduction to Manufacturing Systems |
| Week 3 | Chapter 2: Nature of Materials |
| Week 4 | Chapter 3: Mechanical Properties of Materials |
| Week 5 | Chapter 3: Stress/Strain, Tensile Test and the Stress-Strain Diagram |
| Week 6 | Chapter 4: Physical Properties of Materials |
| Week 7 | Chapter 4: Physical Properties of Materials |
| Week 8 | Chapter 5: Dimensions and Their Measurement |
| Week 9 | Chapter 6: Metals and Phase Diagrams |
| Week 10 | Chapter 6: Ferrous Metals and Alloys |
| Week 11 | Chapter 6: Non-Ferrous Metals and Alloys |
| Week 12 | Chapter 26: Heat Treatment |
| Week 13 | Chapter 7: Summary of Non-Metals: Ceramics |
| Week 14 | Chapter 8: Summary of Non-Metals: Plastics |
| Week 15 | Chapter 9: Summary of Non-Metals: Composites |
| Week 16 | Finals Week-Test |