

Course Calendar for Mechanical and Nuclear Engineering Materials (EGMN604) for Spring 2021.

(Please treat this as a general guideline. You may expect small changes to it)

| Class | Date | Topic | Reading |
|--------------|-------------------|--|------------------|
| 1 | January 26, 2021 | Introduction and Syllabus | Chapter 1 |
| 2 | January 28, 2021 | Atomic Structure and Bonding | Chapter 2 |
| 3 | February 2, 2021 | Crystalline Structure | Chapter 3 |
| 4 | February 4, 2021 | Crystalline Structure and XRD | Chapter 3 |
| 5 | February 9, 2021 | Imperfections in Crystalline Structures | Chapter 4 |
| 6 | February 11, 2021 | Diffusion | Chapter 5 |
| 7 | February 16, 2021 | Mechanical Behavior and Properties of Materials | Chapter 6 |
| 8 | February 18, 2021 | Dislocations and Strengthening Mechanisms | Chapter 7 |
| 9 | February 23, 2021 | Failure | Chapter 8 |
| 10 | February 25, 2021 | Microstructure and Phase Diagrams | Chapter 9 |
| 11 | March 2, 2021 | Phase Transformations in Metals | Chapter 10 |
| 12 | March 4, 2021 | Principles of Solidification | Chapter 10 |
| 13 | March 9, 2021 | Review | |
| 14 | March 11, 2021 | Reading Day | |
| 15 | March 16, 2021 | Midterm EXAM | |
| 16 | March 18, 2021 | Electrical Properties of Materials | Kittel/Callister |
| 17 | March 23, 2021 | Magnetic Properties of Materials | Jiles/Callister |
| 18 | March 25, 2021 | Magnetic Properties of Materials | Jiles/Callister |
| 19 | March 30, 2021 | Thermal Properties of Materials | Chapter 19 |
| 20 | April 1, 2021 | Structures and Properties of Ceramics | Chapter 12 |
| 21 | April 6, 2021 | Corrosion, Degradation and Wear of Materials (Dr. Carlos Castano) | Chapter 17 |
| 22 | April 8, 2021 | Nuclear Materials (Dr. Supy) | Class Notes |
| 23 | April 13, 2021 | Composites | Chapter 16 |
| 24 | April 15, 2021 | In class presentations | |
| 25 | April 20, 2021 | In class presentations | |
| 26 | April 22, 2021 | In class presentations | |
| 27 | April 27, 2021 | Review | |
| 28 | April 29, 2021 | Review | |
| 29 | May 4, 2021 | Preparation for Exam | |
| 30 | May 4, 2021 | FINAL EXAM | |