Fall 2018

MTSE 601-101: Foundations of Materials Science & Engineering

George Georgiou

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FUNDAMENTALS OF ENGINEERING MATERIALS
MTSE 601 Fall 2018
Wednesday 6-9 Tier 112

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 Georgiou
Office: 207 Microelectronics

Office Hours:
Wednesday 4-6
Or after class
Or by appointment

Tel. (973) 596-5690
E-mail: georgiou@njit.edu (preferred contact method)

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<th>Date</th>
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<th>Homework</th>
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<tr>
<td>9/5</td>
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<td>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</td>
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<td>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</td>
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<td>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</td>
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<td>10/3</td>
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<td>Chap. 9 sec. 1-2</td>
<td>Engineering Alloys</td>
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October 10
Midterm Exam
Includes weeks 1-5 (Ch 2-8)

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<td>GEG Notes</td>
<td>of Materials</td>
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<td>10/31</td>
<td>Ch12 Chap. 14, sec.1-2</td>
<td>Composite Materials</td>
<td>12.41, 12.45, 12.79, 12.83, 12.84, 12.93</td>
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<td>Electrical Properties</td>
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<td>Of Materials</td>
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<td>11/14</td>
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<td>Polymeric Materials</td>
<td>10.9, 10.14, 10.21, 10.45, 10.60, 10.62</td>
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<td>10.62, 10.64, 10.66, 10.83, 10.87, 10.138</td>
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**November 21 (WEDNESDAY) – NO CLASS (Follows Friday schedule)**

THANKSGIVING RECESS – NOVEMBER 23-26

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<th>Date</th>
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<td>Magnetic Properties</td>
<td>15.46, 15.49, 16.18, 16.62, 16.65</td>
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12/5

12/12 Students’ Projects Presentation (The topics will be given after Midterm Exam)

FINAL EXAM

Probably Wednesday December 19 (Possible Thursday December 13) 6-9PM

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:

- >90 % - A
- 80-89 % - B, B+
- 50-79% - 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
## Fall 2018 Academic Calendar

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<th>Month</th>
<th>Day</th>
<th>Date</th>
<th>Event</th>
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<tr>
<td>September</td>
<td>4</td>
<td>Tuesday</td>
<td>First Day of Classes</td>
</tr>
<tr>
<td>September</td>
<td>10</td>
<td>Monday</td>
<td>Last Day to Add/Drop a Class</td>
</tr>
<tr>
<td>September</td>
<td>17</td>
<td>Monday</td>
<td>Last Day for 100% Refund, Full or Partial Withdrawal</td>
</tr>
<tr>
<td>October</td>
<td>1</td>
<td>Monday</td>
<td>Last Day for 90% Refund, Full or Partial Withdrawal - No Refund for Partial Withdrawal after this date.</td>
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<tr>
<td>October</td>
<td>22</td>
<td>Monday</td>
<td>Last Day for 50% Refund, Full Withdrawal</td>
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<tr>
<td>November</td>
<td>12</td>
<td>Monday</td>
<td>Last Day to Withdraw</td>
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<tr>
<td>November</td>
<td>20</td>
<td>Tuesday</td>
<td>Thursday Classes Meet</td>
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<tr>
<td>November</td>
<td>21</td>
<td>Wednesday</td>
<td>Friday Classes Meet</td>
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<tr>
<td>November</td>
<td>22-25</td>
<td>Thurs-Sun</td>
<td>Thanksgiving Recess</td>
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<tr>
<td>December</td>
<td>12</td>
<td>Wednesday</td>
<td>Last Day of Classes</td>
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<tr>
<td>December</td>
<td>13-14</td>
<td>Thurs-Fri</td>
<td>Reading Days</td>
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<tr>
<td>December</td>
<td>15-21</td>
<td>Sat-Fri</td>
<td>Final Exams Week</td>
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