

**MSE 201: Materials Science Spring 2009  
COURSE SCHEDULE**

**MWF: 1:00-1:50PM 110 Whitehall Classroom Bldg.**

<u>Date:</u>	<u>Topic:</u>	<u>Reading:</u>	
<b>January</b>			
14	Introduction to the course		
16	Overview of Materials	2-19	
19	MLK holiday – no class		
21	Atomic Structure & Valence	23-30	
23	Primary Bonds	30-43	
26	Atomic Packing & Coordination	43-55	
28	Crystal Unit Cell	60-71	
30	Miller Indices	71-77	<b>HW1</b>
<b>February</b>			
2	Crystal Density & Packing	78-84	
4	Crystal Structure & Interstices	85-98	
6	Crystal Structure & Interstices		<b>HW2/Q1</b>
9	X-ray Diffraction	98-104	
11	Point Defects	110-116	
13	<i>problems &amp; review</i>		<b>HW3</b>
16	<b>EXAM ONE</b>		
18	Impurities	116-122	
20	Solid-State Diffusion	122-141	<b>HW4</b>
23	Solid-State Diffusion		
25	Linear Defects	146-167	
27	Linear Defects		<b>HW5/Q2</b>
<b>March</b>			
2	Planar & Volume Defects	167-174	
4	Strengthening Mechanisms	174-180	
6	<i>problems &amp; review</i>		<b>HW6</b>

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<u>Date:</u>	<u>Topic:</u>	<u>Reading:</u>	
<b>March</b>			
9	<b>EXAM TWO</b>		
11	The Glass Transition	184-192	
13	Structure & Properties of Polymers	192-206	
16	<i>spring break</i>		
18	<i>spring break</i>		
20	<i>spring break</i>		
23	Structure & Properties of Polymers		
25	Structure & Properties of Polymers		
27	Structure & Properties of Glasses	206-212	<b>HW7/Q3</b>
30	Structure & Properties of Elastomers	212-220	
<b>April</b>			
1	One-component Phase Diagrams	226-232	
3	Two-component Phase Diagrams	232-247	<b>HW8</b>
6	Eutectic Phase Diagrams	247-265	
8	Eutectic Phase Diagrams		
10	Complex Phase Diagrams	265-270	<b>HW9/Q4</b>
13	Mechanical Properties	358-385	
15	Mechanical Properties		
17	<i>problems &amp; review</i>		<b>HW10</b>
20	<b>EXAM THREE</b>		
22	Standard Testing Methods		
24	Standard Testing Methods		<b>HW11</b>
27	Materials Processing: casting	668-678	
29	Materials Processing: forming	679-702	
<b>May</b>			
1	<i>course review</i>		<b>HW12</b>

**The final exam is scheduled for Monday, May 4, 2009 at 8:00 AM. (110 CB)**