

Tentative Schedule

	Monday		Wednesday		Friday			
	<i>Note: the reading should be completed <b>before</b> the day indicated on the schedule.</i>							
<b>Week 1</b>	Jan 12		Jan 14		Jan 16			
	Class cancelled		Class cancelled		Class cancelled			
<b>Week 2</b>			Jan 21	Lecture 1	Jan 23	Lecture 2		
Topics: Newton's laws, conservation of momentum			Read Taylor 1.1-1.4		Read Taylor 1.4-1.6			
					<b>Activity 1</b>			
<b>Week 3</b>	Jan 26	Lecture 3	Jan 28	Lecture 4	Jan 30	Lecture 5		
Topics: Cartesian vs. polar coordinates, linear air resistance, trajectory in systems with linear air resistance	Read Taylor 1.6-1.7		Read Taylor 2.1-2.2	<b>Quiz 1</b>	Read Taylor 2.3	<b>HW 1 due</b>		
				Covers 1.1-2.2	<b>Activity 2</b>	Covers Taylor Ch. 1-2		
<b>Week 4</b>	Feb 2	Lecture 6	Feb 4	Lecture 7	Feb 6	Lecture 8		
Topics: quadratic air resistance, charge in a magnetic field, complex exponentials	Read Taylor 2.4		Read Taylor 2.5	<b>Quiz 2</b>	Read Taylor 2.6-2.7	<b>HW 2 due</b>		
				Covers 2.1-2.5	<b>Activity 3</b>	Covers Taylor Ch. 2-3		
<b>Week 5</b>	Feb 9	Lecture 9	Feb 11	Lecture 10	Feb 13	Lecture 11		
Topics: Conservation of momentum, rockets, center of mass, angular momentum	Read Taylor 3.1-3.3		Read Taylor 3.4	<b>Quiz 3</b>	Read Taylor 3.5	<b>HW 3 due</b>		
				Covers 2.6-3.4	<b>Activity 4</b>	Covers Taylor Ch. 2-3		
<b>Week 6</b>	Feb 16	Lecture 12	Feb 18	Lecture 13	Feb 20	Lecture 14		
Topics: kinetic energy and work, potential energy and conservative forces	Read Taylor 4.1-4.2		Read Taylor 4.2	<b>Quiz 4</b>	Read Taylor 4.3-4.4			
		<b>MIDTERM 1</b>		Covers Taylor 3.5-4.2	<b>Activity 5</b>			
		<b>Tuesday, February 17</b>						
		<b>8:30-10:00pm in NPB 1002</b>						
		Covers Taylor Ch. 1-3						
<b>Week 7</b>	Feb 23	Lecture 15	Feb 25	Lecture 16	Feb 27	Lecture 17		
Topics: potential energy and force, energy for 1D systems, Curvilinear 1D systems	Read Taylor 4.5-4.6	<b>HW 4 due</b>	Read Taylor 4.7	<b>Quiz 5</b>	Read Taylor 4.8	<b>HW 5 due</b>		
		Covers Taylor Ch. 3-4		Covers 4.3-4.7	<b>Activity 6</b>	Covers Taylor Ch. 4-5		
<b>Week 8</b>	Mar 2	Lecture 18	Mar 4	Lecture 19	Mar 6	Lecture 20		
Topics: Central forces, energies of interactions	Read Taylor 4.9		Read Taylor 4.10	<b>Quiz 6</b>	Read Taylor 5.1-5.2	<b>HW 6 due</b>		
				Covers 4.8-4.10	<b>Activity 7</b>	Covers Taylor Ch. 4-5		
<b>Week 9</b>	Mar 9	Lecture 21	Mar 11	Lecture 22	Mar 13	Lecture 23		
Topics: Hooke's law, simple harmonic motion, 2D oscillators, Damped oscillators	Read Taylor 5.3-5.4		Read Taylor 5.5	<b>Quiz 7</b>	Read Taylor 5.6	<b>HW 7 due</b>		
				Covers 5.1-5.5	<b>Activity 8</b>	Covers Taylor Ch. 5-6		

*Spring Break (March 16-20)*

<b>Week 10</b>	Mar 23	Lecture 24	Mar 25	Lecture 25	Mar 27	Lecture 26		
Topics: Damped & driven oscillators, resonance, Fourier series, Parseval's Theorem	Read Taylor 5.8		Read Taylor 5.9	<b>Quiz 8</b>	Read Taylor 6.1-6.3	<b>HW 8 due</b>		
				Covers 5.6-5.9	<b>Activity 9</b>	Covers Taylor Ch. 6-7		
<b>Week 11</b>	Mar 30	Lecture 27	Apr 1	Lecture 28	Apr 3	Lecture 29		
Topics: Calculus of variations, Lagrange equations	Read Taylor 6.3		Read Taylor 6.4	<b>Quiz 9</b>	Read Taylor 7.1			
		<b>MIDTERM 2</b>		Covers 6.1-6.4	<b>Activity 10</b>			
		<b>Monday, March 30</b>						
		<b>8:30-10:00pm in NPB 1002</b>						
		Covers Taylor Ch. 4-5						
<b>Week 12</b>	Apr 6	Lecture 30	Apr 8	Lecture 31	Apr 10	Lecture 32		
Topics: Lagrange equations with	Read Taylor 7.2-7.3	<b>HW 9 due</b>	Read Taylor 7.4	<b>Quiz 10</b>	Read Taylor 7.5	<b>HW 10 due</b>		

	Monday		Wednesday		Friday	
constraints		Covers Taylor Ch. 7		Covers 7.1-7.4	<b>Activity 11</b>	Covers Taylor Ch. 7
<b>Week 13</b>	Apr 13	Lecture 33	Apr 15	Lecture 34	Apr 17	Lecture 35
Topics: Examples of Lagrange equations, Conservation Laws, Magnetic Forces	Read Taylor 7.5		Read Taylor 7.6-7.8	<b>Quiz 11</b>	Read Taylor 7.9	<b>HW 11 due</b>
<b>Week 14</b>	Apr 20	Lecture 36	Apr 22	Lecture 37	<b>Activity 12</b>	Covers Taylor Ch. 7
Topics: Lagrange multipliers	Read Taylor 7.10		Review			
<b>Final Exam: Thursday, April 30 at 10am-12pm</b> <b>Covers Taylor Ch. 1-7</b>						