

Tentative Schedule

	Monday		Wednesday		Friday	
	<i>Note: the reading should be completed before the day indicated on the schedule.</i>					
Week 1	Jan 12		Jan 14		Jan 16	
	Class cancelled		Class cancelled		Class cancelled	
Week 2			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	
					Activity 1	
Week 3	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	Quiz 1	Read Taylor 2.3	
				Covers 1.1-2.2	Activity 2	
Week 4	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	HW 1 due	Read Taylor 2.5-2.6	Quiz 2	Read Taylor 2.7-3.3	HW 2 due
		Covers Taylor Ch. 1-2		Covers 2.1-2.6	Activity 3	Covers Taylor Ch. 2-3
Week 5	Feb 9	Lecture 9	Feb 11	Lecture 10	Feb 13	Lecture 11
Topics: Conservation of momentum, rockets, center of mass, angular momentum	Read Taylor 3.4		Read Taylor 3.5-4.2	Quiz 3	Read Taylor 4.2	HW 3 due
				Covers 2.7-4.2	Activity 4	Covers Taylor Ch. 3
Week 6	Feb 16	Lecture 12	Feb 18	Lecture 13	Feb 20	Lecture 14
Topics: kinetic energy and work, potential energy and conservative forces	Read Taylor 4.2		Read Taylor 4.3-4.4	Quiz 4	Read Taylor 4.5-4.6	
		MIDTERM 1 Tuesday, February 17 8:30-10:00pm in NPB 1002		Covers Taylor 4.3-4.4	Activity 5	
Week 7	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 4.7	HW 4 due	Read Taylor 4.8	Quiz 5	Read Taylor 4.9	HW 4 due
		Covers Taylor Ch. 3-4		Covers 4.5-4.8	Activity 6	Covers Taylor Ch. 4-5
Week 8	Mar 2	Lecture 18	Mar 4	Lecture 19	Mar 6	Lecture 20
Topics: Central forces, energies of interactions	Read Taylor 4.10		Read Taylor 5.1-5.2	Quiz 6	Read Taylor 5.3-5.4	HW 5 due
				Covers 4.9-5.2	Activity 7	Covers Taylor Ch. 4-5
Week 9	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 5.5		Read Taylor 5.6	Quiz 7	Read Taylor 5.7-5.8	HW 6 due
				Covers 5.3-5.6	Activity 8	Covers Taylor Ch. 5-6

Spring Break (March 16-20)

Week 10	Mar 23	Lecture 24	Mar 25	Lecture 25	Mar 27	Lecture 26
Topics: Damped & driven oscillators, resonance, Fourier series, Parseval's Theorem	Read Taylor 5.9		Read Taylor 6.1-6.3	Quiz 8	Read Taylor 6.3	HW 7 due
				Covers 5.7-6.3	Activity 9	Covers Taylor Ch. 6-7
Week 11	Mar 30	Lecture 27	Apr 1	Lecture 28	Apr 3	Lecture 29
Topics: Calculus of variations, Lagrange equations	Read Taylor 6.4		Read Taylor 7.1	Quiz 9	Read Taylor 7.2	
	MIDTERM 2 Monday, March 30 8:30-10:00pm in NPB 1002			Covers 6.4-7.1	Activity 10	
Week 12	Apr 6	Lecture 30	Apr 8	Lecture 31	Apr 10	Lecture 32
Topics: Lagrange equations with	Read Taylor 7.3-7.4	HW 9 due	Read Taylor 7.5	Quiz 10	Read Taylor 7.5	HW 8 due

	Monday		Wednesday		Friday	
constraints		Covers Taylor Ch. 7		Covers 7.2-7.5	Activity 11	Covers Taylor Ch. 7
Week 13	Apr 13	Lecture 33	Apr 15	Lecture 34	Apr 17	Lecture 35
Topics: Examples of Lagrange equations, Conservation Laws, Magnetic Forces	Read Taylor 7.6		Read Taylor 7.7-7.8	Quiz 11	Read Taylor 7.9	HW 9 due
Week 14	Apr 20	Lecture 36	Apr 22	Lecture 37	Activity 12	Covers Taylor Ch. 7
Topics: Lagrange multipliers	Read Taylor 7.10		Review			
Final Exam: Thursday, April 30 at 10am-12pm Covers Taylor Ch. 1-7						