

Physics 4A Tentative Schedule Fall 2009

All homework is due the following class meeting

Date	Lecture Topic	Reading Assignment All reading assignments are in the Knight Textbook	Homework Assignment All problems are from end-of-chapter exercises unless noted otherwise
8/17 Mon	Course Syllabus ABP Velocity	Preface to student; Introduction; 1.1-1.3	
8/19 Wed	Motion Diagrams: Finish RTP Lab 1 DOI: cars on the street	1.4-1.6	Pg 30 C.Q. #6, 7, 8 EX # 6, 9, 11, 13, 15, 16 Handout HW for Lab1
8/21 Fri	Proportions Parts A , B, C,	1.7,1.8	Proportions Handout
8/24 Mon	Significant Figures & Units:Measurement uncertainty Quiz Pictoral Models	2.1-2.2	Pg 30 CQ # 1,2 EX # 21, 22, 23, 25, 28, 33, 38
8/26 Wed	x, v, a, graph practice HW for lab 2 in class	2.3-2.4	Pg 64 CQ # 4, 7,11, 14, EX # 26, 27, 28, 29, 30 Handout: Analyzing motion using graphs
8/28 Fri	QUIZ #1 (proportions, sig figures, units) Graphs & Tracks	2.5	Graphs and Tracks handout Pg 67 EX # 35, 36, 37, 38, 40
8/31 Mon	Algebra of Kinematics freefall	3.1-3.4	Memorize Kinematic equations Pg 64 CQ # 12, 13 Pg 65 EX #12, 15, 17, 43
9/2 Wed	Kinematic Formula quiz Vectors, components	4.1-4.2	Pg 87 EX # 1, 2, 3, 4, 6, 11, 13, 18, 19
9/4 Fri	Quiz #2: (Motion graphs, algebra of kinematics) Acceleration in 2-D	4.3	Pg 118 CQ # 1 EX # 1, 3, 4
9/7 Mon	Labor Day		
9/9 Wed	Projectile Motion		Pg 118 CQ #4, 5, 6, 7, 8, 11, 12 EX # 10, 11, 13
9/11 Fri	Projectile Lab	4.5, 4.6, 4.7	Pg 122 EX # 41, 43, 44, 45
9/14 Mon	Circular Motion	5.1-5.3, 5.7	Pg119 CQ # 13, 14, 15, 16 EX # 20, 21, 23, 29, 30, 32, 35, 37
9/16 Wed	Free-body Diagrams	5.4, 5.5, 5.6	Handout Pg 147 EX # 1, 2, FBD's only for 43, 47, 50, 51, 52
9/18 Fri	QUIZ #3 (projectiles & circular motion) Newton's First and Second Law: Conceptual questions & debate	6.1	Pg 147 CQ #6, 7, 9, 10, 11, 13 EX # 8, 13, 15, 30, 33 (due class after exam)
9/21 Mon	Statics Problems	6.2, 6.3	Handout

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Date	Lecture Topic	Reading Assignment	Homework Assignment
9/23 Wed	Test #1 CH 1-5		
9/25 Fri	Dynamics problems Mass, wt, gravity	6.4, 6.5, 6.6	Pg 177 EX # 5, 6, 7, 14, 15, 34, 36, 37
9/28 Mon	Dynamics with Friction	7.1-7.3	Pg 178 EX # 17, 18, 20, 40, 51
9/30 Wed	QUIZ #4 (FBD's, 1st & 2nd law, statics) 3rd Law Problem	7.4-7.5	Pg 204 CQ # 3, 4, 5, 6, 7, 8 EX # 1, 2
10/2 Fri	Interconnected Body Problems	8.1-8.3	Pg 204 CQ # 12, 15 Ex # 34, 41, 52, extra credit # 46
10/5 Mon	Dynamics of circular motion	8.5-8.7	Pg 230 CQ #1, 2, 3, 5, 6 EX# 4, 7, 8
10/7 Wed	Frames of Reference Practice dynamics of circular motion	9.1-9.2	Pg 230 CQ# 9, 10 EX# 13, 17, 31, 33, 35
10/9 Fri	Impulse & Momentum	9.3-9.5	Pg 261 CQ # 4, 5, 7, 9, EX # 1, 3, 8, 9, 10, 13
10/12 Mon	Conservation of Momentum QUIZ #5 (interconnected bodies, Circular motion)	10.1-10.3	Pg 261 CQ #6, 12, 13, 14 EX # 15, 17, 19, 22, 41
10/14 Wed	Potential & kinetic energy	10.4-10.5	Pg 295 CQ #3, 4, 6, 8 Ex # 1, 2, 5, 9, 10, 13
10/16 Fri	Hooke's Law & Elastic PE	10.6, 10.7	Pg 295 CQ# 9, 10, 11, 12, 13 EX # 14, 16, 21, 38, 39,
10/19 Mon	Collisions & energy diagrams	11.1-11.3	Pg 295 CQ # 14 EX # 26, 27, 29, 41, 53, 55
10/21 Wed	Work	11.4-11.9	Pg 329 CQ # 1, 2, 3, 7, 8 EX # 2, 3, 7, 10
10/23 Fri	Work, potential energy & power		Pg 329 CQ # 13, 14 EX # 14, 17, 18, 27, 30, 34, 35
10/26 Mon	Energy vs Momentum		Pg 332 EX# 37, 44a, 45, 50b, 62
10/28 Wed	QUIZ #6 (Impulse, momentum & Energy)		
10/30 Fri	Energy/Km for human and car Day 1		
11/2 Mon	Energy/Km for human and car Day 2	12.1-12.4 (due class after test)	Finish lab write-up
11/4 Wed	Test #2 CH 6-11		

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Date	Lecture Topic	Reading Assignment	Homework Assignment
11/6 Fri	Rotational Motion and angular momentum	12.5-12.8	Pg 377 CQ# 1, 2, 3, 6 EX # 1, 2, 3, 5, 8, 9
11/9 Monday	Torque and rotational dynamics	12.9-12.11	Pg 377 CQ # 8, 11, 12 EX # 22, 24, 25, 26, 30
11/11 Wed	Veteran's Day		
11/13 Fri	static equilibrium, rolling, angular momentum,	13.1-13.4	Pg 377 CQ # 13, 14 Pg 379 EX # 31, 33, 34, 35, 37, 48, 62, 76
11/16 Mon	QUIZ #7 (rotational motion) Newton's law of gravity	13.5-13.6	Pg 404 CQ# 1, 2, 3, 4, 6 EX # 1, 6, 7, 10
11/18 Wed	Gravitational potential energy		Pg 404 CQ # 7, 9, 10 EX# 14, 15, 21, 22, 24, 37, 42
11/20 Fri	Scientific method lab	14.1-14.2	Write-up lab
11/23 Mon	Lab: SHM	14.3-14.4	Pg 435 CQ # 1, 3, 4, 5, EX # 1, 2, 4, 6, 8, 9
11/25 Wed	Energy and dynamics of SHM	14.7	Pg 435 CQ # 8, 9 EX # 11, 14, 15, 65
11/27 Fri	Thanksgiving Holiday		
11/30 Mon	Damped SHM	14.8	PG 436 CQ # 10, 11 EX # 27, 28, 30, 70
12/2 Wed	Resonance QUIZ #8 (Gravity, satellites and oscillations)	15.1-15.3	Pg 436 CQ # 12 EX # 26, 79
12/4 Fri	Fluids & pressure	15.4	Pg 470 CQ # 1, 2, 3, 4, 5 EX # 3, 4, 5, 7, 9, 11, 13, 14
12/7 Mon	Buoyancy	15.5	Pg 470 CQ #6, 7, 9 EX # 16, 17, 19, 20
12/9 Wed	Fluid Dynamics Quiz #9 (fluids)		Pg 470 CQ # 10, 11 EX # 23, 25, 26, 66
12/11 Fri	Catch-up/review day		
12/14 Mon	Final 10:00		