PHYSICS 1 COURSE OUTLINE

INSTRUCTOR: RAY GONZALES

TEXTBOOK: GIANCOLI PHYSICS

Week	Topic	Reading	Homework	Lab
1	The Nature of Science Math Review	Chapter 1		

2	Reference Frames and Displacement Average Velocity Instantaneous Velocity Acceleration	Chapters 2.1 – 2.4	HW 2	Dropping Stuff 1
3	Motion at Constant Acceleration Equations of Motion Problem Solving	Chapters 2.5 – 2.6	HW 3	Motion on an Incline
4	Falling Objects Motion Graphs	Chapters 2.7 – 2.8	HW 4	Dropping Stuff 2
5	Test 1		Test 1	
6	Kinematics in 2 Dimensions Vectors Vector Addition	Chapter 3 Sections 1 - 4	HW 6	
7	Projectile Motion Problem Solving	Chapter 3 Sections 5 - 6	HW 7	Horizontally Launched Projectiles

8	Problem Solving		HW 8	Projectiles Launched at an Angle
9	Test 2		Test 2	
10	Newton's Laws of Motion Force Newton's 1st Law Newton's 2nd Law	Chapter 4 Sections 1 - 4	HW 10	Using Force Sensors
11	Newton's 3rd Law Weight Normal Forces Friction Free Body Diagrams	Chapter 4 Sections 5 - 9	HW 11	Friction Forces
12	Problem Solving		HW 12	Atwood Machine

13	Inclined Planes		HW 13	Forces on an Inclined Plane
14	Test 3		Test 3	
15	Circular Motion	Chapter 5 Sections 1 - 2	HW 15	Conical Pendulum
Winter Break	😀	🎄	❄	
16	Unbanked and Banked Roads Non uniform Circular Motion	Chapter 5 Sections 3 and 4	HW 16	
17	Universal Gravitation Orbital Mechanics Kepler's Laws	Chapter 5 Sections 5 - 8	HW 17	

18	Semester 1 Review Semester 1 Final Exam		Final Exam	

19	Work and Energy Work Done by Constant Force Work Done by Varying Force	Chapter 6 Sections 1 - 3	HW 19	
20	Potential and Kinetic Energy Work – Energy Theorem Conservation of Energy	Chapter 6 Sections 4 - 7	HW 20	Hot Wheels on a Ramp
21	Dissipative Forces Power	Chapter 6 Sections 8 - 10	HW 21	
22	Review		Test 2.1	
23	Linear Momentum Conservation of Momentum Impulse	Chapter 7 Sections 1 - 3	HW 23	Determining Impulse with a Force Force Sensor
24	Collisions	Chapter 7 Sections 4 - 6	HW 24	Collision Carts

25	Rotational Motion Torque	Chapter 8 Sections 1 - 5	HW 25	
26	Angular Quantities	Chapter 8 Sections 6 - 8	HW 26	
28	Spring Break 			
29	Review		Test 2.2	
30	Simple Harmonic Motion	Chapter 11 Sections 1 - 4	HW 30	SHM with Springs
31	Waves	Chapter 11 Sections 7 - 10	HW 31	

32	Reflections Interference Diffraction	Chapter 11 Sections 11 - 14	HW 32	Diffraction Gratings

33	Review		Test 2.3	
34	Geometric Optics Refraction Lenses and Mirrors	Chapter 23 Sections 1 - 7	HW 34	Image Formation with Lenses
35	Review			
36	Semester 2 Final Exam		Final Exam	