

WINTHROP UNIVERSITY
PHYS 211 Course Syllabus
Department of Chemistry, Physics, & Geology

DATE	TOPIC	CHAPTER	ASSIGNMENTS
8-21 W	Introductions, syllabus, Math test, Significant figures, Units, standards, SI system	1.1, 1.3,1.4	Math & Physics Quiz
8-23 F	Converting Units, order of magnitude, Reference frames	1.5-1.6 and 2.1	
8-26 M	Displacement, velocity, acceleration	2.2, 2.3,2.4	
8-28 W	Motion at constant acceleration, Free Fall	2.5-2.7	HW#1
8-30 F	Recitation: problems solving Variable acceleration, Vectors and Scalars-Vector Addition -Graphical	2.8,3.1-3.3	Quiz 1
9-4 W	Units Vectors, Vector Kinematics	3.3-3.6	HW#2
9-6 F	Recitation: problems solving Projectile Motion, relative velocity	3.7-3.9	Quiz 2
9-9 M	Force & Newton's 1st Law, Mass	4.1-4.3	
9-11W	Newton's 2nd Law, Newton's 3rd Law, Weight	4.4-4.6	No Homework
9-13 F	Exam 1	Chap.1-4	No Quiz
9-16 M	Free body diagrams –solving problems	4.7-4.8	
9-18 W	Applications of Newton’s Law-Friction-Uniform Circular Motion	5.1-5.2	HW#3
9-20 F	Recitation: problems solving Dynamics of uniform Circular Motion, Highways banked, non-uniform Circular Motion	5.3-5.5	Quiz 3
9-23 M	Newton’s law of universal Gravitation, vector form, Gravity near earth	6.1-6.3	
9-25 W	Satellites and weightlessness, Kepler laws, type of forces in Nature	6.4-6.7	HW#4
9-27 F	Recitation: problems solving Work done by a constant Force, scalar product of two vectors	7.1-7.2	Quiz 4
9-30 M	Work by Varying Force, Kinetic Energy	7.3,7.4	
10-2W	Work Energy Principle, Conservative and non-conservative forces	7.4 ,8.1	
10-4 F	Potential Energy, Mechanical Energy and its conservation	8.2,8.3	Quiz 5
10-7 M	Problem solving using conservational mechanical energy, conservation of energy	8.4-8.6	
10-9 W	Energy Conservation with dissipative Forces, Escape Velocity, Power Momentum and its relation to Force, Conservation of Momentum.	8.7,8.8	HW#5
10-16 W	Collisions and Impulse, Conservation of Energy	9.1-9.4	
10-18 F	Exam 2	Chap. 5-9	No Quiz
10-21 M	Elastic Collisions in 1 Dimension, Inelastic Collisions	9.5,9.6	

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10-23 W	Collisions in 2-3 D, Center of Mass (CM)	9.7-9.8	No Homework
10-25 F	CM and Translational Motion, Rotational Motion (Angular Quantities)	9.9, 10.1	Quiz 6
10-28 M	Vector Nature of Angular Quantities, Constant Angular Acceleration, Torque	10.2 - 10.4	
10-30 W	Torque and rotational Inertia, Solving Problems, Moment of Inertia	10.5-10.7	HW#6
11-1 F	Recitation: problems solving Rotational Kinetic and Translational Kinetic Energy	10.8,10.9	Quiz7
11-4 M	Angular Momentum, Cross product, Torque as a vector	11.1,11.2	
11-6 W	Angular Momentum of a particle, Angular Momentum and Torque of System of particles, and for a rigid object	11.3-11.5	HW#7
11-8 F	Recitation: problems solving conservation of Angular Momentum, Oscillations of a spring	11.6-14.1	Quiz#8
11-11 M	SHM, Energy of SHO, SHM related to circular Motion, simple pendulum,	14.2-14.4	
11-13 W	Physical pendulum, damped harmonic Motion Forced Oscillations,	14.5-14.8	No Homework
11-15 F	Exam 3	Chap 9-14	No Quiz
11-18 M	Wave motion: transverse and longitudinal wave	15.1-15.3	
11-20 W	The principle of superposition, Reflection and transmission, Interference. refraction	15.6-15.9	HW#8
11-22 F	Standing waves, resonance, Characteristics of Sound,	15.10,16.1-16.3	Quiz#9
11-25 M	intensity of sound, quality of sound and noise	16.4-16.5	
11-27W to11-29 F	Thanksgiving Break - no classes		
12-2 M	Class evaluations sources of sound, Interference of sound waves, Doppler effect, Applications	16.6-16.9	
12-5 TH 8:00 am	Final Exam		