

Physics 11 Course Outline

Unit	Concept	Chapters	Assignment
Unit 1		2.1-2.4	Text Problems: Practice & Review questions
1.1	Course Outline, Units, Conversion	p.13-26	Conversion WS #1
1.2	Sig Figs, Scientific Notation		Sig Fig WS #2 p.16-24 #1-13
1.3	Uncertainties and Operations		p.37 #1-6,8-15
1.4	Lab Demo and quiz		p.24-26 #14-17
1.5	Graphical Analysis	p.26-34	p.38 #16-19 all p.688 #1-10
1.6	Manipulating Variables		Man. Var. WS #3 p.33-34 #18-24 p.39 #20,21,24,26
1.7	Power Lab		lab
1.8	Review, work day		p.688 #1-9,11-15
	PreTest		
	Test		
Unit 2		3.1-3.2	
2.1	Velocity, v_{ave} , average speed	p.41-56	p.45-47 #1-8
2.2	Initial value problems, work day		Velocity WS #3
2.3	Constant velocity graphical analysis: d vs t to v vs t		p.53-56 #9-19
2.4	Velocity graphical analysis: d from area v vs t, instantaneous velocity from limit v_{ave} d vs t		p.59 #1-5,10-12,14,21,22,24
2.5	Relative velocity		p.56 #20 p.689 #1-7,9,10,14,15
2.6	Work Day		Inst. Vel. WS, Motion WS
	Velocity quiz		Velocity WS #4
Unit 3		4.1-4.2	
3.1	Ave. & inst. Acceleration, rate of change, graphical analysis	p.63-80	p.66 #1-4 p.68 #5-8, Const. a WS
3.2	Derive 4 kinematic equations		p.69-75 #9-24
3.3	Gravity problems		p.77-80 #25,27-31 WS#5
3.4	Gravity Lab		
3.5	Work Day		
3.6	Review		p.82-85 #1-5,7-12,14,16-20,22-25,28,30-32,35,37
	PreTest		
	Test		
Unit 4		6.1-6.2 7.1	
4.1	Vectors, perpendicular vectors	p.109-116	p.115-118 #7-14
	Work day Boat problems		vector WS, p.129 #8-10,13-22
4.2	Vector component, projectile motion (horizontal)	p.116-118 p.133-136	p.134-139 #1-8
4.3	Projectile motion (angle)	p.137-139	p.152-155 #2-8

	Work Day		p.692 #4,8,9,11,14,17 p.693 #1-9 WS projectile
4.4	PreTest		
4.5	Test		
Unit 5		5.1-5.2 8.1	
5.1	Newton's Laws, $F_g = W$	p.87-95	p.92-95 #1-8 WS#6
5.2	Dynamics, $F_f = \mu mg$	p.95-100	p.99-102 #9-16 p.105 #1,2,4-10
5.3	Dynamics, $F_{net} = \Sigma ma$	p.100-102	p.106-107 #11-20,22-29 WS#7
5.4	Gravity, Hooke's Law	p.160-163	p.172 #6-14, 16 WS#8
5.6	Friction Lab		
	Work day, quiz		Lab, homework,quiz,p. 691 #1-13
5.5	PreTest		
	Test		
Unit 6		9.1-9.2	
6.1	$p=mv$, Impulse	p.175-188	p.178-179 #1-4 p.193 #1-11,14-15
6.2	Conservation of momentum		p.185-188 #5-8,10-12 p.194 #16-27 WS#9
6.3	Momentum lab		
6.4	Quiz, work day		p.695 #1-13
6.5	PreTest, Bad Movie Physics		PreTest
6.6	Forensic Collision Analysis		
	Test		
Unit 7		10.1 11.1-11.2 12.1	
7.1	Definition, $W=Fd$, $W=Fd\cos\theta$, $P=W/t$	p.197-203	p.199-203 #1-7,9-12
7.2	Kinetic energy	p.217-222	p.213-215 #1-5,8,9,12,13,17-19,27,28 p.221-222 #1-4
7.3	Potential energy, efficiency	p.222-224	p.224 #5-8 p.237-238 #1-6,8-15,17,18
7.4	Work Day		p.210 #15 p.215 #33,34 WS#10
7.5	Quiz, conservation	p.227-235	p.230 #9-11 p.234#13-15 p.238-239#20-25,27-30,32
7.6	Thermal Energy $E=mcT$, conservation $\Delta E_a = - \Delta E_b$	p.247-252	p.248-252 #5-7,9-11 p.262-263 #4-6,8-10,12-14
7.7	PreTest		
7.8	Bad Movie Physics, Work day		WS#11
	Test		

Unit 8		14.1-14.2	
8.1	Wave: def. f, T wave eq.	p.287-294	p.293 #1-4 p.304-305 #1-11
8.2	Refl, transmission, superposition, standing waves	p.294-298	p.296-297 #5-8 p.305 #14a,b,15,16
8.3	2D(water) waves refl, refraction, diffraction, Quiz	p.299-301	p.303 key terms complete with definitions WS#12
	Pretest		p.698 #1-11
	Test		
Unit 9		16.2 17.1-17.2 18.1-18.2	
9.1	Light: def., EM waves, colour, polarization	p.336-342	p.332 #1-4 p.344 #1-3,5,7
9.2	Index of refraction, Snell's Law	p.347-361	p.354-355 #1-7 p.364 #1-12, #16-18, #20-22,24
9.3	Mirrors: Geo, lens equation	p.367-378	p.374-378 #1-12 p.388-389 #1-11
9.4	Work day: review concepts		WS#13 PreTest
9.5	Lenses: Geo, lens equation	p.378-386	p.381#13-16 p.389#12-18 WS#14
9.6	Compound lenses, quiz		
	Pretest		
	Test		
Unit 10		30.1 31.1-31.2	
10.1	Atom, Rad decay, nuclear equations	p.615-621	p.618-621 #1-8
10.2	Fundamental Forces, $\frac{1}{2}$ life	p.621-622	p.622 #9-12 p.636 #1-8,10,12-14
10.3	$E=mc^2$, binding energy	p.639-642	p.642-645 #1-8 p.654 #1-3,7,11,12
10.4	Nuclear applications, nuclear reactors	p.643-652	p.636: LHS: vocab/key terms. p.653: key terms: all p.652:9,10
10.5	Δm , nuclear reactions, quiz		p.654: #22a P.709:#1-14
Unit 11			
11.1	Relativity, Michelson-Morley, postulates		
11.2	Time dilation, length contraction, mass increase		
	Work day		WS #15
	Work day		PreTest
	Test		
	Review #1-2		
	Review #3-4		
	Review #5-6		
	Review #7-8		
	Final Exam		