

Reading_HW_Schedule

Day	Section	Title	Pages	Pages/ Section	Homework Problems	Due Date
08/20	1.1	Introduction	P 1-2	2	none	
	1.2	Idealized Models	P 3	1	none	
	1.3	Standards and Units	P 3-7	4	none	
08/22	1.4	Unit Consistency and Conversions	P 7-9	2	5, 6	08/29
	1.5	Precision and Significant Figures	P 9-11	3	17, 21	08/29
	1.6	Estimates and Orders of Magnitude	P 11	1	24, 32	08/29
08/24	1.7	Vectors and Vectors Addition	P 12-16	5	34, 36	08/31
	1.8	Components and Vectors	P 16-21	6	42, 49	08/31
08/27	2.1	Displacement and Average Velocity	P 30-34	5	2, 12	09/05
	2.2	Instantaneous Velocity	P 34-37	4	19, 20	09/05
	2.3	Average and Instantaneous Velocity	P 37-42	6	24, 26	09/05
08/29	2.4	Motion and Constant Acceleration	P 42-48	7	28, 32	09/07
	2.5	Proportional Reasoning	P 48-51	4	41, 46	09/07
08/31	2.6	Freely Falling Objects	P 51-54	4	49, 52	09/10
	2.7	Relative Velocity along a Straight Line	P 54-56	3	62	09/10
09/05	3.1	Velocity in a Plane	P 68-71	4		
	3.2	Acceleration in a Plane	P 71-74	4	1, 5	09/12
09/07	3.3	Projectile Motion	P 75-85	11	8, 27	09/14
	3.4	Uniform Circular Motion	P 85-88	4	31, 38	09/14
	3.5	Relative Velocity in a Plane	P 88-89	2	39, 43	09/14
09/10	4.1	Force	P 99-102	4	1, 4	09/17
	4.2	Newton's First Law	P 102-104	3		
09/12	4.3	Mass and Newton's Second Law	P 104-109	6	9, 10	09/19
	4.4	Mass and Weight	P 109-112	4	14, 18	09/19
09/14	4.5	Newton's Third Law	P 112-116	5	24, 27	09/21
	4.6	Free-Body Diagrams	P 116-118	3	28, 34	09/21
09/17	5.1	Equilibrium of a Particle	P 128-133	6	2, 9	09/24
	5.2	Applications of Newton's Second Law	P 133-137	5	18, 26	09/24
09/19	5.3	Contact Forces and Friction	P 137-145	9	33	09/26
	5.4	Elastic Forces	P 145-147	3	57	09/26
	5.5	Forces in Nature	P 147-148	2		
09/21	6.1	Force in Circular Motion	P 161-167	7	1, 2	09/28
	6.2	Motion in a Vertical Circle	P 168-170	3	14	09/28
09/24	6.3	Newton's Law of Gravitation	P 170-172	3	16, 17	10/01
	6.4	Weight	P 172-175	4	26, 29	10/01
	6.5	Satellite Motion	P 175-180	6		
09/26	7.1	An Overview of Energy	P 188-192	5		
	7.2	Work	P 192-196	5	1,9	10/05
	7.3	Work and Kinetic Energy	P 196-200	5	14	10/05
09/28	7.4	Work Done by a Varying Force	P 200-203	4	25, 26	10/08
	7.5	Potential Energy	P 203-208	6	30, 31	10/08
10/01	7.6	Conservation of Energy	P 208-212	5	44, 46	10/10
	7.7	Conservative and Non-conservative Forces	P 212-216	5	57	10/10
	7.8	Power	P 216-218	3	72	10/10
10/05	8.1	Momentum	P 231-234	4	1, 7	10/12
	8.2	Conservation of Momentum	P 234-239	6	8	10/12
10/08	8.3	Inelastic Collisions	P 239-243	5	22, 23	10/15
	8.4	Elastic Collisions	P 244-248	5	32, 33	10/15
	8.5	Impulse	P 248-251	4	40	10/15
10/10	8.6	Center of Mass	P 251-253	3		10/17
	8.7	Motion of the Center of Mass	P 253-254	2	49, 52	10/17

Reading_HW_Schedule

	8.8	Rocket Propulsion	P 254-256	3	54	10/17
10/12	9.1	Angular Velocity and Angular Acceleration	P 267-270	4	1, 3	10/22
	9.2	Rotation with Constant Angular Acceleration	P 270-272	3	12, 15	10/22
	9.3	Relationship between Linear and Angular Quantities	P 272-276	5	25	10/22
10/15	9.4	Kinetic Energy of Rotation and Moment of Inertia	P 277-281	5	30	10/24
	9.5	Rotation about a Moving Axis	P 281-284	4	47	10/24
10/17	10.1	Torque	P 294-297	4	1,2	10/26
	10.2	Torque and Angular Acceleration	P 297-303	7	6,7	10/26
	10.3	Work and Power in Rotational Motion	P 303-305	3	18	10/26
10/22	10.4	Angular Momentum	P 305-307	3	22	10/29
	10.5	Conservation of Angular Momentum	P 307-311	5	29	10/29
	10.6	Equilibrium of a Rigid Body	P 311-316	6	35	10/29
	10.7	Vector Nature of Angular Quantities	P 317-319	3		10/29
10/24	11.1	Stress, Strain, and Elastic Deformations	P 333-340	8	1, 2	10/31
	11.2	Periodic Motion	P 340-343	4	24, 25	10/31
	11.3	Energy in Simple Harmonic Motion	P 343-345	3	32	10/31
10/26	11.4	Equations of Simple Harmonic Motion	P 346-351	6	38, 40	11/02
	11.5	The Simple Pendulum	P 351-354	4	47	11/02
	11.6	Damped and Forced Oscillations	P 354-358	5	52	11/02
10/29	12.1	Mechanical Waves	P 365-367	3		
	12.2	Periodic Mechanical Waves	P 367-369	3	3	11/05
	12.3	Wave Speeds	P 369-371	3	6	11/05
10/31	12.4	Mathematical Description of a Wave	P 371-372	2	10	11/07
	12.5	Reflections and Superpositions	P 373-374	2		
	12.6	Standing Waves and Normal Modes	P 374-380	7	14	11/07
	12.7	Longitudinal Standing Waves	P 380-384	5	25	11/07
11/02	12.8	Interference	P 384-385	2	34	11/09
	12.9	Sound and Hearing	P 385-386	2	36	11/09
	12.10	Sound Intensity	P 386-389	4	39	11/09
11/05	12.11	Beats	P 389-391	3	49	11/12
	12.12	The Doppler Effect	P 391-395	5	52	11/12
	12.13	Applications of Acoustics	P 395-396	2		
	12.14	Musical Tones	P 396-397	2		
11/07	13.1	Density	P 407-409	3	2, 4	11/14
	13.2	Pressure in a Fluid	P 409-416	8	12, 28	11/14
	13.3	Archimedes's Principle: Buoyancy	P 416-419	4	29	11/14
11/09	13.4	Surface Tension and Capillarity	P 419-422	4	38	11/16
	13.5	Fluid Flow	P 422-424	3	42, 43	11/16
	13.6	Bernoulli's Equation	P 424-427	4		11/16
11/12	13.7	Applications of Bernoulli's Equation	P 427-430	4	47, 48	11/19
	13.8	Real Fluids: Viscosity and Turbulence	P 430-432	3		
11/14	14.1	Temperature and Thermal Equilibrium	P 441-443	4		
	14.2	Temperature Scales	P 443-446	4	1, 4	11/26
	14.3	Thermal Expansion	P 446-451	6	8, 11	11/26
11/16	14.4	Quantity of Heat	P 451-454	5	22, 23	11/28
	14.5	Phase Changes	P 454-457	4	31, 35	11/28
11/19	14.6	Calorimetry	P 458-459	2	43, 44	11/30
	14.7	Heat Transfer	P 459-466	8	52	11/30
	14.8	Solar Energy and Resource Conservation	P 466-467	2		
11/26	15.1	The Mole and Avogadro's Number	P 477-478	2	1,2	12/03
	15.2	Equations of State	P 479-485	7	15	12/03
	15.3	Kinetic Theory of an Ideal Gas	P 486-492	7		12/03
11/28	15.4	Heat Capacities	P 492-493	2	32	12/05
	15.5	The First Law of Thermodynamics	P 493-501	9	39	12/05

Reading_HW_Schedule

	15.6	Thermodynamic Processes	P 501-503	3		
11/30	15.7	Properties of an Ideal Gas	P 503-506	4	50	12/07
	16.1	Directions of Thermodynamic Processes	P 516-518	3		
	16.2	Heat Engines	P 518-521	4		
12/03	16.3	Internal Combustion Engines	P 521-523	3		
	16.4	Refrigerators	P 523-525	3		
	16.5	The Second Law of Thermodynamics	P 526-527	2		
	16.6	The Carnot Engine: The Most Efficient Heat Engine	P 527-531	5		
12/05	16.7	Entropy	P 531-535	5		
	16.8	The Kelvin Temperature Scale	P 535-536	2		
	16.9	Energy Resources: A Case Study in Thermodynamics	P 536-537	2		
12/07		Review for Final				
12/12		Final Exam from 8:00-10:00				

Schedule

Day	Section	Title	Pages	Pages/		Due Date
				Day	HW	
06/04	1.1	Introduction	P 1-2	12		
	1.2	Idealized Models	P 3			
	1.3	Standards and Units	P 3-7		1, 2, 4	06/06
	1.4	Unit Consistency and Conversions	P 7-9		6, 7, 11	06/06
	1.5	Precision and Significant Figures	P 9-11		15, 19, 23	06/06
	1.6	Estimates and Orders of Magnitude	P 11		24, 25, 30, 32	06/06
06/05	1.7	Vectors and Vectors Addition	P 12-16	12	34, 36, 37	06/07
	1.8	Components and Vectors	P 16-21		39, 42, 44, 46, 49	06/07
06/06	2.1	Displacement and Average Velocity	P 30-34	19	1, 9, 14	06/11
	2.2	Instantaneous Velocity	P 34-37		19	06/11
	2.3	Average and Instantaneous Velocity	P 37-42		24	06/11
	2.4	Motion and Constant Acceleration	P 42-48		30, 38	06/11
		Lab #1				06/13
06/07	2.5	Proportional Reasoning	P 48-51	9	41, 44	06/12
	2.6	Freely Falling Objects	P 51-54		48, 53	06/12
	2.7	Relative Velocity along a Straight Line	P 54-56		62, 64	06/12
06/11	3.1	Velocity in a Plane	P 68-71	18		
	3.2	Acceleration in a Plane	P 71-74		1, 5	06/13
	3.3	Projectile Motion	P 75-85		8, 11, 27	06/13
06/12	3.4	Uniform Circular Motion	P 85-88	5	31, 38	06/14
	3.5	Relative Velocity in a Plane	P 88-89		39, 43	06/14
06/13	4.1	Force	P 99-102	14	1, 4	06/18
	4.2	Newton's First Law	P 102-104			
	4.3	Mass and Newton's Second Law	P 104-109		9, 10	06/18
	4.4	Mass and Weight	P 109-112		14, 18	06/18
		Lab #2				
06/14	4.5	Newton's Third Law	P 112-116	26	24, 27	06/19
	4.6	Free-Body Diagrams	P 116-118		28, 34	06/19
	5.1	Equilibrium of a Particle	P 128-133		2, 9	06/19
06/18	5.2	Applications of Newton's Second Law	P 133-137		18, 26	06/20
	5.3	Contact Forces and Friction	P 137-145	12	33	06/20
	5.4	Elastic Forces	P 145-147		57	06/20
06/19	6.1	Force in Circular Motion	P 161-167	20	1, 2	06/21
	6.2	Motion in a Vertical Circle	P 168-170		14	06/21
	6.3	Newton's Law of Gravitation	P 170-172		16	06/21
	6.4	Weight	P 172-175		29	06/21
	6.5	Satellite Motion	P 175-180			
06/20	7.1	An Overview of Energy	P 188-192	23		
	7.2	Work	P 192-196		1,9	06/25
	7.3	Work and Kinetic Energy	P 196-200		14	06/25
	7.4	Work Done by a Varying Force	P 200-203		25	06/25
		Lab #3				
06/21	7.5	Potential Energy	P 203-208	16	31	06/26
	7.6	Conservation of Energy	P 208-212		44	06/26
	7.7	Conservative and Non-conservative Forces	P 212-216		57	06/26
	7.8	Power	P 216-218		72	06/26
06/25	8.1	Momentum	P 231-234	18	1, 7	06/27
	8.2	Conservation of Momentum	P 234-239		8	06/27
	8.3	Inelastic Collisions	P 239-243		22	06/27
	8.4	Elastic Collisions	P 244-248		33	06/27
06/26	8.5	Impulse	P 248-251	9	40	06/28

Schedule

	8.6	Center of Mass	P 251-253			06/28
	8.7	Motion of the Center of Mass	P 253-254	49		06/28
	8.8	Rocket Propulsion	P 254-256	54		06/28
06/27	9.1	Angular Velocity and Angular Acceleration	P 267-270	18	1	07/02
	9.2	Rotation with Constant Angular Acceleration	P 270-272		12	07/02
	9.3	Relationship between Linear and Angular Quantities	P 272-276		25	07/02
		Lab #4				
06/28	10.1	Torque	P 294-297	18		
	10.3	Work and Power in Rotational Motion	P 303-305			
07/02	11.1	Stress, Strain, and Elastic Deformations	P 333-340	13	1	07/05
	11.2	Periodic Motion	P 340-343		24	07/05
	11.3	Energy in Simple Harmonic Motion	P 343-345		32	07/05
07/03	11.4	Equations of Simple Harmonic Motion	P 346-351	12	40	07/09
	11.5	The Simple Pendulum	P 351-354		47	07/09
	11.6	Damped and Forced Oscillations	P 354-358		52	07/09
07/04		no class				
07/05	12.1	Mechanical Waves	P 365-367	8		
	12.2	Periodic Mechanical Waves	P 367-369		3	07/10
	12.3	Wave Speeds	P 369-371		6	07/10
	12.4	Mathematical Description of a Wave	P 371-372		10	07/10
07/09	12.5	Reflections and Superpositions	P 373-374			
	12.6	Standing Waves and Normal Modes	P 374-380	16	14	07/11
	12.7	Longitudinal Standing Waves	P 380-384		25	07/11
	12.8	Interference	P 384-385		34	07/11
07/10	12.9	Sound and Hearing	P 385-386		36	07/12
	12.10	Sound Intensity	P 386-389		45	07/12
	12.11	Beats	P 389-391	9	49	07/12
	12.12	The Doppler Effect	P 391-395		52	07/12
07/11	13.1	Density	P 407-409	16	5	07/16
	13.2	Pressure in a Fluid	P 409-416		28	07/16
	13.3	Archimedes's Principle: Buoyancy	P 416-419		33	07/16
	13.4	Surface Tension and Capillarity	P 419-422			
		Lab #5				
07/12	13.5	Fluid Flow	P 422-424	11	42	07/17
	13.6	Bernoulli's Equation	P 424-427			07/17
	13.7	Applications of Bernoulli's Equation	P 427-430		49	07/17
	13.8	Real Fluids: Viscosity and Turbulence	P 430-432		59	07/17
07/16	14.1	Temperature and Thermal Equilibrium	P 441-443	14		
	14.2	Temperature Scales	P 443-446		1	07/18
	14.3	Thermal Expansion	P 446-451		8	07/18
	14.4	Quantity of Heat	P 451-454		22	07/18
07/17	14.5	Phase Changes	P 454-457	14	35	07/19
	14.6	Calorimetry	P 458-459		44	07/19
	14.7	Heat Transfer	P 459-466		52	07/19
	14.8	Solar Energy and Resource Conservation	P 466-467			
07/18	15.1	The Mole and Avogadro's Number	P 477-478	17	2	07/23
	15.2	Equations of State	P 479-485		15	07/23
	15.3	Kinetic Theory of an Ideal Gas	P 486-492		20	07/23
	15.4	Heat Capacities	P 492-493		32	07/23
		Lab #6				
07/19	15.5	The First Law of Thermodynamics	P 493-501	14	39	07/24
	15.6	Thermodynamic Processes	P 501-503			
	15.7	Properties of an Ideal Gas	P 503-506		50	07/24
07/23	16.1	Directions of Thermodynamic Processes	P 516-518	8		

Schedule

	16.2	Heat Engines	P 518-521	
	16.3	Internal Combustion Engines	P 521-523	
07/24	16.4	Refrigerators	P 523-525	8
	16.5	The Second Law of Thermodynamics	P 526-527	
	16.6	The Carnot Engine: The Most Efficient Heat Engine	P 527-531	
07/25	16.7	Entropy	P 531-535	7
	16.8	The Kelvin Temperature Scale	P 535-536	
	16.9	Energy Resources: A Case Study in Thermodynamics	P 536-537	
		Lab #7		
07/26		Final Exam		