Haverford College - Physics Department Physics 101a: Classical and Modern Physics I Regular Section (F. Crawford) Fall 2004 Course Schedule/Syllabus

Lecture Schedule

F Sep 3 Vector Calculus, Dot and Cross Product; Speed 2.1 - 2.4 M Sep 6 Velocity; Vector Addition; Inertial Frames 2.5 - 2.9 W Sep 8 Acceleration; Free Fall 3.1 - 3.7 F Sep 10 Free Fall; Projectiles 3.8 - 3.10 M Sep 15 Free Body Diagrams; Weight 4.5 , 4.6 F Sep 17 Inclined Planes; Coupled Motions 4.6 , 4.7 M Sep 20 Friction; Translational Equilibrium 4.8 , 4.9 W Sep 22 Friction; Translational Equilibrium 5.1, 5.2 F Sep 24 Law of Gravity; Gravity of Sphere; Terrestrial Gravity 5.3, 5.4 M Sep 22 Midterm Exam #1 - in class none F Oct 1 Gravitational Fields 5.7, 5.8 M Oct 4 Work; Conservative Forces 6.1 M Oct 4 Work; Conservative Forces 6.1 M Oct 1 Fall Break - no class none M Oct 15 Fall Break - no class none M	Day	Date	Lecture Topics	Hecht Reading
F Sep 3 Vector Calculus, Dot and Cross Product; Speed 2.1 - 2.4 M Sep 6 Velocity; Vector Addition; Inertial Frames 2.5 - 2.9 W Sep 8 Acceleration; Free Fall 3.1 - 3.7 F Sep 10 Free Fall; Projectiles 3.8 - 3.10 M Sep 15 Free Body Diagrams; Weight 4.5 , 4.6 F Sep 17 Inclined Planes; Coupled Motions 4.6, 4.7 M Sep 20 Friction; Translational Equilibrium 4.8, 4.9 W Sep 22 Centripteal Acceleration; Circular Motion 5.1, 5.2 F Sep 24 Law of Gravity; Gravity of Sphere; Terrestrial Gravity 5.3, 5.4 M Sep 27 Kepler's Laws; Orbits 5.5, 5.6 M Sep 29 Midterm Exam #1 - in class none F Oct 1 Gravitational Fields 5.7, 5.8 M Oct 4 Work; Conservative Forces 6.1 M Oct 4 Work; Conservative Forces 6.1 M Oct 13 Fall Break - no class none				
M Sep 8 Velocity; Vector Addition; Inertial Frames 2.5 - 2.9 W Sep 8 Acceleration; Free Fall 3.1 - 3.7 F Sep 10 Free Fall; Projectiles 3.8 - 3.10 M Sep 13 Inertia; Momentum; Newton's Laws 4.1 - 4.4 W Sep 15 Free Body Diagrams; Weight 4.6, 4.7 M Sep 11 Inclined Planes; Coupled Motions 4.6, 4.7 M Sep 20 Friction; Translational Equilibrium 4.8, 4.9 W Sep 21 Law of Gravity; Gravity of Sphere; Terrestrial Gravity 5.1, 5.2 F Sep 21 Law of Gravity; Gravity of Sphere; Terrestrial Gravity 5.3, 5.4 M Sep 27 Midterm Exam #1 - in class none F Oct 1 Gravitational Fields 5.7, 5.8 M Oct 6 Kinetic and Potential Energy; Conservation of Energy 6.2 - 6.4 F Oct 1 Full Break - no class none M Oct 13 Full Break - no class none M Oct 15 Full Break - no class none <td></td> <td></td> <td></td> <td>1.1 - 1.9, Appdx. F</td>				1.1 - 1.9, Appdx. F
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F Sep 17 Inclined Planes; Coupled Motions 4.6, 4.7	M	Sep 13	Inertia; Momentum; Newton's Laws	4.1 - 4.4
Nov 24	W	Sep 15	Free Body Diagrams; Weight	$4.5, \ 4.6$
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F Nov 5 Bernoulli's Equation; Viscous Flow 9.9, 9.10 M Nov 8 Thermal Expansion; Ideal Gas Law 12.1 - 12.5 W Nov 10 Midterm Exam #2 - in class none F Nov 12 Phase Diagrams; Kinetic Theory 12.6, 12.7 M Nov 15 Heat and Temperature; Specific Heat 13.1 - 13.4 W Nov 17 Changes of State; Radiation, Convection, and Conduction 13.5 - 13.10 F Nov 19 Thermodynamic Work; Heat and Internal Energy 14.1 - 14.2 M Nov 29 Isothermal and Adiabatic Changes 14.3, 14.4 W Nov 24 Carnot Engine; Efficiency 14.5, 14.6 F Nov 26 Thanksgiving Holiday - no class none M Nov 29 Entropy; Microstates and Macrostates 14.7 W Dec 1 Relativity Postulates; Simultaneity 26.1 - 26.3 F Dec 3 Time Dilation; Length Contraction; Twin Effect 26.4 - 26.7 M Dec 6 Relativistic Velocity Addition; Relativistic Momentum 26.8, 26.9 W				
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The Final Exam is a self-scheduled exam to be taken during final exam week (Mon Dec 13 to Fri Dec 17).