

## Physics 1B: Principles of Physics, Winter 2014

Last Updated: 3/5/14

**Text:** Physics, Douglas C. Giancoli, 7th Edition

**Requirement:** Physics 1A

**Lecture:** TR 10:30-11:50am, 66 Roessler

**Main Website:** <http://smartsite.ucdavis.edu>

[Syllabus](#)

### Instructor

Prof. Kai Liu , 207 Physics;  
Tel: 530-752-4109; [kailiu\(at\)ucdavis.edu](mailto:kailiu(at)ucdavis.edu)  
Office Hour: W 2-3 pm, 207 Physics  
Problem Session: W 5-6, 285 Physics

### Teaching Assistant

Mark Triplett, 221 Physics;  
[triplett\(at\)ms.physics.ucdavis.edu](mailto:triplett(at)ms.physics.ucdavis.edu)  
Office Hour: T 1-2pm, 2314 EPS

## Schedule

(Subject to change)

**HW#1:** Ch 11 Problems 5, 7, 14, 15, 16, 20, 22, 24, 27, 28, 31, 34. Due 1/16

**HW#2:** Ch 11: Problems 39, 41, 44, 45, 48, 64; Ch 12: Problems 5, 9, 12, 15, 56; Ch 13: Problems 8, 13. Due 1/23

**HW#3:** Ch 13: Problems 25, 27, 34; Ch 14: Problems 16, 17, 27, 28, 30. Due 1/30.

**HW#4:** Ch 14: Problems 38, 41, 43, 44, 47; Ch 15: Problems 5, 7, 10, 29, 30, 35. Due 2/6

**HW#5:** Ch 16: Problems 7, 10, 12, 14, 24, 25, 32; Ch 17: Problems 5, 7, 10, 14, 35, 39. Due 2/18

**HW#6:** Ch 18: Problems 11, 26, 37, 39, 44; Ch 19: Problems 12, 13, 17, 19, 72. Due 2/25

**HW#7:** Ch 20: Problems 30, 34, 35, 45, 47, 6, 12, 14, 15, 17. Due 3/6

**HW#8:** Ch 23: Problems 3, 11, 12, 13, 17, 29, 32, 34, 35, 36. Due 3/13

### Topics:

Waves: Chapter 11  
Sound: Chapter 12  
Heat & Thermodynamics: Chapters 13-15  
Electrostatics: Chapters 16, 17  
Circuits: Chapters 18, 19  
Magnetism: Chapter 20  
Optics: Chapters 23

Tuesday	Thursday
1/7 <b>Oscillations &amp; SHM Energy</b>	1/9 <b>SHM Period</b>

			<a href="#">SHM Simulation</a>
1/14	<b>Pendulum &amp; Resonance</b>  <a href="#">Pendulum Simulation</a> <a href="#">Tacoma Narrows Bridge</a> <a href="#">Breaking wine glass</a>	1/16	<b>Waves &amp; Sound</b>  <b>Quiz #1</b>
1/21	<b>Doppler Effect &amp; Temperature</b> <a href="#">Doppler Effect Simulation</a> <a href="#">3D Mid Air Acoustic Manipulation</a>	1/23	<b>Gas Laws &amp; Heat</b>
1/28	<b>Heat Transfer</b>  <a href="#">Orbiter Thermal Protection System 1 &amp; 2</a>	1/30	<b>Exam I</b>
2/4	<b>Thermodynamics</b>	2/6	<b>Charge</b> <b>Quiz #2</b>
2/11	<b>Electric Field</b>	2/13	<b>Electric Potential &amp; Capacitance</b>
2/18	<b>Current &amp; Ohm's Law</b>  <b>Quiz #3</b>	2/20	<b>Circuits</b>
2/25	<b>Exam II</b>	2/27	<b>Magnetism</b>
3/4	<b>Force in a Magnetic Field</b>  <a href="#">Northern Light</a>	3/6	<b>Reflection</b>  <a href="#">Simulation: Mirror Trick</a> <a href="#">Mirror/Lens Simulation</a> <b>Quiz #4</b>
3/11	<b>Refraction</b>  <a href="#">Reflection/Refraction Simulation</a>	3/13	<b>Review</b>

**FINAL EXAM: FRIDAY, MARCH 21, 6:00-8:00pm, 66 Roessler**

[To Kai Liu's Homepage](#)

