

**Physics 115 Sec. 001: Descriptive Physics [Call No. 5786]**  
(v. 14 January 2008)

**LECTURE:** MWF 1:30pm – 2:20pm in 211 Brace Laboratory

**INSTRUCTOR:** *Anthony F. Starace*, Behlen B58,  
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**OFFICE HOURS:** Mondays & Wednesdays 2:30pm – 3:30pm or by appointment.

**REQUIRED TEXT:** *How Things Work: The Physics of Everyday Life*, 3rd Edition (Wiley, 2006) by Louis A. Bloomfield (ISBN 978-0-471-46886-8, 576 pages, full-color, paperback)

*Notes:*

- (1) Bloomfield has a similar book entitled “How Everything Works.” Do not confuse the text for this course with that book.
- (2) Be sure to sign up for the text’s “Student Companion Site” by going to [www.wiley.com/college/bloomfield](http://www.wiley.com/college/bloomfield) and registering.

**OTHER REQUIREMENTS:**

(1) *Purchase a Personal Response System (PRS) Clicker.* If you purchase this from the UNL bookstore in the Nebraska Union, they can easily register it for you. If you purchase one elsewhere, you must register your clicker for this course here: [www.my.unl.edu](http://www.my.unl.edu)

(2) *Register on EDU:* Homework will be done from this class’s EDU web site. Please register yourself here:  
<http://webtest2.unl.edu/edu/classes/P115S08/>

(3) *Your Correct Email Address:* Please be sure your email address is listed correctly on the course web page: [www.my.unl.edu](http://www.my.unl.edu)

**GRADES:** Your grade in this course is based on your results in three in-class hour exams (15% each), the final exam (30%), the homework assignments (15%), and class participation and attendance (10%).

**EXAMINATIONS:**

*Hour Exams* on Wednesdays of February 19th, March 26th, and April 23rd during class period.

*Final Exam* on Tuesday, May 6, 1:00 pm – 3:00 pm

**WEB PAGES:**

*Publisher:* [www.wiley.com/college/bloomfield](http://www.wiley.com/college/bloomfield)

*Author:* <http://howthingswork.virginia.edu/home.html>

*This Course:* [www.my.unl.edu](http://www.my.unl.edu)

*Homework for this course:* <http://webtest2.unl.edu/edu/classes/P115S08/>

**TENTATIVE SYLLABUS (as of 14 January 2008):**

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**PLANNED COVERAGE** (Note that this listing of topics may be revised during the semester.)

**Chapter 1 The Laws of Motion, Part 1**

Section 1.1 Skating; Section 1.2 Falling Balls; Section 1.3 Ramps

**Chapter 2 The Laws of Motion, Part 2**

Section 2.1 Seesaws; Section 2.2 Wheels; Section 2.3 Bumper Cars

**Chapter 3 Mechanical Objects, Part I**

Sec. 3.1 Spring Scales; Sec. 3.2 Bouncing Balls; Sec. 3.3 Carousels and Roller Coasters

**Chapter 5 Fluids:**

Section 5.1 Balloons; Section 5.2 Water Distribution

**Chapter 7 Heat and Phase Transitions**

Sec. 7.1 Woodstoves; Sec. 7.2 Water, Steam, and Ice; Sec. 7.3 Incandescent Light Bulbs

**Chapter 9 Resonance and Mechanical Waves**

Section 9.1 Clocks; Section 9.2 Musical Instruments; Sec. 9.3 The Sea

**Chapter 10 Electricity**

Sec. 10.1 Static Electricity; Sec. 10.2 Xerographic Copiers; Sec. 10.3 Flashlights

**Chapter 11 Magnetism and Electrodynamics**

Sec. 11.1 Household Magnets; Sec. 11.2 Electric Power Distribution

**Chapter 13 Electromagnetic Waves**

Section 13.1 Radio; Section 13.2 Microwave Ovens