

LIU – POST

PHY 11

Arvind Borde, College Physics I, Fall 2017

4 credits

*Classes* Tu/Th | §1: 2:00–4:50; §2: 8:00–10:50; PH 209.

*Website* <http://arvind-borde.org/courses/phy11/>

*Instructor* Arvind Borde | [arvind.borde@liu.edu](mailto:arvind.borde@liu.edu) | <http://arvind-borde.org/>

*Office* LS 239; telephone: (516) 299 2447. Hours: T, Th, 12:30–2:00 pm, or by appointment.

*Bulletin* Physics 11 is the first half of an introductory, non-calculus physics course that covers the laws and principles of mechanics, thermodynamics, and waves.

*Text, etc.* *Physics: Principles with Applications*, Seventh Edition. Douglas C. Giancoli. Publisher: Addison-Wesley (2014).

*Rules* **Do:** attend all classes/labs, come on time, stay for the duration, pay attention.  
**Don't:** talk among yourselves (except in lab), be disruptive, text, have your phone out. Violating any of these will be marked as an absence and will lead to further disciplinary action. Three or more violations will lead to an automatic F. You may use a computer or tablet to take notes, but must be prepared to sit in the first row if asked.

*Homework & Tests* Weekly homework is on the website. You must attempt it the day it is assigned. If you have difficulties, see me or a tutor *that week itself*. HW will be discussed in the class immediately following. Specific questions will be answered in class, but not general ones about the whole assignment. You must have the homework available in a separate notebook or folder, with your name on each assignment, or clearly marked as such in the class notebook. You must bring the homework and class notebook with you if you want extra help in my office. It is your responsibility to catch up on material you miss for any reason. You should expect to spend 6 hours a week on this course outside class.

Quizzes are “open-notecard” and will be based mainly on material and homework covered since the previous quiz, but familiarity with all material covered up to that point is expected. You will need a dedicated calculator (not cell phone or tablet computer) on all quizzes. *There are no make-up quizzes. If you miss a quiz for any reason you will get a score of –1 on it.* You must keep all your quizzes through the semester.

The complete quiz schedule is on this syllabus.

*Grades* First see the rules above. There will be 6 quizzes. Your 5 best scores will each count 10% toward your grade. The labs count for 30%, and the final for 20%. There will be a grade boost if you have done all the homework over the term.

*Note* Last day to drop: September 19. Last day to withdraw: November 10.

I have understood the syllabus, course requirements, grading method, and rules, and agree to abide by them. I have retained a copy of this syllabus for my records. I have filled out the form overleaf.

Signature: \_\_\_\_\_ Date: \_\_\_\_\_

Name: \_\_\_\_\_

**Name (print clearly):**

**Major:**

**Last physics, other science, and math classes taken (what, when, where):**

**Career goals:**

**Dream goals (If earning money were not an issue what would your perfect life be like?):**

**Math/science weaknesses (if any):**

**Math/science strengths:**

**Anything in particular that you wish to learn in this course:**

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**PLEASE PLACE THIS COPY AT THE FRONT OF YOUR NOTEBOOK/FOLDER  
YOU MUST HAVE IT WITH YOU IN EVERY CLASS**


Week 1

Thursday, September 7  
 Course introduction and review.  
 Ch. 1: Measurement; estimating.

Week 2

Tuesday, September 12  
 Ch. 2: Describing motion I:  
 Kinematics in 1d.

Thursday, September 14

 Lab 1: Measurement

Week 3


Tuesday, September 19  
 Ch. 3: Describing motion II:  
 Kinematics in 2d with vectors.

Test 1: Chapters 1 & 2.

score

%


Thursday, September 21

 Lab 2: Force table

Week 4

Tuesday, September 26  
 Ch. 4: Newton's Laws of motion  
 Dynamics. DC circuits.

Thursday, September 28

 Lab 3: Air track

Week 5


Tuesday, October 3  
 Ch. 5: Circular motion; gravitation.

Test 2: Chapters 3 & 4.

score

%

Thursday, October 5

 Lab 4: Hooke's Law

Week 6

Tuesday, October 10  
 Ch. 6: Work and energy.


Thursday, October 12

 Lab 5: Centripetal force

Week 7

Tuesday, October 17  
 Ch. 7: Linear momentum.

Thursday, October 19

 Lab 6: Ballistic pendulum

Week 8


Tuesday, October 24  
 Ch. 8: Rotational motion.

Test 3: Chapters 5 & 6.

score

%


Thursday, October 26

 Lab 7: Moment of inertia

Week 9

Tuesday, October 31  
 Ch. 11: Waves.

Thursday, November 2

 Lab 8: Simple harmonic motion

Week 10

Tuesday, November 7  
 Ch. 12: Sound.

Test 4: Chapters 7 & 8.

score

%


Thursday, November 9

 Lab 9: Waves on a string

Week 11

Tuesday, November 14  
 Ch. 10: Fluids.

Thursday, November 16

 Lab 10: Speed of sound

Week 12

Tuesday, November 21  
 Catch up Q.

Test 5: Chapters 11 & 12.

score

%

Thursday, November 23

Thanksgiving: no class

Week 13

Tuesday, November 28  
 Ch. 13 & 14: Temperature and heat.

Thursday, November 30

Homework review.  
 Ch. 15: The Laws of Thermodynamics.

Week 14

Tuesday, December 5  
 Course review.

Test 6: Chapters 10, 13–15.

score

%

Thursday, December 7

Course review.