

LIU – POST

PHY 12.001

Arvind Borde, College Physics II, Spring 2020

4 credits

Classes: Tu, Th: 2:00–4:50 p.m., PH 209.

Website: <http://arvind-borde.org/courses/phy12/>

Instructor: Arvind Borde | <http://arvind-borde.org/>

Email: arvind.borde@liu.edu

I'll try to answer all emails promptly, but there are a few simple rules you must follow. You should say, either in the subject line or the first line of the body, what class you're in and what time we meet. You should then immediately say what your question or comment is, as concretely as possible. Questions whose answers are available to you (on this syllabus, for example) will go to the bottom of the pile, as will email that does not follow the rules above. These may go unanswered. Questions requiring long answers are best asked in person. You may get straight to your question without formally addressing me, but if you do address me, the correct forms are "Prof. Borde," or "Dr. Borde," not just "Professor," or "Hey Professor," just as I will not address you as "Student," or "Hey Student."

Office: PH 235; telephone: (516) 299 2447. Hours: T, Th, 12:30–2:00 pm, or by appointment.

Bulletin: Physics 12 is the second half of an introductory, non-calculus physics course covering electricity, magnetism, optics and an introduction to modern physics.

Text, etc.: The basic textual tool will be the course workbook.
Official text: *Physics: Principles with Applications*, Seventh Edition. Douglas C. Giancoli. Publisher: Addison-Wesley (2014). Scientific calculator (bring to every class).

Services: If you're a student with a documented disability, medical condition, or think you may have a disability, and will need accommodations, academic adjustments, auxiliary aids, or other services, please contact Marie Fatscher in Disability Support Services (Post Hall, Lower Level, C10) at 516-299-3057 or marie.fatscher@liu.edu to request services, accommodations or for additional information. Additional information is also available on the DSS website: www.liu.edu/post/dss.

The Center for Healthy Living offers supportive psychological and nutritional services Monday–Friday 9 am to 5 pm and is located in Post Hall, Lower Level – South Entrance (parking lot side of building.) Additional information is available by emailing post-healthyliving@liu.edu or calling Lynne Schwartz at (516) 299-4162.

Rules: **Do:** Attend all classes, come on time, stay for the duration, pay attention. You're expected to take notes in the printed course workbook. You may use a computer/tablet, if you insist, but must sit in the first row.

Don't: Miss classes without documented reasons, come late, leave during class, talk among yourselves, be disruptive, text, have your cell phone out. A "no visible cellphones" policy will be strictly enforced. Documents justifying an absence must be submitted in printed form, not electronically, and must have the date and time of the absence on them. If you violate any of these, it will count as an absence, and penalties will be imposed, including grade reduction.

Three or more violations (two or more for classes that are scheduled for over two hours) will lead to an automatic F.

Homework: 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 workbook. You must bring the homework and class workbook with you if you want extra help in my office. It's 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.

Tests:

You may use a 3" × 5" notecard on tests. The card must fit within the boundaries of the box around this text. If it doesn't, you can't use it.

Tests will be based mainly on material covered, and homework done, since the material on the previous test, but familiarity with all material covered up to that point is expected. You'll need a dedicated calculator (not cell phone or tablet computer) on all quizzes. You may not share.

There are no make-up tests. If you miss a test for any reason you'll get a score of -1 on it.

You must keep all your tests through the semester. The complete test schedule is on this syllabus.

Grades: First see the rules above. The penalties mentioned there take precedence over everything else. There will be 6 tests. Your 5 best scores each count 15% toward your grade. The labs count for 25%. There will be a grade boost if you've done the homework consistently over the term. Further grade boosts are possible for students who participate in class. No private deals for extra credit will be struck with individual students. You will all be treated equally and will all get the same consideration.

Letter Grade Key

%:	50-64	65-71	72-77	78-79	80-83	84-87	88-89	90-93	94+
Grade:	D	C ⁻	C	C ⁺	B ⁻	B	B ⁺	A ⁻	A

Drop, etc.: Last day to drop: February 3. Last day to withdraw: April 3.

Week 1	<i>Tuesday, January 21</i> Course introduction and review. Ch. 16: Electric charge and electric field.	<i>Thursday, January 23</i>  Lab 1: Static electricity.		
Week 2	<i>Tuesday, January 28</i> Ch. 17: Electric potential.	<i>Thursday, January 30</i>  Lab 2: The electric field.		
Week 3	<i>Tuesday, February 4</i> Ch. 18 & 19: Ohm's law & DC circuits	<i>Thursday, February 6</i> Test 1: Chapters 16 & 17	<input type="text" value="score"/>	<input style="width: 20px;" type="text" value="%"/>
Week 4	<i>Tuesday, February 11</i> Ch. 20: Magnetism.	<i>Thursday, February 13</i>  Lab 3: Ohm's law.		
Week 5	<i>Tuesday, February 18</i> No class	<i>Thursday, February 20</i> Test 2: Chapters 18 & 19	<input type="text" value="score"/>	<input style="width: 20px;" type="text" value="%"/>
Week 6	<i>Tuesday, February 25</i> Ch. 21: Electromagnetic induction.	<i>Thursday, February 27</i>  Lab 4: Resistors in series & parallel		
Week 7	<i>Tuesday, March 3</i> Ch. 22: Electromagnetic waves.	<i>Thursday, March 5</i> Test 3: Chapters 20 & 21	<input type="text" value="score"/>	<input style="width: 20px;" type="text" value="%"/>
Spring Break				
Week 8	<i>Tuesday, March 17</i> Ch. 23: Light as a ray.	<i>Thursday, March 19</i>  Lab 5: Capacitors in series & parallel		
Week 9	<i>Tuesday, March 24</i> Ch. 24: Light as a wave.	<i>Thursday, March 26</i>  Lab 6: Snell's law. Test 4: Chapter 22 & 23	<input type="text" value="score"/>	<input style="width: 20px;" type="text" value="%"/>
Week 10	<i>Tuesday, March 31</i> Ch. 25: Optical instruments.	<i>Thursday, April 2</i>  Lab 7: Thin lenses.		
Week 11	<i>Tuesday, April 7</i> Ch. 26: Special relativity.	<i>Thursday, April 9</i> Test 5: Chapters 24 & 25	<input type="text" value="score"/>	<input style="width: 20px;" type="text" value="%"/>
Week 12	<i>Tuesday, April 14</i> Ch. 27: Early quantum theory.	<i>Thursday, April 16</i>  Lab 8: Diffraction.		
Week 13	<i>Tuesday, April 21</i> Review.	<i>Thursday, April 23</i> Test 6: Chapters 26 & 27	<input type="text" value="score"/>	<input style="width: 20px;" type="text" value="%"/>
Week 14	<i>Tuesday, April 28</i> Test return	Final: TBA		

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I've understood the syllabus, course requirements, grading method, and rules, and will abide by them. I'm retaining the syllabus.

Signature: _____ Date: _____

Name: _____