

University Physics II — PHYS 252

Spring 2026 (4 credits)

Prerequisites: PHYS 251 & 251L or ME 221 & 222

Corequisite: MATH 166

Instructional Team

Instructor: Professor Mila Kryjevskaia

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Course Description

Physics 252 is a detailed introduction to electromagnetism, waves, and optics. This four-credit course for engineering and science students requires an understanding of Math 166 and Phys 251 & 251L (or ME 221 & 222). There are four lectures each week, regular homework assignments, and additional required work outside of class time.

Course Goals

Students completing Physics 252 should be able to solve problems in electrostatics, electrodynamics, circuits, and optics that require both conceptual and mathematical understanding. Students must develop qualitative and quantitative reasoning skills necessary to answer novel questions not explicitly discussed in class. Students should be able to provide alternative solutions, check answers for consistency, and identify mistakes in their reasoning when appropriate.

Class Hours

- Monday: 9:00–10:50 am, AGHILL 112
- Wednesday & Friday: 9:00–9:50 am, AGHILL 112

Office Hours

Wednesday and Friday after class, 10:00–11:00 am. You are welcome to email me to arrange a different meeting time. Zoom appointments are possible.

Course Materials

1. **Textbook (optional):** Halliday, D.; Resnick, R.; Walker, J. *Fundamentals of Physics*, any edition, Wiley (full version).

2. PointSolutions Web
3. Scientific calculator

Course Format

Phys 252 meets three times per week in a large lecture hall. There are no small-group discussion sessions associated with the course. However, we will regularly provide opportunities to think about the material during class, share ideas with classmates, and provide feedback to the instructional team using PointSolutions Web.

NDSU students have free access to PointSolutions. You do **not** need to purchase a physical clicker, but you will need a device capable of connecting to the internet (phone, tablet, or laptop) and to download the app. Instructions are available at:

<https://kb.ndsu.edu/page.php?id=101669>

Please install and be prepared to test the PointSolutions Web app on the first day of class.

Attendance

While attendance is not required, I strongly encourage you to attend class and participate using PointSolutions Web. Active participation in **75% or more** of PointSolutions questions will earn an additional **3%** added to your final course grade.

Veterans and student service members with special circumstances or activation orders are encouraged to notify the instructor as soon as possible.

How to Succeed in This Class

Do not memorize material or problem solutions. Physics is not about memorization; it is about reasoning, making mistakes, recognizing them, and learning how to recover.

Please review a set of five short videos on how people learn and on effective learning strategies:

<http://www.youtube.com/playlist?list=PL85708E6EA236E3DB>

These videos were created by Stephen L. Chew, a cognitive psychologist at Samford University. They address common misconceptions about learning and discuss effective strategies for academic success. The entire series can be watched in under 30 minutes.

Homework Assignments

Regular web-based homework (LON-CAPA) will be assigned approximately every 10 days.
<https://proteus.physics.ndsu.nodak.edu/adm/roles>

Ungraded Web-Based Assignments

Weekly ungraded assignments (15–30 minutes) will be used to assess understanding and guide instruction. These assignments focus on your reasoning rather than correctness. Effort will count for **20%** of your final grade.

Assignments will be announced in class, posted on Blackboard, and emailed to students. They will typically be open from Friday through Tuesday.

Exams

All exams will be in person and paper-based. Exams will include both multiple-choice and free-response questions. Partial credit will be awarded on free-response questions.

The final exam will be comprehensive.

Tentative Exam Dates

- Exam 1: February 4
- Exam 2: February 27
- Exam 3: March 27
- Exam 4: April 22
- Final Exam: May 14, 1:00–3:00 PM (AgHill 212)

Grading

- Homework: 20%
- Ungraded assignments: 20%
- Exams: 60% (lowest midterm exam dropped; final not dropped)

Extra Credit: Participation in **75% or more** of clicker questions via PointSolutions will earn an additional **3%** added to your final grade.

Letter Grades

89.5–100%	A
79.5–89.4%	B
69.5–79.4%	C
59.5–69.4%	D

Health and Safety Expectations

Do not come to class if you are sick. If circumstances require strictly online instruction, all course resources will remain accessible through Blackboard.

Copyright of Course Materials

Recording lectures without prior written permission is prohibited under NDSU Policy 190. Course materials may not be used for purposes other than personal learning.

Special Considerations

Students requiring accommodations should contact the Center for Accessibility and Disability Services as soon as possible:

<https://www.ndsu.edu/accessibility-disability>

FERPA

Your educational records for this course are protected under FERPA.

Academic Responsibility

NDSU Policy 335 (Code of Academic Responsibility and Conduct) applies to all cases of academic misconduct. Details are available at:

<http://www.ndsu.edu/fileadmin/policy/335.pdf>