University Physics I (PHYS 251) **Spring 2026**

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Class: Mon 11a-1pm & Wed/Fri 11a-Noon in AG HILL 130/132

Coffee Hours by Warren in Union Atrium: Wed Noon-1pm, and TBD
Coffee Hours by LA in Union Atrium: TBD

Office Hours*:** Office meeting times will ***happily be arranged by contacting me via phone or email (both given above).

Learning Goals:

- To develop the ability to discuss your thinking with your peers and your instructors in and out of class
- To use conceptual tools, such as free-body diagrams, in a variety of circumstances as a tool for correctly framing a physical situation
- To approach, solve, and understand a wide variety of physics problems with and without numerical solutions
- To develop *conceptual understanding* alongside problem solving skills
- To develop mathematical skills specific to applied sciences, building on mathematical skills learned in math courses.

Brief Outline: We will begin with a study of linear motion and mechanics (forces, masses and acceleration). We will learn that conservation laws (e.g., energy and momentum) provide a wonderful and powerful alternative for understanding physics and solving problems. We will continue with applications and extensions of these fundamentals, including gravitation, rotational motion, statics, and fluids.

Assignments and grading:

40% – Homework Problems. These will be assigned and due daily. We estimate roughly 40 assignments. PDF scans of your homework will be submitted through Blackboard. They will be graded either as "Meets" or "Does not meet" Expectations. You will receive 50% credit for turning something in on time even if it doesn't meet expectation. For any assignment that doesn't meet expectations, you will have **2 weeks** to come to coffee hours and give me a chance to work with you to understand the content. Doing so will change your score to Meets Expectation.

60% – Exams: There will be three, unit exams, each worth 20% of your final grade. Exams will take place on Mondays, with the first hour being an individual exam and the second hour being a group exam. Your exam score will be an average of the two scores. The final exam is individual-only, cumulative and can be taken to replace your lowest exam score.
Exam 1: Feb 9th, Exam 2: Mar 23rd, Exam 3: April 27th

Final Grades:

Your final grade will be based on your total score as described above. If you earn one of the percentages shown below, you will receive the grade written on its right.

> 89.5%: A
89.4% > 79.5%: B
79.4% > 69.5%: C
69.4% > 59.5%: D
59.4% > 0%: F

Materials:

Any Calculus-based Physics Textbook (recommended not required)
Voting Paper – Bring to class everyday (if you're in class)
Scientific calculator for exams

How can I succeed in this class? (the most important thing to read)

Being "good" at physics comes with practice. You should expect to spend **two hours outside of class for every hour inside class**. Homework problems often involve two steps: deciding which *principles* of physics apply to the problem and then determining the answer (which may involve calculations.) I encourage you to talk about these solutions with your friends. The most important thing to talk about is not which number to put where (the calculation is the easy part), but the reasoning that helps you decide what to do with the numbers. Come talk to me early and often *early* if you are struggling with any aspect of the course.

Using BlackBoard

Go to: **https://blackboard.ndus.edu/**

Blackboard will be used primarily for course announcements, receiving and submitting homework, feedback on homework, and posting grades.

Video Feedback

I intend to provide Video Feedback rather than numerical grades for homework that's turned in. This will arrive directly through Blackboard. After turning in a homework, you will need to check whether you received full points or not. If you did not receive full points (1 out of 1), there will be video feedback for you to watch that should give you guidance on how to receive full points.

Attendance Expectations

Coming to class is the most important thing you can do to ensure success in this class. We will be coaching you up on everything you need to complete the homework assignments, which in turn will be the best possible preparation for the exams.

If you are unwell or need to miss class, please take care of yourself. You can come to a coffee hour to get caught up on anything you missed in class.

Veteran Status and Student Service Members

Veterans and student service members with special circumstances or who are activated are encouraged to notify Dr. Christensen as soon as possible and are encouraged to provide Activation Orders.

Americans with Disabilities Act for Students with Special Needs

Any students with disabilities or other special needs, who need special accommodations in this course, are invited to share these concerns or requests with Dr. Christensen and contact the Disability Services Office (www.ndsu.edu/disabilityservices) as soon as possible.

Academic Honesty

The academic community is operated on the basis of honesty, integrity, and fair play. NDSU Policy 335: Code of Academic Responsibility and Conduct applies to cases in which cheating, plagiarism, or other academic misconduct have occurred in an instructional context. Students found guilty of academic misconduct are subject to penalties, up to and possibly including suspension and/or expulsion. Student academic misconduct records are maintained by the Office of Registration and Records. Informational resources about academic honesty for students can be found at www.ndsu.edu/academichonesty.

Family Educational Rights and Privacy Act (FERPA) Statement

Your personally identifiable information and educational records as they relate to this course are subject to FERPA.

Additional Resources for Students

As a member of the NDSU community, resources are available for you should you need help in dealing with adverse reactions to things happening in the world today. A variety of resources are listed below:

For students on campus and remotely (telehealth):
Counseling Services: 701-231-7671; https://www.ndsu.edu/counseling/
Disability Services: 701-231-8463; https://www.ndsu.edu/accessibility-disability
Student Health Service: 701-231-7331; https://www.ndsu.edu/studenthealthservice/
Dean of Students Office: 701-231-7701; https://www.ndsu.edu/deanofstudents/

For tutoring and academic support:
ACE Tutoring: 701.231.5554; https://www.ndsu.edu/ace/tutoring
TRIO Student Support Services: 701-231-8028; https://www.ndsu.edu/triosss

In a crisis or emergency situation:
Call University Police: 701-231-8998
Call 9-1-1
For physical health crises: Go to a Hospital Emergency Room
For mental health crises: Go to Prairie St. Johns for a Needs Assessment: 701-476-7216 (510 4th St. S.)
Call Rape and Abuse Crisis Center: 701-293-7273

***Please note that the statements in this syllabus are subject to change as the semester progresses. Any changes will be announced in class and posted on the Blackboard course page. Even if you are not present in class for a particular announcement, you are still responsible for knowing about any changes that may occur.