

General Physics I

Physics 1410

Fall 2025

Instructor Information

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The best way to reach me with questions or concerns is via UNT email.

Welcome! As members of the UNT community, we are all committed to being part of an institution that respects and values the identities of the students and employees we interact with. UNT does not tolerate identity-based discrimination, harassment, or retaliation. Everyone should feel comfortable being their authentic selves in our class. If you have any questions or concerns, please do not hesitate to contact me.

Communication Expectations: All course-related material and announcements will be made available via Canvas. The best way to reach me with questions or concerns is via email at andrea.citati@unt.edu. In *most* cases, you can expect to receive a response to emails within 24 hours. For any emails you send, include PHYS 1410 in the subject line. This will help me prioritize your message so I can respond more quickly.

Class Meetings

Lecture (501)

FRLD 166 - MW 8:00 AM - 9:20 AM

Recitation (511)

FRLD 166 - MW 9:30 AM - 10:20 AM

Office Hour: Tuesday 11:30 AM – 1:00 PM
Wednesday 3:00 PM – 4:30 PM (or by Appointment)

Course Description

This non-calculus (algebra based) physics sequence is designed for life sciences majors and pre-professional students. During the course, we will cover a variety of topics, including mathematical concepts, kinematics in one and two dimensions, forces and Newton's laws, uniform circular motion, work and energy, momentum, rotational dynamics, simple harmonic motion, fluids, waves and sound, linear superposition, interference, heat, and thermodynamics. Due to the breadth of material, some chapters may not be covered in full.

Course Structure and Objectives

This is an in-person course. Class lectures and recitations will be presented as scheduled, and class exams will be held in person. When needed, one or more recitation periods will be utilized for a lecture presentation or exam preparation. Homework will be assigned and submitted using Physics LE: <https://login.physicscurriculum.com/login/index.php>, which is also reachable through the Canvas course page. Copies of lecture and recitation worksheets will be posted to Canvas before lectures start.

Course Pre-requisites

There are no required prerequisites for this course. However, to be successful in this course, you will need to:

- Have proficiency in college algebra and trigonometry.
- Network with others and utilize tact when offered differing perspectives.
- Make the commitment to spend at least 10 hours a week reading the assignments, completing homework assignments, and participating in lecture and recitation sessions.

Course Learning Objectives: Upon successful completion of this course, students should be able to:

- apply basic scientific principles to explain everyday phenomena
- recognize science as a process through which we seek to understand the world around us
- apply the critical thinking, empirical, and quantitative skills needed to solve scientific problems
- express their scientific ideas in straightforward, logical, organized, and concise ways
- effectively communicate within small groups
- evaluate scientific validity as life-long learners.

Attendance

- You are expected to attend all lectures and recitations for the section in which you are enrolled.
- Classes will start at the assigned time.
- No cellphone use is allowed in class except for an emergency call, when using it to finish the in-class quiz, or when taking pictures of writing on the blackboard. No earplugs for music except one for hearing aids.
- Physics 1410 can occasionally be challenging, so why not give 100% attention in lectures?

Textbook & Online Homework

The chapter module will discuss most course materials concepts, demonstrations, and simulation videos. For further reading, refer to the corresponding chapter of the Physics textbook. For the textbook, please use the following option: College Physics from OpenStax, which is freely downloadable.

<https://openstax.org/details/books/college-physics>

OpenStax is a nonprofit ed-tech initiative based at Rice University. It provides free, peer-reviewed, openly licensed textbooks for introductory college. OpenStax is licensed under Creative Commons Attribution License v4.0. Digital Version ISBN-13-978-1-947172-01-2 Paperback: ISBN-13: 978-1-50669-809-0

Homework will be completed through the Physics LE and will be reachable through the following link.

<https://www.physicscurriculum.com/>

Physics LE has a textbook and homework cost of \$27.95 per student per semester. Homework is intended to be practiced, so there is no penalty for an incorrect answer as long as you arrive at the correct answer before the submission deadline.

Learning From Mistakes: Learning necessarily involves making mistakes. If you never make mistakes, it likely means you are not being sufficiently challenged. The goal is to make most of your mistakes on homework and during in-class practice, where you can ask questions and review your notes or textbook to learn from them before the exam. If you make a mistake on an exam, your goal should be to understand what went wrong and learn from it so that you do not repeat the same mistake in future assessments.

Calculator

For exams, you will need a calculator that is not a communication device (e.g., your phone or smartwatch). The calculator needs to be able to do trigonometric calculations, but graphing is not required.

How to Succeed in this Course

Actively Participate in Class: Class is a valuable opportunity to practice problems, ask questions, and discuss concepts with your peers. If all you do is listen to the instructor, you may develop a false sense of understanding. It's important to attempt problems on your own or with a neighbor so that when the instructor presents the solution, you can identify the subtle or confusing parts. Be sure to review your notes and textbook readings and try completing the Recitation Questions more than once.

Ask Questions: It is okay to ask a question that has already been answered. Asking questions shows that you are thinking critically and actively trying to learn, and that is the goal. If a question comes to mind while you are studying at home, write it down so you can bring it up in the next class or during my Office Hours.

Communication Practices

Office hours are a valuable opportunity to ask for clarification or get support in understanding class material. I encourage you to come visit me and contact me for any help you may need. Additional office hours, both in person and virtual, will be offered as the semester ends. Your success is our goal.

Academic Success Resources

UNT strives to offer you a high-quality education and a supportive environment, so you learn and grow. As a faculty member, I am committed to helping you be successful as a student. To learn more about campus resources and how to succeed at UNT, go to unt.edu/success and explore unt.edu/wellness. To get all your enrollment and student financial-related questions answered, go to scrappysays.unt.edu.

Inclusion

Every student in this class should have the right to learn and engage within an environment of respect and courtesy from others. We will discuss our classroom's habits of engagement, and I also encourage you to review UNT's student code of conduct so that we can all start with the same baseline civility understanding ([Code of Student Conduct](https://policy.unt.edu/policy/07-012)) (<https://policy.unt.edu/policy/07-012>).

Lab Credit: You must enroll separately in Physics 1430 for laboratory science credit.

Course Assignments and Grades

The Course Calendar at the end of the syllabus lists the complete course outline, including exam dates and due dates for homework assignments. **These are tentative dates and are subject to change.**

Grades:

The course grades will be calculated as follows:

Recitation	15% (Attendance, Participation & Completion)
Homework	20%. Click here to access Homework
Test 1	10%
Test 2	10%
Test 3	10%
End of Semester Assignment.....	10%
Final Exam Review.....	5%
Final Exam	20%

Exams scores will not be curved.

An additional Final Exam Review via Physics LE credit will be given to help the final grade.

Semester grades will be rounded to the nearest percent:

$\geq 90\% = A$ $80-89\% = B$ $70-79\% = C$ $60-69\% = D$.

Throughout the semester, you can monitor your grade in Canvas.

IMPORTANT: All assignments are due by 11:59 PM on the date listed on the Course Calendar at the end of the syllabus. For the tests, you must notify your instructor **before** the test starts if you will miss it to have an opportunity to make it up.

Recitation

Attendance in recitation is required. The purpose of recitation is time to practice problems with your classmates and your professor and to ask questions. Each week, there will be at least one graded assignment in recitation.

Extra Credit

There are opportunities for extra credit, including the Final Exam Review assignments. See Canvas for more information

Course Evaluation: The Student Perceptions of Teaching (SPOT) is required for all UNT organized classes. This short survey will be made available to you online at the end of the semester and will provide you with an opportunity to provide feedback to your course instructor. SPOT is considered to be an important part of your participation in this class. You will receive an email from “UNT SPOT Course Evaluations” from no-reply@iasystem.org with the survey link. You will have separate SPOT evaluations for lecture, recitation, and lab. During the fall and spring semesters, SPOT surveys are open for students to complete two weeks prior to the final exams.

UNT Policies

Academic Integrity Standards and Consequences: According to UNT Policy 06.003, Student Academic Integrity, academic dishonesty occurs when students engage in behaviors including, but not limited to, cheating, fabrication, facilitating academic dishonesty, forgery, plagiarism, and sabotage. A finding of academic dishonesty may result in a range of academic penalties or sanctions ranging from admonition to expulsion from the University.

ADA Accommodation: UNT makes reasonable academic accommodations for students with disabilities. Students seeking accommodation must first register with the Office of Disability Accommodation (ODA) to verify their eligibility. If a disability is verified, the ODA will provide a student with an accommodation letter to be delivered to faculty to begin a private discussion regarding one's specific course needs. Students may request accommodations at any time; however, ODA notices of accommodation should be provided as early as possible during the semester to avoid any delay in implementation. Note that students must obtain a new letter of accommodation for every semester and must meet with each faculty member prior to implementation in each class. For additional information, see the ODA website at <https://studentaffairs.unt.edu/office-disability-access/>.

Emergency Notification & Procedures: UNT uses a system called Eagle Alert to quickly notify students with critical information in the event of an emergency (i.e., severe weather, campus closing, and health and public safety emergencies like chemical spills, fires, or violence). In the event of a university closure, please refer to Canvas for contingency plans for covering course materials. [Campus Closures Policy](https://policy.unt.edu/policy/15-006) (<https://policy.unt.edu/policy/15-006>).

Sexual Assault Prevention: UNT is committed to providing a safe learning environment free of all forms of sexual misconduct, including sexual harassment, sexual assault, domestic violence, dating violence, and stalking. Federal laws (Title IX and the Violence Against Women Act) and UNT policies prohibit discrimination on the basis of sex and therefore prohibit sexual misconduct. If you or someone you know is experiencing sexual harassment, relationship violence, stalking, and/or sexual assault, there are campus resources available to provide support and assistance. UNT's Survivor Advocates can assist a student who has been impacted by violence by filing protective orders, completing crime victim's compensation applications, contacting professors for absences related to an assault, working with housing to facilitate a room change where appropriate, and connecting students to other resources available both on and off campus. The Survivor Advocates can be reached at SurvivorAdvocate@unt.edu or by calling the Dean of Students Office at 940-565- 2648. Additionally, alleged sexual misconduct can be non-confidentially reported to the Title IX Coordinator at oeo@unt.edu or at (940) 565 2759.

Prohibition of Discrimination, Harassment, and Retaliation (Policy 16.004)

The University of North Texas (UNT) prohibits discrimination and harassment because of race, color, national origin, religion, sex, sexual orientation, gender identity, gender expression, age, disability, genetic information, veteran status, or any other characteristic protected under applicable federal or state law in its application and admission processes; educational programs and activities; employment policies, procedures, and processes; and university facilities. The University takes active measures to prevent such conduct and investigates and takes remedial action when appropriate.

Retention of Student Records

Student records pertaining to this course are maintained in a secure location by the instructor of record. All records, such as exams, answer sheets (with keys), and written papers submitted during the duration of the course, are kept for at least one calendar year after course completion. Coursework completed via the Canvas online system, including grading information and comments, is also stored in a safe electronic environment for one year. Students have the right to view their individual record; however, information about student's records will not be divulged to other individuals without proper written consent. Students are encouraged to review the Public Information Policy and the Family Educational Rights and Privacy Act (FERPA) laws and the University's policy. See UNT Policy 10.10, Records Management and Retention for additional information.

Acceptable Student Behavior

Student behavior that interferes with an instructor's ability to conduct a class or other students' opportunity to learn is unacceptable and disruptive and will not be tolerated in any instructional forum at UNT. Students engaging in unacceptable behavior will be directed to leave the classroom and the instructor may refer the student to the Dean of Students to consider whether the student's conduct violated the Code of Student Conduct. The University's expectations for student conduct apply to all instructional forums, including University and electronic classroom, labs, discussion groups, field trips, etc. Visit UNT's Code of Student Conduct (<https://deanofstudents.unt.edu/conduct>) to learn more.

TAMS Students: The Texas Academy of Mathematics and Science (TAMS) administration has made the following statement and has asked us to include it in our syllabus for members of the Academy:

Class attendance and participation is required. Students must be alert, attentive, energetic, and eager to learn. Students who exhibit disruptive behavior or show disrespect to a teacher in the classroom are subject to severe disciplinary sanctions. The Academy does not authorize absences from class. Students must report all absences to the Academic Office within 36 hours of the absence by completing a form in the Academic Office. A student will be assessed 5 disciplinary points for each class absence unless the absence can be justified. Faculty will also be reporting absences to the Academic Office. A student will be assessed 15 disciplinary points for failure to report an absence that is reported by a faculty member.

If you are a TAMS student and if you are absent for any reason, you are required to file an absence report with the TAMS Academic Office.

Student Support Services

Mental Health

UNT provides mental health resources to students to help ensure there are numerous outlets to turn to for wholehearted care and for students in need, regardless of the nature of an issue or its severity. Listed below are several resources on campus that can support your academic success and mental well-being:

- Student Health and Wellness Center (<https://studentaffairs.unt.edu/student-health-and-wellness-center>)
- Counseling and Testing Services (<https://studentaffairs.unt.edu/counseling-and-testing-services>)
- UNT Care Team (<https://studentaffairs.unt.edu/care>)
- UNT Psychiatric Services (<https://studentaffairs.unt.edu/student-health-and-wellness-center/services/psychiatry>)

Chosen Names

A chosen name is a name that a person goes by that may or may not match their legal name. Please let the instructor know if you have a chosen name that is different from your legal name and would like that to be used in class. Below is a list of resources for updating your chosen name at UNT.

- UNT Records
- UNT ID Card
- UNT Email Address
- Legal Name

*UNT euIDs cannot be changed at this time. The collaborating offices are working on a process to make this option accessible to UNT community members.

Pronouns

Pronouns (she/her, they/them, he/him, etc.) are a public way for people to address you, much like your name, and can be shared with a name when making an introduction, both virtually and in-person. Just as we ask and don't assume someone's name, we should also ask and not assume someone's pronouns.

You can add your pronouns to your Canvas account so that they follow your name when posting to discussion boards, submitting assignments, etc.

Below is a list of additional resources regarding pronouns and their usage:

- What are pronouns and why are they important?
- How do I use pronouns?
- How do I share my pronouns?
- How do I ask for another person's pronouns?
- How do I correct myself or others when the wrong pronoun is used?

Additional Student Support Services

- Registrar (<https://registrar.unt.edu/registration>)
- Financial Aid (<https://financialaid.unt.edu/>)
- Student Legal Services (<https://studentaffairs.unt.edu/student-legal-services>)
- Career Center (<https://studentaffairs.unt.edu/career-center>)
- Multicultural Center (<https://edo.unt.edu/multicultural-center>)
- Counseling and Testing Services (<https://studentaffairs.unt.edu/counseling-and-testing-services>)
- Pride Alliance (<https://edo.unt.edu/pridealliance>)
- UNT Food Pantry (<https://deanofstudents.unt.edu/resources/food-pantry>)

Academic Support Services

- Academic Resource Center (<https://clear.unt.edu/canvas/student-resources>)
- Academic Success Center (<https://success.unt.edu/asc>)
- UNT Libraries (<https://library.unt.edu/>)
- Writing Lab (<http://writingcenter.unt.edu/>)

Tentative Weekly Schedule - Instructor reserves the right to amend the topic schedule.

Lecture	Date	Day	Topic
1	Aug. 18	M	Introduction: Units & Physical Quantities
2	Aug. 20	W	Kinematics 1D
3	Aug. 25	M	Kinematics in 2D
4	Aug. 27	W	Kinematics 2D Cont.
NA	Sept. 1	M	No Class (Labor Day)
5	Sept. 3	W	Force and Newton's Laws of Motion
6	Sept. 8	M	Force and Newton's Laws of Motion Cont.
7	Sept. 10	W	Additional Dynamics Exercises & Uniform Circular Motion
8	Sept. 15	M	Gravitation
9	Sept. 17	W	Test I
10	Sept. 22	M	Work and Energy
11	Sept. 24	W	Work and Energy Cont.
12	Sept. 29	M	Linear Momentum
13	Oct. 1	W	Linear Momentum & Collisions
14	Oct. 6	M	Exercises on Conservation Laws
15	Oct. 8	W	Rotational Kinematics
16	Oct. 13	M	Rotational Kinematics Cont.
17	Oct. 15	W	Rotational Dynamics
18	Oct. 20	M	Rotational Motion and Angular Momentum
19	Oct. 22	W	Test II
18	Oct. 27	M	Fluid Statistics
20	Oct. 29	W	Fluid Dynamics
21	Nov. 3	M	Temperature & Kinetic Theory of Gasses
22	Nov. 5	W	Heat & Heat Transfers
23	Nov. 10	M	Heat & Heat Transfers Cont.
24	Nov. 12	W	Thermodynamics
25	Nov. 17	M	Thermodynamics Cont.
26	Nov. 19	W	Oscillatory Motion
27	Nov. 24	M	No Class (Thanksgiving)
28	Nov. 26	W	No Class (Thanksgiving)
29	Dec. 1	M	Waves
30	Dec. 3	W	Test III (Last Day of Class)
31	TBA		Final Exam