General Physics II
Physics 1420
Fall 2026

Instructor Information

Name: Andrea Citati
Pronouns: He, him, his
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Denton: Physics Building Room 209A
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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 committed to respecting and valuing the identities of all students and employees. 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 feel free to contact me.

Communication Expectations: All course materials and announcements will be available on Canvas. For questions or concerns, please email me at **andrea.citati@unt.edu**, and include **"PHYS 1420"** in the subject line. This will help me prioritize your message and respond more quickly.

Class Meetings

Lecture (001) - Denton
PHYS 102
Tu, Th 12:45 PM - 2:05 PM

Recitation (201)
SAGE 230
Th 4:40 PM – 5:30 PM

Recitation (203)
SAGE 230
Th 3:35 PM – 4:35 PM

Office Hours			
	Monday:	2:00 PM – 3:00 PM	Frisco: FRLD 366 A
	Wednesday:	2:00 PM – 3:30 PM	Frisco: FRLD 366 A
	Tuesday:	3:00 PM – 4:00 PM	Physics Building Room 209 A
	Thursday:	2:30 PM – 3:30 PM	Physics Building Room 209 A

Course Structure

This is an in-person course. Class lectures and recitations will be held as scheduled, and exams will take place in person. Occasionally, recitation periods may be used for lectures or exam preparation. Homework will be assigned and submitted via Physics LE: Physics LE Login, also accessible through the Canvas course page. Lecture and recitation worksheets will be posted on Canvas before classes begin.

Course Description

This course is designed to introduce various topics related to the basic principles of electricity, magnetism, light, and, if time permits, atomic and nuclear physics. Given the extensive material, some chapters will not be covered in their entirety. The topics include: Electric Forces and Electric Fields, Electric Potential Energy and Electric Potential, Electric Circuits, Magnetic Forces and Magnetic Fields, Electromagnetic Induction, Alternating Current Circuits, Electromagnetic Waves, Reflection of Light: Mirrors, Refraction of Light: Lenses and Optical Instruments, Interference and the Wave Nature of Light, Special Relativity, Particles and Waves, Nature of the Atom, Nuclear Physics and Radioactivity, Ionizing Radiation and Nuclear Energy.

Prerequisite: PHYS 1410 General Physics I (or consent of the Physics Department) is a prerequisite for this course.

Attendance

- Attend all lectures and recitations for your enrolled section.
- Follow the University of North Texas' Attendance Policy.
- No cellphone use in class, except for emergencies, in-class quizzes, or taking pictures of the whiteboard. No earplugs for music, except for hearing aids.
- Physics 1420 can be challenging, so 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 involves making mistakes. If you never make mistakes, you're not being sufficiently challenged. Aim to make most of your mistakes on homework and during in-class practice, so you can ask questions and review your notes or textbook before the exam. If you make a mistake on an exam, take time to understand what went wrong and learn from it to avoid repeating it in the future.

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.

Core Objectives

- **Critical Thinking Skills:** Creative thinking, innovation, inquiry, analysis, evaluation, and synthesis of information.
- **Communication Skills:** Effective development, interpretation, and expression of ideas through written, oral, and visual communication.
- **Empirical and Quantitative Skills:** Manipulation and analysis of numerical data or observable facts to reach informed conclusions.
- **Teamwork:** Ability to consider different points of view and work effectively with others to support a shared purpose or goal.

Canvas will be used to post some useful course materials and your grades. To get to this resource, go to https://unt.instructure.com/login/ldap and follow the UNT link to log on. (You will log on using your UNT EUID and password.) Once logged on, select this course. You will find an electronic copy of this syllabus and lecture materials.

How to Succeed in this Course

Actively Participate in Class: Class is a wonderful opportunity to practice problems, ask questions, and discuss concepts with your neighbors. If all you do is listen to the instructor, you will get a false sense of understanding. You need to attempt problems on your own or with your neighbor so that when the instructor shows the solution, you recognize the subtle or confusing parts. Review your notes and textbook readings and attempt to complete the Recitation Questions more than once.

Ask Questions: It is **okay** to ask a question that has already been answered. Any time you ask a question, it shows that you are thinking and trying to learn, and that's the goal. When you come up with a question at home, write it down so you can ask it next class or during my Help Hours.

Communication Practices

Office hours are a valuable opportunity to ask questions or get support in understanding course material. I encourage you to visit me or reach out if you need any assistance. Additional office hours, both in person and virtual, will be offered toward the end of the semester. Your success is my priority.

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).

Lab Credit: You must enroll separately in Physics 1440 for laboratory science credit.

Course Assignments and Grades
The Course Calendar outlines the planned schedule for the semester, including exam dates, homework deadlines, and course topics. **Exam dates and assignment due dates will not change.** To ensure the class develops a strong understanding of each topic, we may spend more or less time on certain material than originally planned. As a result, the order or timing of topics may be adjusted during the semester.

Grades:
The course grades will be calculated as follows:

Recitation Attendance & Participation 5%
Recitation Completion..... 10%
Homework ..... 20% Click here to access Homework
Test 1 ……..... 11%
Test 2 ……..... 11%
Test 3 ……..... 11%
End of Semester Assignment…….. 15%
Final Exam Group Review…….. 2%
Final Exam .....15% Cumulative Final Exam

Exam scores will not be curved.
Homework will have a 5% curve to account for possible technology issues.
There will be 2 Recitation Attendance & Participation automatically excused.

Semester grades will be rounded to the nearest percent:
>= 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. Recitation is designed to help you develop problem-solving skills through practice, discussion, and questions with both classmates and the instructor. Each week, at least one graded activity will be completed during recitation.

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 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).

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 classrooms, 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 - the instructor reserves the right to amend the topic schedule.

Class	Date	Day	Topic
1	Aug. 18	T	Introduction
2	Aug. 20	Th	Electric Forces & Electric Fields
3	Aug. 25	T	Electric Potential Energy
4	Aug. 27	Th	Electric Potential Energy
5	Sept. 1	T	Electric Potential Energy & Capacitors
6	Sept. 3	Th	Capacitors Cont.
7	Sept. 8	T	Electric Current & Resistance
8	Sept. 10	Th	Circuits & DC Instruments
9	Sept. 15	T	Circuits & DC Instruments Cont.
10	Sept. 17	Th	**Test I**
11	Sept. 22	T	Magnetism
12	Sept. 24	Th	Magnetism Cont.
13	Sept. 29	T	Electromagnetic Induction
14	Oct. 1	Th	Electromagnetic Induction Cont.
15	Oct. 6	T	AC Circuits
16	Oct. 8	Th	RCL Circuit
17	Oct. 13	T	Electromagnetic Waves
18	Oct. 15	Th	Electromagnetic Waves Cont.
19	Oct. 20	T	Geometric Optics - Introduction
20	Oct. 22	Th	**Test II**
21	Oct. 27	T	Geometric Optics - Lenses
22	Oct. 29	Th	Geometric Optics Mirrors
23	Nov. 3	T	Wave Optics
24	Nov. 5	Th	Wave Optics Cont.
25	Nov. 10	T	Atomic Physics
26	Nov. 12	Th	Atomic Physics Cont.
27	Nov. 17	T	Radioactivity & Nuclear Physics - Concepts
28	Nov. 19	Th	Continue Material Completion
-	Nov. 24	T	**No Class (Thanksgiving)**
-	Nov. 26	Th	**No Class (Thanksgiving)**
29	Dec. 1	T	In-Class Final Exam Group Review
30	Dec.3	Th	**Test III (Last Day of Class)**
	Dec. 10	Th	**Final Exam (1:00 PM - 3:00 PM)**

Testing is closed-book and closed-notes. However, you will be allowed to use one page of notes.