



PHYS 1402 882 FE – General Physics II

Course Syllabus: Summer 2 2026

“Northeast Texas Community College exists to provide personal, dynamic learning experiences empowering students to succeed.”

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Weekday	Office Hours
Monday	Online
Tuesday	Online
Wednesday	Online
Thursday	Online
Friday	Online

This syllabus serves as the documentation for all course policies and requirements, assignments, and instructor/student responsibilities.

Information relative to the delivery of the content contained in this syllabus is subject to change. Should that happen, the student will be notified.

Course Description:

Four credit hours. Fundamental principles of physics, using algebra and trigonometry, the principles and applications of electricity and magnetism, including circuits, electrostatics, electromagnetism, waves, sound, light, optics, and modern physics topics; with emphasis on problem solving.

Prerequisite(s): Physics 1401

Student Learning Outcomes:

1. Solve problems involving the inter-relationship of fundamental charged particles and electrical forces, fields, and currents.
2. Apply Kirchoff's Rules to analysis of circuits with potential sources, capacitance, inductance, and resistance, including parallel and series capacitance and resistance.
3. Solve problems in the electrostatic interaction of point charges through the application of Coulomb's Law.
4. Solve problems involving the effects of magnetic fields on moving charges or currents, and the relationship of magnetic fields to the currents that produce them.
5. Use Faraday's and Lenz's laws to determine electromotive forces and solve problems involving electromagnetic induction.
6. Articulate the principles of reflection, refraction, diffraction, interference, and superposition of waves.
7. Describe the characteristics of light and the electromagnetic spectrum.

Upon successful completion of the laboratory portion of this course, students will:

1. Demonstrate techniques to set up and perform experiments, collect data from those experiments, and formulate conclusions from an experiment.
2. Demonstrate the collections, analysis, and reporting of data using the scientific method.

- Record experimental work completely and accurately in laboratory notebooks, and communicate experimental results clearly in written reports.
- Solve practical problems involving optics, lenses, mirrors, and optical instruments.

Evaluation/Grading Policy:

The breakdown of the course requirements is as follows:

%	Requirement
60%	Unit Exams
15%	Assignments
15%	Quizzes
10%	Labs

Semester grades will be earned as follows

Percentage	Letter Grade
90% and above	A
80% – 89%	B
70% – 79%	C
60% – 69 %	D
59.9% and below	F

Assignments consists of questions / problems from the chapters administered through Webassign. These problems can be reworked up to five times with decreasing credit for each attempt. The last grade earned for each assignment will be posted in the Blackboard gradebook. There are no extensions on due dates in order to maintain the course schedule.

Quizzes consists of short summary questions / problems over the chapter assignments. These are multiple choice and free response type questions. The quizzes are located and completed in the Blackboard content page in the “Quizzes” folder. These are timed assignments and must be completed in one session.

Laboratory work is completed through the Lab Procedures found in the Blackboard content page. Obtain the lab kit from the NTCC college store according to their instructions. Because students receive their lab kits at different times, I have set the due dates for the lab assignments beginning in the middle of the semester. However, I encourage you to perform the labs concurrently with the course materials to reinforce your understanding of the concepts as much as possible.

There are two Unit Exams administered through Webassign at scheduled windows during the semester. The exam

sessions are required to be recorded with a web cam while producing a screen share using TEAMS. The instructions are shown in the TEAMS folder on the content page of Blackboard. (Failure to produce an acceptable video / screen share with materials in full view will result in a 60 point maximum exam score.) The exams allow two attempts for each individual question for diminishing credit. There is a three hour time limit for each exam, and the exams must be completed in a single session (the timer does not stop once you begin the exam). There are no makeup exams available if you miss a due date.

Webassign grades are automatically imported into Blackboard throughout the semester. If you see a grade in Blackboard that does not match an assignment grade in Webassign, it probably was in progress at the time of refreshing. Check back to see if it updates. The Blackboard gradebook is the official course grade since it is home to the quizzes and labs.

Required Instructional Materials:

Publisher: Cengage Learning

ISBN Number: 978-1-285-73702-7

Optional Instructional Materials:

A hardback copy of the textbook may be obtained from the NTCC bookstore.

Minimum Technology Requirements:

You will need a scientific calculator for this class.

Required Computer Literacy Skills:

Ability to access the internet and upload documents and pictures to apps.

Course Structure and Overview:

Chapter 15 Electric Forces and Electric Fields

Chapter 16 Electric Energy and Capacitance

Chapter 17 Current and Resistance

Chapter 18 Direct-Current Circuits

Chapter 19 Magnetism

Chapter 20 Induced Voltages and Induction

Chapter 21 Alternating-Current Circuits and Electromagnetic Waves

Exam #1

Chapter 22 Reflection and Refraction of Light

Chapter 23 Mirrors and Lenses

Chapter 24 Wave Optics

Exam #2

Communications:

The college's official means of communication is via your campus email address. I will use your campus email address and Blackboard announcements / messages to communicate with you outside of class. Make sure you keep your campus email cleaned out and below the limit so you can receive important messages.

Institutional/Course Policy:

Alternate Operations During Campus Closure and/or Alternate Course Delivery Requirements:

In the event of an emergency or announced campus closure due to a natural disaster or pandemic, it may be necessary for Northeast Texas Community College to move to altered operations. During this time, Northeast Texas Community College may opt to continue delivery of instruction through methods that include, but are not limited to, online through the Blackboard Learning Management System, online conferencing, email messaging, and/or an alternate schedule. It is the responsibility of the student to monitor NTCC's website (<http://www.ntcc.edu/>) for instructions about continuing courses remotely, Blackboard for each class for course-specific communication, and NTCC email for important general information.

Additionally, there may be instances where a course may not be able to be continued in the same delivery format as it originates (face-to-face, fully online, live remote, or hybrid). Should this be the case, every effort will be made to continue instruction in an alternative delivery format. Students will be informed of any changes of this nature through email messaging and/or the Blackboard course site.

Statement Regarding the Use of Artificial Intelligence (AI) Technology:

Employees and students shall be permitted to explore artificial intelligence (AI) and implement its use in and out of the classroom in accordance with policy and administrative regulations. The use of AI shall only be as a support tool to enhance student outcomes or as necessary to engage in research and shall never take the place of faculty, staff, and student decision-making. Any use of AI must comply with law, policy, and administrative regulations relating to student and employee privacy and data security. A student shall only use AI tools with faculty permission and shall be expected to produce original work and properly credit sources, including AI tools used in creating the work.

Example:

APA (7th edition)

OpenAI. (2026). ChatGPT (March 25 version) [Large language model]. <https://chat.openai.com/>

MLA (9th edition)

OpenAI. ChatGPT. 25 Mar. 2026, <https://chat.openai.com/>.

Employees or students who use AI tools to deceptively harm, bully, or harass others shall be disciplined in accordance with policy. [See DH, DIA series, FFD series, FFE, FLB, and the FM series] AI Use by Employees and Students. Northeast Texas Community College 225500 TECHNOLOGY RESOURCES CRB ARTIFICIAL INTELLIGENCE (LOCAL) DATE ISSUED: 12/8/2025 1 of 1 UPDATE 50 CRB(LOCAL)-AJC Adopted: 12/16/2025

NTCC Academic Honesty/Ethics Statement:

NTCC upholds the highest standards of academic integrity. The college expects all students to engage in their academic pursuits in an honest manner that is beyond reproach using their intellect and resources designated as allowable by the course instructor. Students are responsible for addressing questions about allowable resources with the course instructor. Academic dishonesty such as cheating, plagiarism, and collusion is unacceptable and may result in disciplinary action. This course will follow the NTCC Academic Honesty and Academic Ethics policies stated in the Student Handbook. Refer to the student handbook for more information on these subjects.

ADA Statement:

It is the policy of NTCC to provide reasonable accommodation for qualified individuals who are students with disabilities. This College will adhere to all applicable federal, state, and local laws, regulations, and guidelines with respect to providing reasonable accommodation as required to afford equal educational opportunity. It is the student's responsibility to request accommodation. An appointment can be made with the Academic Advisor/Coordinator of Special Populations located in Student Services and can be reached at 903-434-8264. For more information and to obtain a copy of the Request for Accommodations, please refer to the special populations page on the NTCC website.

Family Educational Rights and Privacy Act (FERPA):

The Family Educational Rights and Privacy Act (FERPA) is a federal law that protects the privacy of student education records. The law applies to all schools that receive funds under an applicable program of the U.S. Department of Education. FERPA gives parents certain rights with respect to their children's educational records. These rights transfer to the student when he or she attends a school beyond the high school level. Students to whom the rights have transferred are considered "eligible students." In essence, a parent has no legal right to obtain information concerning the child's college records without the written consent of the student. In compliance with FERPA, information classified as "directory information" may be released to the general public without the written consent of the student unless the student makes a request in writing. Directory information is defined as: the student's name, permanent address and/or local address, telephone listing, dates of attendance, most recent previous education institution attended, other information including major, field of study, degrees, awards received, and participation in officially recognized activities/sports.

Tentative Course Schedule:

Chap.	Title	Week	Key Due Dates*
15	Electric Forces and Electric Fields	1	
16	Electric Energy and Capacitance	1	
17	Current and Resistance	2	
18	Direct Current Circuits	2	
19	Magnetism	2	
20	Induced Voltages and Induction	2 - 3	
21	Alternating Current Circuits and Electromagnetic Waves	3	
	Exam #1		7/29/26
22	Reflection and Refraction of Light	3	
23	Mirrors and Lenses	4	
24	Wave Optics	4 - 5	
	Exam #2		8/12/26