

# NORTH CENTRAL TEXAS COLLEGE

## COURSE SYLLABUS

### COURSE AND INSTRUCTOR INFORMATION

**Course title:** College Physics II.

**Course prefix, number, and section number:** PHYS1402-500.

**Semester/Year of course:** Spring 2026.

**Semester start and end dates:** January 12<sup>th</sup>, May 9<sup>th</sup>.

**Modality (Face to face/Synchronous or Asynchronous online/Hybrid):** Face to face.

**Class meeting location, days, and times:** Lectures on Tuesdays and Thursdays from 12:30 pm to 1:50 pm at FLM02 room 227. Labs on Thursdays from 2:00pm to 4:30pm at FLM02 room 213.

**Semester credit hours:** 48.

**Course description:** 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.

**Course prerequisites:** PHYS 1401.

#### Course Materials

Starting in Spring 2026 NCTC is partnering with Barnes & Noble College (BNC) to make purchasing course materials easy and affordable. When students register for classes, they are automatically opted in to the Lion Book Bundle which will provide students first day access to course materials. In this program students are charged \$24 per credit hour (\$96 for a 4-hour class) as a fee on their NCTC student account. (This is labeled as “Book Fee” on NCTC invoices). Students may choose to opt out of this program, but would then be required to purchase needed class materials on their own. If opting out, students would receive a refund on their NCTC student account. Students may choose to opt out starting one month prior to classes beginning through the first week of class. Students might benefit from opting out if they are enrolled in classes that use OER (free course materials). **Note: The Lion Book Bundle applies to all classes a student is registered for in a given semester (both 16-week and 8-week). A student must either opt in or out for ALL classes—not each class individually.** If you want to take advantage of the Lion Book Bundle, no action is needed as students are automatically opted in. If you would like to opt out of the program, you must go to the Opt-out page.

Click here for more information: [Lion Book Bundle information](#)

**Required Course Materials:** Mastering Physics with Pearson eText Access Code. Ebook and assignments are accessible through Mastering Physics. The ebook is “Physics: Principles with

Applications” by Douglas C. Giancoli, 7th edition, Pearson. No lab manual is required. I will post the lab’s handouts on the Canvas website.

**INCLUDED in the Lion Book Bundle:** access to Mastering Physics with Pearson eText Access Code.

**Name of instructor:** Franz Aguirre.

**Office location:** Flower Mound MSU-221.

**Telephone number:**

**E-mail address:** faguirre@nctc.edu

**Office hours for students:** 5:00pm-7:00pm.

### **SYLLABUS CHANGE DISCLAIMER**

The faculty member reserves the right to make changes to this published syllabus if it is in the best interest of the educational development of this class. Any such changes will be announced as soon as possible in person and/or in writing.

### **SUMMARY OF COURSE ASSIGNMENTS**

**List of graded assignments:**

1. Quizzes: 5%
2. Homework: 35%
3. Labs: 20%
4. Partial Exams: 25%
5. Final Exam: 15%

**Final grade scale:** A: 90-100 B: 80-89 C: 70-79 D: 60-69 F: 0- 59

**Late work policy:** no late solution to any assignment will be accepted. Make-up exams can be scheduled if I am notified in advance. Only valid medical excuses or exceptional circumstances beyond the student's control are permitted for make-up exams. Makeup exams will not be the same exams given at the regularly scheduled time.

**SEE CANVAS FOR THE COMPLETE COURSE CALENDAR, OUTLINE, DETAILED DESCRIPTION OF GRADED WORK, AND OTHER RELATED MATERIAL.**

## COURSE POLICIES

### **Academic Integrity Policy:**

Students are expected to submit their own solutions to assignments. A grade of zero will be assigned to the student who submits a copy of another student's work.

**Artificial Intelligence Policy:** Students are allowed to use automated tools based on artificial intelligence as long as they have been properly cited. Violations of this policy will be considered student misconduct. It is the student's responsibility to verify the correctness of the result submitted in an assignment using these tools.

**Attendance Policy:** There is no grade for attendance but students are expected to complete their work in Canvas each week. Student's attendance will be inferred from progress in the course.

### **Withdrawal Policy**

A student may withdraw from a course on or after the official date of record. It is the student's responsibility to initiate and complete a Withdrawal Request Form.

**Last day to withdraw from the course with a "W" is:** March 30<sup>th</sup>.

### **Student Learning Outcomes:**

At the successful completion of this course the student will be able to:

1. Solve problems involving the inter-relationship of fundamental charged particles, and electrical forces, fields, and currents.
2. Apply Kirchhoff'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.

### **Core Objectives:**

Critical Thinking

Communication  
Teamwork  
Empirical and Quantitative Analysis

## **COLLEGE POLICIES**

### **STUDENT HANDBOOK**

Students are expected to follow all rules and regulations found in the Student Handbook.

### **ADA STATEMENT**

NCTC will adhere to all applicable federal, state and local laws, regulations and guidelines with respect to providing reasonable accommodations to afford equal educational opportunity. It is the student's responsibility to contact the Office for Students with Disabilities to arrange appropriate accommodations. See the OSD Syllabus Addendum.

### **AI STATEMENT**

Individual course instructors, in coordination with their divisions, set policies regulating the use of generative AI tools in their courses, including allowing or disallowing some or all uses of such tools. Course instructors will set such policies in their course syllabi and clearly communicate such policies to students. Students who are unsure of policies regarding generative AI tools are encouraged to ask their instructors for clarification.

### **STUDENT SERVICES**

NCTC provides a multitude of services and resources to support students. See the Student Services Syllabus Addendum for a listing of those departments and links to their sites.

## **QUESTIONS, CONCERNS, or COMPLAINTS**

The student should contact the instructor to deal with any questions, concerns, or complaints specific to the class. If the student and faculty are not able to resolve the issue, the student may contact the chair or coordinator of the division. If the student remains unsatisfied, the student may proceed to contact the instructional dean.

**Name of Chair/Coordinator:** Jaime Noles

**Office location:** Gainesville 408

**Telephone number:** 940-668-7731 ext. 4930

**E-mail address:** jnoles@nctc.edu

**Name of Instructional Dean:** Mary Martinson

**Office location:** Gainesville 1403

**Telephone number:** 940.668.7731 ext. 4377

**E-mail address:** mmartinson@nctc.edu