POINT 1902 LOMA
NAZARENE UNIVERSITY

Department of Physics and Engineering

PHY2054 – University Physics II (Spring 2025)

4 Units (3 units lecture + 1 unit lab)

Lecture: MWF 1:30 pm – 2:25 pm, Rohr Science 395

Lab Section 1: R 7:25 – 9:10 am, Rohr Science 265

Lab Section 2: R 12:30 – 2:15 pm, Rohr Science 265

Final Exam: Wednesday, May 7th, 1:30 – 4:00 pm, Rohr Science 395

INFORMATION	SPECIFICS FOR THE COURSE
Instructor title and name:	Dr. Michelle Chen
Phone:	619-849-2960
Email:	michellechen@pointloma.edu
Office location and hours:	RS264, by appointment, or M/F: 12 – 12:30 pm; T: 11 am – 12 pm; R: 12 – 1:30 pm

PLNU Mission

To Teach ~ To Shape ~ To Send

Point Loma Nazarene University exists to provide higher education in a vital Christian community where minds are engaged and challenged, character is modeled and formed, and service is an expression of faith. Being of Wesleyan heritage, we strive to be a learning community where grace is foundational, truth is pursued, and holiness is a way of life.

Course Description

An analytic, calculus-based study of classical physics appropriate for science and engineering majors with an emphasis on electromagnetism, circuits, and optics. Lecture and laboratory.

Program and Course Learning Outcomes

1. translate the description of physics problems into the mathematical equations required to solve them using relevant physical principles
2. calculate solutions to physics problems once appropriate equations or techniques are identified
3. predict reasonable answers in appropriate problems, and assess the reasonableness of calculated answers
4. explain the physical meaning of the parameters in introductory physics equations
5. create and interpret graphical representations of physical quantities (electric fields, ray diagrams etc.)
6. demonstrate teamwork skills / ability to collaborate by working in groups on a laboratory experiment.
7. Demonstrate proficiency using introductory physics equipment in the lab setting (for example oscilloscopes, waveform generator, lasers)

Required Texts and Recommended Study Resources

- Physics for Scientists and Engineers Volume 2, 5th Edition by Giancoli
- Access to Expert TA (access through CANVAS, part of LomaBooks)
- a calculator

Assessment and Grading

Graded Components

- **Pre-Class:** In preparation for each class meeting there is a reading assignment. To be ready for group work and higher-level learning, these reading assignments are very important to help you come prepared to class. To complete the reading assignment, you must answer a few questions and submit them electronically through Canvas by 10:00 am of the morning before class. Late submissions will not be accepted. This electronic communication is so important because it is your voice in what material we emphasize during class meetings and provides me constant feedback of your understanding of the material. These submissions will be graded on the following scale: 2 = demonstrates reading, 1 = room for improvement, 0 = unsatisfactory. These points are accumulated and are worth 2% of the final grade. The lowest 4 scores will be dropped.

- **Homework:** Practicing working physics problems is critical to your success in the class. Almost each week there will be homework assignment posted on CANVAS and due through ExpertTA. You are strongly encouraged to discuss with your classmates, but to solve and submit your own work. Late homework receives a 20% reduction in possible value per day.

- **Lab:** Weekly lab meetings will provide you the opportunity for hands-on experience of topics from class meetings, improve lab technique, and data analysis. Labs will be performed in small groups, but each student is responsible for submitting their own results. It is essential to come to the

labs. Due to the collaborative nature the labs, there will be No make-up labs. You must pass the lab portion of the class to pass the class.

- **Examinations and Final Examination:** There will be three in-class exams during the semester and one comprehensive final exam. All exam dates are indicated in the course calendar in the syllabus. Exams will be closed book, but a sheet of formulas will be provided to you to use during your exam. Partial credit will be given for correct reasoning at any step of a problem, but only if it is communicated clearly enough for me to understand. For problems that call for solution or explanation, no credit will be given for an answer alone; the method or reasoning must also be shown. Exams are to be taken at the time indicated in the syllabus unless other arrangements are made in advance with the professor for some unavoidable circumstance, and otherwise cannot be made up. You must take ALL the exams in order to pass the class. **Final Examination Policy:** Successful completion of this class requires taking the final examination **on its scheduled day (Wednesday May 7th 2025, 1:30 – 4:00 pm)**.

Grading Scale

- Your course grade will be based on the following:

Pre-Class	2%	
Homework	18%	
Lab	20%	
Tests (3)	40%	(equally weighted)
Final Exam	20%	

Final Examination Policy

Successful completion of this class requires taking the final examination on its scheduled day. The final examination schedule is posted on the Traditional Undergraduate Records: Final Exam Schedules site. If you find yourself scheduled for three (3) or more final examinations on the same day, you are authorized to contact each professor to arrange a different time for one of those exams. However, unless you have three (3) or more exams on the same day, no requests for alternative final examinations will be granted.

PLNU Academic Accommodations Policy

PLNU is committed to providing equal opportunity for participation in all its programs, services, and activities in accordance with the Americans with Disabilities Act (ADA). Students with disabilities may request course-related accommodations by contacting the Educational Access Center (EAC), located in the Bond Academic Center (EAC@pointloma.edu or 619-849-2486). Once a student's eligibility for an accommodation has been determined, the EAC will work with the student to create an Accommodation Plan (AP) that outlines allowed accommodations. The EAC makes accommodations available to professors at the student's request.

PLNU highly recommends that students speak with their professors during the first two weeks of each semester/term about the implementation of their AP in that particular course. Accommodations are

not retroactive so clarifying with the professor at the outset is one of the best ways to promote positive academic outcomes.

Students who need accommodations for a disability should contact the EAC as early as possible (i.e., ideally before the beginning of the semester) to assure appropriate accommodations can be provided. It is the student's responsibility to make the first contact with the EAC. Students cannot assume that because they had accommodations in the past, their eligibility at PLNU is automatic. All determinations at PLNU must go through the EAC process. This is to protect the privacy of students with disabilities who may not want to disclose this information and are not asking for any special accommodations.

Additional Course Information:

Additional PLNU policies and practices that apply to this course can be found at the following link: https://docs.google.com/document/d/18i1pUoY0iCfB8w7JKxVvACQW309X-JRB/edit?usp=sharing&ouid=116164865489739533893&rtpof=true&sd=true