

Physics and Engineering
EGR4092 Internship in Engineering

Number of Units 2

Hybrid (work for internship host + PLNU online tasks)

No Final Exam

Summer 2025

BASIC INFORMATION

Instructor: Dr. Maria Zack

Phone: 619.849.2458

Email: mzack@pointloma.edu

Office Hours: I offer office hours both in-person and via Google Meet/Zoom. During the summer I will be in Europe part of the time so please email me to set up an office hour visit.

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.

Department Mission

The Department of Physics & Engineering provides strong programs of study that aid in ensuring our students are well prepared for both graduate studies and careers in a variety of scientific and engineering fields. We emphasize a collaborative learning environment that allows students to thrive academically, build personal confidence, and develop interpersonal skills, while providing a Christian setting for students to learn values and judgment and pursue integration of modern scientific knowledge and Christian faith.

COURSE DESCRIPTION

EGR 4092 Internship in Engineering (2 Units)

A supervised experience in which the student works with industry professionals to gain experience in engineering. May be repeated up to a total of four (4) units. Credit/No Credit.

Prerequisite(s): Student must have taken at least two upper-division engineering or physics classes and consent of instructor.

COURSE LEARNING OUTCOMES

- ABET #1 Graduate of the program will demonstrate an ability to identify, formulate, and solve complex engineering problems by applying principles of engineering, science, and mathematics (CC: CT)
- ABET #2 Graduate of the program will demonstrate an ability to apply engineering design to produce solutions that meet specified needs with consideration of public health, safety, and welfare, as well as global, cultural, social, environmental, and economic factors
- ABET #3 Graduate of the program will demonstrate an ability to communicate effectively with a range of audiences (CC: OC, WC, IL)
- ABET #4 Graduate of the program will demonstrate an ability to recognize ethical and professional responsibilities in engineering situations and make informed judgments, which must consider the impact of engineering solutions in global, economic, environmental, and societal contexts
- ABET #7 Graduate of the program will demonstrate an ability to acquire and apply new knowledge as needed, using appropriate learning strategies.

In addition, an internship is an opportunity for students to:

- Apply skills and knowledge learned in major courses to real business situations.
- Reinforce and expand previous conceptual learning through work experience.
- Develop “networks” in the business and professional community.

The PLO assessed in this course: Students will understand the professional, ethical and social issues and responsibilities with the implementation and use of mathematical models and technology.

The signature assignment for this assessment: Ethics Exercise

REQUIRED TEXTS AND RECOMMENDED STUDY RESOURCES

There is no textbook for this class.

COURSE CREDIT HOUR INFORMATION

In the interest of providing sufficient time to accomplish the stated Course Learning Outcomes, this class meets the PLNU credit hour policy for a 2 unit class delivered over fifteen weeks. Specific details about how the class meets the credit hour requirement

can be provided upon request. (Based on 37.5 hours of student engagement per credit hour.)

Distribution of Student Learning Hours

Category	Time Expectation in Hours
Work at internship location (verified via time sheets).	80 or more
Reading Assignments	5
Written Assignments	10
Other Assignments & Learning Activities	1
Total Hours	96

ASSESSMENT AND GRADING

Graded Components

- **Academic Internship Contract:** You must complete an “Academic Internship Contract” and turn it in to me no later than midnight on Friday of the second week of classes. The form is attached. The person who is to supervise you at your internship work place must sign as your on-site supervisor and I must sign as your department sponsor. Please be as precise as possible in specifying your duties as an intern and the skills you hope to develop. Your internship should not be considered valid for academic credit until I have approved and signed your completed contract.
- **Weekly Timesheets:** Each week you need to turn in your timesheet indicating the hours that you have worked and what you did during those hours. The timesheet must be signed by your supervisor. Each weekly report covers Monday through Saturday of that week and is due by Wednesday of the following week. You can find a link to the timesheet in the relevant assignment. Please upload you signed timesheet in Canvas.
- **Internship Evaluation Essay:** There are multiple steps in preparing this essay and a assignment related to each step. This brief paper asks you to reflect on the quality of your internship, what new things you learned and how the work connects with the coursework that you have taken. *This should include references to articles and books that you have read to gain technical knowledge for your internship.*
- **Ethics Assignment:** There will be an assignment due at the end of the semester that will ask you to consider some of the ethical issues that you observed or encountered during your internship.

- **Examinations and the Final Examination.** There are no examinations in this class.
- **Late work will not be accepted** without prior consent or a well-documented emergency.

Grading Distribution	Percent
Contract Documents	5
Time Sheets	35
Paper Outline	10
Paper Draft	10
Final Paper	30
Ethics	10
Total	100

Grading Scale

Approximate minimal percentages required to obtain a given grade are:

Standard Grade Scale Based on Percentages					
	A	B	C	D	F
+		87.5- 90	77.5-80	67.5-70	
	92.5 -100	82.5-87.5	72.5-77.5	62.5 -67.5	0-60
-	90-92.5	80-82.5	70-72.5	60-62.5	

INCOMPLETES AND LATE ASSIGNMENTS

All assignments are to be submitted/turned in by the beginning of the class session when they are due—including assignments posted in Canvas. Incompletes will only be assigned in extremely unusual circumstances.

CLASS ENROLLMENT

It is the student's responsibility to maintain his/her class schedule. Should the need arise to drop this course (personal emergencies, poor performance, etc.), the student has the responsibility to follow through (provided the drop date meets the stated calendar deadline established by the university), not the instructor. Simply ceasing to attend this course or failing to follow through to arrange for a change of registration (drop/add) may easily result in a grade of F on the official transcript.

ARTIFICIAL INTELLIGENCE (AI) POLICY

Use of Artificial Intelligence (AI) tools (e.g, ChatGPT, iA Writer, Marmot, Botowski) to generate content (text, video, audio, images) that will end up in any work submitted to be graded for this course is not permitted. Use of these tools will be treated as plagiarism. If you have any questions about using AI, please discuss this with the instructor.

PLNU ACADEMIC ACCOMODATIONS 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>Links to an external site.

EGR4092C– 1 Schedule

Date	Details	Due
Fri May 16, 2025	Assignment Contract Work	due by 5pm
	Assignment Location Paperwork	due by 5pm
Tue May 20, 2025	Assignment Trip Log	due by 11:59pm
	Assignment Trip Preparation Log	due by 11:59pm
Wed May 21, 2025	Assignment Week 1 Time Sheet	due by 11:59pm
Mon May 26, 2025	Assignment Schedule a Meeting To Discuss Reading	due by 11:59pm
Wed May 28, 2025	Assignment Week 2 Time Sheet	due by 11:59pm
Wed Jun 4, 2025	Assignment Week 3 Time Sheet	due by 11:59pm
Fri Jun 6, 2025	Assignment Executive Summary of Trip Log	due by 11:59pm
	Assignment Lessons Learned	due by 11:59pm
Wed Jun 11, 2025	Assignment Week 4 Time Sheet	due by 11:59pm
Fri Jun 13, 2025	Assignment Contract Work (1 student)	due by 5pm
Mon Jun 16, 2025	Assignment Schedule a Meeting To Discuss Reading (1 student)	due by 11:59pm
	Assignment Paper Outline	due by 11:59pm
Wed Jun 18, 2025	Assignment Week 5 Time Sheet	due by 11:59pm

Date	Details	Due
Wed Jun 25, 2025	Assignment Week 6 Time Sheet	due by 11:59pm
Mon Jun 30, 2025	Assignment Paper Outline (1 student)	due by 11:59pm
	Assignment Draft of Paper	due by 11:59pm
Wed Jul 2, 2025	Assignment Week 7 Time Sheet	due by 11:59pm
Mon Jul 7, 2025	Assignment Draft of Paper (1 student)	due by 11:59pm
Wed Jul 9, 2025	Assignment Week 8 Time Sheet	due by 11:59pm
Mon Jul 14, 2025	Assignment Final Paper	due by 11:59pm
Wed Jul 16, 2025	Assignment Week 9 Time Sheet	due by 11:59pm
Fri Jul 18, 2025	Assignment Ethics	due by 11:59pm
Mon Jul 21, 2025	Assignment Week 10 Time Sheet	due by 11:59pm

EGR4092C-2 and EGR4092E-2 Schedule:

Date	Details	Due
Fri Jun 20, 2025	Assignment Contract Work	due by 5pm
	Assignment Location Paperwork	due by 5pm
Mon Jun 23, 2025	Assignment Schedule a Meeting To Discuss Reading	due by 11:59pm
Wed Jun 25, 2025	Assignment Week 1 Time Sheet	due by 11:59pm
Wed Jul 2, 2025	Assignment Week 2 Time Sheet	due by 11:59pm
Fri Jul 4, 2025	Assignment Paper Outline	due by 11:59pm
Wed Jul 9, 2025	Assignment Week 3 Time Sheet	due by 11:59pm
Fri Jul 11, 2025	Assignment Draft of Paper	due by 11:59pm
Wed Jul 16, 2025	Assignment Week 4 Time Sheet	due by 11:59pm
Fri Jul 18, 2025	Assignment Ethics	due by 11:59pm
Mon Jul 21, 2025	Assignment Week 5 Time Sheet	due by 11:59pm
	Assignment Final Paper	due by 11:59pm