

Point Loma Nazarene University

Physics and Engineering

EGR4092 Internship in Engineering

Number of Units 2

Hybrid (working for company + PLNU online tasks) Spring 2024

Instructor: Dr. Maria Zack
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Office hours: On Zoom - Click here for appointment (Links to an external site.) These are the times that I work to hold open for appointments. If none of them work you can email me to see if we can find another time. Please note that some sessions are Zoom only and are shown with the statement "Zoom only" after the time. The others can be Zoom or In-Person (RS246). Monday 10:30-11:30 AM Tuesday 8:00-9:30 AM and 2:00-3:00 PM Wednesday By appointment only Thursday 5:00-6:00 PM (Zoom only) Friday 11:15 AM - 12:00 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.

Department Mission

The Physics and Engineering Department at PLNU provides strong programs of study in the fields of Physics and Engineering. Our students are well prepared for graduate studies and careers in scientific and engineering fields. We emphasize a collaborative learning environment which allows students to thrive academically, build personal confidence, and develop interpersonal skills. We provide a Christian environment 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)

A supervised experience in which the student works with industry professionals to gain experience in engineering. May be repeated to a total of four units. This course is graded Credit/No Credit only.

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

COURSE LEARNING OUTCOMES

Students will develop:

1. an ability to identify, formulate, and solve complex engineering problems by applying principles of engineering, science, and mathematics (CC: CT)
2. 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
3. an ability to communicate effectively with a range of audiences (CC: OC, WC, IL)
4. 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
5. an ability to function effectively on a team whose members together provide leadership, create a collaborative and inclusive environment, establish goals, plan tasks, and meet objectives
6. an ability to develop and conduct appropriate experimentation, analyze and interpret data, and use engineering judgment to draw conclusions (CC: QR)
7. an ability to acquire and apply new knowledge as needed, using appropriate learning strategies.

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

1. Apply skills and knowledge learned in major courses to real business situations.
2. Reinforce and expand previous conceptual learning through work experience.

3. Develop “networks” in the business and professional community.

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
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.

SPIRITUAL CARE

Please be aware PLNU strives to be a place where you grow as whole persons. To this end, we provide resources for our students to encounter God and grow in their Christian faith.

If you have questions, a desire to meet with the chaplain or have prayer requests you can contact your professor or the [Office of Spiritual Life and Formation](#).

STATE AUTHORIZATION

State authorization is a formal determination by a state that Point Loma Nazarene University is approved to conduct activities regulated by that state. In certain states

outside California, Point Loma Nazarene University is not authorized to enroll online (distance education) students. If a student moves to another state after admission to the program and/or enrollment in an online course, continuation within the program and/or course will depend on whether Point Loma Nazarene University is authorized to offer distance education courses in that state. It is the student's responsibility to notify the institution of any change in his or her physical location. Refer to the map on [State Authorization](#) to view which states allow online (distance education) outside of California.

PLNU COPYRIGHT POLICY

Point Loma Nazarene University, as a non-profit educational institution, is entitled by law to use materials protected by the US Copyright Act for classroom education. Any use of those materials outside the class may violate the law.

PLNU ACADEMIC HONESTY POLICY

Students should demonstrate academic honesty by doing original work and by giving appropriate credit to the ideas of others. Academic dishonesty is the act of presenting information, ideas, and/or concepts as one's own when in reality they are the results of another person's creativity and effort. A faculty member who believes a situation involving academic dishonesty has been detected may assign a failing grade for that assignment or examination, or, depending on the seriousness of the offense, for the course. Faculty should follow and students may appeal using the procedure in the university Catalog. See [Academic PoliciesLinks to an external site.](#) for definitions of kinds of academic dishonesty and for further policy information.

ARTIFICIAL INTELLIGENCE (AI) POLICY

Use of Artificial Intelligence (AI) tools (e.g, ChatGPT, iA Writer, Marmot, Botowski) in creating written work for this class is not permitted, and use of these tools will be treated as plagiarism.

PLNU ACADEMIC ACCOMMODATIONS POLICY

PLNU is committed to providing equal opportunity for participation in all its programs, services, and activities. 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 issue an academic

accommodation plan (“AP”) to all faculty who teach courses in which the student is enrolled each semester.

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 and/or if they do not wish to utilize some or all of the elements of their AP in that course.

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.

LANGUAGE AND BELONGING

Point Loma Nazarene University faculty are committed to helping create a safe and hospitable learning environment for all students. As Christian scholars we are keenly aware of the power of language and believe in treating others with dignity. As such, it is important that our language be equitable, inclusive, and prejudice free. Inclusive/Bias-free language is the standard outlined by all major academic style guides, including MLA, APA, and Chicago, and it is the expected norm in university-level work. Good writing and speaking do not use unsubstantiated or irrelevant generalizations about personal qualities such as age, disability, economic class, ethnicity, marital status, parentage, political or religious beliefs, race, gender, sex, or sexual orientation. Inclusive language also avoids using stereotypes or terminology that demeans persons or groups based on age, disability, class, ethnicity, gender, race, language, or national origin. Respectful use of language is particularly important when referring to those outside of the religious and lifestyle commitments of those in the PLNU community. By working toward precision and clarity of language, we mark ourselves as serious and respectful scholars, and we model the Christ-like quality of hospitality.

You may report an incident(s) using the [Bias Incident Reporting Form](#)Links to an external site.

SEXUAL MISCONDUCT AND DISCRIMINATION

In support of a safe learning environment, if you (or someone you know) have experienced any form of sexual discrimination or misconduct, including sexual assault, dating or domestic violence, or stalking, know that accommodations and resources are available through the Title IX Office at pointloma.edu/Title-IX. Please be aware that under Title IX of the Education Amendments of 1972, faculty and staff are required to disclose information about such misconduct to the Title IX Office.

If you wish to speak to a confidential employee who does not have this reporting responsibility, you can contact Counseling Services at counselingservices@pointloma.edu or find a list of campus pastors at pointloma.edu/title-ix.

PLNU ATTENDANCE AND PARTICIPATION POLICY

Regular and punctual attendance at all class sessions is considered essential to optimum academic achievement. If the student is absent for more than 10 percent of class sessions, the faculty member will issue a written warning of de-enrollment. If the absences exceed 20 percent, the student may be de-enrolled without notice until the university drop date or, after that date, receive the appropriate grade for their work and participation.

In some courses, a portion of the credit hour content will be delivered **asynchronously** and attendance will be determined by submitting the assignments by the posted due dates. See [Academic Policies](#) in the Undergraduate Academic Catalog. If absences exceed these limits but are due to university excused health issues, an exception will be granted.

Asynchronous Attendance/Participation Definition

A day of attendance in asynchronous content is determined as contributing a substantive note, assignment, discussion, or submission by the posted due date. Failure to meet these standards will result in an absence for that day. Instructors will determine how many asynchronous attendance days are required each week.

USE OF TECHNOLOGY

In order to be successful in the online or hybrid environment, you'll need to meet the minimum technology and system requirements; please refer to the [Technology and System Requirements](#) information. Additionally, students are required to have headphone speakers, microphone, or webcams compatible with their computer available to use. Please note that any course with online proctored exams require a computer with a camera (tablets are not compatible) to complete exams online.

Problems with technology do not relieve you of the responsibility of participating, turning in your assignments, or completing your class work.

LOMA WRITING CENTER

The Loma Writing Center exists to help all members of the PLNU community cultivate transferable writing skills to engage their academic, professional, personal, and spiritual

communities. We work toward this goal by conducting one-on-one consultation sessions, supporting writing education across the PLNU community, and participating in ongoing writing center research.

Getting feedback from the Loma Writing Center while you're in the process of working on an assignment is a great way to improve the quality of your writing and develop as a writer. You are encouraged to talk with a trained writing consultant about getting started on an assignment, organizing your ideas, finding and citing sources, revising, editing for grammar and polishing final drafts, and more. For information about how to make in-person or online appointments, see [Loma Writing Center webpage](#) or visit the Loma Writer Center on the first floor of the Ryan Library, room 221.

Course Summary:

Date	Details	Due
Wed Jan 17, 2024	Assignment Week 1 Time Sheet	due by 11:59pm
	Assignment Contract Work	due by 5pm
Fri Jan 19, 2024	Assignment Location Paperwork	due by 5pm
	Assignment Research Step 1: Topic and Reference Combo	due by 11:59pm
Wed Jan 24, 2024	Assignment Week 2 Time Sheet	due by 11:59pm

Date	Details	Due
Wed Jan 31, 2024	Assignment Week 3 Time Sheet	due by 11:59pm
Wed Feb 7, 2024	Assignment Research Step 2: Reading Summary	due by 11:59pm
Fri Feb 9, 2024	Assignment Week 4 Time Sheet	due by 11:59pm
Fri Feb 9, 2024	Assignment Schedule a Meeting To Discuss Reading	due by 11:59pm
Wed Feb 14, 2024	Assignment Week 5 Time Sheet	due by 11:59pm
Wed Feb 21, 2024	Assignment Week 6 Time Sheet	due by 11:59pm
Wed Feb 21, 2024	Assignment Research Step 3: Reading Summary	due by 11:59pm
Wed Feb 28, 2024	Assignment Week 7 Time Sheet	due by 11:59pm

Date	Details	Due
Wed Mar 6, 2024	Assignment Week 8 Time Sheet	due by 11:59pm
Mon Mar 11, 2024	Assignment Research Step 4: Reading Summary	due by 11:59pm
Wed Mar 13, 2024	Assignment Week 9 Time Sheet	due by 11:59pm
Sun Mar 17, 2024	Assignment Paper Outline	due by 11:59pm
Wed Mar 20, 2024	Assignment Week 10 Time Sheet	due by 11:59pm
Wed Mar 27, 2024	Assignment Week 11 Time Sheet	due by 11:59pm
Fri Mar 29, 2024	Assignment Draft of Paper	due by 11:59pm
Wed Apr 3, 2024	Assignment Week 12 Time Sheet	due by 11:59pm

Date	Details	Due
Wed Apr 10, 2024	Assignment Week 13 Time Sheet	due by 11:59pm
Wed Apr 17, 2024	Assignment Week 14 Time Sheet	due by 11:59pm
Fri Apr 19, 2024	Assignment Final Paper	due by 11:59pm
Wed Apr 24, 2024	Assignment Week 15 Time Sheet	due by 11:59pm
Wed May 1, 2024	Assignment Ethics	due by 11:59pm