

PHY 495 – Seminar in Physics

1 Unit

Spring 2017

PLNU Mission Statement

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.

Professor: Dr. Heide Doss

Office: Rohr Science (RS 211) **cell phone:** (619) 840-4559; **office phone:** (619) 849-2219

E-mail: plnuPhysicsDoss@gmail.com or hdoss@pointloma.edu (response time faster for first email)

Office Hours: M, T, F 8:30-12; W 9:45-12; Th 8:30-10:30; or by appointment, (RS 211)

Regular meeting times January 17, 2017 – April 25, 2017 (NOTE: T Jan 10 is a M schedule)

Lecture: T 12:25 pm – 1:20 pm (Rohr Science 219)

Final Exam: None

Textbook: None

Course Description:

Presentation of papers by students, faculty, and visiting scholars, as well as attendance at seminars at other institutions. May be repeated up to a maximum of four units. Graded Credit/No Credit.

Student Learning Outcomes: By the end of this course students will be able to demonstrate the following skills:

1. Effective reading of scientific literature;
2. Presentation of scientific material from literature;
3. Group collaboration on a scientific project;
4. Writing a paper as a group in the format of current journal articles, along with peer review;
5. Presenting a group project in both video format and conference format;
6. Writing a résumé and a cover letter.

Final Grades: Successful completion of this course is based on satisfactory completion of activities, active participation in discussions, and successful presentations. Graded Credit/No Credit.

Collaboration: Scientists and engineers collaborate, and I expect and encourage you to collaborate with your peers, however your work should be your own. The guideline is that you should have no trouble explaining or repeating the work you turn in.

Final Exam: There is no final exam for this course.

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.

PLNU Attendance and Participation Policy:

Attendance is expected at each class session. In the event of an absence you are responsible for the material covered in class and the assignments given that day.

Regular and punctual attendance at all classes is considered essential to optimum academic achievement. If the student is absent from more than 10 percent of class meetings, the faculty member can file a written report, which may result in 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. See http://catalog.pointloma.edu/content.php?catoid=24&navoid=1581#Class_Attendance in the Undergraduate Academic Catalog.

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.

Academic Accommodations:

If you have a diagnosed disability, please contact PLNU's Disability Resource Center (DRC) within the first two weeks of class to demonstrate need and to register for accommodation by phone at 619-849-2486 or by e-mail at DRC@pointloma.edu. See [Disability Resource Center](#) for additional information. For more details see the PLNU catalog:

http://catalog.pointloma.edu/content.php?catoid=24&navoid=1581#Academic_Accommodations

Students with learning disabilities who may need accommodations should discuss options with the instructor during the first two weeks of class.

Credit Hour:

In the interest of providing sufficient time to accomplish the stated course learning outcomes, this class meets the PLNU credit hour policy for any 4 unit class delivered over 15 weeks. Specific details about how the class meets the credit hour requirements can be provided upon request.

Copyright Protected Materials:

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 http://catalog.pointloma.edu/content.php?catoid=24&navoid=1581#Academic_Honesty for definitions of kinds of academic dishonesty and for further policy information.

FERPA Policy: In compliance with federal law, neither PLNU student ID nor social security number should be used in publicly posted grades or returned sets of assignments without student written permission. This class will meet the federal requirements by distributing grades and papers individually. Also, in compliance with FERPA, you will be the only person given information about your progress in this class unless you have designated others to receive it in the “Information Release” section of the student portal. See Policy Statements in the undergrad academic catalog.

Tentative Syllabus – subject to updates

HW: The general rule is 2 and 3 hours outside of class per unit hour of class, each week.

Date	Topics and Readings	Assignments
1/17/17 T	Science literature	Read one science article written for the general public, and one for the general scientist. Be ready to share and discuss. Look for a scientific journal article to read in an area you are interested in (email me which one you choose.)
1/24/17 T	Science literature Discussion of science articles read Project discussed	Read a scientific research paper (email me the article you choose). Be prepared to discuss it. Pick a project with your group. As a group write up a one page proposal.
1/31/17 T	Short presentation/discussion of Scientific journal article. Presentation/discussion of project proposal (turn in written proposal) Scientific literature – form, process	Write an article for the general scientist and another for the general public about the science in the research article you read. Each should be between 1 and 2 pages. Work on your project
2/7/17 T	Discussion of conference style presentations. Science discussion, preparing for different audiences. (turn in two articles you wrote)	Work on your project/ project presentation/ video/ project article. Intro due next class. Prepare a conference style presentation of the research article you read. Be ready to present next class.
2/14/17 T	Conference style presentations – discussion (Turn in Intro section of your project article)	Work on your project/ project presentation/ video/ project article. Analysis section and supplementary section(s) due next class.
2/21/17 T	Conference style presentations - discussion (Turn in Analysis section of project article and any supplementary sections)	Work on your project/ project presentation/ video/ project article. Conclusions and Abstract due next class.
2/28/17 T	Conference style presentations - discussion Project discussion (Turn in Conclusions & Abstract for project article)	Finalize your project articles – complete your video. Have the article ready to submit to the journal on 3/14 when you will be assigned to peer review. Work on the video.
3/6 – 3/10	No Classes - Spring Break	

Date	Topics and Readings	Assignments
3/14/17 T	Discussion of peer review, journal articles, conferences, ethics (turn in article)	Peer review assignments. Group: prepare conference style presentations of your project, get video finalized.
3/21/17 T	Conference style project presentations	Be ready to discuss a current science topic next class. Search for another research article in an area you are interested in and email me the info
3/28/17 T	Conference style project presentations. Video presentations. Current science topic discussions. Résumés, and Cover Letters.	Read a current research article that interests you (email me info). Be ready to discuss. Look for a job, copy the job listing, and work on a résumé and cover letter for the job.
4/4/17 T	Informal presentation/discussion of research articles. Résumés, and Cover Letters.	Search for and read a research article in an area affiliated with the job you are writing a résumé and cover letter for. Email me the info. Finish writing the résumé and cover letter.
4/11/17 T	Informal presentation/discussion of research article related to the job you are applying for. (Turn in copy of job offer, résumé, and cover letter.)	Get ready a presentation for the job offer. Also, write up a short (one to two pages) science article for the general public based on the research article you read for the job application.
4/18/17 T	Presentations - discussions (Turn in article for general public.)	Find another journal article in an area you are interested in and read it. Email me info. Write a short summary for another scientist of the article.
4/25/17 T	Presentations - discussions (Turn in summary.)	:-)
	Grades turned in by May 14	