SUNY Geneseo, Department of Physics and Astronomy

PHYS 341: Seminar in Physics

Syllabus, Spring 2022, Section 1

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Course Websites: http://www.geneseo.edu/~mclean/Seminar/ and in Canvas

Learning Outcomes

This course is designed to train students in oral presentations. Presenting your work needs almost as much care and preparation as the work itself. Oral presentation skills can be fine-tuned with practice. We will also discuss best techniques when presenting to different audiences. At the end of this course, you should be more confident when speaking in front of your peers, you should have developed prioritization and time management skills for presentations, you should be more aware of the strengths and weaknesses of technological aids used in presentations (PowerPoint, video, etc.) and you should be more capable of critiquing and assisting your peers with these same skills.

Times and places

Class Meetings: ISC 229, Fri 2:30–3:20PM
Office hours: Mon 3:00–4:30PM, Wed 1:00–3:00PM, Thu 2:00–3:30PM
I am also available at other times; see the schedule on my web site. Just stop by my office, or to ensure that I'll be there, contact me by phone or email.

Required materials

Access to a computer

Required coursework (with fraction of final course grade)

6% Your critique of two colloquium presentations (see instructor in case of time conflict)
16% Your critique of your peers' presentations
Grading of critiques based on thoughtfulness, helpfulness, and degree to which explicit evidence is given to support the evaluation. Extra credit for the critique score can be earned by asking quality questions immediately following the presentations.
12% First presentations: 10 minutes + 2 minutes for questions; from category 1 or 2
17% Second presentations: 12 minutes, recorded video; from category 1, 2, or 3
22% Third presentations: 12 minutes + 3 minutes for questions; from category 1, 2, or 3
27% Fourth presentations: 15 minutes + 5 minutes for questions; from category 4 or 5

For each presentation, your grade will be based on:

43% Instructor's evaluation of your presentation, based on clarity of scientific content, appropriateness of visual aids, time management, ability to answer questions, and poise
43% Your peers' evaluation of your presentation, on the same basis
14% Your self-evaluation (both written, and in a post-interview), based on honesty, relevance to improving your presentation skills, and responsiveness to constructive criticism

Participation: Being absent from the audience for all or part of a presentation not only disqualifies you from critiquing it, but also robs from your classmate's chance to present to a group. Unexcused absences will result in an additional 1% deduction from your total course grade, per presentation, in addition to a score of zero for that critique.

Similarly, it is crucial that you submit your critiques on time, so that the presentation is fresh in your mind and so that the speaker can most benefit from it. The critique late penalty will be 2% per hour for the first 24 hours, 1% per hour after that.

Presentation Categories

The following are the categories for presentation topics. No presentation may be on a topic that you have orally presented in the past, nor on a topic that another student in this section has already presented. *All presentations topics must be approved by the instructor in advance.*

(1) A simple experiment that you design and perform this semester. At a minimum, you must create at least one relevant plot (e.g., y vs x) with at least 8 data points.

(2) An experiment from Optics & Modern Physics Lab. You need not repeat the experiment, but for approval you must show and explain your data to the instructor. Failure to review and re-familiarize oneself with the lab is a frequent and serious error. You may not use this category twice.

(3) A journal article from *Physics Today* or a similar journal (*American Journal of Physics, The Physics Teacher, Scientific American,* etc.) This talk must focus on the information in the article alone, which must therefore be at least one full page long. Your job is not to research the topic, but instead to present that article.

(4) An experiment that you performed in Intermediate Lab. Same restrictions as category 2.

(5) A summer REU project, PHYS 372 (Undergraduate Research) project, or similar. You may have presented a poster on the work, but not an oral presentation.

All presentations should be targeted for an audience of competent junior physics majors. Presentations should include visual aids such as PowerPoint presentations — each student is responsible for providing their own technology and making it function.

Procedures

Request topics on the Google Request Sheet linked on Canvas.

Presenters must submit their visual aids to the appropriate Canvas drop box ***before*** their presentation.

During class, critique sheets will be available for all listeners to take notes for themselves. These sheets will ***not*** be collected. Except in special circumstances, laptops will not be allowed for this purpose. Presentations will be video recorded.

After class, everyone will enter critiques of the presentations from that day via an online survey. Critiques of others are due by the midnight that ends the day of the presentation.

Videos and critiques, compiled to ensure anonymity of the evaluators, will be provided to the presenters only, shortly after class. After reviewing these, presenters will submit self-critiques, due by the midnight ending the day following the day when the videos and critique summaries are delivered. During the following week, presenters will review this feedback, and then meet one-on-one with the instructor to discuss it.

Expected Schedule

Date	Class	Due
Jan. 28	Orientation	
Feb. 4	Discussion: What makes a good talk?	First topics
11	First presentations	
18	First presentations	Second topics
25	Discussion: What went well?	
Mar. 4	Second presentations	Third topics
11	Review of Colloquia	Videos for next class Review of 1 colloquium
18	SPRING BREAK	
25	Second presentations	
Apr. 1	Third presentations	
8	Third presentations	Fourth topics
15	Discussion	
22	Fourth presentations	
29	Fourth presentations	Review of 2 colloquia
May 6	Fourth presentations	

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