

PHYS 190 Physics Seminar Fall 2006 SYLLABUS

Catalog Description: **PHYS 190. Physics Seminar.** Special lecture series on announced topics by local and visiting speakers, emphasizing current research developments with related reading assignments. May be taken twice for credit. 1-2 units

Prerequisites: Upper division standing in the physic major program; i.e. completed at least three upper division physics courses.

Instructors:

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Office Hours: M/W 10:00 – 11:00	Office Hours: M 11:00
	Tutoring Center TTh 9:00

Student Learning Objectives:

- Learn and practice using the important elements of preparing and presenting an effective oral presentation.
- Learn how to critically evaluate and analyze the effectiveness of physics seminar presentations given by experienced professionals.
- Learn to give an effective technical oral presentation – PRACTICE, PRACTICE, PRACTICE

Assignments:

The class assignments will be centered around the Physics Department's Colloquium Series (generally scheduled for Thursdays at 4:00 pm in MND 1015). Initially you will be required to attend the colloquia given by professional scientists and to evaluate their effectiveness for the audience present. And then toward the end of the semester you will give a colloquium which will be evaluated by your peers and the faculty present. In addition we will periodically meet as a class on Tuesday at 4:00 pm in MND 1015 and work to prepare you for these two major assignments.

The specific assignments are:

1. During the first class period (Tues. Sept. 5 MND 1015) the instructors will discuss the learning goals for the course and outline required student work and expectations for your performance.
2. Early in the semester based on reading some of the research literature on oral communication of technical information and class discussions on this topic, students will develop guidelines/model on how to prepare and present an effective technical presentation.
3. Starting early in the semester students will “test” their guidelines and understanding of what constitutes an effective oral presentation by initially observing and evaluating colloquia given by science professionals as part of the Department’s Fall 2006 Colloquium Series. These student evaluations of department colloquium speakers will be shared in class and over the semester “operationalize” the guidelines for you of what are the critical aspects of an effective oral presentation.
4. Life tells us that if we are trying to learn a new skill or to get better at something, no amount of watching somebody else do it can be substituted for practicing the skill your self. In order to get better at getting up in front of a group and presenting information you will be required to give the following three preliminary oral presentations to the class:
 - a. Give a short (less than 10 minutes) presentation on an article from of a recent copy of the journal, “The Physics Teacher”. The only thing you can use is a possible physical demonstration and the chalk board to make your presentation. You will assume that your audience is a group of high school physics teachers.
 - b. Choose a “social topic” for which the physics community is impacted by (nuclear proliferation, energy conservation, etc.) and present a short talk defining the issue for audience made up of local business people and politicians. Use transparencies or power point to present the information.
 - c. The final talk will be a five minute presentation to the class describing the topic and motivation for your colloquium talk. Assume your audience is the physics faculty.
5. Your main colloquium presentation will be given as part of the department colloquium series toward the end of the semester. The audience will be the physics faculty and majors present. It will be 25 minutes long plus five minutes for questions. The subject of this talk can be either an area of physics that you’ve done independent research on, or a topic that you’ve taken a particular interest and it would be fun to share it with your peers. Your talk should show independent thought and a synthesis of ideas – it should not be just a report on the topic.

Required Materials:

No required textbook, but you are required to keep a 3 ring binder (1.5 – 2 in. rings) that you will keep all of your work in. This work includes your evaluations as well as your preparation work for your talks, so you should get a set of tabs. These will be collected at the end of the semester and evaluated as part of the participation grade.

Grading:

The grade you earn in this course will be determined as follows:

Journal Presentation	10 %
Social Issue Presentation	10 %
Colloquium Motivation Talk	10 %
Evaluation of Colloquium Speakers	20 %
Colloquium Talk	35 %
Class Participation	15 %
Total:	100 %

The peer and faculty evaluations of your talk will be conducted using the same forms that have been used in recent semesters.

The workload described above is based on two units of course credit. If you have signed up for 190 as a one unit course, the reduction will result in the elimination of the social issue talk only, all other work and participation will be required. Grade breakdown will be accordingly shifted in weights.

Important Dates:

The Department Colloquium schedule for Fall 2006 is on the Department Web page. The class will meet on some Tuesdays as needed; keep an eye on DeGraffenreid's Course Website for changes and announcements. The tentative dates for the main assignment are:

Journal Presentation:	Tuesday, Sept. 26
Social Issue Presentation:	Tuesday, Oct. 17
Colloquium Motivation Talk:	Tuesday, Nov. 7
Evaluation of Colloquium Speakers:	Will be set during the semester.
Colloquium Talk:	End of the semester

Other Information:

- Houp, *et al.* Reporting Technical Information, Oxford University Press, 2006.(ISBN: 0-19-517879-3).
- Companion Web Site for Chapter on Oral Reports (Ch. 19):
www.us.oup.com/us/companion.websites/0195178793/studentresources/chapters/ch19/
- Office of Naval Research, *Tips for Preparing Scientific Presentations*:
www.onr.navy.mil/about/speaking_tips/
- Ohio State Physics Department: Dazzle 'em with Style: The Art of Oral Scientific Presentations: www.physics.ohio-state.edu/~wilkins/writing/Supp/dazzle.html