

Guidelines for Final Project and Presentation

The final project for this course will consist of two parts, a group presentation to the class (worth 20% of the final grade) during the final three weeks of the course and an individual written report (worth 30% of the final grade) due on the last day of class.

The topic for the final project is to provide an **exposition of the subject matter of one of the recent Nobel prizes in Physics (1977-2011)**. Students will form groups of three and choose a topic that they find particularly interesting (one topic per group on a first come first serve basis).

A good starting point for choosing and exploring the topic is the website:

http://nobelprize.org/nobel_prizes/physics/laureates

The group presentations will be made during the final three weeks of class, March 21st, 28th, and April 4th. Each group will have 30 minutes total, consisting of between 20-25 minutes for oral presentation and the remaining time for questions from the audience. Each member of the group can participate in the presentation or the group can designate one or more spokespersons to deliver the report. All group members should be prepared and available to answer questions.

The written part of the final project will be done on an individual basis, but must be on the theme designated by the group for the oral presentation. This written report should be typed in 12 point font and be no more than 6 pages (singled spaced) or 12 pages (double spaced), excluding references. All written reports should be handed in (hard copy) by April 4th.

Some questions to consider for the final project:

1. What is the breakthrough(s) for which this Nobel Prize was awarded?
2. What motivated the scientists to pursue this line of research? Did they find what they were looking for or was the outcome unexpected? Explain.
3. Explain the physical principles underlying the cited work in terms that other students in PHY189 can understand.
4. What was the background work and personal experience of the scientists that led to or enabled the prize-winning work?
5. Were there other scientists, not included in the prize, who made crucial contributions? Describe their work.
6. Discuss the ways in which the prize-winning work provides a foundation for work in other disciplines either within physics or outside of physics.
7. Does the work provide tangible benefits to humanity through practical applications or is it abstract and beneficial to only a narrow spectrum of people? In answering this question, use your own critical judgement rather than repeating hype you may find from other sources.