August 22, 2013

Dear P310/510'ers:

The Plan for P310/P510 Environmental Physics:
Each of you will be asked to make one class presentation and to write one paper this semester. Half of the class will present in October and the other half in December. If you are presenting in October you will be asked to do a paper in December. Similarly, if you are presenting in December you will do your paper in October. I will provide a list of interesting topics for your October effort and another list for your December effort. I’d be pleased to consider topics you like that are not on my list.

The Purpose of These Two Exercises:
It is my experience that when you carry out substantive research on a topic in energy, you automatically become the class expert on that topic. This deeper understanding often leads to greater interest on your part and sometimes a career. For this reason, I recommend that you choose topics that are already interesting to you. In this course you will have an opportunity to explore two topics in depth, one for a presentation and a second for the paper. I make a few suggestions below about successful presentations and papers.

Presentation Mechanics:
Three styles work well:

1.) a simple chalk-board talk with notes
2.) overhead transparencies
3.) a PowerPoint-like program

Remember that you have only 10 minutes, followed by 5 minutes for questions from your colleagues. If you choose a chalk-board talk, it helps to come in a little early to put diagrams or lists you will need on the board. If you choose to use overhead transparencies I’d be happy to make transparencies for you of any pages you bring to me at least 20 minutes before class. If you use Power Point, make sure that you know how to find your .ppt file on the system or that you bring your talk on a memory stick.

Presentation Audience:
This presentation is intended to inform the listener about a body of knowledge or research. In preparation for the presentation you will have done reading that your audience has not done. Think about the audience you are educating and the kinds of new knowledge that you would appreciate if you were part of the audience. As your colleagues have knowledge of both mathematics and physics, I strongly encourage you to make your presentation quantitative.

Presentation Summary:
On the Tuesday following the October presentations and again in December, the presenters will provide 2 pages of text summarizing their presentation and their references. These two-page summaries are not outlines and do not include pictures. Copies of these summaries will be provided to the class and will serve as a study reminder for your classmates as they prepare for class tests.

Paper Mechanics:
Unlike your presentation summary, your 5-page paper (10-pages for P510 folks) must stand on its own. It may well include informative pictures, diagrams, and/or tables, similar to the ones that you would use if you were doing a presentation on this subject. It is my experience that the strength of your paper
depends on the references you use. Be sure that all citations and references are available to your readers.

**Paper General Advice:** (copied from Prof. Ken Richards, SPEA)
The key to writing an interesting paper is going to be deciding what you might have to say. Some papers are just overviews - their purpose is to inform the reader about a body of knowledge, or research. These are useful, though often not very imaginative or terribly original. If they are good, readers respond with, "I didn't know that" or "I am glad to get this information." Other papers present a new way of thinking about a problem or argue a point in a new way. These have to be more original. Generally, they can be a bit shorter (though not necessarily so), and have a stronger thesis statement. Readers tend to reply with "That is a different perspective," "What an interesting insight," or "This author is full of crap."++

Best from Physics,
Ben Brabson

++ Ken Richards, Professor, SPEA