

# PHYS 3600

## Seminar in Presenting Physics Research

Wednesday 2:20–3:20pm

Stevenson Center 6638

**Instructor:** Alex Lupsasca

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**Office:** Stevenson Center 6613

**Office hours:** Wednesday 3:30–4:30pm or by appointment

### COURSE DESCRIPTION

The word *science* comes from the Latin *scientia*, which means *knowledge*. The twin goals of the scientific enterprise are to discover and disseminate new knowledge. Scientists spend years honing their research skills but devote comparatively little time to improving their communication skills. The purpose of this course is to help you develop your ability to impart scientific results, a skill that should prove useful to you regardless of the career path you follow, in both science or beyond.

The key to becoming an effective science communicator is: practice, practice, practice! As such, you will spend most of your time in this class preparing, presenting, and evaluating talks. That is, you will be expected to: read abstracts and papers, listen to and critique scientific talks, write talk abstracts, give your own oral presentations and provide feedback to your classmates on theirs.

### COURSE STRUCTURE

You will be expected to attend and critique one scientific talk each week. I highly recommend that you attend the weekly Physics & Astronomy colloquium; however, if you have a conflict with its scheduled time (Thursdays 4–5pm in Stevenson 4327), then you are welcome to substitute another talk (there are several across campus each week; talk to me about selecting an appropriate one). You will be given a critique sheet that you will be expected to fill out and submit electronically by Friday at 5:00pm. This will enable me to compile the information in your critiques to jumpstart our discussions in the following week's class.

In addition, we will spend the first  $\sim 2/3$  of the semester working on various presentation skills. During this time, each of you will give several VERY short (3–5 min) presentations that the rest of us will critique to help you improve your skills. These presentations will typically require some advance preparation on your part, usually in the form of reading a scientific paper and choosing a figure from that paper to present and explain in detail.

We will then spend the last  $\sim 1/3$  of the semester with each of you giving an APS-style talk (10 min + 2 min for questions) on a specific research topic—either your own project or that of a faculty member whose research interests you. These longer talks will certainly require significant preparation time. You will also be expected to write an engaging title and abstract for your talk—an overlooked, but important skill.

A Vanderbilt librarian will give a guest lecture on October 11<sup>th</sup> to demonstrate how you can best use the libraries' resources to find relevant primary and secondary literature for your assignments.

Finally, we will be reading the book “Talk like TED” by Carmine Gallo. Other selected readings will also be provided.

### GRADING POLICY

Overall, your grade will be determined by:

- 30% your weekly attendance at and critique of scientific talks
- 20% your participation in class discussions and critiques of others' presentations
- 10% your short presentations (graded on effort; these are learning experiences)
- 10% title and abstract of your APS-style talk
- 30% your APS-style talk

Since classes are discussion-oriented, class attendance and participation are essential. If there are unavoidable circumstances that preclude you from coming to class, please contact me beforehand if possible. All [Vanderbilt policies](#) regarding ethics and honorable behavior apply to this course.