

Welcome to Physics 499



Instructors:

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Website: <http://courses.physics.illinois.edu/phys499/>

with thanks to: Steve Errede, Dave Hertzog, Lance Cooper, Tony Liss, Laura Greene, and Doug Beck

1. Communicate!

- **The most successful scientists are excellent communicators.**
- **Communicating forces you to organize your thoughts.**
- **Effective communication is challenging.**
- **Communication skills are valued and critical in all sectors: academic, industry, ...**

We will emphasize communications in this class!

2. Professional Development

- **Communication**
 - **Writing, Figures, Speaking, Posters**
- **Narrative for your research**
- **Information Related to Graduate School**
- **Discussion of how research is funded**
 - **The sell!**

What is required of you?

- **Senior Thesis**
 - **Produced one section at a time, due Mon. Dec. 14 (before 5pm)**
- **Research Poster**
 - **A method of presentation at conferences & workshops, due Mon Oct. 5 (before 8am)**
- **Student Presentations**
 - **Two 1-min “elevator speeches” describing your research, pitched for different audiences**
 - **Formal APS-style conference talk, Fri Dec. 4**
 - PowerPoint presentation, 10-min APS-style talk
 - This talk will be your dress rehearsal for the Undergraduate Research Symposium Friday January 29, 2016
- **Writing Workshops**
- **Colloquium Reports**

Some details:

- **Research Poster and accompanying “speech”**
 - **Poster Session:**
 - Monday Oct. 12, 5:00pm
 - **Audience:**
 - Faculty Reviewers
 - Prize for best poster!
 - Physics 110 Students
 - You are the example!
- **APS-Style Presentation**
 - **Physics Undergraduate Research Symposium: Jan. 29, 2016**
 - **Topic – your research**
 - **8 min + 2 min for questions**



Courtesy Toni Pitts

And a few more details:

- **Senior Thesis**
 - **We will guide you through – but it is a lot of work**
 - You will usually be able to revise (see grading rubric) for added points
 - **Written in much the same way as you would write an article for publication - beginning with an outline**



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DEADLINES:

- Goal is to help you plan your writing to meet deadlines
- Most assignments due on Friday (< 9pm), you can ask last-minute questions during class on Fridays
- Points will be deducted for assignments submitted after the posted deadline
- Some assignments are eligible for re-grading and assignment of additional points, if the original assignment was submitted by the deadline
- Revision deadline is posted on the instructions



DEADLINES – A Few Changes

(relative to previous years)

- **Colloquium Reports due no later than 15 days after the talk**
 - See template questions.
 - We expect well-written narrative reports (following all the rules). Use an appropriate number of paragraphs.
 - No additional reports (beyond the four required) will be accepted for extra credit.
- Note that homework rewrites *each* have deadlines

This course is a challenge...

- Don't get behind on your assignments
- Take charge of your research literacy
- Explore new areas of physics—don't assume that you already know which research area you want to pursue
- Embrace all opportunities to polish your skills
- Help one another

... but you'll learn very useful things that you won't learn anywhere else

