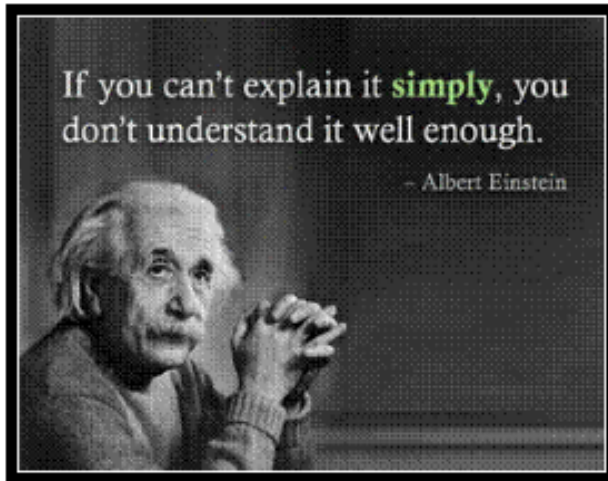


Introduction to Physics 595, Spring '24



Physics 595

Communicating Scientific Research

Spring 2024

The whole of science is nothing more than a refinement of everyday thinking.
Albert Einstein, Physics and Reality, 1936

Home

Course Info

Syllabus

Assignments

Writing Wrkshp

Resources

Course Instructors:

Lance Cooper: 227B Loomis, 333-8702

Celia Elliott: 215 Loomis

Course webpage:

<https://courses.physics.illinois.edu/phys595/sp2024/>

Our Goals for You in Phys 595

1. Learn how to effectively communicate your scientific research to a general (*i.e.*, non-expert) audience
2. Gain extensive practice with different modes of scientific writing and presentation
Journal articles, scientific posters, research proposals, referee reports, research summaries, editor cover letters
3. Learn how different aspects of the scientific process work
Publishing, refereeing, proposal writing and reviewing
4. Gain specific instruction on special topics
e.g., writing prelims, theses, resumes, etc.
5. Help you develop a specific writing project you have
Help with a journal article, prelim paper, thesis, scientific poster, etc.

How Physics 595 is Organized

Science Communications “Bootcamp”:

[Physics 595 Spring 2024 Channel on Media Space](#)

Lectures will be in person, but videotaped lectures will be posted on the Physics 595 MediaSpace Channel

Week	Date	Lectures	Homework Assignments	Assignments Due	Writing Workshop	Reading	Zoom/Video
1	Jan 19	Course Introduction; Persuasive Science Communication	Assignment 1: Write a Research Topic Statement and Research Outlines		WW0		Zoom Link Video Recording
2	Jan 26	Journal Club Presentations; Journal Club Presentation Template; Scientific Writing Tips	Assignment 2: Prepare and Present a Journal Club or Research Presentation		WW1 (Solutions) WW1: Coherent Paragraph Structure	Paragraphs Writing Cohesive Paragraphs Guide to Being Concise	Zoom Link Video Recording
3	Feb 2	The Scientific Publication Process Writing Referee Reports	Assignment 3: Write a Scientific Referee Report	Assignment 1 Due	WW2 (Solutions) WW2: Writing Short Sentences	"Why Did You Accept My Paper" paper	Zoom Link Video Recording
4	Feb 9	Writing Abstracts and Introductions	Assignment 4: Write a Research Abstract and Introduction	JC Paper Selection Due	WW3 (Solutions) WW3: Making Verbs Work	Verb Usage	Zoom Link Video Recording

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Weekly activities:
 10 – 11 am, Friday:
 Lectures on effective writing/presentations

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Weekly activities:

11 am – noon, Friday:
Writing Workshop to be completed either during class time or as “homework”. *They should take about 30 minutes each.*

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Weekly activities:

11 - noon, Friday:
Writing Workshop often includes on-line slides about the WW topic to review before completing the WW assignment.

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Science Communications “Bootcamp”:

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Weekly activities:

Project-based Assignments: Assignments to practice and develop different science communication skills

Physics 595 Grading Policy

1. **Writing Workshop exercises** (13% of grade)

12 in-class or homework exercises; you'll get full credit (10 pts) if completed, 0 pts if missing.

2. Writing assignments (67% of grade)

You'll submit drafts for detailed feedback from me. Only your final draft will be graded.

3. **Presentation assignment** (20% of grade)

You'll submit a draft and meet with me to discuss the draft for feedback. Final presentations will be evaluated by me with input from the rest of the class.



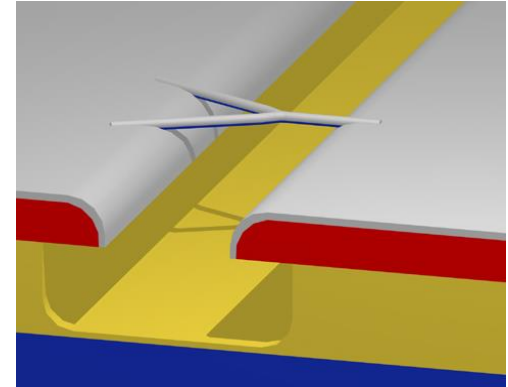
Major Assignments in Phys 595

1. **Weekly Writing Workshop exercises** (130 pts)
2. **Journal club or research presentation** (200 pts)
3. **Scientific referee report on a paper you choose** (100 pts)
4. **Scientific abstract and introduction section for your research project paper + effective figures** (150 pts)
5. **Scientific methods and results sections for your research project paper + effective figures** (150 pts)
6. **Scientific proposal and panel review involving your research topic** (200 pts)

Assignment #1

Assignment #1: Research Topic and Outline

Write a two or three sentence description of your research topic (i.e., a topic statement) for the semester, and draft outlines for your writing project in both topic and sentence outline formats.



In this assignment, you'll identify the research topic around which many of the class assignments will be based.

- ⇒ You're encouraged to use your own research for this topic, particularly if you're working on a journal article, a prelim paper, a thesis, etc.
- ⇒ However, if you'd rather select a different research topic, that's fine also!

Physics 595 Agenda

Physics 595 - Course Syllabus - Spring 2024

(Syllabus is subject to change!)

[Physics 595 Spring 2024 Channel on Media Space](#)

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<https://courses.physics.illinois.edu/PHYS595/sp2024/syllabus.html>

Physics 595 Agenda (continued)

<https://courses.physics.illinois.edu/PHYS595/sp2024/syllabus.html>

5	Feb 16	Communicating Science: Giving Better Science Talks			WW4 (Solutions) WW4: Avoiding Ambiguous Pronouns	Ambiguous Pronouns "Rethinking Design of Presentation Slides"	Zoom Link Video Recording
6	Feb 23	Methods and Results Sections of Scientific Papers Displaying Scientific Data	Assignment 5: Write Research Methods and Results Sections w/ Figures	Assignment 4 Draft Due	WW5 (handout)	Figures and Captions Graphing Resources	Zoom Link Video Recording
7	March 1	Effective Scientific Posters 20-Minute Journal Club or Research Presentations:		Assignment 3, Referee Report Due	WW6 (solutions) WW6: Removing Questionable Qualifiers	Poster "Stump" Speeches Scientific Poster Example/Template	Zoom Link Video Recording
8	March 8	20-Minute Journal Club or Research Presentations:		Assignment 4 Final Due	WW7 WW7: Writing an Editor Cover Letter		Zoom Link Video Recording
	March 15	Spring Break					

Physics 595 Agenda (continued)

<https://courses.physics.illinois.edu/PHYS595/sp2024/syllabus.html>

9	March 22	20-Minute Journal Club or Research Presentations:			WW8 (solutions) WW8: Avoiding "There is..." Sentences	Zoom Link Video Recording
10	March 29	Physics 595 Proposal Assignment Writing Scientific Proposals Effective Project Summaries	Assignment 6: Write a Scientific Proposal	Assignment 5 Draft Due	WW9 (solutions) WW9: Three Preposition Rule	Physics 595 Proposal Cover Sheet "What Words Are Worth" paper Zoom Link Video Recording
11	April 5	Proposal Review Process CVs for Proposals Preparing a Proposal Budget			WW10 (solutions) WW10: Parallel Construction	Celia's CV template NSF-style CV template NIH-style CV template Zoom Link Video Recording
12	April 12	20-Minute Journal Club or Research Presentations:		Proposal Project Summaries Due	WW11 WW11: Misplaced Modifiers	Zoom Link Video Recording

Physics 595 Agenda (continued)

13	April 19	20-Minute Journal Club or Research Presentations:		Proposal Due Proposal Review Form Proposal Review Assignments	WW12 WW12: Ambiguous Four Letter Words	With Need Like	Zoom Link Video Recording
14	April 26	Phys 595 Proposal Panel Review		Assignment 5 Final Due			Zoom Link Video Recording

<https://courses.physics.illinois.edu/PHYS595/sp2024/syllabus.html>



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How To Get the Most Out of This Course

1. Make use of the advice we provide in assignments

You'll benefit from the advice more if you put it to good use.

2. Take advantage of the critiques we'll offer

Make sure you understand why we suggested changes...if you don't understand, ASK! I'll be available during Writing Workshop to answer questions, or schedule an office hour with me!

3. Keep up with assignments

This course is partly an exercise in time management. Don't put off assignments until the last minute!

4. Ask if there's something else you want to know

If there's a special science communications topic you want/need to learn about, ask, we're happy to help!