

Physics 496: Communicating in Physics—Writing Papers and Giving Talks Fall 2024

Semester at a Glance

Meets 2:00–4:50 p.m. Fridays, 158 Loomis Laboratory of Physics

Class attendance is mandatory unless excused; [Zoom link](#)

Writing Workshop is held weekly, unless otherwise noted; be sure to bring your laptop to class!

In-Class Activities require your presence and *active* participation

Homework Assignments are uploaded to the course portal on [my.physics](#) by the posted deadline¹

Schedule is subject to change; changes will be posted to [course website](#)

Questions about the schedule should be directed to [Celia Elliott](#)

August 30—first day of class

Course introduction (TLH)

Technical communications for physicists (cme)

Communicating in science—“The Up Goer Five” (JLR)

Effective titles (cme)

No homework due today

September 6

Literature search group activity (JLR)

How to read a physics paper (TLH)

Standards and values for physicists (cme)

Read before class “[Ethics in Physics: The Need for Culture Change](#)”

Ethics overview (cme)

HW #1—“Evaluating Titles”

September 13

Introduction to Writing Workshop—rationale and goals (JLR)

WW #1—“Finding the Right Word” (JLR)

How to evaluate a scientific talk or colloquium (TLH)

How to write an abstract (cme)

Writing an abstract (TLH)

HW #2—“Active Reading for Physics Papers”

September 20

WW #2—“Using the Right Word” (JLR)

What makes a good science talk (cme)

Fermi problems (TLH)

HW #3—“Title and Abstract”

¹ Deadline dates and times are listed on each written homework assignment.

September 27

WW #3: “Four-Letter Words in Science Writing” (JLR)

How to get started if you hate to write, Part I (Outlines) (cme)

HW #4—Best Practices for Technical Presentations Colloquium Report #1 Due

October 4

How to get started if you hate to write, Part II (Paragraphs) (cme)

Guest speaker—Professor [Lance Cooper](#), “How to Pick a Graduate School” 3:00 p.m.

Technical Writing 101 (Review the handout prior to class!) (cme)

HW #5—“Explaining Physics” Draft

October 11

WW #4: “Ambiguous Pronouns” (JLR)

Revising and editing your work (cme)

How to write instructions (JLR)

The scientific publication process and peer review (TLH)

Writing Instructions—group activity (JLR)

HW #6—“Explaining Physics” Final Version

October 18

WW #5: “*Them Thar* Indirect Openings” (JRL)

Reference rules and styles in scientific writing (cme)

What to reference, why, and how—group activity (cme)

“How to Survive Graduate School” (TLH)

First meeting of journal-club teams—group activity

HW #7—Peer Review

October 25

WW #6: “The Three-Preposition Rule (3PR)” (JLR)

Effective figures and captions (cme)

Rules for writing numbers (Review the handout prior to class)

Guest speaker—Professor [William Mischo](#), “Ethical Use of AI in Scientific Writing”

Have team scribe submit your paper selection for your journal-club

talk HW #8—Short Science Talk Draft Slides

Last Day to Submit Re-writes for Colloquium Report #1

Arrange for your JC team to meet with Professor Hughes before November 15

November 1

Making verbs work (cme)

HW #9 Short Science Talk (presented during class; parallel sessions in Room 158 and Room 222)

Colloquium Report #2 Due

November 8

WW #7—“Making Verbs Work” (JLR)

A framework for ethical decisions (cme)

Hard problems—ethical case studies team activity

Intellectual property and copyright (cme)

HW #10—Evaluating Figures and Captions

November 15

WW #8—“Parallel Construction”

Writing a statement of purpose for grad school admissions (cme)

How to present a journal-club talk (cme)

Guest speaker—Dr. Azton Wells, Argonne National Laboratory

HW #11—Making Your Own Figures and Captions

November 22

WW #9: “Shooting for ‘Shorth’” (JLR)

Scientific posters (JLR)

Class activity: Eliminating fluff in scientific writing (Review the handout prior to class)

Guest speaker—Dr. William Mischo, University Library, “Using Generative AI in Scientific Research”

HW #12 Resume and Statement of Purpose or Cover Letter

November 29—NO CLASS, Thanksgiving Break

MONDAY, December 2—Email your nearly final journal club slides to phys496@physics.illinois.edu by **NOON**

December 6—last day of class

WW Bonus (optional—complete on your own)—“Editing Practice”—submit by Dec 12 for credit

The Last Word on “Due To” (Ms Particular)

HW #13 Journal Club Talk (presented during class)