

**Ask early! Ask often!**

## **Physics 496—Introduction to Physics Research—Fall 2021**

### **Semester at a Glance**

**Meets 2:00–4:50 p.m. Fridays, 136 Loomis Laboratory of Physics**

**In-Person Attendance is Mandatory unless Excused**

**Writing Workshop** is held weekly, unless otherwise noted

**In-Class Activities** require your attention and *enthusiastic* participation

**Homework Assignments** must be uploaded to the course portal on Gradescope by the deadline\*

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

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

### **August 27—first day of class**

Course introduction and web tour (Class questions and discussion—come prepared)

Technical communications for physicists

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

Evaluating a science talk or colloquium

Effective titles

**No homework due today**

### **September 3**

Introduction to Writing Workshop—rationale and goals

WW #1—“Finding the Right Word”

How to read a physics paper

Standards and values for physicists (group activity)

Ethics overview

**HW #1—“Evaluating Titles”**

### **September 10**

WW #2—Literature search group activity

Avoiding plagiarism

How to write an abstract

Writing an abstract—collaborative activity + group presentations

**HW #2—“Understanding a Paper”**

### **September 17**

WW #3—“Using the Right Word”

Reference rules and styles in scientific writing

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

Mass, count, and collective nouns

**HW #3—“Title and Abstract”**

---

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

## September 24

WW #4: “Four-Letter Words in Science Writing”

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

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

MS PowerPoint tutorial

**HW #4—“Proper Referencing”**

**Colloquium Report #1 Due**

## October 1

WW #5: “Ambiguous Pronouns”

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

**HW #5—“Explaining Physics” Draft**

## October 8

Revising and editing your work

The scientific publication process

Peer reviewing

**Guest speaker—Professor [Yonatan Kahn](#), High Energy Theory (3:30 p.m.)**

**HW #6—“Explaining Physics Concepts” Final Version**

## October 15

WW #6: “*Them* *Thar* Indirect Openings”

Effective science talks

**Class activity: Rules for capitalization and acronyms (Review the handout prior to class)**

Creating good figures and captions

First meeting of journal-club teams

**HW #7—Peer Reviews**

## October 22

WW #7: “The Three-Preposition Rule (3PR)”

Voice and tense—Making verbs work

How to present a journal-club talk

Fermi problems

**Making estimates in research (group activity)**

**Guest speaker—Professor [Angela Kou](#), Condensed Matter Experiment/Quantum Information (2:30 p.m.)**

**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**

## October 29

WW #8—“Making Verbs Work”

**Class activity: Rules for expressing numbers (Review the handout prior to class)**

**HW #9—Short Science Talk (presented during class)**

**Colloquium Report #2 Due**

## **November 5**

### **WW #9—“Parallel Construction”**

A framework for ethical decisions (cme)

Hard problems—ethical case studies team activity

Acknowledgments in papers, talks, and posters

**Guest speaker—Professor [Helvi Witek](#), Astrophysics/Gravitation (2:00 p.m.)**

### **HW #10 Evaluating Figures and Captions**

**Arrange for your JC team to meet with Professor Hughes by November 19 !**

## **November 12**

### **WW #10: “Shooting for ‘Shorth’”**

Applications—CVs, resumes, and cover letters

Writing a statement of purpose for grad school admissions

Surviving graduate school (TLH)

### **HW #11—Making Your Own Figures and Captions**

## **November 19**

Scientific posters

Intellectual property and copyright

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

### **HW #12 Resume and Statement of Purpose or Cover Letter**

## **November 26—No Class, Thanksgiving Break**

**Last Day to Submit Re-writes for Colloquium Report #2**

**MONDAY, November 29**—Email your nearly final journal club slides to [phys496@physics.illinois.edu](mailto:phys496@physics.illinois.edu) by **NOON!**

## **December 3—last day of class**

WW Bonus (optional—complete on your own)—“Editing Practice”

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

### **HW #13 Journal Club Talk (presented during class)**