

Ask early! Ask often!

Physics 496—Introduction to Physics Research—Spring 2020

Semester at a Glance

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

Writing Workshop is held weekly, unless otherwise noted; **laptops required**.

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

Homework Assignments must be emailed to phys496@physics.illinois.edu by the deadline.*

January 24—first day of class

Introduction to Writing Workshop—rationale and goals

WW #1—“Finding the Right Word”

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

Evaluating a science talk or colloquium

Effective titles

No homework due today

January 31

WW #2—Literature search group activity

How to read a physics paper

Mass, count, and collective nouns

Standards and values for physicists (group activity)

HW #1—“Evaluating Titles”

February 7

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

How to write an abstract (cme)

Writing an abstract—collaborative activity + group presentations (Bring your laptop to class!)

“Image Formation by Induced Local Interactions: Examples Employing Nuclear Magnetic Resonance,”
Nature **242**, 190–191 (1973).

HW #2—“Understanding a Paper”

February 14

WW #3—“Using the Right Word”

Fermi problems

Making estimates in research (group activity)

Avoiding plagiarism

Reference rules and styles in scientific writing

HW #3—“Abstract & Title”

Colloquium Report #1 due

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

February 21

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

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

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

HW #4—“Proper Referencing”

February 28

WW #5: “Ambiguous Pronouns”

Analyzing your audience—how to pitch your “story” appropriately

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

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

HW #5A—“Explaining Physics” Outline Due

Last day to submit rewrites for Colloquium Report #1

March 6

WW #6: “Them Thar Indirect Openings”

Creating good figures

Tips for figure captions

Peer reviewing

Guest speaker—Professor Nicolas Yunes, Fundamental Physics

HW #5B—“Explaining Physics Concepts” Final Version Due

March 13

WW #7: Evaluating figures team activity and team presentations

Effective science talks

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

Revising and editing your work (cme)

First meeting of journal-club teams

HW #6—Peer Reviews

Colloquium Report #2 due

March 20—No class—Spring Break

March 27

WW #8—“The Three-Preposition Rule (3PR)”

How to present a journal-club talk

Voice and tense—Making verbs work

Guest speaker—Professor Taylor Hughes, Condensed Matter Theory

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

HW #7—Evaluating Figures and Captions

April 3

WW #9—“Making Verbs Work”

Collaborative writing in physics

Acknowledgments in publications, talks, and posters

Intellectual property and copyright

No Homework this week—PHYS GRE tomorrow

Arrange for your JC team to meet with Professor Madhavan or Professor Hughes by April 17!

Last day to submit rewrites for Colloquium Report #2

April 10

WW #10: “Writing Instructions” team activity and team presentations

A framework for ethical decisions (cme)

Hard problems—ethical case studies team activity

HW #8 Making Your Own Figures and Captions

Colloquium Report #3 due

April 17

Applications—CVs, resumes, and cover letters

Writing a statement of purpose for grad school admissions

Guest speaker

HW #9—Short Science Talk (presented during class; slides emailed to instructors before class)

April 24

WW #11—“Shooting for Shorth”

Scientific posters

The scientific publication process and arXiv

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

Last day to submit rewrites for Colloquium Report #3

HW #10 Resume and Statement of Purpose

Monday, April 27

Mail your nearly final journal club presentation to phys496@physics.illinois.edu by **NOON!**

May 1—last day of class

WW #12—“Putting it All Together—Ms. P-style Editing” (optional; may submit for 20 pts extra credit)

The Last Word on “Due To” (cme)

HW #11 Journal Club Talk (presented during class)

Colloquium Report #4 due (this report is not eligible for rewrites)