PHYS 598 PEN, General Course Information, Spring 2020

Classes

The class will meet on Fridays, 11:00 a.m. – 1:00 p.m. Class will meet at 11:00 a.m. in Rm. 158 Loomis for lectures and other in-class activities. On roughly half the class days (see posted schedule: https://courses.physics.illinois.edu/phys598pen/syllabus.html), there will be in-class time for Writing Workshop (WW), where you will work on the computer-based WW exercises aimed at improving your writing skills. Writing Workshop exercises not completed in class can be completed as homework assignments after class.

Course Website

The course syllabus, written instructions for assignments and an assignment summary, announcements, lecture notes, and links to useful external resources will be posted on the course website: http://courses.physics.illinois.edu/phys598pen/. Please check the course website frequently for updates and information.

Instructor Information

Instructors	Office Hours	Office	E-mail
Lance Cooper	Fridays, 9 – 11 a.m. & by appointment	227B Loomis	slcooper@illinois.edu
Celia Elliott	By appointment	215 Loomis	cmelliot@illinois.edu

Course Objectives

The purpose of this course is to help you improve your scientific writing and presentation skills. The course will particularly focus on helping you learn how to prepare scientific papers and presentations such as journal publications, prelim papers and presentations, theses and thesis presentations, scientific proposals, etc. The course aims to provide professional training for those in science, including how to write and respond to referee reports, how to write and evaluate scientific proposals, etc.

Course Components

The course will consist of in-class writing practice, lectures, student presentations and group exercises, and written homework assignments, including a final research paper that will be due during finals week in lieu of a final examination. There will be no examinations in this course.

During the in-class writing workshop (WW), you will gain experience in reading and revising technical material electronically and in correcting common rhetorical errors. You will also have an opportunity to ask questions and get detailed feedback from the instructor during WW on your other class assignments.

The written homework assignments will consist of specific writing tasks, including preparation of a scientific poster and you. We will discuss how to create effective figures to illustrate your work. Homework assignments are to be emailed by the deadline given to Lance Cooper (slcooper@illinois.edu) as a Word, PPT, or PDF attachment. Formal presentations will include a journal club presentation of another group's research, a research presentation of your work (or of a research topic you select) and a scientific poster presentation of your work. Please refer to the

class syllabus (https://courses.physics.illinois.edu/phys598pen/syllabus.html) and written assignments for additional details and deadlines.

Recommended Reading

No textbook is required for this course. Lecture notes are posted on the course website for your convenience. Some scientific papers published in the peer-reviewed literature should be consulted for your assignments; all are available free of charge online through the University's library subscription. However, the following books are worth adding to your personal library.

William Cleveland, *Visualizing Data* (Hobart Press, 1993).

Robert A. Day and Barbara Gastel, *How to Write & Publish a Scientific Paper*, 7th ed. (Greenwood, 2011).

Julie Steele and Noah Iliinsky, *Beautiful Visualization: Looking at Data through the Eyes of Experts* (O'Reilly Media, 2010).

Vernon Booth, *Communicating in Science: Writing a Scientific Paper and Speaking at Scientific Meetings,* 2nd ed. (Cambridge University Press, 1993).

Grading

Timely submission of written assignments is required. You will be given feedback on and grades for the communications aspects of your assignments, and grades on all assignments will contribute to your final grade.

Each WW exercise will be reviewed and full credit will be given for these assignments if a serious effort is made to complete them. Solutions to the WW exercises will be posted.

Each homework assignment will be scored and points granted. Drafts will be required for most assignments, but will be ungraded. The total points for each assignment are provided in the written instructions for that assignment.

Homework Assignments

Assignments include both written work and oral presentations. Detailed instructions for each assignment, along with the assignment due date, are posted on the Assignments webpage (https://courses.physics.illinois.edu/phys598PEN/sp2019/Assignments.html). Assignments are due by the designated due date. Deadline extensions may be granted in special circumstances with prior approval of the instructor. All assignments (MS Word, MS PowerPoint, or PDF documents ***only***) are to be ***emailed*** to Lance Cooper by the deadline noted.

Writing Workshop (WW) Exercises

Many of the WW exercises—created by Celia Elliott—are included to help you identify writing flaws and practice correcting them. Lance Cooper has included several other WW exercises to practice writing professional writing genres (editor cover letters, research statement, etc.) These exercises can either be completed in class as part of Writing Workshop or after class as short homework assignments. The Writing Workshop assignments should take no more than ~30 minutes each. Completed assignments should be emailed to Lance Cooper (slcooper@illinois.edu). Full credit will be given for these exercises if they are completed, and solutions to the assignments will be posted on the course website.

Academic Integrity

All activities in this course are subject to the Academic Integrity rules as described in Article 1, Part 4, Academic Integrity, of the Student Code.

Infractions include, but are not limited to:

- cheating, plagiarism, fabrication
- facilitating infractions of academic integrity.
- academic interference
- computer-related infractions
- unauthorized use of university resources
- sale of class materials or notes

Violations of any of these rules will be prosecuted and reported to the student's home college in compliance with the Student Code: Article 1, Part 4, Academic Integrity, of the Student Code.

All aspects of the course are covered by these rules.

Disability Access

(https://www.disability.illinois.edu/academic-support/instructor-information/examples-disability-statements-syllabus)

The Department of Physics is committed to being an open and welcoming environment for all of our students. We are committed to helping all of our students succeed in our courses.

To obtain disability-related academic adjustments and/or auxiliary aids, students with disabilities must contact the course instructor and the Disability Resources and Educational Services (DRES) as soon as possible. To contact DRES, you may visit 1207 S. Oak St., Champaign, call 333-4603, e-mail disability@illinois.edu or go to the DRES website. If you are concerned you have a disability-related condition that is impacting your academic progress, there are academic screening appointments available on campus that can help diagnosis a previously undiagnosed disability by visiting the DRES website and selecting "Sign-Up for an Academic Screening" at the bottom of the page.

If you are interested in obtaining information to improve writing, study skills, time management or organization, the following campus resources are available to all students:

Writer's Workshop

Undergrad Library
217-333-8796
http://www.cws.illinois.edu/workshop

https://www.disability.illinois.edu/strategies

http://www.counselingcenter.illinois.edu/self-help-brochures/

Also, most college offices and academic deans provide academic skills support and assistance for academically related and personal problems. Links to the appropriate college contact can be found by going to this website and selecting your college or school: http://illinois.edu/colleges/colleges.html

If you are experiencing symptoms of anxiety or depression or are feeling overwhelmed, stressed, or in crisis, you can seek help through the following campus resources:

Counseling Center

206 Fred H. Turner Student Services Building
7:50 a.m.-5:00 p.m., Monday through Friday
Phone: 333-3704

McKinley Mental Health

313 McKinley Health Center
8:00 a.m.-5:00 p.m., Monday through Friday
Phone: 333-2705

McKinley Health Education offers individual consultations for students interested in learning relaxation and other stress/time management skills, call 333-2714.

Physics 598 PEN - Course Syllabus - Spring 2020

(Syllabus is subject to change!)

Week	Date	Lectures	Homework Assignments	Assignments Due	Writing Workshop Assignment	Reading
1	Jan 24	Course Introduction; Persuasive Science Communication	**Assignment 1:** 1-page Research Topic paper		WW0 WW0 Debrief	
2	Jan 31	Scientific Writing Tips; Journal Club Presentations; Journal Club Presentation Template	**Assignment 2:** Journal Club Presentation/Referee Report		WW1 (Solutions) WW1 Debrief	Paragraphs
3	Feb 7	The Publication Process and Writing Referee Reports	**Assignment 3:** Research Topic Abstract and Introduction w/ References	Assignment 1 Due	WW2 (Solutions) WW2 Debrief	"Why Did You Accept My Paper" paper
4	Feb 14	Writing Abstracts and Introductions		JC Paper Selection Due	WW3 (Solutions) WW3 Debrief	Verb Usage
5	Feb 21	Giving Better Talks (cme) How to Lose Your Listeners (cme)	**Assignment 4:** Research Methods and Results w/ Figures	Assignment 3 Draft Due	WW4	Ambiguous Pronouns
6	Feb 28	Methods and Results Sections of Scientific Papers; Displaying Scientific Data 20-Minute Journal Club Presentations:		Referee Report Due	WW5 (handout)	Figures and Captions Graphing Resources

7	March 6	20-Minute Journal Club Presentations:	**Assignment 5:** 20-Minute Research Presentation	Referee Report Due	WW6	Writing an Editor Cover Letter
8	March 13	20-Minute Journal Club Presentations:		Assignment 3 Final Due	WW7 (solutions)	Poster "Stump" Speeches Effective Scientific Posters Scientific Poster Example/Template
	March 20	**SPRING BREAK**				
9	March 27	20-Minute Journal Club Presentations:		Assignment 4 Draft Due	WW8	
10	April 3	Writing Scientific Proposals; Effective Project Summaries; Physics 598 Proposal Assignment 20-Minute Journal Club Presentations:	**Assignment 6:** Scientific Proposal		WW9	Physics 598 PEN Proposal Cover Sheet "What Words Are Worth" paper
11	April 10	Proposal Review Process; CVs for Proposals; Preparing a Proposal Budget 20-Minute			WW10	NSF-style CV template NIH-style CV template

		Journal Club and Research Presentations:				
12	April 17	20-Minute Research Presentations:		Proposal Project Summaries Due	WW11	Only
13	April 24	20-Minute Research Presentations:		Proposal Due Proposal Review Form Proposal Review Assignments	WW12	With Need Like
14	May 1	Phys 598PEN Proposal Panel Review		Assignment 4 Final Due		