

## PHYS 496, General Course Information, Spring 2020

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### Course Objectives

The purpose of this course is to teach you valuable writing, presentation, teamwork, leadership, and organizational skills that will better prepare you for a successful career in science or technology. You will learn good communications practices and standard conventions for physics talks, abstracts, journal articles, and figures, and you'll learn how to communicate your science to general audiences as well as to specialists. You will be exposed to forefront physics research and the variety of career options that are available for physics majors.

### Classes

The class will meet on Fridays, 2:00–4:50 PM, in Room 158 Loomis. Attendance is mandatory, and unexcused absences will result in a loss of points for the “participation” portion of your final grade. If you are unable to attend class, email the instructors *prior* to class, explaining the reason for your absence and your plan for making up the work.

An integral part of the class is “Writing Workshop” (WW), a series of in-class activities designed to improve your writing skills by analyzing and editing examples taken from published physics papers. The examples have been chosen to showcase specific, common scientific-writing flaws. You must bring a laptop or tablet equipped with MS Word to each class that has a WW scheduled to complete the exercises. If you do not have a computer that you can bring to class, contact the instructors immediately to arrange for a loaner. If you do not already have Word installed on your computer, you can get Microsoft Office 365 for free from the UI Webstore (q.v.

<https://webstore.illinois.edu/shop/product.aspx?zpid=2816>).

### Course Website

The [course syllabus](#), [assignment summary](#), written instructions for assignments, announcements, lecture notes, and links to useful external resources are posted on the [course website](#). Check it frequently.

### Instructors

	Office Hours	Where	Email
<a href="#">Taylor L. Hughes</a>	by appointment	2115 ESB	<a href="mailto:hughest@illinois.edu">hughest@illinois.edu</a>
<a href="#">Vidya Madhavan</a>	by appointment	1018 MRL	<a href="mailto:vm1@illinois.edu">vm1@illinois.edu</a>
<a href="#">Celia M. Elliott</a>	by appointment	215 LLP	<a href="mailto:cmelliott@illinois.edu">cmelliott@illinois.edu</a>

### Course Components

The course will consist of in-class writing practice (Writers' Workshop), lectures, formal and extemporaneous student presentations and group exercises, and written homework assignments and colloquium reports. No formal exams will be given.

For the in-class writing practice ([WW](#)), you will gain experience in reading and revising technical material electronically and in correcting common writing errors. You will also have an opportunity to ask questions and get detailed feedback during WW on your other class assignments. These exercises have been devised to help you identify common technical writing flaws and practice correcting them. Missed exercises **may not be made up** unless prior arrangements are made with Celia.

The [homework assignments](#) consist of specific writing tasks, including written evaluations of presentations and papers, abstracts, outlines, figure captions, and articles for a general audience. You will also learn how to create effective figures and captions to illustrate your written work.

PHYS 496 students are required to *attend at least four departmental colloquia* during the semester and *prepare a short written analysis* of each, using the “[Colloquium Report](#)” template. Each colloquium report is worth 50 points, and the first three are eligible for rewrite points.

Formal presentations will include an individual presentation, a team journal-club presentation, and informal individual and group presentations as part of in-class activities.

Refer to the [grading matrix](#) and written [assignments](#) for additional details and deadlines.

### **Textbook**

No textbook is required for this course. [Lecture notes](#) are posted on the course website after each class. Some scientific papers published in the peer-reviewed literature will be assigned; all are available free of charge online through the University’s library subscription.

### **Recommended Reading**

The following books are well worth adding to your personal library.

Vernon Booth, *Communicating in Science: Writing a scientific paper and speaking at scientific meetings*, 2nd ed. (Cambridge, Cambridge University Press, 1993).

Herbert Michaelson, *How to Write and Publish Engineering Papers and Reports*, 3rd ed. (Phoenix, Oryx Press, 1990).

### **Course Reserves**

The following materials are on reserve at the Grainger Engineering Library. Both are excellent resources; consult them for completing your homework assignments.

Robert A. Day and Barbara Gastel, *How to Write and Publish a Scientific Paper*, 7<sup>th</sup> ed. (Greenwood Press, 2011).

Scott Montgomery, Chapter 9, “Graphics and Their Place,” *The Chicago Guide to Communicating Science*. (University of Chicago Press, 2003). Required reading for WW #7 and Homework #8.

### **Grading**

Timely submission of written assignments is required. You will be given feedback on both the physics and the technical writing components of your assignments, and each will contribute to your final grade. A [grading matrix](#) that shows course components and the points assigned to each is posted on the course website.

Each WW exercise will be reviewed and points awarded for completing it. The WW exercises are graded binarily; if you show up and make a good-faith effort to complete the exercise and participate in class, you will receive full points. If you don’t, you will receive 0 points for that exercise. Missed WW exercises may not be made up, unless prior arrangements are made for an excused absence.

Each homework assignment will be scored and points allotted. The total points for each assignment are provided in the written instructions for that assignment and on the [grading matrix](#).

To give you an incentive to complete your assignments on time and to revise your work, you will be able to earn additional points for rewrites on some assignments, *provided the initial draft is submitted by the posted due date and time*. Late submissions will be ineligible for “rewrite” points. You will be able to earn additional points for each eligible revision, up to 100 percent of the original points assigned to that exercise.

You may use the student gradebook for PHYS 496 available at [my.physics.illinois.edu](http://my.physics.illinois.edu) to check on your grades at any time and to confirm that all your submitted assignments have been graded. Incremental rewrite points will be added as they are earned to the total points awarded to each assignment in the gradebook.

Final grades will be determined by the total points you earn, the distribution of grades among the whole class, and your class rank.

### **Academic Integrity**

The instructors for PHYS 496 take academic integrity very seriously, and we expect you to do so as well. Progress in science is not possible unless we can rely on its practitioners to be scrupulously honest in all their activities. Dishonesty in any form—cheating, plagiarism, representing others’ work as your own individual work, submitting work you did for another class as original work, or fabricating excuses for missed work—will not be tolerated. We encourage you to review the College of Liberal Arts and Sciences’ excellent discussion of [academic integrity](#). If you have *any* question about proper citation of sources, the reuse of materials (including your own) in a homework assignment, or the limits of work that can be done collaboratively and presented as your own, *please* consult us *before* you do something that could have serious adverse consequences for your academic career. We will report instances of academic misconduct to the appropriate University authorities.

Part of academic integrity also involves the proper use of course materials. Do not share confidential course materials with others outside of PHYS 496 or repost them to unscrupulous internet sites that promote cheating.

### **Assignments**

Assignments include both written work, team activities, and oral presentations. Detailed instructions for each assignment, along with its due date, are [posted on the website](#). Most assignments are due by 9:00 PM on the designated due date, but *check the written homework instructions* for due dates and times. **Assignments turned in after the deadline date and time will be penalized by a deduction of up to 10% of the total points, if submitted within 48 hours of the deadline. Assignments submitted more than 48 hours late will be increasingly penalized. Furthermore, late assignments will not be eligible for rewrite points.**

Deadline extensions will not be granted except for extraordinary circumstances (transient global amnesia; severe, sustained chest pains; uncontrolled bleeding from a major artery...). Get *something* on paper and get it turned in by the deadline.

All assignments are to be emailed to [phys496@physics.illinois.edu](mailto:phys496@physics.illinois.edu) by the deadline noted on the assignment page. A [summary](#) of the homework assignments, including due dates, eligibility for rewrites, and points assigned, is posted on the course website.

**Don't forget to put your name at the top of the page for submitted assignments.**

**Revisions of Previously Submitted Assignments:** If you are submitting a revised assignment for regrading, please prominently identify it as a revision on the top of the page, e.g., “Homework #6—Rev. 1. Subsequent revisions should be labeled in ascending numerical order. Keep *all* files (originals and revisions) for your records.

For your written assignments, you may wish to consult the University's Center for Writing Studies [Writers Workshop](#), which provides free, one-on-one help to all UIUC students. The Workshop's consultants can help with any kind of paper, in any class, at any stage of the writing process. While the Writers Workshop is not an editing service, the tutors will help you with anything related to your writing, including grammar, brainstorming, organizing, polishing final drafts, citing sources, and more. The Writers Workshop offers 50-minute sessions by appointment in five locations: the Undergraduate Library, Grainger Library, Ikenberry Commons, Burrell Hall, and the Pennsylvania Avenue Residence Halls. You can drop in for a quick 15–30 minute session in 251 UGL during the evening on Mondays through Thursdays. The Workshop also sponsors writing groups, online tutoring, and hands-on presentations about academic writing skills.

### **Peer Review**

One of the homework assignments will be peer reviewed. The reviews will be done anonymously; please maintain the confidentiality of the review process. Your colleagues will be most helped by reviews that are specific, detailed, and objective. Be critical, but express your criticisms in a positive, nonjudgmental way. Strive for the “golden rule” for reviewers—“Review unto others as you would have them review unto you.”

### **Physics Colloquium**

Colloquium is held at 4:00 pm on Wednesdays in Room 141 Loomis. If you have a class conflict and cannot attend the Physics Department colloquia, consult Professor Hughes or Professor Madhavan for suggestions on alternative arrangements.

Completed colloquium reports should be [emailed to Celia](#). Note that colloquium reports and any revisions for additional credit must be [submitted by the posted deadlines](#) to receive full credit.

### **Class Administration**

Any concerns, questions, or comments about the administration of the course should be directed to Professor Madhavan.

### **Email**

The instructors will communicate with you about the course via email to your *University of Illinois* email account; check it regularly! If you send email to the instructors, please put PHYS 496 in the subject line of each message. We do not use the “threading” feature of some email programs, so don't omit the subject line and be sure to include your full name in your message.