PHSX 330: Communicating Physics  
Spring 2016

Course Information
- Instructor: Dr. David A. Macaluso
- Office: C.H. Clapp Building, room 119
- Telephone: (406) 243-6641
- Email: david.macaluso@umontana.edu
- Lectures: Tu/Tr 9:40 – 11:00 AM, CHCB 230/231
- Office Hours: Monday & Wednesday 3-5.

Textbook
- Required
  
  * The Craft of Scientific Writing, 3rd Edition
    By Michael Alley
    ISBN-10: 0387947663

- Suggested
  
  * Scientific Writing and Communication: Papers, Proposals, and Presentations, 2nd Edition
    By Angelika Hofmann

Overview
This course covers the concepts and techniques of **effective scientific communication**. We will cover several topics, with emphasis on the most effective communication techniques for your **intended audience**:  
1. Fellow scientists  
   a. of related background (scientific peers)  
   b. of general background (scientists from another discipline or mixed disciplines)  
2. The general public (i.e. non-scientists)  
3. Prospective employers  
4. Admissions departments  
5. Scholarship committees  
6. Grant agencies  
7. Students

Learning Outcomes
Upon completing this course, students should have:  
1. An understanding of the **mechanics** of writing: grammar, sentence structure, punctuation, and diction (Dry? Yes. Important? VERY. We’re spending about 2 weeks on it, so be ready)  
2. Improved written communication skills, with emphasis on **concise scientific communication**.  
3. Experience composing scientific journal articles, and a deeper understanding of the peer review process in general (what it is, why it is the way it is, and what it means to science – all of which are significant).  
4. An appreciation for the importance of science conferences and experience with the two primary conference presentation formats: oral presentations and poster presentations.  
5. Experience writing proposals (grant and scholarship) and applications (graduate school and job).  
6. Experience creating a resume and a curriculum vitae, or CV (meaning “course of life” in Latin).  
7. An understanding of the responsibility all scientists have in communicating science to the public.  
9. Experience criticizing and being criticized by your peers. Put your judgy pants on and grow a thick skin.  
10. Experience with LaTeX.
Projects and assignments will include:
- a journal article
- an oral presentation
- a poster presentation
- proposals (grant & scholarship)
- a resume and a CV
- job and graduate school applications
- teaching & outreach
- daily writing on a new prompt to start each class that will be submitted and graded
- daily activities that will be submitted and graded

Add/Drop/Withdraw
Please refer to the University policy on adding, dropping, and withdrawing from the course at http://www.umt.edu/registrar/students/dropadd.php.

From the 16th through the 45th instructional day, all classes must be dropped using Drop forms (instructor signature required, advisor signature required for undergraduates). $10 fee applies.
From the 46th to the last instructional day prior to finals week, classes must be dropped using the Drop form (instructor and Dean signatures required, advisor signature required for undergraduates). $10 fee applies.

Websites
Grades and other materials will be posted on Moodle.
Our textbook, The Craft of Scientific Writing, has a companion website: http://writing.engr.psu.edu/index.html

Course Expectations
This is an upper division course intended for physics majors. The expectations are appropriate for advanced undergraduate students who are familiar with the concepts of personal responsibility, accountability, and academic honesty. For example:

Attendance: Papers and presentations will be based on lectures, in-class discussions, and in activities. Participation in in-class activities also accounts for a large portion of the course grade. Daily writing prompts are also a significant portion of your grade. Thus regular attendance is mandatoryish.

Reading Assignments: Students are expected to read the assigned material before class, and by that I mean before class. Occasional quizzes (your only quantitative assessments in this class) will be given based on the assigned reading and topics previously covered in lecture.

Original Work (a BIG DEAL in this class): I strongly encourage students to work together, to use all available resources, to read as much as possible, and to seek assistance from me whenever necessary. However, written work submitted in this class must be the original work of the student. For specific information regarding the University policy on academic misconduct, please refer to the last page of this syllabus.

Due Dates and Times (another BIG DEAL in this class): Get your work in on time! Scientific writing classes traditionally have significantly more issues with late submissions and requests for deadline extensions than traditional quantitative science classes. It seems to be how our scientist brains work (or don’t).
Grading

Grade breakdown:

- Projects (papers, proposals, posters, presentations, etc.) 70%
- Homework and in-class activities 10%
- Quizzes 10%
- Daily writing prompts 10%

All assignments will be due at the beginning of class.

Late assignments will receive 50% of whatever grade is earned.

Academic Honesty

University policy statement on academic honesty: All students must practice academic honesty. Academic misconduct is subject to an academic penalty by the course instructor and/or a disciplinary sanction by the University. All students need to be familiar with the Student Conduct Code: (http://www.umt.edu/vpsa/policies/student_conduct.php).

Students with Disabilities:

Whenever possible, and in accordance with civil rights laws, The University of Montana will attempt to provide reasonable modifications to students with disabilities who request and require them. Please feel free to setup a time with me to discuss any modifications that may be necessary for this course. For more information, visit the Disability Services for Students website at http://life.umt.edu/dss/.

Final Exam

I apologize, there will be no final exam in this course.
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<td>LaTeX, writing basics (words &amp; structure)</td>
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<td>Putting it all together: planning an article</td>
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