WR 525/PSM 525 Advanced Scientific and Technical Writing (4 credits)

Prospective students: This syllabus provides students who are taking this course the outline of what they will be learning, the course assignments, and when work is due. This syllabus will be available on the course Blackboard site for enrolled students.

* Instructor's name
Cynthia B. Chapman, ELS, PMP
* Instructor's email and phone
chapmacy@onid.orst.edu, 541-602-1031

Link to instructor's on-line bio/website:

Syllabus effective for term(s): Fall 2013 and Winter 2014

* OSU catalog course description, including pre-requisites/co-requisites
WR 525/PSM 525 combines scientific and technical writing with science journalism. Students will draw on a data set (preferably their own) to draft a scientific journal article (or their research proposal), a short funding proposal, a magazine article, and a book review. They will also critically evaluate and edit documents by peer reviewing classmates’ drafts. An undergraduate writing course is a required prerequisite.

* Course content

Blackboard
WR 525/PSM 525 will be delivered via Blackboard, your online learning community, where you will interact with your classmates and with me. Within the course Blackboard site you will access the learning materials, tutorials, and syllabus; discuss issues; submit assignments; take quizzes; email other students and the instructor; participate in online activities; and display your projects. To preview how an online course works, visit the Ecampus Course Demo at http://ecampus.oregonstate.edu/coursedemo/about/. For technical assistance, Blackboard and otherwise, see http://ecampus.oregonstate.edu/services/technical-help.htm.
Week 1  The scientific method: when, what to write, and where to publish
Lectures:  Introduction to the instructor (1-1)  
  Introduction to the course and material (1-2)  
  Writing science (1-3)  
  Selecting an outlet; the research process (1-4)  
  Comparing scientific and technical writing (1-5)  
  Scientific integrity in research and publication (1-6)  

Learning outcomes:  
Determine and select the appropriate visual display to present a process or data.  
Develop an understanding of the course and the community.  
Understand methods to self-assess the quality of writing.

Week 2  Requests for proposals (RFP) and writing proposals: “Grant writing”
Lectures:  Funding resources; readiness to propose; proposal processes (2-1)  
  Writing proposals: technical writing with specific purposes (4); types of proposals; persuasion; grants and contracts, concept of a “binding offer” (2-2)  
  Using NSF forms and guidelines; the course RFP (2-3)  
  Process and protocol of peer review; Levels of Edit concept (2-4)  
  Technical editing overview (2-5)  

Learning outcomes:  
Analyze guidelines and audiences to write a proposal.  
Use persuasion effectively to write a proposal.  
Learn the processes and protocols for peer review.

Week 3  Types of scientific writing and reading
Lectures:  Communities, disciplines, audiences create guidelines; authorship examples; a productive process for writing the journal article (3-1)  
  Primary sources, letters (3-2)  
  Scientific conduct and integrity in publication, using the COPE website (3-3)  

Learning outcomes:  
Interpret then write about study design, data, and results using guidelines and standards.  
Employ critical thinking to revise or edit professional writing using guidelines.  
Write appropriately within the chosen discourse community.  
Understand the purpose for and the content of ethical scientific research.  
Explore methods to self-examine writing and recognize how to correct habitual error patterns.

Week 4  Types of scientific writing and reading (continued)
Lectures:  Archives—libraries, data storage, access—and journal publication requirements (4-1)  
  Sample scientific articles (2):  Watson and Crick on DNA (4-2)  
  Read to understand drafting and revision of the journal article (4-3)  

Learning outcomes:  
Understand and analyze guidelines and why audiences formulated them.  
Use critical thinking to revise or edit professional writing to community standards.  
Understand that rhetorical choices in writing influence access to and understanding of scientific information by the reader because those choices affect where and how the scientific information is stored and referenced.

Week 5  What’s technical about scientific writing?
Lectures:  Levels of editing (5-1)  
  Copyright and its use (5-2); Journal publication process (flowchart), terminology  
  Beyond research:  career paths in scientific writing and editing (5-3)  
  Science & multimedia:  
    State, federal academies of science:  
    Virtual science institutes  
    Foundations and nonprofits  
    Museums  
    Aquariums  
    Publishers
(Week 5 continued)
Learning outcomes:
Understand and practice the technical aspects of writing about scientific information.
Understand the technical process of publishing scientific journals.
Understand the copyright process and when copyright is invoked.
Understand potential career opportunities that require professional scientific and science writing skills.

Week 6 Advanced technical writing
Lectures: Using abstracts to explain audiences, purposes, and types of technical writing (6-1)
- Basic patterns of technical writing (6-2)
- Basic forms of technical writing (6-3)
- Budgets and balance sheets in grant proposals; conference reports (6-4)
- Business writing basics (6-5)
Learning outcomes:
- Interpret then write about data and results using guidelines and standards for a public or “general” audience.
- Apply rhetorical concepts and techniques to analyze a collection of articles written by science journalists.

Week 7 What’s technical about science writing?
Lectures: Science journalism; review the concept of “primary sources” (7-1)
- Science literacy and science journalism: Pulitzer Prizes for explanatory writing (7-2)
- The process to write a book review: writing your opinion (7-3)
Learning outcomes:
- Analyze guidelines and audiences to understand how to adapt writing to different professional communities and outlets.

Week 8 Science journalism (also known as “science writing”)
Lectures: Writing about your mentor, your research or discoveries for a public audience (8-1)
- Interviewer v. interviewee: chains of evidence and the primary source in journalism (8-2)
Learning outcomes:
- Understand and practice the rhetorical choices of the science journalist and the “culture of attribution” for science writing.
- Use the persuasive appeals to pathos and logos effectively in a science magazine article.
- Write about data and results to a non-specialized audience.

Week 9 Science journalism, literacy, and advocacy
Lectures: Scientific literacy and appropriate advocacy to the general American public (9-1)
- Guest video: Interview with Nick Houtman, editor of Terra magazine at OSU (9-2)
Learning outcomes:
- Analyze guidelines and audiences to understand how to adapt writing to different professional communities and outlets.

Week 10 (Dead Week) Summary presentations
Lecture: Future of scientific publication and science journalism. (10-1)
Learning outcomes:
- Use critical thinking to edit and revise professional writing using guidelines and feedback from peer reviewers or editors.
* Measurable student learning goals, outcomes, and components

**Learning Goals**
1. Each student will learn the tools to use and the processes to follow to communicate scientific results to their peers in a scientific journal article (or in a research proposal) and to the general public in a magazine article.
2. Each student will learn to judge the competence of their own and their peers’ writing by editing and reviewing a journal article or research proposal, a magazine article, a funding proposal and a book review according to professional writing standards and guidelines.
3. Each student will understand what it means to write to specific audiences and how they constitute writing communities.

**Learning Outcomes**
By the completion of this course, each student will be able to:
1. Analyze guidelines and audiences to write a funding proposal, a magazine article, a book review, and a scientific journal article or research proposal.
2. Determine and select the appropriate visual display to present data or a process.
3. Interpret then write about data and results within a scientific journal article or a research proposal and a magazine article.
4. Employ critical thinking to revise or edit a proposal or a scientific journal article or a science magazine article using a standard or guidelines.
5. Apply rhetorical concepts and techniques to analyze a collection of science writing and scientific journal articles then incorporate those principles while writing a book review.
6. Use persuasion effectively to write a funding proposal and a submission letter.

**Other Components**
As part of the process to document the research (or an internship) according to standards set by their disciplinary communities for the literature-as-primary source, students will participate in an overview of methods for judging, selecting, retrieving, and storing information in both digital and analog forms.

As part of the process to write and be published, the course will incorporate some form of interactive peer review among the students. It is in this context that they will also learn and apply technical editing and business writing skills.

As part of the process to transform scholarly writing into a magazine story, students will develop interviewing skills and will come to understand the person-as-primary source concept in journalism.

* Learning resources

Prospective students: Please check with the OSU Bookstore for up-to-date DVD, course packet, and textbook information for the term you enroll (http://osubookstore.com/ or 800-595-0357). If you purchase course materials from other sources, be very careful to obtain the text with the correct ISBN.

Texts (*Required)
*Style manual for the individual student’s discipline. Students will be encouraged to seek advice of a mentor or use a manual specified in the selected outlet. The default style guide is The Chicago Manual of Style, 16th ed. 2010. Documentation II (author/date style). Chicago, IL: University of Chicago Press. Also available online through Chicago, IL: University of Chicago Press. Also available online through Chicago, IL: University of Chicago Press. Also available online through


This is the complete list in the series; the version with the asterisk (*) is required for this course unless you choose the volume marked with an asterisk in the series below this one.

Tufte, Edward R. (http://www.edwardtufte.com/tufte/)
—. 2001. The visual display of scientific information. 2nd ed. Cheshire, CT: Graphics Press LLC.


Internet Resources

Board of Editors in the Life Sciences resources at http://www.bels.org/related-resources.htm.


* Evaluation of student performance

**Student performance will be measured by written**
Peer review of draft sections of the journal article or research proposal, the magazine article, and the book review according to guidelines supplied by the instructor.
Instructor review and grading of final papers (funding proposal, journal article or research proposal, submission letters, book review, and magazine article)

**Grading**
Scientific paper/journal article/research proposal: 30%
Magazine article: 25%
Funding proposal: 20%
Book review: 10%
Peer reviews, protocols, and exercises: 10%
Submission letters (2): 5%
Total points to be earned in the course: 1000.

**Special note**
Students will need to write informally and frequently among each other in writing groups that will be formed as well as to me and to outside sources. This writing will not be graded because it will vary in quantity and quality for each student. This is the student’s opportunity to write as much and as frequently as required to complete each of the assignments. For example, the scientific paper will be broken into subsections to be written then reviewed and edited by other student peers before final submission for grading.

**Course Policies: Incompletes**
Take this course only if you plan to finish it in a timely manner (before the beginning of next term). I assign an "I" or incomplete only when there is a strong and compelling case for doing so (e.g., documented health reasons, military commitment), and an incomplete contract is filed in cooperation with the student.
I will not consider assigning an incomplete unless the individual has completed over 50% of the course tasks (i.e., has completed assignments through week 7). Don’t delay requesting an incomplete by the 8th week; note that students receiving incompletes are subject to assignment weight reduction (and consequently may not be eligible for an A or A- grade) because some of their work will be submitted late.
* Statement Regarding Students with Disabilities
Accommodations are collaborative efforts between students, faculty members, and Disability Access Services (DAS), http://ds.oregonstate.edu/home/. Accommodations approved through DAS and DAS can help obtain services; students are responsible for contacting the faculty member in charge of the course prior to or during the first week of the term to discuss accommodations. Students who believe they are eligible for accommodations but who have not yet obtained approval through DAS should contact DAS immediately at 541-737-4098.

* Expectations for Student Conduct

Academic Integrity
Students, including graduate students, are expected to comply with all regulations pertaining to academic honesty, defined as: An intentional act of deception in which a student seeks to claim credit for the work or effort of another person or uses unauthorized materials or fabricated information in any academic work. For further information, visit Avoiding Academic Dishonesty, at http://oregonstate.edu/studentconduct/code/index.php#acdis, or contact the office of Student Conduct and Mediation at 541-737-3656.

Prohibited Conduct
In an academic community, students and faculty, and staff each have responsibility for maintaining an appropriate learning environment, whether online or in the classroom. Students, faculty, and staff have the responsibility to treat each other with understanding, dignity and respect. Disruption of teaching, administration, research, and other institutional activities is prohibited by Oregon Administrative Rule 576-015-0015 (1) and (2) and is subject to sanctions under university policies, OSU Office of Student Conduct both available at http://oregonstate.edu/studentconduct/code/index.php.

Conduct in this Online Classroom
Students are expected to conduct themselves in the course (e.g., on discussion boards, email postings) in compliance with the university's regulations regarding civility at http://oregonstate.edu/studentconduct/regulations/index.php#acdis. Students will be expected to treat all others with the same respect as they would want afforded themselves. Disrespectful behavior to others (such as harassing behavior, personal insults, inappropriate language) or disruptive behaviors in the course (such as persistent and unreasonable demands for time and attention both in and out of the classroom) is unacceptable and can result in sanctions as defined by Oregon Administrative Rules Division 015 Student Conduct Regulations, Section 576-015-0030 Sanctions, at http://oregonstate.edu/studentconduct/code/index.php.

Communications

Ground Rules for Online Communication & Participation:
Online threaded discussions are public messages, and all writings in this area will be viewable by the entire class or assigned group members. If you prefer that only the instructor sees your communication, send it to me by email, and be sure to identify yourself and the course. Posting of personal contact information is discouraged (e.g. telephone numbers, address, personal website address).
Online Instructor Response Policy: I will check email frequently and will respond to course-related questions within 24 hours.

Observation of “Netiquette”: All your online communications need to be composed with fairness, honesty, and tact. Spelling and grammar are very important in an online course. What you put into an online course reflects your level of professionalism. These links discuss writing online: [http://goto.intwg.com/](http://goto.intwg.com/) and netiquette: [http://www.albion.com/netiquette/corerules.html](http://www.albion.com/netiquette/corerules.html).

Please check the Announcements area and the course syllabus before you ask general course "housekeeping" questions (e.g., how do I submit assignment 3?). If you don't see your answer there, then please contact me.

Guidelines for a productive and effective online classroom
The discussion board is your space to interact with your colleagues related to current Lectures or responses to your colleague’s statements. Use the discussion board to ask questions whose answers will be of interest to all students.

Pay close attention to what your classmates write in their comments and protocols. Ask clarifying questions, when appropriate using email or the discussion board.

Think through and reread your comments before you post them.

Assume the best of others in the class and expect the best from them.

Value the diversity of the class. Recognize and value the experiences, abilities, and knowledge each person brings to class.

Disagree with ideas, but do not make personal attacks. Do not ridicule or embarrass others. Do not make sexist, racist, homophobic, or victim-blaming comments at all.

Be open to be challenged or confronted on your ideas or prejudices.

Contacting the instructor
Students with personal concerns related to the course may contact me by email at chapmacy@onid.orst.edu; emails are checked in the morning and in the afternoons, but allow 24 hrs. before you expect a reply. For issues related to the course work, post queries on the discussion board so that other students may benefit from your questions and my answers. If I am not available during any 24 hr. period, I will post a notice on the discussion board.

Technical Assistance
If you experience computer difficulties, need help downloading a browser or plug-in, assistance logging into the course, or if you experience any errors or problems while in your online course, contact the OSU Help Desk for assistance. You can call (541) 737-3474, email osuhelpdesk@oregonstate.edu or visit the OSU Computer Helpdesk online at [http://oregonstate.edu/is/tss/och/](http://oregonstate.edu/is/tss/och/).

Tutoring
Effective fall term 2009 we went to a new Online Tutoring Service, NetTutor to meet the needs of Ecampus students.

NetTutor is a leading provider of online tutoring and learner support services fully staffed by experienced, trained and monitored tutors. Students connect to live tutors from any computer that has Internet access. NetTutor provides a virtual whiteboard that allows tutors and students to work on problems in a real time environment. They also have an online writing lab where tutors critique and return essays within 24 to 48 hours.
Routine Feedback
Use the discussion board for ongoing student comments and suggestions during the term so that students can report problems or make suggestions about the course and the instructor can address concerns. Civil anonymous posts may be permitted.

OSU Student Evaluation of Teaching
Results of course evaluations are extremely important and are used to help me improve this course and the learning experience of future students. Results from the 19 multiple choice questions are tabulated anonymously and go directly to instructors and department heads. Student comments on the open-ended questions are compiled and confidentially forwarded to each instructor, per OSU procedures. The online Student Evaluation of Teaching form will be available toward the end of each term, and you will be sent instructions through ONID. You will login to “Student Online Services” to respond to the online questionnaire. The results on the form are anonymous and are not tabulated until after grades are posted. When less than six students are registered for the course, no course evaluations will be available (university policy requires guarantee of anonymous responses, and less than six is not anonymous).