

SYLLABUS

Writing in Biological Sciences (WC) – ZOO 4100-02 and BOT 4100-02
Lecture Section 02
Spring 2012

Class meeting time: Wednesday 2:10 to 5:00 for 8 weeks

Class meeting place: Biological Sciences 309

Instructor (Lecture Sec. 02): Dr. Michael Dillon, BS 408, michael.dillon@uwyo.edu

Office hours: by appointment (please email)

Textbooks: (1) Strunk, W., Jr, and E. B. White. *The Elements of Style*. MacMillan Publishing Co., New York, New York. Latest Edition. (2) Hacker, D. 2008. *A Pocket Style Manual*. Fifth edition. Bedford/St. Martin's, Boston, MA. You should also own and use a good dictionary. Optional (and entertaining) reading: Truss, Lynn. *Eats, Shoots & Leaves: The zero tolerance approach to punctuation*.

Other than the textbooks, all class materials, including lecture notes and exercises will be available on the course website: <http://www.uwyo.edu/mdillon/zoo4100.html>

Course outline

This course meets University Studies WC (W3) and L requirements. The WC course components provide instruction and experience in writing in the major area of study, in our case the biological sciences. Specifically, the WC course requires that students demonstrate the ability to write as professionals in their field. The L course components entail developing skills and abilities essential for adult learning. It transcends disciplines, learning environments, and levels of education. This L course teaches students how to use library resources, evaluate information, and apply their knowledge to research assignments. The L component of the class requires completion of the UW Library Online TIP Tutorial and a passing score (70%) on the TIP quiz. The TIP tutorial and quiz are found at <http://tip.uwyo.edu> accessible from the Library's home page or the WyoWeb.

The course comprises two parts. One is a "discussion" section. The instructor for the discussion section will be your primary contact on a term paper project that is part of this course, and you should have secured that faculty member's agreement to supervise and evaluate your term paper project before you enrolled in the discussion section. The other part is a lecture or "writing" section. I (Dillon) will be your "lecture/writing" instructor. I will meet with you weekly for the first half of the semester to discuss general and advanced issues of writing in the life sciences, and will be your instructor of record (I will assign the final grade, with input from your "discussion" instructor).

The "discussion" part will be spent writing and rewriting your term paper, working closely with your discussion instructor. Half of your grade will be determined by how you perform in the structured lecture portion of the class. The other half will be determined by how you perform in writing and revising your term paper.

Academic Honesty

UW Regulation 6-802. The University of Wyoming is built upon a strong foundation of integrity, respect and trust. All members of the university community have a responsibility to be honest and the right to expect honesty from others. Any form of academic dishonesty is unacceptable to our community and will not be tolerated. Teachers and students should report suspected violations of standards of academic honesty to the instructor, department head, or dean. Regulations and other guidance can be found at: <http://www.uwyo.edu/generalcounsel/support/clean%20uw%20regulations/UW%20Reg%208-30.pdf> and <http://www.uwyo.edu/AS/student-appeals/academic-dishonesty.html>.

Disability Statement

If you have a physical, learning, sensory or psychological disability and require accommodations, please let me know as soon as possible. You will need to register with and provide documentation of your disability to University Disability Support Services (UDSS) in SEO, 330 Knight Hall.

Philosophy

What is writing in biological sciences? Biologists, defined broadly, write in a vast array of styles, only some of which are taught in this class. Biologists scrawl prescriptions, jot down case histories of patients, record field notes; and they prepare correspondence, news releases, advertising copy and policy statements. They also write reports not intended for publication (including environmental impact statements), and popular or peer-reviewed scientific articles. A few write books, but those books mostly fall into one of the above categories. In this class I teach how to write in the style called "formal scientific writing." It is characterized by correct grammar and complete sentences, the absence of slang and contractions, and by the use of references to statements that are not common knowledge, but that can be found in the published literature. In teaching scientific writing I emphasize the most serious problems encountered in this kind of writing: poor organization, wordiness, weak verbs, lack of clarity, repetitive or awkward constructions, grammar, spelling, imprecise use of words, incomplete comparisons, and unsupported statements. Fortunately, these topics are important in most kinds of writing, so focusing on them should help everyone, not just the few who are destined to write scientific articles and books.

There are no secret rules to excellent scientific writing, and I have none to teach you. Often, students in this class believe that, "I know how to write, I just need help in *scientific* writing." The only difference between writing about science and about something else is the complexity and technicality of the subject matter and the rules of referencing. So, I teach verb strength, conciseness, clarity, and other topics that some college seniors would prefer to leave behind. But, I assure you that these topics are what characterize excellent scientific writing, defined broadly or narrowly. Of course, each scientific publication has its own rules for format, so there is no point in my teaching such specific topics as how to format a literature citation. Your discussion instructor and you can choose a suitable format for your term paper, and your future employers will determine the format, and to some extent, the style in which you write for them.

Another common perception of students is that, "I understand what I mean; I just can't explain it in writing." In truth, how we write is how we think, and by improving our written explanation of something, we improve our intellectual understanding of it. When we rewrite something to enhance its clarity, we also clarify our mental image of it. This is why rewriting is so important in scientific or any writing; when you rewrite something until it is crisp, clear and precise, you have improved your understanding of the subject in the same way and to the same degree.

The quality of scientific writing can be seen as a scale with many levels. At the bottom is the writer who does not understand the subject to begin with, uses repetitive and weak constructions, conveys little information in many words, and disregards rules of spelling, grammar, and paragraph construction along the way. At the top of the scale is the writer who combines true eloquence with masterful grasp of the material and technical flawlessness. The reader of this level of writing learns much, and enjoys the process. My goal, and I hope yours, is to raise the level of your writing, however it currently ranks, by a notch or several notches over the course of the semester.

Timetable (Subject to change)

Date	Topics	Assignments due	Readings/notes*
Week 1 11 Jan	Introduction to the course. What is formal writing? What is scientific writing? The multitude of non-fiction writing styles. Alternative organizations for scientific papers: review papers vs. data-based papers. The goal and philosophy of the class. Words: verb strength, empty nouns, nominalizing verbs, redundancy, wordiness, word length, accuracy in word choice, accessible vocabulary, variety	1	
Week 2 18 Jan	Sentences: subject-verb agreement, consistent tense, mood and voice, pronoun-antecedent, compound structures, completing comparisons, positions of modifiers, split infinitives, dangling modifiers. Active v. passive voice. Rewriting methods.	2, 3	H1-9, 13 L1 SW Ch. 1, 2
Week 3 25 Jan	Computers and writing. Spell checkers and homonyms, grammar checkers, fonts, tables, figures, equations, bibliographic databases. Organizing your writing: outlining, choosing appropriate headings, upholding the important themes, punch lines.	4,5	H10-12, 14-15, 17-21 H22-23 SW Ch. 5
Week 4 1 Feb	Issues in scientific writing: tight vs. loose referencing; primary, secondary, tertiary sources; gray literature; personal communications; internet sources; scientific names; direct quotes. Plagiarism in its many forms.	6,7	H29, 32, 35, 37
Week 5 8 Feb	Scientific argumentation: formulating a hypothesis, writing the abstract, introductions Quiz 1.	8, 9, 10 (Quiz 1)	H25-28, 34, 36
Week 6 15 Feb	Scientific argumentation: interpreting data (results), discussion/conclusions Business and professional writing: cover letters	11	
Week 7 22 Feb	Business and professional writing: résumés; curricula vitae; letters of complaint, thanks, inquiry; memoranda.	12	
Week 8 29 Feb	Interviews: good, bad, and ugly, questions to be prepared for. Mock interviews. Quiz 2. Last day of lecture section of course	13, 14 (Quiz 2)	

* H = Hacker, SW = Strunk and White

Writing assignments, worksheets, quizzes and due dates

No.	Due	Length *	Points	Assignment
1	Wk. 1		5	Exercise 1 (nouns and verbs)- In class
2	Wk. 2	2	-	Essay: "My evolving interest in biology"
3	Wk. 2		5	Exercise 2 (conciseness and clarity) - In class
4	Wk. 3		5	Revision of essay
5	Wk. 3		5	Exercise 3 (grammar) - In class
6	Wk. 4		5	Exercise 4 (punctuation) - In class
7	Wk. 4		5	Exercise 5 (bibliographic databases) - In class
8	Wk. 5		5	Term paper proposal sheet
9	Wk. 5		5	Exercise 6 (referencing) - In class
10	Wk. 5		5	Quiz 1
11	Wk. 6		5	Abstract of a paper
12	Wk. 7	1-2	5	Cover letter
13	Wk. 8	1-2	5	Résumé
14	Wk. 8		5	Quiz 2
Total			65	

* All assigned lengths are double-spaced typewritten pages, 10-12 cpi, margins 1¼ -1½". Do not submit any single-spaced material; it is difficult to edit.

Grading (percentage scale)

A 90+% B 80+% C 70+% D 60+% F <60%

Contributions to grade: writing exercises and quizzes - 50%; term paper - 50%