

Communication in Science

BMS510 Course Syllabus* Fall 2009

<u>Date</u>	<u>Lecture Topic</u>
8/31	Steps in Writing a Paper; Figures and Tables I
9/7	No Class
9/14	Preliminary Abstract; Figures and Tables II
9/21	Introduction and References
9/22	Methods and Results
9/28	No Class
10/5	Discussion and Conclusion
10/12	Comparative Analysis of Journal Article Structure
10/19	Revisions and Editing
10/26	Style Improvement
11/2	Writing a Grant Proposal
11/9	NIH and NSF Online Submission Sites
11/16	Ethics in Scientific Writing
11/23	Posters and Seminars
11/30	Student Presentations
12/7	Student Presentations

BMS510 Course Information*
Fall 2009

Course Title and Number: **Communication in Science, BMS510**
Credit Hours: **2 credits**

Course Meets: **Mondays, 6:30 – 8:20 pm**
Location: **DAI Auditorium**
Dates: **Aug. 31 – Dec. 7 except Sept. 7 and 28**

Required Text: **1. How to Write and Publish a Scientific Paper, 6th ed. by Robert A. Day. Oryx Press, Phoenix Arizona. 2006.**

Recommended Texts:

- 2. Scientific English, A Guide for Scientists and Other Professionals, 2nd ed. by Robert A. Day. Oryx Press, Phoenix Arizona, 1995.**
- 3. The Elements of Style, 3rd ed. by W. Strunk and E.B. White. Macmillan Publishing Co. Inc. New York New York, 1969.**
- 4. Scientific Style and Format: the CBE Manual for Authors, Editors and Publishers, 6th ed. Council of Biology Editors Inc., Cambridge University Press, 1994.**
- 5. The ASM Style Manual for Journals and Books. American Society for Microbiology, 1991.**
- 6. ACS Style Guide: A Manual for Authors and Editors. American Chemical Society, 1998.**

Other: **Reading assignments will be handed out in class. Additional materials will be placed on reserve in the library (DAI Library).**

Prerequisites: **One year of graduate study in a biomedical or environmental science research-based program. Permission of instructor.**

Instructor: **Linda Mayerhofer, Ph.D.**
Home Telephone: **489-5935, leave message**
Office Hours: **By appointment, or immediately before and after class**
Email: **lmayerhofer@albany.edu**

*** Can be altered by the instructor at any time.**

Introduction

Course Objectives and Description. This is an introductory course designed to help you develop effective scientific writing and data presentation skills. Each two-hour class will be divided between lecture, writing exercises and discussion of peer-edited writing assignments.

Overview of what we will do in the course. There are several types of assignments you'll be doing throughout the course:

1. Working on your paper or proposal. At the beginning of the course you will select a small group of your own experiments as the data for your paper. You will choose whether to write up the results in the form of a journal article or as a research proposal. During the course we will go through the steps of writing a paper or a grant proposal (NIH format). You are required to complete a certain portion of the paper each week, which you will exchange with members of your peer-editing group. You will also hand in a copy of your work to me, which will be returned to you with editing and suggestions for revision.

2. Editing the work of your peers. Students in groups of two or three will read and edit each other's work each week, and discuss their comments during the peer-review sessions. Your task is to edit the other students' drafts for English grammar and usage, overall organization and clarity, and scientific validity. You are expected to come up with constructive suggestions (in writing) for how to improve the manuscript and then be able to verbally relate this information to your peer in group discussion.

3. Text improvement and critical analysis. We will discuss and edit sample abstracts, methods, tables and figures, and discuss how to present the data optimally. Selected journal articles will be assigned and critiqued in class for content, clarity, organization, and correct English usage.

4. Posters and seminars. We will cover poster organization and presentation, and students will prepare a poster mock-up of their project, which they will present to a peer-group. In the last week of the course, students will give a short (10 minute) oral presentation of their work. We'll discuss tips for preparing successful oral presentations.

Grading (A-E). Students will be graded on their participation in class, the weekly writing assignments, their oral presentation and on the final draft of their paper or proposal. Grades will be assigned according to a point system, where each assignment is given a point value.

100	10 short writing assignments (10 pts. each), generally one per week
50	5 assignments on parts of a paper or grant proposal (10 pts each)
15	points for participation (1 pt per class), based on attendance, punctuality and preparedness
25	oral presentation (last two weeks of class)
<u>50</u>	completed final draft of the paper or grant proposal (hand in at last class)
250	points total

Assignment Format. All assignments and paper drafts are to be typed, **double-spaced**, with at least a 10 or 12 pt. font. Enlarge tables, figures, figure legends and raw data like gels or blots to at least 10 or 12 pt font size equivalent. This is really important because single-spaced documents or densely packed figures and tables are difficult for your editor to read, and there is no space for editorial comments.

Tips for getting the most out of the class. Students are expected to bring their weekly completed assignments to class, along with 2 or 3 copies to exchange with their editing group. If you don't bring your work, then you'll have nothing to exchange.

Choosing the right project to work on is also important. It is most optimal if you use recent experimental data from a project that has not yet been written up. Do not use data or written material from a project which you have already revised or have received extensive help in editing. The writing assignment for this class is meant to be a work in progress rather than a polishing of a previously written piece.

Students are expected to read independently on the topics being covered in lecture. The list of required and recommended books is just a small selection of what is available, and students are encouraged to look online and in the library for any books or articles that can help them to improve their writing and grantsmanship abilities.

Attendance. Attendance is mandatory, and can only be excused for a valid medical reason, accompanied by a doctor's note. If you miss more than two un-excused classes, a letter grade will be deducted from your final grade for each additional class missed beyond the first two. If you know you will have to miss a class, please email me before class to let me know, and make arrangements to get the missed material.

Academic Integrity. All students will be held to the standards of academic integrity stated in the SPH graduate students handbook. Standards for ethics and accuracy in scientific reporting will be discussed in class. Students are asked to be highly sensitive to the unacknowledged use or inadequate acknowledgment of published material.