

BMS510
Communication in Science
Course Syllabus
Fall 2010

Course Title and Number: Communication in Science, BMS510
Credit Hours: 1 credit
Course Meets: Alternate Tuesdays 9:00–11:00 am ; Aug 31–Dec 7
Location: DAI Auditorium
Instructor: Linda Mayerhofer, Ph.D.
Office Hours: By appointment, or immediately before and after class
Email/ Phone: lmayerhofer@albany.edu / 489-5935

Topics covered in this course:

- Scientific Journal Style and Format
- Data Organization and Management
- Preparation of Figures and Tables
- Writing the Sections of a Journal Article: Abstract, Introduction, Methods, Results, Discussion, Conclusion and References
- Methods for Text Revision, Editing and Style Improvement
- Preparation of Posters and Seminars

Required Text - Students need to have this textbook before the start of the course:

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

Recommended Texts - These reference books will be on reserve in the DAI library but students are encouraged to obtain their own copies of these useful reference books:

Scientific English, A Guide for Scientists and Other Professionals, 2nd ed. by Robert A. Day. Oryx Press, Phoenix Arizona, 1995.

The Elements of Style, 3rd ed. by W. Strunk and E.B. White. Macmillan Publishing Co. Inc. New York New York, 1969.

Scientific Style and Format: the CBE Manual for Authors, Editors and Publishers, 6th ed. Council of Biology Editors Inc., Cambridge University Press, 1994.

The ASM Style Manual for Journals and Books. American Society for Microbiology, 1991.
ACS Style Guide: A Manual for Authors and Editors. American Chemical Society, 1998.

Prerequisites - Enrollment in graduate study in a biomedical or environmental science research-based program. Permission of instructor.

Introduction

Course Objectives and Description: This introductory course is designed to prepare you to write scientific journal articles efficiently and accurately. Through material covered in lecture topics, writing and editing exercises, and writing a scientific journal article based on your own data, after completing this course, you will be able to:

- Identify and use proper scientific journal style and format
- Develop an individualized data organization and management system to facilitate efficient writing of journal articles
- Prepare informative and complete, visually appealing figures and tables in the proper format
- Write the sections of a journal article, with emphasis on correct structure and style within each section and adherence to specific journal requirements
- Edit and revise manuscripts in peer review format and give written and verbal feedback to other students
- Identify common scientific writing errors and be able to correct these in written exercises, student manuscripts, and journal articles
- Design and present a poster for a scientific meeting
- Prepare for giving an oral seminar on your research

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

1. Working on your lab rotation report. For this course you will select a small group of your own experiments from your lab rotation as the data for your paper. In class, we will go through the steps of writing a paper in the style of a journal article. You are required to complete a certain portion of the paper for each class, which you will then exchange with other students for peer-editing. 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 will read and edit each other's work, and discuss their comments during the peer-review sessions. Your task is to edit the other students' drafts for English grammar, usage and style as well as overall organization, 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 to be critiqued in class for content, clarity, organization, and correct English usage.

4. Posters and seminars. We will discuss poster organization and presentation, and students will prepare a poster mock-up of their project which they will describe to another student. We'll also discuss tips for preparing successful oral presentations, and students will prepare powerpoint slides to present their work in a short oral presentation to the class.

Grading (A-E). Students will be graded on their participation in class, the writing assignments, the poster mock-up and the final draft of their paper (lab rotation report). Grades will be assigned according to a point system, where each assignment is given a point value.

100	5 short writing assignments (20 pts. each)
50	5 assignments on parts of a paper (10 pts each)
15	points for participation, based on attendance, punctuality and preparedness
25	poster mock-up and powerpoint presentation
<u>50</u>	completed final draft of the lab rotation report
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. 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 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 University at Albany Community Rights and Responsibility 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.

The topics and course information in this syllabus can be altered by the instructor at any time.