

Biol 2002 Research Laboratory Scientific Writing

The importance of learning to write effectively cannot be overstated, both for success in college and in whatever career path you choose after you graduate. Learning to write effectively includes understanding the standards for writing within a specific discipline. What are the main purposes of writing in this discipline? Who is the audience? What type of discourse is generally used within this discipline? The style of writing employed by science disciplines is different than what you may be more familiar with from the humanities and social sciences.

Within the College of Biological Sciences, the faculty have developed a set of writing abilities that all students graduating from this college should have. This list of abilities is part of the Writing Enhanced Curriculum (WEC) project, and can be found here:

<http://www.cbs.umn.edu/sites/default/files/public/downloads/CBSScientificWritingAbilities.pdf>

[Note: not including list here, but TAs can show it in class on this day and briefly orient them to what's on the list]

Our goal in this course is not to “complete” all of the abilities on this WEC list. In fact, many of these skills are ones that professional scientists continue to develop throughout their careers. In Biol 2002, it is our goal to start you on the path to gaining and honing some of the abilities on the WEC list.

Learning outcomes for Biol 2002 writing:

By the end of this semester, you will:

- Understand the overall format of a scientific paper. Understand the purpose of each section of a scientific paper, as well as the key components and type of discourse used in each section. Use published papers from the literature as models to gain this understanding.
 - In Biol 2002, we will work through each section normally found in a science paper, but we will spend more time on the Results and Discussion sections than the others. When you take Biol 2004 you will write a paper based on your own research project. Our work here in Biol 2002 should help prepare you for that opportunity write a full research paper.
- Understand the purpose of scientific papers within the biological sciences (i.e., why do researchers publish papers?). Recognize that authors make

choices about what to present and how to present it, and that there are underlying assumptions in those choices.

- Have practiced communicating in a way that is overt, logical, precise & concise. Be aware of the choices you are making as an author, and the assumptions underlying those choices.
- Have practiced writing in a way that tells a logical and cohesive “story”.
- Have practiced planning and writing results & discussion sections of scientific papers (including figures & tables) in a way that is true to the format and style of discourse used by professional scientists.
- Have practiced synthesizing ideas from published sources & presenting your own information & ideas in the context of other, published, work.

How will we accomplish these learning goals?

We will first give you some exposure to published scientific papers so you can understand why they are written in the first place, what components/sections they consist of, what the writing is like in each section, and what decisions the authors make in different sections of the papers.

Along with analyzing scientific research articles in a holistic manner in order to understand their overall purpose and style of writing, we will also break papers down into sections and focus on how to construct each part of a scientific paper (the introduction section, for example).

Specific writing activities and assignments (and associated due dates) are listed in the lab schedule. Point values for writing assignments are in the lab syllabus.