

The Art of Writing in the Sciences

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CHM 6180
Section 4565

Office Hours
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Meetings: T-Th -- 4th Period (10:40 – 11:30 am)
Turlington 2354

Texts: The Craft of Scientific Writing
3rd Edition -- Michael Alley
Springer-Verlag 1996

The Elements of Style
4th Edition – Strunk and White
Allyn and Bacon 2000

Course: There is a general recognition that the science curricula, while excellent in technical content, are inadequate in helping students develop effective communication skills. This course is an attempt to address the writing needs of students in the sciences. It is not a remedial course; students should have some general grasp of the language. It is also not a grammar course, although basic language elements will be reviewed and emphasized. Writing well in any area requires an appropriate appreciation of mechanics and style.

This course will be driven more by application than theory, aiming for immediate practical value to students. We will write early and often, but in manageable proportions (thinking both of the students and the instructor). Examples of good writing and not-so-good writing will be presented and analyzed. Skills will be crafted by addressing specific types of writing that scientists are called upon to do (e.g., abstracts, memos, letters, papers, dissertations). Even e-mail communication, which increasingly consumes us all, can benefit from attention to specific improvement skills. This is a course intended to improve current writing levels and to encourage continued attention to this important craft. No matter how good the science may be, if it cannot be communicated to others, careers can languish. Writing is not easy, but it should not be a source of dread. A goal of this course is to improve your skills to the point that you might even enjoy writing.

Coverage includes

- ❖ **Science writing** -- how it's like other writing; how it's not
- ❖ **Writing writ large** -- the many kinds of science writing
- ❖ **Applied writing** -- with a purpose in mind
- ❖ **Learning to write** -- effective writing may not come naturally; but as a craft it can be learned and cultivated
- ❖ **The writing scientist** -- writing on a daily basis
- ❖ **Basic writing tools** -- the irreducible elements of grammar
- ❖ **Word selection** -- precise, yet concise
- ❖ **Avoiding embarrassment** -- commonly misused words
- ❖ **Sentence construction** -- strive for simplicity
- ❖ **Architecture of paragraphs** -- telling a story, sentence by sentence
- ❖ **Language appreciation** -- communication, yes, but with a modicum of style
- ❖ **The scientific method** -- how it guides the writing
- ❖ **Origin of good writing** -- clear writing from clear thinking
- ❖ **What is good writing?** -- some common traits
- ❖ **To be avoided** -- pet peeves about writing
- ❖ **Terror of the blank page** -- getting started may be the hardest part.
- ❖ **Basic organization skills** -- bringing order from chaos
- ❖ **Aids in writing** -- basic resources you should know and appreciate
- ❖ **Personal matters** -- CVs, resumes, applications, cover letters
- ❖ **Abstracts** -- short is not always easy
- ❖ **Manuscripts for journals** -- telling colleagues what you did (and in a way that they understand)
- ❖ **Revise, revise, revise** -- assuming three times is enough
- ❖ **Revising on a word processor** -- maybe too easy
- ❖ **Proofreading** -- deceptively difficult; always important
- ❖ **Research proposals** -- seeing the forest and the trees
- ❖ **e-Mail writing** -- today's oxymoron
- ❖ **Writing outside the specialty** -- essays, editorial pieces
- ❖ **Writing and the 2nd Law of Thermodynamics** -- reducing entropy