

Biological Scientific Writing (BIOL 825)

[Department of Biological Sciences, Fort Hays State University](#)

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[Course Webpage](#)

Lecture Notes — *Getting Started in Graduate School and Using Software*

GRADUATE SCHOOL

Take responsibility for your graduate education

- Obtain information from the FHSU Graduate School about deadlines.
 - Check the Graduate Student Guidelines for the Department of Biological Sciences.
- Update your advisor regularly.
- Meet with your committee regularly to update them on your progress.
- Manage your time effectively in all of your assigned tasks:
 - the classes you are taking,
 - your research,
 - your teaching or other assigned duties for which you are being paid.
- Support the activities of the department and other students.
- Attend professional meetings appropriate to your interests and be active in these organizations.
 - Some travel expenses to professional meetings can be reimbursed if you are giving a presentation or serving as an officer in the organization or some similar role. These funds are provided through the Department of Biological Sciences honorarium and through the Graduate School — check their deadlines and requirements well in advance. In addition, the department typically arranges transportation to professional meetings through the university motor pool.

Choosing a graduate advisor and a graduate committee — First Semester

- Identify faculty who might be able to help you achieve your potential research and career goals.
- Set up appointments with those faculty to discuss your goals and their potential interest in serving as your advisor or committee member.
- Ask a faculty member if they will serve as your advisor to:
 - Advise you on your program of study (courses you will take),
 - Advise you on your research,
 - Help you arrange for research support,
 - Chair your oral comprehensive exam,
 - Chair your thesis defense.
- Discuss potential committee members with your advisor. Your committee members will:
 - Advise you on your program of study,
 - Advise you on your research,
 - Attend your thesis defense (but not necessarily your oral comprehensive exam).
- Ask faculty if they will serve on your committee.
 - In addition, at least 1 committee member must be from outside the Department of Biological Sciences, either from a different department or from off-campus.

Establish a program of study (list of graduate courses you will take) — First Semester

- Prepare an organized summary of relevant undergraduate coursework.
 - Organize your courses by broad topics.
 - Transcripts are organized by semesters, which makes them difficult for your committee to use.
- Discuss possible graduate courses with your advisor.
- Set up a committee meeting to discuss graduate coursework.
 - Discuss possible times with your committee members; do not set up a time without consulting them.
 - Provide each committee member with a copy of your curriculum vitae.
 - Provide each committee member with a summary of your undergraduate courses and potential graduate courses.
 - Be receptive to changes in graduate courses recommended by your committee members.
- Be certain that a copy of your program of study is filed with the Graduate School.
 - This must be on file if you are supported by a graduate assistantship.
 - The Graduate School will check each semester to confirm that you are enrolled in at least 6 credit hours from your program of study (3 credit hours in the summer).

Develop a thesis research project — First Year

- Some funded projects are offered to faculty and passed to graduate students.
 - Do not take on such a project if it is not what you want to do.
 - Does it help you achieve your goals?
 - Do not necessarily limit yourself to the project requirements for your thesis.
 - Is it possible to ask a question for which you can obtain data while successfully performing the original project tasks and your other responsibilities as a graduate student?
- Some projects do not have prearranged funding.
 - FHSU Graduate School policy limits university Graduate Assistantship funding (including tuition waivers) to 4 semesters (Wetlands Center assistantships can run 6 semesters); assistantships funded by external sources are limited only by the funding source.
 - Departmental assistantships (GTA, Fleharty Fellowship, Balthazor Assistantship) are not funded during the summer, but one or two summer GTAs are sometimes available.
 - You will need to obtain funding for equipment, supplies, travel, research assistants (labor), etc. ; the department has some equipment and limited funds to support research.
 - During your first year, work with your advisor and others to develop funding requests.
- It is best to incorporate some reliable aspect of study that can be used as your thesis if your primary study fails for some reason beyond your control (e.g., weather) — have a plan B.
- We will cover preparation of thesis and research proposals later in the class.

USING Microsoft WORD and Adobe ACROBAT

Microsoft Word ([editing practice file](#))

- Although alternatives exist, the university uses a recent version of Microsoft Word as its primary word processing software.
- Word (not Adobe Acrobat) should be used to write and edit manuscripts, CVs, etc.
- Word has reviewing and editing features — deleting, inserting, commenting — that you need to be able to use in this course.
 - In Word 2007 and later versions, the reviewing feature is one of the “ribbons” at the top of the page under the “quick access toolbar.”
- I will use the “track changes” and “comments” features in assignments I edit and return to you via e-mail attachment.
 - You can control how those “marks” are displayed (and printed).
 - Marks can be displayed “in text” (similar to what you would see on a marked paper copy). You hold your cursor over a highlighted area to see a “pop-up” balloon with the comment.
 - Marks also can be displayed in balloons in the right-hand margin, which will shrink the size of your text.
- Word also has spelling and grammar checkers that you should use as a *supplement* to your own proofreading.
 - NEVER rely on them alone.
 - These can be customized somewhat on your computer to suit your needs.

Adobe Acrobat ([editing practice file](#))

- The department has Adobe Acrobat available on only a few computers in AH 321 (Adobe Reader is free, but Acrobat costs money).
- Converting a document into a pdf file (portable document format file) should not be done until you are near or at the end of your writing and editing process.
 - Acrobat is not intended to serve as software for writing and editing, so it is not as flexible as Word and similar products.
- The advantage of a pdf file is that it typically retains formatting from one computer to the next, which is not always true of Word and other text formats.
- Some reviewing and editing can be done in a pdf file by using Acrobat.
- Adobe also can extract, delete, insert, rotate, and crop pages of pdf files, such as publications downloaded from JSTOR, BioOne, and other sources.
- pdf files can exist as two layers: the image of the file and the searchable text of the file (most publications available from on-line publishers already have searchable text).
- Publications and other documents available in paper can be scanned and saved as searchable pdf files by using the OCR function (Optical Character Recognition function) in Acrobat.
 - This could allow you to maintain an entirely paperless and quickly searchable reprint collection for your personal use.

CURRICULUM VITAE (CV)

Write and *maintain* a curriculum vitae (CV): *update your CV on a regular basis*.

A curriculum vitae is more detailed (and longer) than a resume.

- Appearances matter.
 - Proofread your CV; have others proofread your CV.
 - Use a software spell checker, but do not rely solely on it.
 - Be concise.
 - You have to make your impression quickly
 - Much of the information in a long CV often is ignored, especially in initial cuts of large numbers of applicants.
 - Organize information in a clear, consistent manner with:
 - Headings (and possibly subheadings),
 - Font features (e.g., bold, italic, all caps, small caps),
 - Paragraph features (e.g., indentation, interparagraph space).
 - Limit blank space within reason.
 - Reverse chronological sequence is typically used for employment history, grant history, publications, etc. What have you done most recently?
 - Never submit a CV electronically as a Word or other text file; use a pdf file to retain formatting.
- Include:
 - Name, professional (FHSU) mailing address, (appropriate) e-mail address, and phone number (with appropriate voice-mail message).
 - Education and completion dates of any degrees (possibly a list of relevant courses to accompany transcripts, if requested).
 - You can list yourself as a Master of Science degree *candidate* after you meet the requirements of the Graduate School. Initially, you are a student in a Master of Science program.
 - Relevant employment, with brief descriptions of duties.
 - Honors and awards received.
 - Grants or other funding received (do not claim a proposal as your own if you were not one of its authors).
 - Publications (as appropriate).
 - Emphasize (or include only) peer-reviewed publications.
 - Agency reports or similar contractual summaries are less valuable in most cases because they have not typically undergone anonymous peer review.
 - Presentations (as appropriate).
 - Emphasize oral presentations at professional meetings.
 - Presentations to the general public.
 - Poster presentations.
 - Relevant skills, activities, or interests not included in the above sections.

- These items cannot be requested by your potential employer, so do not include them:
 - Sex, race, religion, age, marital status, or other information prohibited by law.
 - Some employers will remove this information before your CV is reviewed, which will detract from its appearance.
- Adapt the information in your CV to fit the position for which you are applying; expect to modify every CV you submit. You are building a “master copy” of your CV to “save as” and edit.
 - Emphasize particularly relevant items.
 - De-emphasize or delete unimportant items.
- Arrange for *reliable* people to serve as references *before* you submit your CV.

Dr. Stark’s general formula for an effective CV

- Most students have two pages, at this stage of their careers, to catch someone’s attention. People will actually read what you have, but probably not all of it in the first round, so you need to have your best information first to make the first cut. Accordingly, do not waste space. Use small fonts (not too small), small indentations, and bold fonts to set off information in an attractive and functional manner.
- Your coursework is important, but not as much as your experiences, especially if presentations or publications are involved. These are typically rare for incoming graduate students and should be near the top, never buried on the 3rd or 4th page, and always before Eagle Scout, choir leader, etc.
- Compress degree details. They are your ante to get into the game, but they will not win the game. Your experiences are what set you apart and allow you to effectively compete for specific positions; use them well.
 - If you have many experiences, highlight a few items on each.
 - If you have few experiences, do your best to detail them.
 - Include responsibilities and skill areas: statistics, GIS, sampling techniques, identification skills, etc.

The CV you are to prepare for class will be a “master” CV of everything that might be important in a potential job application. Every time you apply for a position, you should copy this CV (“save as”) and modify its contents to target the position you for which you are applying. Expect your modified CV to be shorter. The course list typically will not be required when you apply for a job, but it (and your CV) will be useful at your first graduate committee meeting as you plan your program of study (your graduate courses).