

Written Exam Workshop Help Tips

Start early. You should allot adequate time to have multiple drafts.

Don't be afraid to ask group members or senior grad students for copies of their written so you have a guide and idea of what a written exam should look like.

Read a lot of background articles before starting to write. Then start by generating your specific aims and the outline of your whole written. At this point the rest may seem daunting, but try to break it up into sections. This will also make it more manageable.

Chose an area of the written where you are particularly strong or are most interested in to act as a confidence booster. Don't feel like you need to start with the first page. In fact, often times when writing a scientific paper the early sections like the abstract and introduction are left until the end.

Possible starting points:

- Experimental Section – if you have a lot of lab work done this could be a good place to start since you should already have much of this written in your lab notebook.
- Results, Graphs, Tables – like the experimental section, if you have a lot of results you may feel most comfortable starting here. It also gives you something to discuss in this section.
- Figures – if you know your background really well and need to make figures to describe your project these can establish a rough outline for the background section.

Before generating figures make sure you have a good idea of what is acceptable. Talk to your group or advisor for general formatting.

Make sure fonts are consistent in everything: figures, captions, text, and title.

Avoid copying and pasting figures from other sources. It looks unprofessional, and in fact, in most cases it's stealing. Take the extra time to reproduce the figure (if possible) with ChemDraw or Excel or whatever (this will be tedious, and take time). Once you have the figure, you can use it later on in posters, papers, presentations, etc...

To insert figures use TIFF formats since they are most compatible with WORD and will look the best. Although you can generate figures as you're writing, don't insert them into the document until you are near completion. Inserting figures too early can create formatting nightmares at the end. WORD has a tendency to try to repaginate when moving figures around which causes it to lock up.

To generate graphs of publication quality, get the raw data in ANCI format and graph in a program designed for your application. Typically EXCEL works fine, but the quality isn't as good.

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Use EndNote, RefWorks, or Word to manage your references. It will make your references drastically easier than doing it by hand and you won't have to worry about making errors. Import references as you go from SciFinder.

Set a time to save while you're writing and save copies of the draft in multiple places. E-mailing to yourself or labmates also works well. You don't want to think you have it complete, then lose everything you've worked on for a month.

If possible, keep the different sections of your written separate. That way you won't lose the whole document if something happens to the file. It also makes working with the document more manageable.

Be careful with autocorrect "on" in Word. It may misspell scientific words you've already spelled correctly.

Avoid using academic jargon. (The word "novel" has recently been banned for use in titles by JACS). Use simple and clear language. A 40 page written exam will not cover an extraordinary amount of material if written properly. Also, don't try to add new concepts at the last minute since the ideas will most likely be less clear and less thought out.

If allowed by your division, talk to you advisor for tips and expectations. Also find other students who've had the same committee members for tips and expectations.

Have as many people read it and give feedback as possible.

Double check the spelling of the names of professors on your written committee. Also, make sure that all words in the beginning part of your written exam are spelled correctly. Making a good impression from the start is much better than the opposite.

Don't print double-sided. If you have colored figures in your written, only print those pages on the color printer since it will be cheaper.

Presentation is everything. Some department areas have different requirements, but if you need or want to have your written bound the copy centers in Smith and Coffman are great places to have it done. They can take budget numbers if you have an account to use and are also cheaper than Kinko's. If you have colored figures in your written only have those pages printed on the color printer since it will be cheaper and don't use a bright colored cover.

Plan on getting a letter that requests revisions. Every year, a few (very small number) of students pass after their first try. For the majority of students, its back to writing for a while. When you get the letter explaining your revisions, don't take them personally. Instead, include a cover letter with your second draft, thanking the referees and explaining in detail how all of the suggestions were fixed. Again, this is good warm up for when you begin submitting publications.