Math F305: Senior Seminar

Overview

I've listed below some ideas you'll want to keep in mind when you prepare your talk. The talk will be evaluated in the following criteria. I'll keep notes during your presentation and will give you feedback by email the day after you present.

Completeness

Distill out all the main ideas from your section of problems. The problems in the text have you work through the material bottom up. This is how we learn mathematics, but we normally present it top down. If the main results can be stated as theorems or propositions, do so. You'll probably want to state some definitions as well. At the end of each chapter there is a summary section that contains a list of some of the main ideas of the chapter. This would be a good place to start for deciding what the main ideas of your problems are. Remember: you are not presenting the problems. You are presenting the ideas behind the problems. Try to wrap them up in a package for us to understand.

Accuracy

In mathematics it is better to say nothing than to say something false. So be sure that when you present material that it is factually correct. Keep in mind you are teaching your classmates and don't want to lead them astray! If a question comes up that you don't know the answer to, don't be afraid to say you don't know the answer. This is much better than giving a false reply. Of course, you are welcome to guess or conjecture so long as you make it clear that this is what you are doing.

Clarity

You will want to convey your ideas as clearly as you can. Even though we will have all attempted your problems, don't assume that we understood or remember what we did.

Please proceed at a reasonable speed: too fast and you will loose us, and too slow and our minds will wander. Examples help make the ideas you are presenting clear: if there are particularly nice examples in your section of problems feel free to include them in your presentation.

Have a game plan of what the talk is all about. Divide your time in your talk according to the importance of the ideas you want to present; the big ideas should be the focus of your talk, not the sidenotes. Try to know your material so well that you feel comfortable speaking about it.

Boardwork

It takes a bit of practice to use a blackboard well. Here are some ideas for getting started.

- Use lots of space on the board.
- Write from top to bottom and from left to right as your talk proceeds.
- If you need to alter something you have written that someone taking notes might have already written down, don't erase it. Strike through your mistake and write the correction nearby.

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- If you want to keep something on the board for later reference, you can box it off so that you don't erase it.
- If you see your classmates taking notes from your presentation, make sure you don't erase something prematurely.
- Try giving your talk at a blackboard in a dry run to get a feeling for it.

Preparedness

Your goal is to understand your collection of problems at least as well as anyone else in the room. Be sure to come prepared to give your talk and to answer questions about it. If you need notes, be sure to have written them up in advance. You shouldn't need to consult the text during your lecture (though in response to student questions about text problems, I think this would be fine). A dry run would help you determine if you are prepared for your talk.

Timeliness

Your talk should last 15 minutes if there are three speakers for the day, or 20 minutes if there are two speakers for the day. I think you'll find there will be sufficient material in your collection of problems to fill this time; usually the trouble will be fitting everything you want to say into your time slot. You might want to give your talk a dry run to make sure it has an appropriate length. If you go overtime, I'll give you a warning after 2 minutes. If timing is tight for the day, I'll ask you to stop shortly afterwords to ensure time for questions and for other presentations.