Math 553 — How to Prosper in Math Grad School

In graduate school you are always overworked and overcommitted. This is not going to change, as it is the only way to bring you rapidly up to the level required of professional mathematicians.

The way to succeed is to work consistently and promptly, and on the RIGHT THINGS:

- Go over your lecture notes after every class, trying to understand every detail but also the big picture ("what are we aiming at?")
- After you get your homework back, rewrite in full every problem on which you made significant errors. Do **not** put this task off until you study for the next test or exam.
- After you get your test back, rewrite in full every problem on which you made significant errors. Do **not** put this task off until you study for the final exam.

  Regard your errors as *system* failures, not personal failures. Ask: How could you improve your study *system* to eliminate that kind of error in future?
- At the end of every work day, ask yourself "Did I ask any good questions today?" Just *asking* a question can help you focus your own thoughts.

Here's the baseline level of competence you should attain before each test or exam:

- Be able to recognize every homework problem, then quickly recall its key points and graphs, and write out the solution. (Some exam problems will be similar to homework, and you are expected to recognize these problems.)
- Be able to write down every proof on the "list" without hesitation. Know where to start and stop, on each proof. When studying, you should write out each proof several times, to get quick at it.

To achieve this level of competence, start studying two weeks before the exam. Follow a detailed daily plan. Plan *exactly* what you will work on each day.