How to succeed

Short version

Real analysis does not yield its insights easily. But if you work hard and regularly, you will be rewarded.

- Always re-work your lecture notes before the next class, checking every step and filling in missing details. (Allow 1.5 hours for this.)
- Read the text as you re-work your notes. This will help you get the big picture.
- Ask the professor before each class about the points you didn't follow in the last class.

Long version

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 off this task 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 one week before the exam. Follow a detailed daily plan. Plan exactly what you will work on each day.