

On Writing a Senior Thesis in Mathematics

Congratulations on your decision to write a Senior Thesis in Mathematics and its Applications. This is a demanding but very rewarding project. You will have an opportunity to experience doing mathematics and using it to better understand the world around us. You will probably find that it is much more work than any single mathematics course, and that is why the project is scheduled to take at least three semesters. It is expected that some of your time during the summer between junior and senior year will be taken up with this project.

A senior thesis which has been submitted to the Department of Mathematics and has been deemed acceptable by the Undergraduate Committee will result in the citation “Graduation with Senior Thesis” on the student’s transcript, and in the Graduation Bulletin.

If you have not already done so, you should immediately find a professor in the Mathematics Department who is willing to advise you on your thesis. The two of you together should gradually choose a topic, and make a list of readings through which you will work your way. You and your advisor should meet regularly during the junior and senior years to discuss these readings, as you would in any reading course. You will then have to choose a firm topic, and make an outline of the work. In the second semester of your senior year you will probably spend a good deal of time writing this thesis. Be warned that most people find that writing mathematics is a slow process. The sooner in your senior year that you start writing, the better.

Below is a schedule of submission dates that you must observe in writing the Senior Thesis.

Deadlines for the Senior Thesis

1. December of the junior year: The student is expected to find a Mathematics Faculty Advisor and set up a program of readings for the second semester. It is best to do this *well before* the second semester. The student should then register for one credit of Mathematics 497 (Undergraduate Reading).
2. February 1 of the junior year: The student is expected to submit to the Director of Undergraduate Studies (DUS) a note announcing that he or she plans to write a senior thesis, including the name of the Faculty Advisor. In some cases the DUS may deem it advisable to offer some flexibility about this and the previous deadline.
3. April 15 of the junior year: The student should submit to the DUS a proposed list of readings (agreed to with the Faculty Advisor), together with the statement of a general topic for the thesis.
4. April before the senior year: The student must set up a program of readings for the next semester (and the summer) with the advisor. The student must also register

for one credit of Mathematics 46-800 (Directed Readings). It is recommended that students work three semesters plus a summer on the project, but the real minimum is a summer plus senior year.

5. October 15 of the senior year: The student must submit to the DUS a title of the thesis, together with an outline.
6. December of the senior year: The student must set up a program of readings and writing for the semester with the faculty advisor. The student must also register for one credit of Mathematics 48-900 (Undergraduate Thesis).
7. February 1 of the senior year: The student must submit to the DUS some tangible evidence of progress in the writing of the thesis. This would, in many cases, be quite unpolished. For example, a first draft, a first chapter or even an extensive and detailed outline of the work would be suitable.
8. April 5 of the senior year: The thesis should be submitted to the Faculty advisor for a reading, possible revisions, and a signature.
9. On or before April 15 of the senior year: The thesis *must* be submitted to the DUS, with the advisor's signature. It will then be examined by the Undergraduate Committee, which will decide whether it is to be accepted. The Committee will make a decision and forward the information to the Registrar before April 20. A student whose Senior Thesis is accepted receives the notation "Graduation with Senior Thesis" both on the transcript and on the Graduation Program.
10. Students will present their work, in the form of a 30-minute seminar talk, on a day chosen by the DUS between April 15 and the end of classes of the last semester. The last Saturday of classes seems to be an ideal date. These seminar talks will be followed by a party celebrating the students' achievements.