

Preparing for Graduation: A Guide for Doctoral Students in Mathematics

by Scott Varagona

Before we begin, here's a disclaimer. This advice is valid as of Spring 2012, but please note: the Graduate School's policies and forms do change from time to time. It is obviously your responsibility to check the Graduate School's website (and your Auburn e-mail account) regularly for any changes or updates to the Graduate School's policies. Hopefully, my successors will continue to update this document and keep it current long after I have graduated.

My goal in writing this document is to explain in detail what you must do at each step of the graduation process, so that your last few semesters of graduate school will go as smoothly as possible. I have tried to state exactly what is involved in each step: which form you must turn in, which signatures you will need, etc. However, if something remains unclear to you even after you read the advice I give here, you can always talk to your GPO and/or your contact in the Graduate School. They will be happy to help you.

Let's start with some general advice.

1. First, here are some important web pages:

- The Graduate School website: <http://www.grad.auburn.edu/>
- The "Students" page of the Graduate School website, which has links to almost everything you will need as you prepare to graduate: <http://grad.auburn.edu/students.html>
- The Graduate School Calendar, which contains important deadlines for graduation: <http://www.grad.auburn.edu/cs/gscalendar.html>
- The Doctoral Studies Checklist, which lists out everything you must do before you graduate: <http://grad.auburn.edu/cs/doccklst.html>
- The Graduate School section in the AU Bulletin, which contains a lot of miscellaneous but useful information: http://www.auburn.edu/student_info/bulletin/graduate.pdf

- The Graduate School's Thesis/Dissertation guide, which includes links to the LaTeX style files you will need for your dissertation: http://www.grad.auburn.edu/etd_guide.html

Let me point out something that is hopefully common sense: check the Graduate School calendar often and be aware of deadlines as you prepare to graduate. Try to get things done early just in case something goes wrong, so you will have time to fix it.

2. Choosing your Advisory Committee

Your committee must consist of at least FOUR Mathematics professors (including your Advisor, i.e., "Major Professor"). At least four of your committee members must be on the "Graduate Faculty" list (found at http://graduate.auburn.edu/gfast/List_of_Faculty_By_name.aspx) and the majority of them (especially your Advisor) must be "Graduate Faculty Level 2." (See <http://www.grad.auburn.edu/general/policychanges> and <http://grad.auburn.edu/general/advisorycomm.html> for details; these new policies should be reflected in the next edition of the AU Bulletin.) If you are unsure who to ask (or who is qualified) to be on your committee, you can certainly ask your Advisor for suggestions. Once you have contacted these professors and they agree to be on your committee, you will put their names on your Plan of Study (more about that later).

Be aware that many forms you will eventually turn in must be signed by all of your committee members (sometimes also the Department Chair), and occasionally professors leave town--or even leave the country--for long periods of time. Some professors spend most of the Summer semester away from Auburn, for example. So, once again, get things done early!

3. Here is a list of all the major things you must do, and when you must do them, before graduating. (My main source for everything on this list is <http://grad.auburn.edu/cs/doccklst.html>, the Graduate School's Doctoral Studies Checklist.) From now on, let us refer to the semester in which you will graduate as "Graduation Semester."

At Least TWO Semesters Before Your Graduation Semester:

- General Oral Exam

ONE Semester Before Your Graduation Semester:

- Turn in Plan of Study (this can be done earlier, however)
- Turn in Residency Form
- Do Graduation Check

During Graduation Semester:

- Turn in First Submission Approval Form
- Submit dissertation draft to Graduate School for Format Check
- Send a copy of the dissertation to your “University Reader” for his or her approval
- Turn in Form X (to schedule Final Defense)
- Do Final Defense
- Turn in Form Z (the committee’s report from the Final Defense)
- Complete Final Draft of the Dissertation
- Turn in Electronic Thesis/Dissertation Final Approval Form to the Graduate School
- Turn in Final Copy of Dissertation to the Graduate School (online, via <http://etd.auburn.edu/etd/>)
- Take the Graduate School’s online survey
- Attend Graduation Ceremony (Optional)

This list shows at a glance what will happen before you graduate; the rest of this document discusses each step in detail. I hope this helps!

At Least TWO Semesters Before Your Graduation Semester:

General Oral Exam

So, by now, you have passed all of your Prelims and your Advisor thinks your research has progressed far enough for you to do the **General Oral Exam**. The General Oral Exam is a presentation you will do in front of your committee members to show them the basic idea of your research, what you have achieved, and what you still plan to achieve by the time you finish

your dissertation. Your Advisor can tell you more about what particular things he or she expects from your General Oral Exam.

When it comes time to do the General Oral Exam, you will need to contact all of your committee members to find a date and time that will work for everyone. Then talk to the secretaries in the Mathematics & Statistics Office to reserve a room in Parker during that time slot. (If you need a room with a projector or Smartboard, be sure to tell the secretaries that!) Once you have done all of that, go to <http://grad.auburn.edu/cs/doccklst.html> and, under the heading “**General Oral Exam**,” click on the link to *Form A*. Fill out the form; among other things, you will need to type in your Banner ID# (which is the number on your Student ID card) and also the date, time, and place of the presentation. Click “Generate the Form,” then print the form. Next, have your Advisor and the Chair of the Math Department sign the form. Finally, walk over to the Graduate School building and turn in the form. (I turned in all such forms to the secretary at the front desk; she would usually stamp such a form, thus making it official that I turned in the form on that particular day.)

Important Note: As stated on the Doctoral Studies Checklist, you must turn in Form A *at least one week before* the date of your General Oral Exam.

Once you’ve turned in Form A, the Graduate School will send out “Form B,” which is just the formal announcement of the General Oral Exam. They will also send you and/or your Advisor “Form C,” which is the form your committee must sign after your General Oral Exam is over. Either you or your Advisor should print out “Form C.” Once you do your General Oral Exam (and, hopefully, you pass), your committee members will all sign Form C. Make a copy of the signed Form C for your records, then turn in the original signed Form C to the Graduate School.

Important Note: At least ONE FULL SEMESTER must pass between the semester in which you do the General Oral Exam and your graduation semester. So, for example, you could do the General Oral Exam during Fall Semester and then graduate in the following Summer Semester. (This is why I put the General Oral Exam under the heading “At least two semesters before your graduation semester.”)

ONE Semester Before Your Graduation Semester:

Turn in Plan of Study

The Plan of Study is a document you must submit to the Graduate School at least one semester before your graduation semester. It is preferred for graduate students to submit their Plan of Study online: to do so, go to <http://grad.auburn.edu/students.html> and click on “**Plan of Study.**”

In the Plan of Study, you will provide the Graduate School with some important information. Among other things, you will list all the courses you have taken (or will take) that will go towards the total number of required credit hours for the Ph.D. in Mathematics. See **page 125** of http://www.auburn.edu/student_info/bulletin/graduate.pdf to get precise instructions on what courses count towards your doctoral degree, how many transfer credit hours from your Master’s work are allowed, how many “Research and Dissertation 8990” credit hours are required, etc. Also check with the Math Department’s GPO and/or the Math Department website for any specific course requirements the Math Department has (beyond the Graduate School’s normal requirements).

There is also a section of the Plan of Study where you list the names and e-mail addresses of your committee members. Once you complete the Plan of Study and submit it online to the Graduate School, an e-mail will automatically be sent to your committee members prompting them to approve. Note that, if it later becomes necessary for you to amend your Plan of Study for some reason, then you will have to get your committee members’ approval again.

Random note: Even if you previously got a Master’s Degree at Auburn (and submitted a Master’s Plan of Study), you will need to submit a brand new Plan of Study for the Ph.D.

Another random note: Later in the graduation process, you will have to choose a “University Reader.” Although the University Reader will do a number of the same things your other committee members do, the University Reader is technically NOT a member of your committee and should NOT be

included on the Plan of Study! (There will be a different form naming the University Reader later.)

Turn in Residency Form

The Residency Form (which may be found on the Graduate School's website, at <http://www.grad.auburn.edu/forms/residency.pdf>) is basically just a form certifying that you have indeed been attending grad school at Auburn and working on research with your Advisor. (It seems this form exists for certain technical reasons.)

Print out the form and fill it out; you will need to know your Student ID number (which is the number on your Student ID card). In the "Degree Program" blank, I just wrote "Ph.D." Once you have filled everything out, sign and date it. Then have your Advisor (i.e., Major Professor) sign and date it. Finally, bring the form to the Math Office so that the Department Chair can sign and date it. Make a copy for your records, and turn in the original signed copy to the Graduate School.

Do Graduation Check

The Graduate School's system for Graduation Checks is called "GAAAP" and may be accessed here:

<http://graduate.auburn.edu/GAAAP/>

Sign in the way that the instructions say, and follow the directions. When you are done, the Graduate School will know that you are planning to graduate next semester and will look over your records to make sure everything is in order. In my case, I was planning to graduate in the Spring Semester, so I submitted my Graduation Check towards the end of Fall Semester. I then heard back from the Graduate School with the Graduation Check results over the Christmas Break. (For me, the only thing that was wrong was that I had not turned in my Residency Requirement form yet; I was able to turn it in later.) At any rate, if there is anything that you have not yet done but that needs to be done, at this stage the Graduate School will hopefully let you know! If you have done everything right up until now, though, probably nothing major will be out of place.

The only other major thing that must be done before your Graduation Semester starts is this: *you must be registered for at least one credit hour during your Graduation Semester.* So, go ahead and register towards the end of the semester before your Graduation Semester. (I reiterate this point, and say a bit more about it, in the next section.)

During Graduation Semester:

Your last semester of graduate school will probably be the most hectic semester of all. There are many forms to fill out and deadlines to meet, so be sure to pay extra close attention and stay on top of things.

Once again, *you must be registered for at least one credit hour during your Graduation Semester.* (One hour of Research and Dissertation 8990 is fine, but you can register for more hours than that if you need to fulfill some remaining credit requirements.) Remember to register for classes before the semester actually starts; late registrations, though sometimes possible, are a hassle.

A random note: If you are going to attend the Graduation Commencement Ceremony (which is optional), at some point during this semester you should reserve your cap and gown at the University Bookstore in Haley Center. (The bookstore will give a deadline for cap and gown reservations.) My cap and gown cost \$57.00. Also, check that your Advisor will be able to attend the ceremony and has a cap and gown reserved; the Math Department may take care of professors' cap and gown reservations automatically, but it never hurts to check and make sure. The date and time of your graduation ceremony will be stated on the Auburn website (more on this later).

Turn in First Submission Approval Form

The Graduate School calendar will list the deadline for turning in the "First Submission Approval Form." The deadline is usually fairly early in the semester, and many things must be done before you will be ready to turn in this form, so make sure to prepare early.

At this stage, the first draft of your dissertation should be pretty much complete, and you should e-mail a copy of your dissertation draft to your committee members for their review. Your committee members may (or may not) ask you to make some revisions at this point. Then, go to the Doctoral Studies Checklist, <http://grad.auburn.edu/cs/doccklst.html>, and under section V, click the “**1st Submission Approval Form**” link. To fill out all the boxes and generate the form, you will need to type in the following information:

- 1) Your name
- 2) Your Banner ID (which is the ID # on your Student ID card)
- 3) The title of your dissertation
- 4) The names of all of your committee members

Follow the directions and the website will generate the form for you; print out the form and have your committee members sign it.

Once the form has been printed, there will also be a blank where you need to write the name of your “**University Reader**,” so we should talk about that. First, just about everything you would want to know about the University Reader is stated here:

<http://www.grad.auburn.edu/cs/outsidereader.html>

Basically, the University Reader is a professor in a different department (i.e., NOT in Mathematics & Statistics) who can offer an outside perspective, and will represent the Graduate School during the dissertation approval process. The University Reader is an important part of the process: he or she must read the dissertation, send a report about it to the Graduate School, and attend your Final Defense.

If you do not know any professors in other departments and you feel uncomfortable asking someone out of the blue, then probably your Advisor will be able to recommend a University Reader to you.

IMPORTANT NOTE: Not just any professor is qualified to be a University Reader! The Graduate School website states that the University Reader must be a member of the “Graduate Faculty.” That means *you must choose a professor from the list found here:*

<http://www.grad.auburn.edu/faculty/>

Once you have someone in mind, either you or your Advisor should contact that person to see if he or she agrees to serve as the University Reader. If so, then put that person's name in the blank on the First Submission Approval Form. (You can simply print the University Reader's name yourself; you do not need his or her signature at this stage.) You will also be asked to write the date when you plan to send a copy of the dissertation to your University Reader.

If you are not yet able to find someone to agree to be the University Reader, then there are also spaces on the form where you may nominate other professors as possible University Readers.

Finally, your Committee Chair (i.e., your Advisor) will sign at the bottom of the form. Make a copy of the form for your records, and turn in the original signed copy to the Graduate School.

Submit Dissertation Draft to Graduate School for Format Check

You must e-mail a copy of your dissertation draft to **doctoral@auburn.edu** for a format check. Usually the deadline for this is the same day as the deadline for the First Submission Approval Form; check the Graduate School calendar.

Again, note that the dissertation does not have to be 100% finished and/or proofread at this stage, but it should be a fairly complete first draft. The Graduate School will check to make sure that the formatting has been done according to their guidelines. See

http://www.grad.auburn.edu/etd_guide.html

for guidelines and the link to the Graduate School's official LaTeX template files.

Send a Copy of the Dissertation to Your “University Reader” for His or Her Approval

After you have turned in your First Submission Approval Form to the Graduate School and the University Reader has been selected, you will send a copy of your dissertation draft to the University Reader. (I simply e-mailed my dissertation to the Reader.) The Graduate School should send an e-mail to the University Reader with an evaluation form attached. The University Reader will read the dissertation and return the completed evaluation form to the Graduate School; the Graduate School will then inform you what changes (if any) the University Reader recommends. Again, see

<http://www.grad.auburn.edu/cs/outsidereader.html>

for details on this part of the review process. I suggest you keep in touch with your University Reader so that you will know when he or she has turned in the evaluation form.

It is not required that you meet the University Reader in person at this stage. However, since my dissertation was on a topic in Topology that was not easily accessible to a non-mathematician, I offered to meet with my University Reader in person and give a broad explanation of what my dissertation was about. I think this is a nice thing to do, but it is by no means required.

IMPORTANT NOTE: Once the University Reader approves the dissertation and turns in his or her evaluation form to the Graduate School, only THEN are you allowed to schedule your Final Defense. So, be sure to contact your University Reader early in the semester to ensure that he or she can get the job done in time!

Turn in Form X (to schedule Final Defense)

Once the University Reader has approved the dissertation and turned in the evaluation form, you are allowed to schedule your Final Defense (using **Form X**). Form X is not available on the Graduate School website; the Graduate School will e-mail a copy to you and your Advisor directly.

Note: You must turn in Form X to the Graduate School at least one week before the date of your Final Defense!

To fill out Form X, you will need to write basic information about yourself and your degree (Doctor of Philosophy), your committee members' names, your University Reader's name, and the date, time, and place of the Final Defense. Thus, *you need to contact all of your committee members and also the University Reader to find a date and time that will work for everyone!* Once you have a date and time in mind, talk to the secretaries in the Math Office to reserve a classroom in Parker in that timeslot. Remember to request a room with any facilities you may need, i.e., a projector or a Smartboard. (Sometimes Final Defenses take place during Seminars of a given subject area; e.g., a Final Defense in the area of Graph Theory will often take place during a Combinatorics seminar. In this case, you would not need to reserve the room on your own. Talk to your Advisor about this.)

Once you have the date, time, and place nailed down, write it on Form X. Have your Committee Chair (i.e., your Advisor) and also the Chair of the Math Department sign Form X.

Finally, after the form is completely filled out, make a copy for your records and turn in the original signed copy to the Graduate School.

Next, the Graduate School will send out "Form Y," which is just the official announcement of your Final Defense. (You don't have to do anything with this form.) This would be a logical moment, however, to e-mail the Math Department's GPO with the date, time and place of your Final Defense as well as the title of your dissertation and the name of your Advisor. (The GPO will then send out an e-mail to the entire Math Department announcing your Final Defense.)

At this stage, the Graduate School will also send you and your Advisor "**Form Z**," which you must print out and bring to the Final Defense. (I will say more on this in the next step.)

Do Final Defense (and Turn in Form Z)

Here it is; the moment you've been waiting for! Ask your Advisor what he or she expects from you for your Final Defense. You will probably be expected to give a 40-minute-or-so presentation on your research, after which your committee members may ask you questions.

NOTE: To help your committee prepare for your presentation, you are supposed to e-mail an (almost) final copy of your dissertation to all of your committee members (and to the University Reader) at least three days before the Final Defense.

Your committee members and the University Reader must be present for the Final Defense. You should print out **Form Z** in advance and hand it to your Advisor after your presentation is over. You will then leave the room and your committee members will deliberate on whether or not you passed. If you pass, then your committee will check “Satisfactory” and the committee members and the University Reader will all sign the form. (Yay!) Make some copies of the signed Form Z for your records, and then turn in the original signed copy of Form Z to the Graduate School.

NOTE: The deadline for all Doctoral Final Defenses during your Graduation Semester will be listed on the Graduate School Calendar. Obviously, try to avoid putting your Final Defense off until the last minute. (Although the Final Defense must be done by a certain date, Form Z is not usually due until a little bit later. However, I went ahead and turned in Form Z right away.)

Complete Final Draft of the Dissertation

By now, the dissertation should almost be finished. You will probably want to proofread it again before the time comes to submit the final copy. Be sure to make any last adjustments that either your committee members or your University Reader requested. (Hopefully, at this stage, your dissertation will be solid enough that no one will demand any unreasonable or drastic changes!) Also, if necessary, you should make formatting adjustments based on the feedback from the Graduate School after your Format Check. As I remarked earlier, remember to use the Graduate School’s style files (and an up-to-date LaTeX program).

People often ask me what would be an appropriate length for the dissertation. The simple answer is: it depends. My dissertation was 72 pages long (not counting preface pages) when everything was done, but often dissertations in Mathematics will be about 50-70 pages. If your dissertation is shorter than that, but your Advisor seems satisfied with what you’ve achieved, then you have nothing to worry about.

One more thing: If you're going to proofread everything carefully, be prepared to find some unexpected errors in the dissertation. (I certainly did.) Leave yourself enough time before the submission deadline so you can fix any last-minute problems that may arise. You are also bound to find plenty of typos. I stressed a lot about weeding out as many typos as I could, but here's the truth: any manuscript that is 50-70 pages long simply WILL have some typos in it! Just do your best to proofread, fix as many typos as you can, and try not to worry about it excessively.

When the final version of your dissertation is complete and you are ready to turn it in to the Graduate School, there are *three* things you must do. (Be sure you take care of these things before the deadline stated on the Graduate School calendar.) Here are the three things: 1) Turn in Electronic Thesis/Dissertation Final Approval Form to the Graduate School; 2) Turn in Final Copy of Dissertation to the Graduate School; 3) Take the Graduate School's Online Survey.

Here's each step in detail:

Turn in Electronic Thesis/Dissertation Final Approval Form to the Graduate School

Currently, the Electronic Thesis/Dissertation Final Approval Form can be found at

http://www.grad.auburn.edu/etd/approval_form.pdf

although there should also be a link to the form on the Doctoral Studies Checklist, <http://grad.auburn.edu/cs/doccklst.html>. (You may need to download the form directly to your computer; I had trouble reading the form through my web browser.)

The first few pages of this form give information about fees, copyright options, and publishing options. You will have the opportunity to choose the "Open Access Publishing" option if you want; the form will explain what this means. (I chose Open Access Publishing because I wanted my work to be widely available online, but note that this option is also more expensive and you'll have to pay the \$100 fee yourself.) You will also be given the

opportunity to request dissertation printing/binding and/or copyright registration, but those things are optional.

The only other important note at this stage is that you will have the following choice: you may release your dissertation publicly on the Internet immediately, or you may keep your dissertation private for varying lengths of time. You may prefer to keep your dissertation private for a while, e.g., if your dissertation contains some partial results that you hope will help you prove a more substantial result in the near future. That way, you can continue to work on getting that result for a few years (post-graduation) without fear of being “scooped.” In my case, because my dissertation was pretty much self-contained and I had proved most of the major theorems I’d set out to prove, I decided I would go ahead and release my dissertation immediately (“Unlimited Access”). Either way, you should talk with your Advisor about what options you should pick before you fill out the form.

The Electronic Thesis/Dissertation Final Approval form also requires basic info like your name and Student ID # (found on your Student ID card), as well as the title of your dissertation, the date you did your Final Defense, and the date you will submit the final copy of the dissertation. In the space for “Style Guide,” I just wrote the name of the style file I used, “auphd.sty,” which is the LaTeX style file that the Graduate School provided. (I talked briefly about that earlier.) You will need the names, e-mail addresses, and dated signatures of all your committee members as well. (The University Reader does *not* need to sign this form; at this stage, the University Reader’s job is already done.)

As always, make copies of this form for your records, and turn in the original signed form to the Graduate School.

**Turn in Final Copy of Dissertation to the
Graduate School (online, via
<http://etd.auburn.edu/etd/>)**

Submit the final copy of your dissertation as a .pdf file to the Graduate School’s “AUETD” website:

<http://etd.auburn.edu/etd/>

Simply follow the directions and upload the .pdf file of your dissertation. There will be a place to paste your dissertation abstract as well (although you may have to write it in plain text, as opposed to LaTeX code).

Once again, you may be asked whether you want to release your dissertation publicly on the Internet immediately, or keep your dissertation from being publicly available for some time. If they ask you this again, just give an answer that matches the answer you gave on the Final Approval Form.

Take the Graduate School's Online Survey

Finally, go to the Doctoral Studies Checklist, <http://grad.auburn.edu/cs/doccklst.html>, and find “**Survey of Earned Doctorates**” (in section VII, part F). Click on the link, follow the directions, and complete the survey. (This survey takes a while, so you should set aside at least thirty minutes to do it.) *This survey is required by the Graduate School in order for you to graduate.* When you finish, both you and the Graduate School will automatically receive an e-mail verifying that you completed the survey.

**You've finished the last step!
CONGRATULATIONS!**

You should now be ready to graduate. If you are attending the (optional) graduation commencement ceremony, don't forget to pick up your cap and gown at the University Bookstore beforehand. Visit the AU website for graduation information; currently, the website you should check may be found here:

http://www.auburn.edu/administration/registrar/helpful_resources/graduation/graduation.html

If you are attending the graduation ceremony, be sure to remind your Advisor of the date and time. Check again to make sure that your Advisor will be able to attend and will have a cap and gown.

Your official diploma will not be given to you at the ceremony; it will be mailed to you afterwards. You will provide a mailing address to the Registrar's Office at some point earlier in the semester. In my case, I received an e-mail directly from the Registrar's Office asking for my mailing address, but in the future this matter may be handled differently.

What if Something Went Wrong?...

If you mess up and miss one of the deadlines on the Graduate School calendar, before you panic, you should always talk to your contact in the Graduate School to see if it is still possible to do whatever you need to do (albeit, a little bit late). The Graduate School may be able to help you out, but there are no guarantees. Put forth your best effort to get everything done early, meet all the deadlines, and graduate on time.

Still, let's say, in the worst-case scenario, you miss some deadline and there is no way to fix it: as a result, you are unable to graduate in the semester you were hoping to. I am told that, if you still finish everything you are supposed to finish by the end of the semester, there is a way to graduate at the end of the following semester without actually being enrolled during that semester. (Some paperwork must be done to achieve this, however.) Still, keep in mind, if you want to be hired by a university that requires you to have a Ph.D. in hand by a given date, this kind of delay can throw off your plans. Be careful, and good luck!

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