

A large red square with a white border, centered on a white background. Inside the square, the text "Applying to Math Grad School" is written in white, bold, sans-serif font.

Applying to Math Grad School

Where to Apply: Academic Reasons...

- What do you want to study?
 - Specific area of interest, “pure” or “applied,” or unsure.
 - Specific person you want to work with
 - Are interesting courses / qualifying exams offered?
- What do you want to do post-graduation?
 - Teaching, Research, Industry, National Lab, Government
 - Ask programs where their alumni get jobs.
- Are there other departments (e.g. engineering, biology, etc) you can collaborate with?
- Your academic advisor / professors may recommend where to apply.
- Can you get in?
 - Schools range between “safe,” “competitive,” and “reach.” Faculty will be your best bet for determining this spectrum. Potentially: **US News & World Report** and **[AMS School Rankings](#)**

Where to Apply: Personal Reasons...

- Where do you want to live?
 - Part of the country
 - City, Suburbs, Rural
 - Near family, friends, or significant other
- Cost of Living
 - Will stipend be enough for the university's location?
 - Are you responsible for student fees? At NC State, fees for TAs are about **\$1,275 each semester**.
 - Has the math department had funding issues in the past? How many years of TA/RA funding are guaranteed in the program (provided you are in good academic standing)?
- Work/Life Balance
 - Is the grad student body supportive or competitive? What are the workload expectations of a TA/RA with a full course load?
- Talk to current graduate students at the school

What do I need for Applications...

- Personal Statement
- CV (Curriculum Vitae) / Resumé
- Recommendation Letters
- Transcript (Unofficial/Official)
- GRE scores (subject test)
- Cost
- Due Dates
- Additional Material
 - Cover letters, Course lists, etc.

Personal Statement

- Why do you want to go to **this** grad school?
 - Convey eagerness to pursue mathematical research in graduate school.
 - Customize each personal statement for the particular school.
- Why are you a good candidate for graduate school?
 - Research projects, REUs, senior projects, advanced/graduate coursework, good grades in higher-level math classes, math extracurriculars (COMAP/Putnam/Math Clubs, etc...), conferences, academic awards, teaching experience, coding, ...
- Stories about personal development, ideally relating to math.
- Role models
- Stick to the facts; childhood memories and blue sky philosophizing will not help.

Personal Statement

- Name-drop people that you know or want to work with
 - “I did a project with Dr. Johnson at NC State which made me realize I want to pursue a Ph.D....”
 - “Dr. Smith’s recent work in Uncertainty Quantification...”
- Address holes in your application / questions reviewers may have
 - Why don’t you have any graduate coursework?
 - Why did you take a gap year?
 - Why did you receive a bad grade in Calculus 1?
 - What did you do in your time away from school?
 - Why did you switch careers?
- **Proofread, proofread, proofread!**
 - Get anyone willing to provide feedback.
 - If your application is a toss-up with another, one typo can make the difference.
 - [Undergraduate Writing Center](#)

CV / Resumé

- Education
 - Include your GPA and your math GPA.
- Research Experience / Higher level coursework
 - **REUs, publications**, general field(s) of research
 - Senior thesis, honors projects, graduate classes
- Teaching Experience
 - Can also include tutoring and grading
- Extracurriculars, Relevant Experience, & Awards
 - **Internships and relevant job experience**
 - Coding languages, LaTeX proficiency
 - Scholarships, Dean's list, **Awards**
 - Putnam Exam, COMAP competition, math clubs, AMS, Pi Mu Epsilon membership, math conference presentations
 - Student government, sports, club leadership

- Maximum of 2 pages
- List everything **important** on 1st page
- Don't list something twice.

Letters of Recommendation

- Who do I ask?
 - Professors that know your ability and potential
 - Typically a professor that you've had multiple times
 - Professors with whom you have done research
- What should they write?
 - Provide suggestions of what they could mention (communication skills, research potential, etc.)
 - Consider the school you are applying to
- Inform them about deadlines and send reminders.
 - Make a spreadsheet
- Provide them your CV and draft personal statement as soon as it is available.
- **ASK EARLY**
 - Guideline: At least one month before the first application deadline.
 - The more time they have to write the letter, the more likely it is to be turned in on time

Transcripts

- Most will take unofficial transcripts
- Applications require transcripts from everywhere you received college credit.
 - Community College, Study Abroad, Other institutions
- Official transcripts take time and money
 - 24-48 hours to process for NC State
 - \$12 charge for NC State
 - Ask if they accept e-Transcripts
- Acceptance is contingent upon receiving an official transcript and/or proof of graduation.

General GRE

ets.org/gre

- Can be taken anytime
- Verbal and quantitative sections (English and Math)
- Many schools will have “minimum” or “average” scores listed
 - If not, reach out to department administrator/coordinator
 - Quantitative: 80th percentile or above is good; 90+ is ideal.
 - Verbal scores can be **very** helpful!
 - If you have a low verbal score, ask your letter writers to discuss your verbal communication skills.
- Can take multiple times and decide which scores to send
- Immediate scores

Subject Test

- Some schools require it, some recommend it, others don't care
 - Know which ones do which
 - Do not feel obligated to send "bad" scores if optional
- Test dates in September, October, and April
 - 5 week waiting period for results
- Can take multiple times and decide which scores to send

Test Dates	Registration Deadlines			Scores Available	
	Regular Deadline	Late Deadline ¹	Supplementary Test Center and Monday Administration Deadline ²	Online	Approx. Score Report Mailing Date
09/12/20	08/07/20	08/14/20	07/24/20	10/12/20	10/23/20
10/17/20	09/11/20	09/18/20	08/28/20	11/16/20	11/27/20
04/10/21	03/05/21	03/12/21	02/19/21	05/10/21	05/21/21

ets.org/gre

Costs

- Taking the GRE and Subject Test
 - GRE - \$205
 - Subject Test - \$150
 - Sending scores - \$27 per school
 - First four schools are free if indicated on exam
- Application Cost
 - Around \$75, depends on school and year
 - Some schools are more than \$100
 - Lots of applications will add up

Due Dates

- Know them!
- Make a spreadsheet and send it to your letter writers.
 - Send reminders
- Application Deadline vs. Application Material deadline
 - When do you need to hit “Submit” versus when does the school need to receive materials

Additional Materials (only required by some programs)

- Cover Letters
- Course Lists
 - Every math class...
 - Title
 - Grade
 - Instructor
 - Book used
 - Brief Description

Above All

KEEP ORGANIZED!!!