First Year Graduate Student Seminar

September 2, 2015

Today:

Goals of the FYGSS; program information; applying for fellowships

Next meeting:

September 16: David Manuel will talk about grading and help session assignments
Outline

- Goals of the FYGSS
- Additional Seminars
- Grading and help session assignments
- Applying for Fellowships
- Language Requirements
- Annual Review
- Feedback
- Calendar for the Semester

This talk is available at the following web site:
http://www.math.tamu.edu/~phoward/graduate/materials.html
Goals of the FYGSS

• Give first-year students an overview of the department, and information that will help them choose a research topic and advisor.
• Address common questions associated with graduate study in mathematics.
• Give students information about the mathematics profession.
• Give first-year students from different areas (mathematical and geographical) a chance to meet and talk.
• Provide the graduate director with an opportunity to communicate with first-year graduate students (announcements, reminders, etc.).
• Provide first-year graduate students with an opportunity to ask questions about the program.
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Talks on Faculty Research Groups

• Very roughly, we have 11 research groups in the department.
Research Groups

- Algebra and combinatorics (10,14)
- Applied mathematics and interdisciplinary research (11,24)
- Approximation theory (5,1)
- Functional analysis (10,22)
- Geometry and topology (8,5)
- Groups and dynamics (3,5)
- Number theory (4,6)
- Numerical analysis and scientific computation (7,21)
- Partial differential equations and mathematical physics (14,9)
- Probability theory (1,1)
- Several complex variables (2,3)

(Number of faculty, Number of PhD students)
Talks on Faculty Research Groups

- Very roughly, we have 11 research groups in the department.
- Faculty members talk for about 20 minutes about their research area, including: a brief discussion of the mathematics, relevant coursework, individual faculty research programs.
- The goal is both to inform students about research in their area, and to give students an idea of the research that goes on in other areas.
- I.e., don’t just attend the talks in your area.
- Students should also attend some of the faculty talks in the GSO seminar.
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FAQs

• How should I prepare for the qualifying exams?
• Can I get summer funding?
• How can I get a fellowship? How can I get supported on a grant?
• What are my responsibilities as a TA? How should I balance these responsibilities with my studies?
• How do I go about choosing an advisor?
• What sorts of jobs will be available to me when I graduate, and how do I go about applying for them?
• What should I start doing now to get ready for the job search?
• Should I join mathematical societies and organizations?
• More?
Fall 2015 FYGSS

• Sept. 2: Goals of the FYGSS; program information; applying for fellowships
• Sept. 16: David Manuel will talk about grading and help session assignments
• Sept. 30: David Kerr will talk about department research in functional analysis; Frank Sottile will talk about department research in algebraic geometry
• Oct. 14: Kaitlyn Phillipson will talk about outreach opportunities; I’ll talk about other things students can start doing now to prepare for the job market
• Oct. 28: Panel discussion: Adjusting to graduate school
• Nov. 11: Panel discussion: preparing for qualifying exams
• Dec. 3: Preparing for Spring 2016
Spring 2016 Topics

• Student panel discussions: Finding an advisor and advice from graduating students
• The current job market for mathematicians
• Faculty research groups
• Summer 2016 and future years in the program
Additional Seminars
GSO Seminar

• The Graduate Student Organization (GSO) seminar meets on Thursdays 4:00-5:00 in Blocker 506A.
• “Come for the cookies, stay for the pizza.”
• This is a good chance to meet your fellow graduate students and to learn about the research programs of professors in the department.
• For more information: http://gso.math.tamu.edu
Industrial and Applied Math Seminar

• The department’s SIAM Student Chapter is co-organizing (with the graduate program) a seminar on applications of mathematics outside of academia.

• This seminar will begin meeting Spring 2016.
More Seminars

• Information about all seminars in the department is available on the seminars web page:
  
  http://www.math.tamu.edu/seminars

• Students should subscribe to the seminars mailing list. The guide for this is here:
  
  https://www.math.tamu.edu/computing/help/majordomo.html
Grading and Help Session Assignments
Grading and Help Session Assignments

• David Manuel will talk about these assignments in more detail in the next FYGSS.
• For both of these assignments, the expected workload is 10 hours per week, but for grading assignments this can be an average.
• Pick up a textbook for your assignment from Judy Muzny in Blocker 227.
Grading Assignments

• Students with grading assignments should already have contacted the professor they’re grading for. Make sure you know:
  – What the schedule will be for collecting and returning graded work
  – Who will keep track of the grades
  – Any grading preferences the professor has
  – If you’ll be asked to grade any exams (including the final)
Help Session Assignments

• Pick up a nametag in Blocker 227, and wear it during every help session. Also, pick up sign-in sheets.
• Don’t make students hunt you down in the back of the room. If you’re not working with a student, introduce yourself to students as they come in. (If there are no students, you can work on homework etc.)
• Do not tutor students for a course that’s not covered by your help session. Direct them to the appropriate help session.
• Do not (!!) tutor for pay during a help session.
Applying for Fellowships
Why Apply for Fellowships?

• $$$ and reduced or no TA duties.
• Prestige (looks good on your CV).
• Practice: Most researchers in the mathematical sciences continue to apply for grant funding throughout their careers, and it’s beneficial to get accustomed to this process as soon as possible.
  
• The more applications and proposals you write, the better you’ll get at writing them.
• Also, writing a fellowship proposal forces you to take a step back and think more broadly about what you genuinely want to be working on.
• But mostly $$$ and reduced TA duties.
What Fellowships are Available?

• The American Mathematical Society (AMS) collects information about fellowship opportunities in the mathematical sciences on its web site
  – [http://www.ams.org/programs/funding](http://www.ams.org/programs/funding)

• The information here is scattered, and there is a lot of repetition, but it’s worth sorting through. Start with *Stipends for Study and Travel*, followed by *Programs for Graduate Students and Recent PhDs*. 
NSF Graduate Fellowships

• This is the single biggest source of math graduate fellowships in the country.
• In 2015, 45 fellowships were awarded in math, out of 2000 total awards.
• There were 16,500 applications (but only about 370 in math).
• 17 fellowships were awarded to students from Texas A&M.
• None in math.
NSF Graduate Fellowships

• Awards in math by area:
  – Topology: 8
  – Algebra, number theory, and combinatorics: 14
  – Analysis: 3
  – Applied math: 11
  – Computational math: 6
  – Geometric analysis: 2
  – Math biology: 1

• More information about Awards:
NSF Graduate Fellowships

• Unfortunately, there are restrictions on who can receive these fellowships: (1) applicants must be US citizens, nationals, or permanent residents, and (2) students must apply no later than fall semester of their second year of graduate school. (Students with MS degrees cannot apply.)
• The due date is Oct. 30.
• The math department awards a $250 book/travel allotment to students who apply and receive honorable mention.
• More information:  
  http://www.nsfgrfp.org/
Language Requirements
English Language Requirement

• International students must have English Proficiency Certification to serve as teaching assistants, and the department expects students to achieve this during their first year.

• Certification can be obtained in three ways:
  – Completion of an undergraduate degree at an accredited U. S. college or university (Master’s degree is not sufficient)
  – Scoring at least 80 on each of four sections (composition, listening, oral, reading) of the English Language Proficiency Exam (ELPE)
  – Obtaining an A or B in English Language Institute (ELI) courses at the 300-level or higher.

• The department only pays for ELI courses for first year students.
Foreign Language Requirement

• Has been eliminated.
Annual Review
Good Standing

Many department policies specify that a student must be in *good standing*, so it’s worth reviewing what that means. In order to be in good standing PhD students should:

- Maintain a 3.0 or better cumulative GPA every semester
- Adequately perform their TA duties every semester
- Pass all breadth requirement courses with a B or better during their first two years
- Pass two qualifying exams during their first two years
- (International students) Obtain English Proficiency Certification during their first year
- Receive positive progress reports from their advisor every year after filing a degree plan
- Not violate the ethics code of the university
Review Procedure

• The graduate committee carries out a full progress evaluation for each student during the summer. This includes a report from the student’s advisor (once the student has an advisor), and a full review of the student’s file.

• In addition the graduate committee reviews the standing of each graduate student at the end of each semester.
General Punitive Action

- If it is judged that a student is no longer in good standing, the student will be placed on probation for the next semester.
- In practice, there is no penalty associated with probation (no loss of funding).
- At the end of the probation semester, if the student is still not in good standing, the department will not pay the student’s tuition for the next semester. Generally, the student will still be supported on an assistantship during this semester.
- At the end of this second semester, if the student is still not in good standing, the department will no longer support the student with either tuition or a stipend.
Example Case

• Students should pass two qualifying exams during their first two years in the program.
• For a student who begins the program Fall 2015 the last chance to complete this requirement is August 2017.
• If a student who starts Fall 2015 does not pass two qualifying exams by August 2017 he/she will be put on probation for Fall 2017.
• If the student has not passed two qualifying exams by January 2018 his/her tuition will not be paid Spring 2018. The student will generally still have an assistantship.
• If the student has not passed two qualifying exams by August 2018 all department support will be dropped.
Tuition Policy

• The upper administration of the university (i.e., the provost’s office) pays tuition as follows:
  – 5 years for students entering with only a baccalaureate degree
  – 4 years for students entering with a master’s degree

• For students beyond this mandate, but still in good standing with the department, tuition is paid from alternative sources, depending on the availability of funds. So far, we have been able to pay tuition in all such cases.

• This tuition schedule does not affect assistantships. Students beyond 4 or 5 years who are still in good standing with the program will continue to be supported on assistantships.
Feedback
Feedback

Students entering the program go through an enormous amount of stuff very fast, and it helps if we understand what works (is useful, efficient, etc.) and what doesn’t. In chronological order:

• Tuesday – Thursday, Aug. 17, 18: ISS (International Student Services) check-in and orientation.

• Saturday, Aug. 15 or 22: ELPE (English language proficiency exam).

• Thursday, Aug. 20 or 27: International Student Conference (ISC).

• Friday, Aug. 21 or 28: University level graduate student orientation, 8:00 – 5:00.

• Thursday, Aug. 27, University level TA workshop, 8:00 – 5:00.

• Anything else?
Calendar for the Semester
Dates to Keep in Mind

• Friday, Sept. 4 (this Friday) is the last day to add or drop a class with no record
• Wednesday, Nov. 18 is Bonfire 1999 Remembrance Day
• Friday, Nov. 20 is the Q-drop deadline: this is the last day a class can be dropped with no letter grade assigned
• Thanksgiving holiday is Wed. through Friday, Nov. 25-27.
• Wednesday, Dec. 9 is the last day of classes for the semester
Things to Watch For

• Early in the semester, Monique will ask students to characterize their intended research areas (according to our 11 categories).
• Roughly midway through the semester Monique will ask students to sign up for January qualifying exams.
• Toward the end of the semester students will register for Spring 2016 classes, including possibly ELPE classes.