

A low-angle photograph of the Texas State Capitol dome, which has a green patina. The building is made of light-colored stone and features arched windows. The scene is framed by out-of-focus trees with yellow and green leaves, suggesting an autumn setting. A semi-transparent pinkish-red banner is overlaid across the middle of the image.

Texas A&M University Department of Mathematics

2021 Graduate Students Orientation

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All the talks today will be available at <https://www.math.tamu.edu/~bonito/>

Click on graduate Programs



Outline

- Schedules and timelines
- Brief Facts about Texas A&M
- Overview of the department
- Initial Course Scheduling
- Miscellanies



Schedules and Timelines

Today's schedule

- Overview of the programs; discussion of course scheduling (this presentation)
- Graduate Teaching Assistant (GAT) duties and assignments, David Manuel – Director of the GAT training and assignments.
- Computer systems, David Manuel
- Graduate Student Organizers and Representatives
 - GSO, Jakob Mashburn
 - AMS Student Chapter, Manasinee Bezbaruah
 - SIAM Student Chapter, Madison Sheridan
 - AWM Student Chapter, Priyanga Ganesan

Do not Forget

- International students check-in

<https://tamu-iss.terradata.com/>

- English Language Proficiency Exam (ELPE)

Our deadline is August 11

<https://testing.tamu.edu/Exams/ELPE>


- University level graduate student orientation

Choose between August 20 or August 27

<https://grad.tamu.edu/New-Current-Students/New-Graduate-Student-Orientation>

Schedule for the Semester

- Math Graduation – Welcome – Enjoy ceremony: Saturday Aug. 14
- Fall first day of classes: Monday Aug. 30
- Last day to register for Fall 2020 classes without a penalty: Friday Aug. 27
- Add/Drop period without penalties: Monday Aug. 30 – Friday Sept. 3
- All Fall semester bills due by 5:00 p.m: Monday Sept. 6
- First meeting of the First Year Graduate Student Seminar (FYGSS):
Thursday Sept. 2 in Blocker 628 at 5:30pm (pizza)
- Last day of classes: Wednesday, Dec. 8
- Final Exams: Friday Dec. 10 – Wednesday Dec 15



Brief Facts about Texas A&M

About Texas A&M

- Founded in 1876
- A&M originally referred to “agriculture and mechanics,” but in 1963 this interpretation was dropped
- Among the 5 largest universities in the US, public and private
- About 70,000 students (College Station campus), including about 15,000 graduate and professional students
- 1st in nation for most graduates serving as CEOs of Fortune 500 companies
- 2 Nobel Prize winner
- 6 National Academy of Sciences Members
- \$1.13 billion in research expenditures
- In 2012 Texas A&M joined the Southeastern Conference (SEC)
- If you yell “Howdy” anywhere on campus, everyone within earshot will stop what they’re doing and yell it back

Campus Map

An interactive campus map is available at the following site

aggiemap.tamu.edu

Student ID

- Students can apply for a Student ID on-line at the following site

myaggiecard.tamu.edu

- Cards can be picked up in the Aggie Card Office in Student Business Services, General Services Complex (GSC), Suite 2801.



Overview of the Department

People

- ~ 70 Professors
- ~ 35 Academic Professional Track faculty
- ~ 15 Visiting assistant professor and Visitors
- ~ 95 PhD students
- ~ 60 MS students (MS-Trad, MS-Dist, MS-QF, MS-Data)

The department graduates about 16 PhD students, 10 campus MS students, and 15 distance MS students each year.

Research Groups

- Algebra & Combinatorics
- Applied Math & Interdisciplinary
- Approximation Theory
- Functional Analysis
- Geometry & Topology
- Groups & Dynamics
- Number Theory
- Numerical Analysis & Scientific Computation
- PDE & Math Physics
- Probability
- Several Complex Variables



Active Seminars

- Algebra and Combinatorics
- Algebraic Geometry
- Banach Spaces
- First Year Graduate Students
- Free Probability
- Geometry
- Graduate Student Organization
- Groups and Dynamics
- Inverse Problems and Machine Learning
- Linear Analysis
- Linear Analysis
- Mathematical Physics and Harmonic Analysis
- Noncommutative Geometry
- Nonlinear Partial Differential Equations
- Number Theory
- Numerical Analysis
- Probability
- Many Working seminars
- Many Colloquium series



Initial Course Scheduling

MS Schedules

- For MS students, course schedules are determined by the MS track chosen
 - Traditional
 - Teaching
 - Computational
 - Industrial
 - Math Biology
 - Requirements for these tracks
- <http://www.math.tamu.edu/graduate>
- All of them have sequence requirements, see PhD schedule for additional info.
 - Usual load is 9 credits per long semester

PhD Schedules

- Usual load 9 credits per long semester and 3 per summer term
- For PhD students, first-year schedules are mostly determined by the qualifying-exam and breadth requirements. These are characterized by four broad categories
 - Algebra, discrete math, number theory
 - Real and complex analysis
 - Differential geometry, topology
 - Applied and numerical analysis

Qualifying Exam Requirements

- Students must pass two qualifying exams from two different areas by the end of their second year in the program (one before 1.5y).
- Each qualifying exam is based on a two-semester sequence.
- The five options are
 - Algebra (M653-M654)
 - Applied and Numerical Analysis (M617-M618)
 - Complex Analysis (M617-M618)
 - Real Analysis (M607-M608)
 - Differential Geometry and Topology (M636-M622)

<https://www.math.tamu.edu/graduate/phd/requirements/QualBreadth.html>

Breadth Requirements

- As a breadth requirement, students must take at least one approved course from the two areas they do not take qualifying exams in.
- Students who have already completed introductory level courses in a breadth area should take a more advanced course in the area.

Example 1: Applied Math

- Any student in applied math will take the applied/numerical analysis qualifying exam and this is based on two courses
 - M641 – Analysis for Applications I
 - M610 – Numerical Partial Differential Equations
- Many students in applied math will take the analysis qualifying exam, which is based on
 - M607 – Real Variables I
 - M608 – Real Variables II

Example 1: Applied Math

- If a student takes the applied/numerical and analysis qualifying exams, he/she will need to fulfill breadth requirements in two areas
 - Algebra, discrete math, number theory
 - Differential geometry, topology
- Some options for algebra, discrete math, number theory
 - M653: Algebra I
 - M626: Analytic number theory
- Some options for differential geometry, topology
 - M622: Differential geometry I
 - M636: Topology I

Example 1: Applied Math

Here is an example first-year schedule:

- Fall 2020
 - M607, Real Variables I
 - M641, Analysis for Applications I
 - M653, Algebra I
- Spring 2021
 - M608, Real Variables II
 - M610, Numerical PDE
 - M642, Analysis for Applications II

This student would be prepared to take two qualifying exams and would only have one breadth requirement left for the second year.

Example 2: Algebraic Geometry

- Any student studying algebraic geometry will take the qualifying exam in algebra, which is based on the courses
 - M653-M654: Algebra I-II
- Many students in applied math will take the differential geometry and topology qualifying exam, which is based on
 - M622 – Differential Geometry I
 - M636 – Topology I

Example 2: Algebraic Geometry

- If a student takes the algebra and differential geometry / topology qualifying exams, he/she will need to fulfill breadth requirements in two areas
 - Real or complex analysis
 - Applied / Numerical Analysis
- Some options for real and complex analysis
 - M607: Real variables I
 - M617: Theory of functions of complex variables
- Some options for applied and numerical analysis
 - M609: Numerical analysis
 - M610: Numerical methods for partial differential equations
 - M641: Analysis for applications

Example 2: Algebraic Geometry

Here is an example first-year schedule:

- Fall 2020
 - M607, Real Variables I
 - M636, Topology I
 - M653, Algebra I
- Spring 2021
 - M622, Differential Geometry
 - M648, Computational algebraic geometry
 - M654, Algebra II

This student would be prepared to take two qualifying exams and would only have one breadth requirement left for the second year.

Advisors and Next Step

Track	Contact
MS trad and PhD	Andrea Bonito grad.director.math@tamu.edu
MS-QF	Gregory Berkolaiko berko@math.tamu.edu
MS-Data	Simon Foucart foucart@math.tamu.edu

- Send me an email with:
 - The quals you are thinking of attempting (PhD)
 - Which track you are thinking of following (MS)
 - Your fall schedule proposal
 - Whether you want to meet with me to discuss further
- **Deadline: Wednesday August 11**

HOWDY and OGS

HOWDY.TAMU.EDU: Register to classes

A registration tutorial is available at

<http://registrar.tamu.edu/Courses,-Registration,-Scheduling/Registration-Enrollment-Information/Registration-Tutorials>

but you will see a presentation later.

OGSDPSS.TAMU.EDU: Degree plans and petitions submissions



Miscellanies

Email

You should have a university email: netid@tamu.edu

Configuration, and in particular forwarding to your TAMU Google account via

gateway.tamu.edu

To the extent possible, you should check this account at least once each day while in the program.

SUPPORT: math.support@tamu.edu

Personal Webpage

Options:

- Google Sites
- People@TAMU
- Non TAMU

sites.google.com

people.tamu.edu

Send an email to jyashafer@tamu.edu once you have set up your website so we can link it from our department webpage.

SUPPORT: math.support@tamu.edu

Scams and Frauds: Targets

- Incoming students, and especially incoming international students, are often targeted by scams and frauds.
- These are typically initiated by phone or email, and can involve
 - Passport and visa status
 - Credit cards
 - Banking
 - US Taxes
 - Computer accounts
 - Etc.

Scams and Frauds: How

- Individuals perpetrating such activities can be highly aggressive and threatening.
- Some common rules of thumb
 - No reputable agency will call you and ask for information such as a credit card number or social security number, so if this happens, it's a scam
 - Double check links in emails you receive to ensure they're valid; the safest thing is to look up the agency's contact information and re-type it.
- If you suspect you are being targeted, please contact me immediately.

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