

2026 Spring Math 1580.730 Survey of Math with Applications & UGMT

January 12 – May 8

Instructor Information

Name: Shafeena T Khan

Class Meets: Matt Room 312; Mon/Wed/ Fridays 1pm-1:50pm

Office Location: General Academic Building (GAB) Room 407

Office Hours for Student Support: Mon/Wed 11am-12pm Sage 120A, Tues/Thu 3pm-4pm GAB 407 others by appointment.

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I'm here to support your learning and success in this course. During office hours, you can ask questions, review content, or get help with assignments. If my office hours conflict with your course schedule, we can schedule a mutually convenient time, connect with me.

How to Contact Me

Please reach out whenever you have questions, need clarification, or want to let me know about anything affecting your participation in the course. There are two ways to contact me:

- **Canvas Inbox (Preferred):** This is the fastest way to reach me.
- **UNT Email:** Shafeena.khan@unt.edu
- If you choose to email, include “MATH 1580.730” in the subject line and use your official UNT email account. Email sent from any other account may not be addressed.

You can expect a response within **one business day**. If you don't hear back, feel free to send a follow-up message.

Please remember to keep all communication respectful and professional, following [UNT's General Online Communication Guidelines](#).

Course Overview

This course is designed to build your mathematical problem-solving skills through engaging, real-world applications. You'll explore topics including personal finance, apportionment methods, set theory, probability and statistics, and graph theory. Beyond the math itself, you'll strengthen critical thinking, adaptability, and resilience – skills that will benefit you far beyond this class.

Catalog Course Description

3 hours. Topics include probability, statistics, algebra, logic, and the mathematics of finance. Additional topics are selected from geometry, sets, cryptography, fair division, voting theory, and graph theory.

Emphasis on applications. Recreational and historical aspects of selected topics are also included. Technology is used extensively.

Note: This course does not serve as preparation for calculus, science, engineering, or business courses.

Course Prerequisite and Other Readiness Expectations

- This section requires corequisite enrollment in a corresponding UGMT 1300 section and approval from the [TSI Office of Academic Advising Services](#).
- A consistent learning ethic and willingness to stay engaged with the course material. In math courses, regular practice, persistence, and thoughtful diligence are essential for success.
- Digital Literacy
 - Navigate Canvas.
 - Complete assignments online.
 - Download and print required course materials.

Course Structure

Lecture Class

This course meets in person on campus five (5) days per week. To create a positive learning environment, please arrive on time, stay for the entire class, and be respectful of your classmates by minimizing distractions. Your punctual attendance and active participation helps you and the whole class get the most out of our time together. There is **no remote or online option** for this course.

The TSI section includes two instructional components: Lecture three (3) days per week and UGMT two (2) days per week.

UGMT Class

UGMT 1300 is an integral and graded part of your MATH 1580 requirement and success. The lecture and UGMT will be seamless. Its purpose is to provide you with additional instructional support. Check your schedule to determine your UGMT section.

Section 731 T Th 1 PM – 1:50 PM WH 312

Section 732 T Th 2 PM – 2:50 PM WH 312

The course topics are structured into six content modules. The course begins with the first content module in Canvas open. I will open subsequent modules as we progress.

Course Objectives

Upon completion of this course, the successful student will be able to:

- Solve problems involving voting and apportionment methods.
- Apply mathematical models to solve personal finance problems.
- Apply set theory concepts and skills to create Venn diagrams and effectively solve problems.
- Interpret and analyze interpretations of data.
- Solve problems involving fundamentals of probability and counting techniques.
- Apply graph theory principles to solve real-world application problems.

Required Course Materials

Pearson MyLabs Math (MLM) Requirement

This course requires the purchase of access to Pearson MyLabs Math (MLM). MLM is the required online platform for most graded homework and essential course materials. Purchasing MLM access is required for successful course completion.

MLM includes:

- Homework assignments
- The e-text: *Thinking Mathematically* by Robert Blitzer (8th Edition)
- Additional learning resources

Registration & Purchase Instructions

Register **once** for MLM using the Access Pearson link in Canvas (left-hand navigation). To receive credit, register using your official UNT email address and official UNT name.

- ◆ Credit is awarded only for work submitted under the *first MLM account you create*.
- ◆ Work completed in additional accounts, except the first trial account, or accounts created with non-UNT email addresses cannot be transferred and will not receive credit.

Deadline: Register by the second day of the term. See the Start Here module in Canvas for full instructions.

Trial Access: A one-time **14-day no-cost trial** may be used if you have not previously used a trial for this course. Full access must be purchased before the trial ends to avoid loss of progress or credit.

Note-taking Materials

- Fill-in lecture notes: Available on Canvas.
- Additional materials: Paper and pencil to take notes of lessons and learning activities.

Calculator

You may use a TI-36 or a basic graphing calculator (TI-84 or equivalent). I provide instructional support for only these models.

Technology Requirements

To complete this course, you must have

- A desktop, laptop, or tablet that is compatible with Canvas and required software.
-  **Note:** Smartphones are **not** sufficient for completing coursework.
- Reliable internet access is essential.
- Access to Microsoft Excel through UNT Office 365: [Microsoft Office 365](#) .
- See AI Policy under Course Policies.

Check [Canvas Technical Requirements](#) to ensure your device is compatible.

Course Evaluation & Grading

Evaluation

Your grade in this course is determined by your performance on the following components:

- Homework (MLM and other assignments) – 20%
- Midterm Exams (average of all) – 60%
- Final Exam – 20%

Grades will be posted in the Canvas Grades tab throughout the course. The Totals column is only an estimate until all assignments are entered, and the course grade is calculated per the evaluation criteria.

Course Grading Scale

Letter Grade	Percentage Range	Description
A	90–100%	Outstanding, excellent work
B	80–89%	Good, impressive work
C	70–79%	Solid, college-level performance
D	60–69%	Below average, needs improvement
F	Below 60%	Unsatisfactory, does not meet minimum criteria

UGMT Grading Scale

Letter Grade	Math 1580 Course Grade Range	Description
P	60–100%	Pass – Earns UGMT 1300 credit
NP	Below 60%	No Pass – Does not earn UGMT 1300 Credit

Grading Philosophy

Your course grade is based entirely on your individual performance on graded assignments and assessments. I do not grade on a curve, as doing so would compare your results to others. Instead, I encourage you to collaborate with peers to deepen your understanding while focusing on your own progress.

Resources for Success

College math success doesn't happen in isolation. Support and collaboration make a big difference. Below are key resources to help you stay on track and strengthen your understanding:

- **Instructor Support:** Message me through Canvas Inbox. I respond to most student messages in one business day.
- **Study Groups:** Use the [Navigate Study Buddy](#) tool to connect with classmates and study together. Collaborative learning strengthens understanding.
- [UNT Math Lab](#): Free math tutoring in a welcoming environment.
- [The Learning Center](#): Academic coaching, workshops, and tutoring to support your success across all courses.

Course Components

Homework – Learn by Practice!

Homework assignments are designed to provide you the practice needed to learn and retain new content. Most modules include multiple assignments per week, beginning the first day of class.

All assignments are accessed directly on Canvas. Keep a dedicated notebook for your math work, where you write out steps for each exercise. This organization supports better understanding and exam preparation.

- **Attempts:** Most MLM homework exercises allow 3 attempts per question. Questions with only two or three answer choices allow only 1 attempt.
- **Due Dates:** MLM assignments are due by 11:59 PM, the class period following the content. If the due times conflict with your schedule, work ahead.
- **Late Work Policy:** This class does not accept late work. However, your three lowest homework scores will be dropped at the end of the term.
- **MLM HW Grace Period:** To support your learning, you can submit most MLM assignments for up to 70% credit until 8:00 am on the Monday following the week it was due. To access missed assignments, use the password: **late**.

In addition to MLM homework, this category may include other graded assignments on Canvas, such as learning support activities, which also count as a homework assignment.

Exams

You have four (4) exams, three (3) midterm exams and a final exam. The midterm exams are **tentatively** scheduled as follows. Any changes to an exam date or exam content will be announced in class.

Exam 1 – Friday, Feb 13 (Module 1 & Module 2)

Exam 2 – Wednesday, Mar 25 (Module 3 & Module 4)

Exam 3 – Friday, Apr 24 (Module 5 & Module 6)

Final Exam – See [Final Exam Schedule](#) for date and time, comprehensive.

Any changes to exam dates or content will be announced in Canvas.

Exam Policies

Exams must be taken in class as scheduled or a grade of zero will be assigned.

Missed exams cannot be made up. However, if you have a university-excused absence (Policy 06.039) and provide official documentation within two business days, your final exam score may replace the missed exam grade

You may request to take an exam early by messaging me via Canvas Inbox at least one week before the scheduled date.

Extra Credit Opportunities

You have two ways to earn extra credit in this course: by completing Study Plan quizzes before each midterm exam and by achieving high scores on Final Exam review homework assignments. These opportunities are designed to reward consistent effort and strong preparation.

Study Plan Quizzes – Midterm Exam Bonus

Each exam covers two modules, and each module includes a **timed Study Plan quiz in MyLabs Math (MLM)**. These are not required but offer an excellent way to review key concepts and earn extra points toward your exams.

- Quizzes close at 11:59 PM the day before the exam.
- You may attempt each quiz up to five times.
- Your highest score determines your bonus.
- Bonuses from both Study Plan Quizzes are combined and applied to the corresponding exam.

Score Achieved	Bonus Points Toward Exam
90% or higher	+5 points
80–89%	+4 points
70–79%	+3 points
Below 70%	No bonus

Final Exam Review Homework – Final Exam Bonus

You will complete three comprehensive review assignments in MLM to prepare for the final exam. These assignments are required and graded.

You can also earn bonus points on the final exam based on your performance:

Reviews Completed with $\geq 90\%$	Bonus Points on Final Exam
1	+3 points
2	+6 points
3	+10 points

Exam Grade Replacement Option

If you earn all 10 bonus points on the final exam (by scoring 90% or higher on all three review homework assignments), you may replace one low module exam grade with your final exam score—if the final exam grade is higher.

Consistently completing your assignments, preparing for exams, and taking advantage of engagement and extra credit opportunities will position you for success in this course.

~This course does not accept late work regardless of the reason.~

Changes to Syllabus

I will post any changes to the syllabus as an Announcement on Canvas.

Course Schedule

Schedule is subject to change and updates will be announced in class. Assignments in MyLabs Math (MLM) are due by **11:59 PM** of the class day following the lesson. Most missed MLM assignments can be completed for up to 70% credibly if submitted by 8 am on the Monday following their due date.

Week 1

Date	Scheduled Content	Other Assignments
1/12/2026	Course Introduction & Problem-Solving	
1/13/2026	UGMT	
1/14/2026	1.1 Voting Methods	MLM Orientation
1/15/2026	UGMT	
1/16/2026	1.2 Flaws of Voting Methods	Syllabus Quiz

 Week 2

Due Date	Scheduled Content	Other Assignments
1/19/2026	MLK Jr. Holiday – University Closed	
1/20/2026	UGMT	
1/21/2026	1.3 Apportionment Methods Part 1 1.3 Apportionment Methods Part 2 (Canvas)	
1/22/2026	UGMT	
1/23/2026	1.4 Flaws of Apportionment Methods	

 Week 3

Date	Scheduled Content	Other Assignments
1/26/2026	2.1 Percents, Sales Tax, and Discounts	
1/27/2026	UGMT	Module 1 Study Plan
1/28/2026	2.2 Simple Interest, 2.3 Compound Interest	
1/29/2026	UGMT	
1/30/2026	2.4 Methods of Saving: Investments	

 Week 4

Date	Scheduled Content	Other Assignments
2/2/2026	2.5 Basics of Loans, Parts 1, and 2	
2/3/2026	UGMT	
2/4/2026	Catch-up, Get ahead	
2/5/2026	UGMT	
2/6/2026	2.6 Income Tax	

 Week 5

Date	Scheduled Content	Other Assignments
2/9/2026	2.7 Federal Student Loans (Canvas)	
2/10/2026	UGMT	
2/11/2026	Wrap-up	Module 2 Study Plan
2/12/2026	UGMT	
2/13/2026	EXAM 1 (Mod 1 & Mod 2)	

 Week 6

Date	Scheduled Content	Other Assignments
2/16/2026	3.1 Basic Set Concepts	
2/17/2026	UGMT	
2/18/2026	3.2 Subsets	
2/19/2026	UGMT	
2/20/2026	3.3 Set Operations & Venn Diagrams	

 Week 7

Date	Scheduled Content	Other Assignments
2/23/2026	3.4 Set Operations & Venn Diagrams w 3 Sets	
2/24/2026	UGMT	
2/25/2026	Catch-up, get ahead	
2/26/2026	UGMT	
2/27/2026	3.5 Surveys	

 Week 8

Date	Scheduled Content	Other Assignments
3/2/2026	4.1 Gathering, Organizing, and Visualizing Data	
3/3/2026	UGMT	Module 3 Study Plan
3/4/2026	4.2 Measures of Central Tendency	
3/5/2026	UGMT	
3/6/2026	4.3 Measures of Dispersion	

Spring Break March 9 – March 15

 Week 9

Date	Scheduled Content	Other Assignments
3/16/2026	4.4 The Normal Distribution	
3/17/2026	UGMT	
3/18/2026	4.5 Applications Involving the Normal Distribution	
3/19/2026	UGMT	
3/20/2026	4.6 Scatter Plots, Correlation, and Regression Lines	

 Week 10

Date	Scheduled Content	Other Assignments
3/23/2026	Wrap-up	Module 4 Study Plan
3/24/2026	UGMT	
3/25/2026	EXAM 2 (Mod 4 & Mod 5)	
3/26/2026	UGMT	
3/27/2026	5.1 Counting Methods 1: FTC and Permutations	

 Week 11

Date	Scheduled Content	Other Assignments
3/30/2026	5.2 Counting Methods 2: Combinations	
3/31/2026	UGMT	
4/1/2026	5.3 Fundamentals of Probability	
4/2/2026	UGMT	
4/3/2026	5.4 Probability Involving Counting Methods	

 Week 12

Date	Scheduled Content	Other Assignments
4/6/2026	5.5 The Additional Rule, the Complement Rule, and Odds	
4/7/2026	UGMT	
4/8/2026	5.6 Conditional Probability and the Multiplication Rule	
4/9/2026	UGMT	
4/10/2026	5.7 Expectation	

 Week 13

Date	Scheduled Content	Other Assignments
4/13/2026	6.1 Graphs Paths, and Circuits	
4/14/2026	UGMT	Module 5 Study Plan
4/15/2026	6.2 Euler Paths and Euler Circuits	
4/16/2026	UGMT	
4/17/2026	6.3 Hamilton Paths and Hamilton Circuits	

 Week 14

Date	Scheduled Content	Other Assignments
4/20/2026	6.4 Trees – late accepted until 8am Wednesday	
4/21/2026	UGMT	
4/22/2026	Wrap-up	Module 6 Study Plan
4/23/2026	UGMT	
4/24/2026	EXAM 3 (Mod 5 & Mod 6)	

 Week 15

Date	Scheduled Content	Other Assignments
4/27/2026	Final Exam Review 1 (MLM HW)	
4/28/2026	UGMT	
4/29/2026	Final Exam Review 2 (MLM HW) Final Exam Review 3 (MLM HW)	
4/30/2026	Pre-Finals Day	
5/1/2026	Reading Day – No Classes	

 Final Exam Week

Date	Scheduled Content	Other Assignments
5/2/2026	Final Exam , see Final Exam Schedule 10AM-12PM	

Course Policies

Academic Integrity

Academic honesty is essential to your success and to maintaining the integrity of our university. Cheating, plagiarism, or any form of academic dishonesty will not be tolerated. A student found cheating will receive an irreplaceable zero on that assignment; for exam-related violations, a final course grade of F may be assigned; and all violations will be reported to the [Office of Academic Integrity](#) in accordance with UNT Policy 06.003.

Every student in this course is capable of success through honest effort, personal responsibility, and appropriate use of resources.

AI Use Policy

Generative AI tools (e.g., ChatGPT, Microsoft Copilot) may be used to check grammar, spelling, and help format or revise your own written work, but their use must be disclosed in your submission. Using AI to produce entire assignments or during exams is prohibited. Violations will be treated as academic integrity issues under university policy.

Attendance

Regular attendance and active participation are key to your success. You are expected to attend every class unless you have a university-excused absence (e.g., military service, religious holy day, official university event) as outlined in [Student Attendance and Authorized Absences Policy](#). If you miss a class due to an emergency, please notify me.

Arrive on time to avoid disruptions; lateness or leaving early may count as an absence. Classes are not recorded, so attending live and taking notes is essential. Lectures won't be repeated outside class—office hours are for specific questions only.

Examination Policy

All exams are taken on Canvas using Respondus Lockdown Browser and must be submitted by **11:59 PM** on the scheduled date. Late submissions are not accepted, regardless of when you start the exam.

If you miss an exam, you will receive a zero for that exam, there are no make-up exams. If the absence qualifies as [university excused absence](#) under [Policy 06.039](#) and documentation is provided within two business days, your final exam grade may replace the missed exam score.

Early Exam Request

If you have a conflict with a scheduled exam date, you can request to take your exam early. Please send your request via **Canvas Inbox** at least **one week** prior to the desired early exam date.

Exam Etiquette

To ensure the best test-taking environment for all students, the following policies apply:

- Students who arrive late for an exam will not be allowed to take the exam and will receive a zero.
- Store all papers, textbook, notes, and other materials in a closed backpack or bag.
- Do not wear caps or hoodies during exams.
- Turn off and remove all non-medically necessary electronic devices, including but not limited to cell/smart phones, earpieces, headsets, laptops, smartwatches.
- Handling any unapproved electronic device during an exam will be considered cheating, results in a score of zero, and will be reported to the Academic Integrity Office.
- Remain courteous and quiet throughout the exam.
- Present your UNT photo ID upon request.
- Bring your own pencils, erasers, and approved calculator. Sharing materials is not permitted.
- No extra paper permitted; exams include sufficient space to show all work.
- Legibly print your name in English letters on both the exam and the scantron form, if used. No name, no credit.
- Submit exams by 1:45PM Exams not submitted by 1:45PM may receive a zero.

Late Work Policy

UNT is a community of achievers and success depends on staying on schedule. This course holds students to high standards with built-in flexibility.

- **Exams:** There are no late exams or retakes. If an exam is missed, a grade of zero is recorded. (See Examination Policy.)
- **Timely Submissions:** All work must be submitted by the posted due date.

This course does not accept late work beyond the limited grace period built into MyLabs.

Student Support Services & Assistance

Academic Support & Student Services

UNT strives to offer you a high-quality education and a supportive environment, so you learn and grow. As a faculty member, I am committed to helping you be successful as a student. To learn more about campus resources and information on how you can be successful at UNT, go to [Succeed at UNT](#) (unt.edu/success) and explore the many links at [Wellness at UNT](#) (unt.edu/wellness). To get all your enrollment and student financial-related questions answered, go to [Integrated Student Services](#) (scrappysays.unt.edu).

Technical Assistance for Online Course System

The University is committed to providing a reliable online course system to all users. However, part of working in the online environment involves dealing with the inconveniences and frustration that can arise when technology breaks down or does not perform as expected. Here at UNT we have a Student Help Desk that you can contact for help with Canvas or other technology issues.

Visit the UIT Help Desk website for their current support hours. Website links, email, phone number, and office location provided as follows:

AIT Help Desk: [AIT Student Help Desk](http://aits.unt.edu/support/) (<http://aits.unt.edu/support/>)

Email: helpdesk@unt.edu

Phone: 940-565-2324

In Person: Sage Hall, Room 330

Canvas Technical Requirements: [Canvas Technical Requirements](https://digitalstrategy.unt.edu/clear)

(<https://digitalstrategy.unt.edu/clear>)

Additional Canvas Support: [Canvas Technical Help](https://community.canvaslms.com/docs/DOC-10554-4212710328)

(<https://community.canvaslms.com/docs/DOC-10554-4212710328>)

Pearson MyLabs Student Technical Support

MyLabs offers student technical support.

Website: [Pearson Student Technical Support](https://www.pearsonmylabs.com/student-technical-support)

Welcome to UNT!

As members of the UNT community, we have all made a commitment to being part of an institution that respects and values the identities of the students and employees with whom we interact. UNT does not tolerate identity-based discrimination, harassment, and retaliation.

UNT Policies

Academic Integrity Standards and Consequences. Policy

According to UNT Policy 06.003: Student Academic Integrity, academic dishonesty occurs when students engage in behaviors including, but not limited to cheating, fabrication, facilitating academic dishonesty, forgery, plagiarism, and sabotage. A finding of academic dishonesty may result in a range of academic penalties or sanctions ranging from admonition to expulsion from the University.

Every student in my class can improve by attending class, consistently doing their own work, and accessing appropriate resources. [Academic Integrity Policy](#) violations will not. Read and follow this important set of guidelines for your academic success.

ADA Accommodation Statement

UNT makes reasonable academic accommodation for students with disabilities. Students seeking accommodation must first register with the Office of Disability Access (ODA) to verify their eligibility. If a disability is verified, the ODA will provide a student with an accommodation letter to be delivered to faculty to begin a private discussion regarding one's specific course needs. Students may request accommodations at any time; however, ODA notices of accommodation should be provided as early as

possible in the semester to avoid any delay in implementation. Note that students must obtain a new letter of accommodation for every semester and must meet with each faculty member prior to implementation in each class. For additional information see the [Office of Disability Access](https://disability.unt.edu/) website. (<https://disability.unt.edu/>).

Access to Information - Eagle Connect

Students' access point for business and academic services at UNT is located at: my.unt.edu. All official communication from the University will be delivered to a student's Eagle Connect account. For more information, please visit the website that explains Eagle Connect and how to forward e-mail [Eagle Connect](https://it.unt.edu/eagleconnect) (<https://it.unt.edu/eagleconnect>).

Emergency Notification and Procedures

UNT uses a system called Eagle Alert to quickly notify students with critical information in the event of an emergency. In the event of a university closure, please refer to the UNT Learning Management System, Canvas, for contingency plans for covering course materials.

Student Evaluation Administration Dates

Student feedback is important and an essential part of participation in this course. The student evaluation of instruction is a requirement for all organized classes at UNT. The survey will be made available during weeks 13, 14 and 15 of the long semesters to provide students with an opportunity to evaluate how this course is taught. Students will receive an email from "UNT SPOT Course Evaluations via IASystem Notification" (no-reply@iasystem.org) with the survey link. Students should look for the email in their UNT email inbox. Simply click on the link and complete the survey. Once students complete the survey, they will receive a confirmation email that the survey has been submitted. For additional information, please visit the [SPOT website](http://spot.unt.edu/) (<http://spot.unt.edu/>) or email spot@unt.edu.

Important Notice for F-1 Students taking Distance Education Courses

Federal regulations state that students may apply only 3 fully-online semester credit hours (SCH) to the hours required for full-time status for [F-1 Visa \(PDF\)](#) holders. Full-time status for F-1 Visa students is 12 hours for undergraduates and 9 hours for graduate students.

Student Verification

UNT takes measures to protect the integrity of educational credentials awarded to students enrolled in distance education courses by verifying student identity, protecting student privacy, and notifying students of any special meeting times/locations or additional charges associated with student identity verification in distance education courses. See [Student Identity Verification Policy](#), (<https://policy.unt.edu/policy/07-002>).

See, [Academic Calendars by Semester](#), for the complete list.

January 12: Classes begin.

January 16: Last Day to Add a Class or Swap Sections. A swap is switching sections of the same course in the same session.

January 24: Last Day to Drop a Class Section Without W. Courses dropped before this date will not appear on official transcript. Dropping courses may impact financial aid and degree completion. See advisors.

January 25: Drop with a grade of W Begins. Courses appear on the transcript with a grade of W and tuition and fees remain. Dropping courses may impact financial aid and degree completion. See advisors.

February 20: Last Day to Change to Pass/No Pass (undergrads)

March 6: Midpoint of the Semester

April 10: Last Day to Drop a Course or All Courses with a Grade of W.

April 11: First Day to Request a Grade of Incomplete. Beginning this date, a student may request a grade of "I," incomplete, a non-punitive grade given only if the

- (1) student *is passing*,
- (2) has justifiable reason the work cannot be completed on schedule; and
- (3) arranges with the instructor to complete the work in no more than one academic year.

April 29 – 30: Prefinal Days

April 30: Last Regular Class Meeting

May 1: Reading Day – No Classes

May 4 – 8: Final Examinations

May 8: Last Day of Session