2026 Spring Math 1580.410 Survey of Math with Applications
January 12 – May 8

Instructor Information

Name: Ms. Hines

Virtual Office Hours (Bookable)

I'm here to support your learning and success in this course. During virtual office hours, you can ask questions, review content, or get help with assignments. Use the scheduling link in the Canvas Syllabus portal to book a time that works for you. Your success matters to me—please don't hesitate to connect.

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**: If you choose to email, include "MATH 1580.410" 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

- TSI complete in Math
- 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 install course software, Respondus Lockdown Browser
    - Download and print required course materials.

Course Structure

This course is delivered asynchronously online with no required class meeting times. You'll complete all learning and assignments independently, with my support throughout.

All communication, assignments, and materials will be managed through Canvas. Optional online sessions may be offered, and tips for succeeding in a remote learning environment are available at UNT Online.

The course begins with the first content module, already available on Canvas. New modules will unlock as we move forward. There are six total content modules, and terms such as *module*, *chapter*, and *unit* may be used interchangeably.

Each module includes printable lecture notes that align with instructional videos. Watch the videos for guided instruction and worked examples and complete the notes as you watch. This simulates the classroom experience and will help you learn and retain the material more effectively.

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.
- Use set theory concepts to construct Venn diagrams and solve related problems.
- Interpret, analyze, and draw conclusions from data representations.
- Apply fundamental principles of probability and counting techniques to solve problems.
- Use graph theory to model and solve application-based problems.

Required Course Materials

Pearson MyLabs Math (MLM) Requirement

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

MLM includes:

- Homework assignments
- Study Plan quizzes
- 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, you must 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 may 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 video lessons and learning activities.

Calculator

TI-36X, TI-84 or equivalent. I provide instructional support for only these models. Desmos online calculator (available at desmos.com) is provided on exams. Be sure to practice using your calculator with homework.

Technology Requirements

To complete this course, you must have

- A computer (desktop, laptop, or tablet) compatible with Canvas and required software.
- Webcam and microphone for proctored test.
- Reliable internet.
- MS Excel, access through UNT Office 365
- Respondus Lockdown Browser (free download linked in Canvas).
- *Note:* Smartphones are **not** sufficient for completing coursework or taking exams.

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) – 15%
- Engagement Tasks (Orientation assignments, Discussions, Surveys, etc.) – 5%
- 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.

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

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 provides practice to learn and retain new content. Most modules include multiple assignments per week, starting the first day of class. All assignments are accessed on Canvas. Keep a dedicated notebook to write out steps, supporting understanding and exam prep..

- **Attempts:** Most MLM exercises allow 3 attempts; questions with 2–3 choices allow 1 attempt.
- **Due Dates:** Homework assignments are due *by* 11:59 PM on the posted due date. Work ahead if needed.
- **Late Work Policy:** Late submissions are not accepted; your **three lowest homework scores** will be dropped.
- **MLM HW Grace Period:** Most MLM assignments can be submitted for up to **70% credit** until **8:00 AM** the Monday after the due week (password: *Late*).
- **Other Assignments:** Homework may also include additional graded activities on Canvas, such as learning support exercises.

Exams

You have seven (7) exams, six (6) 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 on Canvas.

Exam 1 – Thursday, January 29 (Module 1 Voting and Apportionment)

Exam 2 – Tuesday, February 17 (Module 2 Personal Finance)

Exam 3 – Tuesday, March 3 (Module 3 Set Theory)

Exam 4 – Tuesday, March 24 (Module 4 Statistics)

Exam 5 – Monday, April 13 (Module 5 Counting and Probability)

Exam 6 – Thursday, April 23 (Module 6 Graph Theory)

Final Exam – See Final Exam Schedule : Monday, May 4, comprehensive.

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

Exam Policies

- **Submission Deadline:** Exams will be available starting at 12 AM on the scheduled date. Exams must be submitted by 11:59 PM on the scheduled date. Submissions after this time receive a zero.
- **Missed Exams**: Exams cannot be made up unless you have a university-excused absence (Policy 06.039). You must provide official documentation within two business days. In this case, your final exam score may be used to replace the missed exam grade.
- **Early Exam Requests:** If you need to take an exam before the scheduled exam date, message me via Canvas Inbox at least one week in advance. Early exams are granted at my discretion.

Taking an Exam with Respondus

- Complete the **"How to Take an Exam with Respondus"** module in Canvas before your first test.
- Your exam environment must be private and clear of distractions. Show a clean desk surface to your webcam.
- You'll have **60 minutes** to complete each midterm exam; additional time is provided for the final exam.
- Once an exam begins, no additional time or retakes will be granted due to technical issues.
- When work is required, it must be completed on paper and shown to the webcam. No valid written work = no credit.
- Grades will be posted in Canvas within one week of the exam. You may request to review problems with me, but all decisions on credit are final.

Engagements Tasks

Engagement tasks are designed to help you become familiar with course expectations, tools, and the learning process. They may include orientation quizzes, discussion assignments, and surveys.

These tasks promote active participation and help build a sense of connection in our online learning environment. They also count toward your final grade—so be sure to complete them on time for full credit.

Extra Credit Opportunities

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

Study Plan Quizzes – Module Exam Bonus

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 module exam grade.

- Quizzes close at 11:59 PM the day before the exam.
- You have five attempts per quiz.
- Your highest score determines your bonus.

Score Achieved	Bonus Points toward Exam
90% or higher	+ 10 points
80 – 89%	+ 8 points
70 – 79%	+ 7 points
Below 70%	No points

🧠 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 ≥ 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

Assignments in MyLabs Math (MLM) are due by **11:59 PM** on the posted due date. Plan ahead and avoid waiting until the last minute. Before starting your homework, complete your learning coursework. Learning coursework includes printing out lecture notes, watching the lesson videos while completing those notes, reviewing them afterward, and reading the corresponding textbook sections.

Week 1

Due Date	Course Content	Engagement
1/12/2026	MyLabs Orientation	
1/13/2026	Syllabus Quiz	Five (5) Course Overview Quizzes
1/14/2026	Problem-Solving HW	
1/15/2026		
1/16/2026	1.1 Voting Methods	Get Acquainted Discussion

Week 2

Due Date	Course Content	Engagement
1/19/2026	**MLK Jr Holiday – University Closed**	
1/20/2026		
1/21/2026	1.2 Flaws of Voting Methods	
1/22/2026		
1/23/2026	1.3 Apportionment Methods Part 1 1.3 Apportionment Methods Part 2	

Week 3

Due Date	Course Content	Engagement
1/26/2026	1.4 Flaws of Apportionment Methods	
1/27/2026		Module 1 Discussion
1/28/2026	Module 1 Study Plan	
1/29/2026	**EXAM 1**	
1/30/2026	2.1 Percents, Sales Tax, and Discounts,	

Week 4

Due Date	Course Content	Engagement
2/2/2026	2.2 Simple Interest	
2/3/2026		
2/4/2026	2.3 Compound Interest	
2/5/2026		
2/6/2026	2.4 Methods of Saving: Investments	

Week 5

Due Date	Course Content	Engagement
2/9/2026	2.5 Basics of Loans, Parts 1, and 2	
2/10/2026		
2/11/2026	2.6 Income Tax	
2/12/2026		
2/13/2026	2.7 Federal Student Loans	Module 2 Discussion

Week 6

Due Date	Course Content	Engagement
2/16/2026	Module 2 Study Plan	
2/17/2026	**EXAM 2**	
2/18/2026	3.1 Basic Set Concepts	
2/19/2026		
2/20/2026	3.2 Subsets	

Week 7

Due Date	Course Content	Engagement
2/23/2026	3.3 Set Operations & Venn Diagrams	
2/24/2026		
2/25/2026	3.4 Set Operations & Venn Diagrams w 3 Sets	
2/26/2026		
2/27/2026	3.5 Surveys	Module 3 Discussion

Week 8

Due Date	Course Content	Engagement
3/2/2026	Module 3 Study Plan	
3/3/2026	**EXAM 3**	
3/4/2026	4.1 Gathering, Organizing, and Visualizing Data, 4.2 Measures of Central Tendency	
3/5/2026		
3/6/2026	4.3 Measures of Dispersion	

Spring Break March 9 – March 15

Week 9

Due Date	Course Content	Engagement
3/16/2026	4.4 The Normal Distribution	
3/17/2026		
3/18/2026	4.5 Applications Involving the Normal Distribution	
3/19/2026		
3/20/2026	4.6 Scatter Plots, Correlation, and Regression Lines	Module 4 Discussion

Week 10

Due Date	Course Content	Engagement
3/23/2026	Module 4 Study Plan	
3/24/2026	**EXAM 4**	
3/25/2026	5.1 Counting Methods 1: FTC and Permutations	
3/26/2026		
3/27/2026	5.2 Counting Methods 2: Combinations	

Week 11

Due Date	Course Content	Engagement
3/30/2026	5.3 Fundamentals of Probability	
3/31/2026		
4/1/2026	5.4 Probability Involving Counting Methods	
4/2/2026		
4/3/2026	5.5 The Additional Rule, the Complement Rule, and Odds	

Week 12

Due Date	Course Content	Engagement
4/6/2026	5.6 Conditional Probability and the Multiplication Rule	
4/7/2026		
4/8/2026	5.7 Expectation	Module 5 Discussion
4/9/2026		
4/10/2026	Module 5 Study Plan	

Week 13

Due Date	Course Content	Engagement
4/13/2026	**EXAM 5**	
4/14/2026		
4/15/2026	6.1 Graphs Paths, and Circuits 6.2 Euler Paths and Euler Circuits	
4/16/2026		
4/17/2026	6.3 Hamilton Paths and Hamilton Circuits	

Week 14

Due Date	Course Content	Engagement
4/20/2026	6.4 Trees – late accepted until 8am Wednesday	
4/21/2026		Discussion 6
4/22/2026	Module 6 Study Plan	
4/23/2026	**EXAM 6**	
4/24/2026		

Week 15

Due Date	Course Content	Engagement
4/27/2026	Final Exam Review 1	
4/28/2026	Final Exam Review 2	
4/29/2026	Final Exam Review 3	
4/30/2026	Pre-Finals Day	
5/1/2026	Reading Day – No Classes	

Final Exam Week

Due Date	Course Content	Engagement
5/4/2026	**Final Exam,** see Final Exam Schedule	

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.

Attendance

Although this course is online, active participation is required. In this setting, "attendance" means regularly engaging with learning materials, including watching the instructional videos and completing the student lecture notes. The instructor will not repeat entire lectures via email or office sessions.; those times are reserved for specific questions or clarifications.

You are encouraged to **work ahead** and manage your time effectively. If a schedule conflict arises, complete the work early. For exam scheduling conflicts, request an early exam in advance.

Review UNT's Student Attendance and Authorized Absences Policy for information on excused absences.

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 Protocol

To ensure exam integrity, follow these guidelines:

- Review the "How to Take an Exam with Respondus" module in Canvas.
- Show a clear desk and test-taking environment to your webcam.
- Complete the exam alone in a quiet place.
- Once the exam is open, you will have 60 minutes to complete it.
- Do not open the exam unless you are fully prepared, and your technology is ready and in working order.
- No extra time or re-takes will be granted due to technical difficulties.

- Work is not accepted through email.
- You must complete the problems on your own paper and show your work to the webcam. No valid work, no credit—no exceptions.
- You will see your exam grade on Canvas about one week after the exam. You may request to review exam problems with me; however, all decisions on credit are final and not open for discussion.

Exam grades will be posted in Canvas within one week. You may request to review specific questions, but all final grading decisions are not open to negotiation.

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.

- All assignments must be submitted by the posted due date.
- Most MLM homework assignments can still be submitted by 8 am the Monday following the week it was due for 70% credit using the password: Late.
- Exams cannot be submitted late or re-taken. See the Examination Policy above for possible grade replacement under qualifying circumstances.
- Your three lowest homework scores will be dropped at the end of the term to accommodate emergencies.

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/)

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)

Additional Canvas Support: Canvas Technical Help

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

Pearson MyLabs Student Technical Support

MyLabs offers student technical support.

Website: Pearson 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 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).

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/) 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).

Summary of Key Dates – 2026 Spring

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 why 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