

2026 Fall Math 1580.400 Survey of Math with Applications

August 17 – December 11

Welcome

Welcome to Survey of Mathematics with Applications. Success in this course comes from consistent effort, completing work on time, and asking for help early. My goal is to support you in meeting your academic goals while keeping course expectations clear and consistent. Staying engaged gives you the best chance for success in this course.

Instructor Information

Name: Ms. Barber

Virtual Office Hours (by appointment)

I'm available to support your progress in this course. Use the scheduling link in Canvas to book a virtual meeting for questions, course help, or review.

How to Contact Me

Please reach out whenever you have questions or concerns.

- **Canvas Inbox (Preferred):** Fastest response.
- **UNT Email:** Include "MATH 1580.400" in the subject line and use your official UNT email account.

I usually respond within **one business day**. If you don't hear back, please send a follow-up message.

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

Course Overview

This course develops practical problem-solving skills through topics such as personal finance, voting methods, probability, statistics, set theory, and graph theory.

You will strengthen logical thinking, decision-making, and quantitative reasoning skills useful in college, work, and everyday life.

Catalog Course Description

3 hours. Topics include probability, statistics, algebra, logic, and 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 is not preparation for calculus for science, engineering, or business programs.

Course Prerequisites and Readiness

To succeed in this course, students must have:

- TSI complete status in Math
- Regular study habits
- Willingness to stay engaged
- Basic digital skills for Canvas and online assignments
- Access to compatible computer and reliable internet

Course Structure

This is an asynchronous online course, which means there are no required live class meetings. All course materials, assignments, grades, and announcements are available in Canvas. See [UNT Online](#) for tips for succeeding in a remote learning environment.

Each module includes guided notes and lesson videos. Complete the notes while watching each lesson video to prepare for homework and exams.

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 (Required)

Purchase of Pearson MyLabs Math (MLM) access is required for the full course term. MLM is used for homework, quizzes, and required course materials.

Students using trial access must purchase full access before the 14-day trial expires.

MLM includes:

- Homework assignments
- Study Plan quizzes
- eText: *Thinking Mathematically* (Blitzer, 8th ed.)
- Additional learning resources

Register through the Access Pearson link on Canvas using your official UNT email address.

Registration & Purchase Instructions

- Register only **once** through the Access Pearson link on Canvas.
- Use your official UNT email address and official UNT name when registering.
- Only work completed in your first valid MLM account may receive credit.
- Work completed in additional accounts or accounts created with non-UNT email address may not receive credit.
- Register immediately. See the **Start Here** module in Canvas for full instructions.
- Pearson may offer a one-time 14-day trial access to students who have not previously used the trial.
- Students using trial access must purchase full access before the 14-day trial access expires to avoid loss of access or credit.

Note-taking Materials

- Guided notes are available in Canvas.
- Keep paper and pencil available for lesson notes, practice, and exam preparation.

Technology Requirements

To complete this course, students need:

- A computer or tablet compatible with Canvas
- Reliable internet access
- Webcam and microphone for proctored test
- Microsoft Excel through UNT Office 365
- Respondus Lockdown Browser (linked in Canvas)

Note: Smartphones are **not** sufficient for coursework or exams.

Check Canvas Technical Requirements to confirm device compatibility.

Calculator

- You may use a TI-36, TI-84, or equivalent calculator.
- Instruction and calculator assistance are provided for TI-36 and TI-84 models only.
- Students using other calculator models should be prepared to navigate its functions independently.
- Desmos and online TI-84 tools will be available on exams.
- Use the same calculator during homework and review to prepare for exams.

Course Evaluation & Grading

Evaluation

Your grade is based 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 are posted in Canvas throughout the course.

Grading Scale

- A: 90 – 100%
- B: 80 – 89%
- C: 70 – 79%
- D: 60 – 69%
- F: Below 60%

Grading Policy

Grades are based on individual performance on course assignments and exams. This course is not graded on a curve.

Students are encouraged to collaborate appropriately while completing their own graded work.

Course Components

Homework: Learn by Practicing

Homework helps you practice new skills and prepare for exams. Most modules include multiple assignments each week, beginning on the first day of class. Progress in math usually comes from steady practice, not perfection.

Complete homework consistently and use a dedicated notebook to show work and keep organized notes for review.

- Most MLM exercises allow 3 attempts. Some exercises allow only 1 attempt.
- Homework assignments are due *by* 11:59 PM on the posted due date.
- Work ahead when possible.
- Your three lowest MLM homework scores will be dropped.
- Most MLM homework may be submitted for up to 70% credit by 8 AM Monday following the week it was due. Use the password (case sensitive): **Late**
- Homework may include additional graded activities on Canvas.

Exams

This class has **six module exams** and **one comprehensive final exam**.

Exams are completed in Canvas using Respondus LockDown Browser. Dates are listed below as well as in the course schedule.

Exam 1 – Tuesday Sept 1 (Problem Solving and Module 1 Voting and Apportionment)

Exam 2 – Tuesday Sept 22 (Module 2 Personal Finance)

Exam 3 – Tuesday Oct 6 (Module 3 Problem Solving and Set Theory)

Exam 4 – Tuesday Oct 20 (Module 4 Statistics)

Exam 5 – Tuesday Nov 10 (Module 5 Counting and Probability)

Exam 6 – Thursday Nov 19 (Module 6 Graph Theory)

Final Exam – Monday, Dec 7, see [Final Exam Schedule](#) (Comprehensive)

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

Engagement Tasks

Engagement tasks may include orientation activities, discussions, surveys, and other course check-ins.

These assignments help you learn course expectations, stay connected, and earn credit toward your final course grade.

Extra Credit Opportunities

You have two ways to earn extra credit in this course through strong preparation and consistent effort.

Study Plan Quizzes (Module Exam Bonus)

Each module includes a timed Study Plan quiz in MyLabs Math. These quizzes are optional and help you review for the module exam.

- Quizzes close at 11:59 PM the day before the exam.
- Up to 5 attempts are allowed.
- Your highest score earns the bonus.

Highest Score	Bonus on Module Exam
90% or higher	+10 points
80–89%	+8 points
70–79%	+7 points
Below 70%	No bonus

Final Exam Review Bonus

Three comprehensive review assignments in MyLabs Math are assigned before the final exam. These assignments are graded separately as homework, and qualifying scores may also earn bonus points on the final exam.

Students who score 90% or higher may earn bonus points on the final exam:

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

These opportunities can strengthen exam preparation while adding bonus points.

Exam Grade Replacement Option

Students who earn all 10 final exam bonus points may replace one lower module exam grade with the final exam score if the final exam score is higher.

Consistent preparation, timely work, and use of extra credit opportunities can strengthen overall course performance.

Changes to Syllabus

Updates to the syllabus or schedule will be announced in 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 the learning coursework for each module:

- Print or open guided notes
- Watch lesson videos while completing notes
- Review notes afterward
- Read assigned textbook sections when listed

The course schedule in this syllabus contains official deadlines, exams, and major due dates. Canvas announcements provide reminders and updates.

Week 1

Date	Assignments Due
Mon 8/17	MyLabs Orientation Start the Course Orientation Quizzes, * are due Thursday
Tue 8/18	Syllabus Quiz Module 0 Learning Guide
Wed 8/19	Module 0 Problem-Solving HW 1 Module 0 Problem-Solving HW 2
Thu 8/20	* Respondus Lockdown Browser Check * Passwords/Access Codes * Expectations of an Online Course * AI Use Policy
Fri 8/21	1.1 Voting Methods Get Acquainted Discussion

Week 2

Date	Assignments Due
Mon 8/24	1.2 Flaws of Voting Methods
Tue 8/25	
Wed 8/26	1.3 Apportionment Methods Part 1 1.3 Apportionment Methods Part 2
Thu 8/27	Respondus Tech Check Required before Exam 1
Fri 8/28	1.4 Flaws of Apportionment Methods Module 1 Discussion

Week 3

Date	Assignments Due
Mon 8/31	Module 1 Study Plan
Tue 9/1	EXAM 1
Wed 9/2	2.1 Percents, Sales Tax, and Discounts
Thu 9/3	
Fri 9/4	2.2 Simple Interest

Week 4

Date	Assignments Due
Mon 9/7	University Closed in Observance of Labor Day Holiday
Tue 9/8	
Wed 9/9	2.3 Compound Interest
Thu 9/10	
Fri 9/11	2.4 Methods of Saving: Investments

Week 5

Date	Assignments Due
Mon 9/14	2.5 Basics of Loans Part 1 2.5 Basics of Loans Part 2
Tue 9/15	
Wed 9/16	2.6 Income Tax
Thu 9/17	Practice Respondus Quiz for Exam 2
Fri 9/18	2.7 Federal Student Loans Module 2 Discussion

Week 6

Date	Assignments Due
Mon 9/21	Module 2 Study Plan
Tue 9/22	EXAM 2
Wed 9/23	3.1 Basic Set Concepts
Thu 9/24	
Fri 9/25	3.2 Subsets

Week 7

Date	Assignments Due
Mon 9/28	3.3 Set Operations & Venn Diagrams
Tue 9/29	
Wed 9/30	3.4 Set Operations & Venn Diagrams with 3 Sets
Thu 10/1	
Fri 10/2	3.5 Surveys, Module 3 Discussion

Week 8

Date	Assignments Due
Mon 10/5	Module 3 Study Plan
Tue 10/6	EXAM 3
Wed 10/7	4.1 Gathering, Organizing, and Visualizing Data 4.2 Measures of Central Tendency
Thu 10/8	
Fri 10/9	4.3 Measures of Dispersion

Week 9

Date	Assignments Due
Mon 10/12	4.4 The Normal Distribution
Tue 10/13	
Wed 10/14	4.5 Applications Involving the Normal Distribution
Thu 10/15	Practice Respondus Quiz for Exam 4
Fri 10/16	4.6 Scatterplots, Correlation, and Regression Lines Module 4 Discussion

Week 10

Date	Assignments Due
Mon 10/19	Module 4 Study Plan
Tue 10/20	EXAM 4
Wed 10/21	5.1 Counting Methods 1: Fundamental Counting Principle & Permutations
Thu 10/22	
Fri 10/23	5.2 Counting Methods 2: Combinations

Week 11

Date	Assignments Due
Mon 10/26	5.3 Fundamentals of Probability
Tue 10/27	
Wed 10/28	5.4 Probability Involving Counting Methods
Thu 10/29	
Fri 10/30	5.5 The Addition Rule, the Complement Rule, and Odds

Week 12

Date	Assignments Due
Mon 11/2	5.6 Conditional Probability and the Multiplication Rule
Tue 11/3	
Wed 11/4	5.7 Expectation
Thu 11/5	
Fri 11/6	Module 5 Discussion

Week 13

Date	Assignments Due
Mon 11/9	Module 5 Study Plan
Tue 11/10	EXAM 5
Wed 11/11	6.1 Graphs, Paths, and Circuits 6.2 Euler Paths and Euler Circuits
Thu 11/12	
Fri 11/13	6.3 Hamilton Paths and Hamilton Circuits

Week 14

Date	Assignments Due
Mon 11/16	6.4 Trees – late accepted until 11/18, 8 AM
Tue 11/17	Module 6 Discussion
Wed 11/18	Module 6 Study Plan
Thu 11/19	EXAM 6
Fri 11/20	Final Exam Review 1

Thanksgiving Break November 23 – November 29

Week 15

Date	Assignments Due
Mon 11/30	Final Exam Review 2
Tue 12/1	
Wed 12/2	Final Exam Review 3
Thu 12/3	Pre-Finals Day
Fri 12/4	Reading Day – No Classes

Final Exam Week

Date	Assignments Due
Mon 12/7	Final Exam, see Final Exam Schedule

Math 1580 Course Policies

Academic Integrity

Academic honesty is expected in this course. Cheating, plagiarism, unauthorized use of AI, or other academic misconduct may result in penalties consistent with university policy.

Possible consequences include a zero on that assignment, an F in the course for serious violations, and referral to the [Office of Academic Integrity](#) in accordance with UNT Policy 06.003.

Success in this course requires honest effort, personal responsibility, and appropriate use of course resources.

AI Policy

AI tools may be used only when explicitly authorized in the assignment instructions.

Attendance/Participation

Because this is an online course, attendance means regular participation in course activities.

This includes:

- Watching lesson videos
- Completing guided notes
- Submitting assignments on time
- Staying current with course deadlines

Course materials provide the primary instruction for this class. Office hours and messages are best used for specific questions after reviewing the lesson materials.

Students are expected to plan ahead and work proactively when possible. For exam scheduling conflicts, request an early exam through Canvas Inbox at least two business days in advance.

See UNT's [Student Attendance and Authorized Absences Policy](#) for excused absences.

Examination Policy

All exams are completed in Canvas using Respondus LockDown Browser.

- Exams must be submitted by 11:59 PM on the scheduled date.
- Exams not completed by the deadline receive a score of zero unless covered by an approved university-excused absence.
- Documentation for approved absences must be submitted within two business days of missed exam date.
- When approved, the final exam score may replace a missed module exam grade.
- Students needing an **early exam** should contact me through Canvas at least two business days before the requested early exam date. Approval is based on course scheduling and circumstances.

Unauthorized Aids During Examinations and Assessments

Students may use only those materials and resources that are expressly authorized by the instructor for a particular examination or assessment. Touching, holding, or accessing any unauthorized aid during the examination period constitutes a violation of the Student Code of Conduct, regardless of whether the aid is used.

Any item that may be considered an unauthorized aid must be kept out of view and in a closed container (e.g. zipped backpack, buttoned purse, etc.) during the entirety of the examination or assessment.

Unless specifically authorized in writing by the instructor, prohibited aids include, but are not limited to:

- Mobile phones and smartphones

- Smartwatches and fitness trackers with communication, recording, or internet capabilities
- Tablets, laptops, and other computing devices
- Earbuds, headphones, and other audio devices
- Smart glasses, cameras, recording devices, and wearable technology
- Artificial intelligence (AI) tools, chatbots, and other generative AI technologies
- Notes, textbooks, study guides, formula sheets, or reference materials
- Any other device, material, or resource not expressly permitted by the instructor

Students are responsible for clarifying any questions about permitted materials before the examination begins.

Exam Protocol for Testing with Respondus

To support a fair testing environment:

- Complete the How to Take an Exam with Respondus module before your first exam.
- Test in a private space with clear desk or workspace.
- Complete the exam independently.
- Module exams are 60 minutes unless otherwise noted.
- Once an exam begins, the timer continues. Please confirm your technology is ready before starting.
- Students should check technology before starting as extra time or retakes are not provided for avoidable technical issues.
- Written work must be completed on paper when required and shown as instructed for credit.
- Coursework submissions are accepted only through the designated course platform unless otherwise directed.
- Exam grades are typically posted within one week.

Students may ask questions about grading for clarification. Final score determinations remain with the instructor.

Late Work Policy

This course moves quickly, so deadlines are important.

- Assignments are due by the posted deadline.
- Most missed MyLabs Math homework may be submitted for up to 70% credit by **8 AM the Monday following the due date**. Use the password: **Late**.
- Exams cannot be submitted late.
- Your three lowest MyLabs Math homework scores will be dropped at the end of the term.

No additional late work is accepted beyond the built-in homework grace period.

Resources for Success

Many students improve through steady practice and early use of support resources. 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.

Student Support Services & Assistance

Academic Support and 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 and other UNT technology issues.

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

IT Help Desk: [IT Student Help Desk](https://its.unt.edu/support/) (https://its.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](#)

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 this course can improve through consistent effort and academic honesty. Academic Integrity Policy violations will not help you succeed. Read and follow this important set of guidelines for your academic success.

ADA Accommodation Statement

UNT makes reasonable academic accommodations for students with disabilities. Students seeking accommodations must first register with the Office of Disability Access (ODA) to verify their eligibility. If a disability is verified, the ODA will provide the 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 accommodations should be provided as early as possible in the semester to avoid delays 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.

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 student's Eagle Connect account. For more information, please visit the website that explains Eagle Connect and how to forward email to 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 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 the last weeks of the term 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>).

Summary of Key Dates – 2026 Fall

See [Registration Guide](#).

August 17: Classes begin.

August 21: Last day to Add a Class or Swap Sections.

August 28: Census – Official Enrollment Determined. Last day to drop a course section to no longer appear on the official transcript. (*Dropping courses may impact financial aid and degree completion. See advisors.*)

August 29: Beginning this date, students can drop a course with a grade of W. For information on how to drop a class, see [Registration Guide, Dropping](#). The course appears on the transcript with a Grade of W and tuition and fees remain. (*Dropping courses may impact financial aid and degree completion. See advisors.*)

November 6: The last day to drop a course or all courses with a grade of W.

November 7: Beginning this date, a student may request a grade of “I,” incomplete, a non-punitive grade given only if a student (1) ***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.

December 3: Last Regular Class Meeting.

December 7 – 11: Final Exam