



Finite Mathematics – Math1324.033FE

Course Syllabus: Fall 2026 (2nd 8 weeks) MW 11:00 – 12:20 MS-130

“Northeast Texas Community College exists to provide personal, dynamic learning experiences empowering students to succeed.”

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Weekday	Office Hours
Monday	1:30 – 3:00
Tuesday	9:30 – 11:00
Wednesday	1:30 – 3:00
Thursday	9:30 – 11:00
Friday	Online

This syllabus serves as the documentation for all course policies and requirements, assignments, and instructor/student responsibilities.

Information relative to the delivery of the content contained in this syllabus is subject to change. Should that happen, the student will be notified.

Course Description:

The application of common algebraic functions, including polynomials, exponential, logarithmic, and rational, to problems in business, economics, and the social sciences are addressed. The applications include mathematics of finance, including simple and compound interest and annuities; systems of linear equations; matrices; linear programming; and probability, including expected value. Three hours credit.

Prerequisite(s): 1) TSI Not Complete – Multiple Measures Placement with Corequisite Model
or 2) TSI Complete Status

Student Learning Outcomes:

Upon successful completion of this course, students will

1324.1 Apply elementary functions, including linear, quadratic, polynomial, rational, logarithmic, and exponential functions to solving real-world problems.

1324.2 Solve mathematics of finance problems, including the computation of interest, annuities, and amortization of loans.

1324.3 Apply basic matrix operations, including linear programming methods, to solve application problems.

1324.4 Demonstrate fundamental probability techniques and application of those techniques, including expected value, to solve problems.

1324.5 Apply matrix skills and probability analyses to model applications to solve real-world problems.

Program Student Learning Outcomes:

Critical Thinking Skills

CT.1 Students will demonstrate the ability to 1) analyze complex issues, 2) synthesize information, and 3) evaluate the logic, validity, and relevance of data.

Communication Skills

CS.1 Students will effectively develop, interpret and express ideas through written communication.

Empirical and Quantitative Skills

EQS.1 Students will manipulate numerical data or observable facts by organizing and converting relevant information into mathematical or empirical forms.

EQS.2 Students will analyze numerical data or observable facts by processing information with correct calculations, explicit notations, and appropriate technology.

EQS.3 Students will draw informed conclusions from numerical data or observable facts that are accurate, complete, and relevant to the investigation.

Evaluation/Grading Policy:

The breakdown of the course requirements is as follows:

%	Requirement
75%	Midterm and Final Exams
25%	Midterm and Final Homework

Semester grades will be earned as follows

Percentage	Letter Grade
90% and above	A
80 %–89%	B
70 %–79%	C
60%–69 %	D
59.9% and below	F

Students are required to have access to a computer with high-speed internet, a microphone, a webcam, and appropriate system rights to download and install the necessary software. Please note, the college does not provide this equipment.

Make-up exams will not be given unless the student has coordinated with the instructor prior to the exam. Late work for whatever reason will incur a penalty unless otherwise indicated by the instructor.

Required Instructional Materials:

Business Precalculus Copyright 2016 by David Lippman This text is licensed under a Creative Commons Attribution – Share Alike 3.0 United States License. To view a copy of this license, visit <http://creativecommons.org/licenses/by-sa/3.0/us/> or send a letter to Creative Commons, 171 Second Street, Suite 300, San Francisco, California, 94105, USA/

Good news: your textbook for this class is available for free online, in web view and PDF format! You can also purchase a print version, if you prefer, via the campus bookstore or from lulu.com. Research shows you learn more and retain it longer using a hard copy textbook.

Publisher: Lulu.com

ISBN Number: 22667462

Note: The NTCC Bookstore link is at www.ntcc.edu.

Optional Instructional Materials:

Minimum Technology Requirements:

Scientific calculator

Blackboard will work on both a Mac and a PC. (Chrome Books are known to have issues with Blackboard.) It is best to access Blackboard through Fire-Fox or Chrome as your web browser. If you have trouble with any of the activities working properly, you might change your web browser as your first solution. The Default Browser in Windows 10 is Edge. This browser does not do well with Blackboard! If you go to Windows Accessories, you will find Internet Explorer still on your computer but is not your default browser. If you have any difficulties navigating with Edge, close it and go to Internet Explorer.

To use TEAMS, you must have access to a computer with high-speed internet, a microphone, a Webcam, and appropriate systems rights to download any necessary software. Please note, the college does not provide this equipment.

You can download Blackboard Student for your smart phone from the Play store or the App store.

More information is available for Technology Requirements and Support under the Student Resources – Technical Support Tab in Blackboard

Required Computer Literacy Skills:

As an online student you will have a much different "classroom" experience than a traditional student. In order to ensure that you are fully prepared for your online part of the course, following is a list of expectations and

requirements: Students in a hybrid and/or on-line program should be comfortable with and possess the following skill sets:

1. Self-discipline
2. Problem solving skills
3. Critical thinking skills
4. Enjoy communication in the written word

As part of your online experience, you can expect to utilize a variety of technology mediums as part of your curriculum:

1. Communicate via email including sending attachments
2. Navigate the World Wide Web using a Web browser such as Internet Explorer
3. Use office applications such as Microsoft Office (or similar) to create documents
4. Be willing to learn how to communicate using a discussion board and upload assignments to a classroom Web site
5. Be comfortable uploading and downloading saved files
6. Have easy access to the Internet
7. Navigate Blackboard, including using the email component within Blackboard. Instructions and tutorials for this are provided in your course.

For more information or technical assistance on using the Learning Management System, please refer to the Home Page, Orientation Module, in the important technical requirements, information and support folder in Blackboard.

Course Structure and Overview:

This is an eight-week online course where students are required to access graded activities on the Blackboard Learning Management System. A typical class involves general participation by all members in discussions regarding mathematical principles and procedures being studied. Students are required to complete online homework and discussion forums. It is particularly important for students to keep up with course materials and assignments since this is a very fast-paced course. Students are expected to watch instructional videos, read course textbooks, and complete online assignments located in the Learning Management System, Blackboard by due dates.

Communications:

Emails, TEAMS and phone messages will be responded to within 24 hours. If you do not receive a response within 24 hours, then the email or phone message was not received. Posts in the Discussion Forum "Questions, Comments, and/or Concerns?" will be monitored by the instructor. Responses by the instructor will be within 72 hours of post. Students are expected to abide by Netiquette rules when communicating online. See this link for details: [Netiquette Rules](#).

The college's official means of communication is via your campus email address. I will use your campus email address and Blackboard to communicate with you outside of class. Make sure you keep your campus email cleaned out and below the limit so you can receive important messages.

Institutional/Course Policy:

No late work will be accepted without prior approval by the instructor. Students are always expected to be respectful toward classmates and professors! Review Student Conduct in the Student Handbook. It is the student's responsibility to check Blackboard for important information/announcements regarding the course. Students should be working on course material via Blackboard every week. Do not wait until the last minute to complete and submit assignments in case of technology issues.

Alternate Operations During Campus Closure and/or Alternate Course Delivery Requirements:

In the event of an emergency or announced campus closure due to a natural disaster or pandemic, it may be necessary for Northeast Texas Community College to move to altered operations. During this time, Northeast Texas Community College may opt to continue delivery of instruction through methods that include, but are not limited to, online through the Blackboard Learning Management System, online conferencing, email messaging, and/or an alternate schedule. It is the responsibility of the student to monitor NTCC's website (<http://www.ntcc.edu/>) for instructions about continuing courses remotely, Blackboard for each class for course-specific communication, and NTCC email for important general information.

Additionally, there may be instances where a course may not be able to be continued in the same delivery format as it originates (face-to-face, fully online, live remote, or hybrid). Should this be the case, every effort will be made to continue instruction in an alternative delivery format. Students will be informed of any changes of this nature through email messaging and/or the Blackboard course site.

Statement Regarding the Use of Artificial Intelligence (AI) Technology:

Employees and students shall be permitted to explore artificial intelligence (AI) and implement its use in and out of the classroom in accordance with policy and administrative regulations. The use of AI shall only be as a support tool to enhance student outcomes or as necessary to engage in research and shall never take the place of faculty, staff, and student decision-making. Any use of AI must comply with law, policy, and administrative regulations relating to student and employee privacy and data security. A student shall only use AI tools with faculty permission and shall be expected to produce original work and properly credit sources, including AI tools used in creating the work.

Example:

APA (7th edition)

OpenAI. (2026). ChatGPT (March 25 version) [Large language model]. <https://chat.openai.com/>

MLA (9th edition)

OpenAI. ChatGPT. 25 Mar. 2026, <https://chat.openai.com/>.

Employees or students who use AI tools to deceptively harm, bully, or harass others shall be disciplined in accordance with policy. [See DH, DIA series, FFD series, FFE, FLB, and the FM series] AI Use by Employees and Students. Northeast Texas Community College 225500 TECHNOLOGY RESOURCES CRB ARTIFICIAL INTELLIGENCE (LOCAL) DATE ISSUED: 12/8/2025 1 of 1 UPDATE 50 CRB(LOCAL)-AJC Adopted: 12/16/2025

NTCC Academic Honesty/Ethics Statement:

NTCC upholds the highest standards of academic integrity. The college expects all students to engage in their academic pursuits in an honest manner that is beyond reproach using their intellect and resources designated as allowable by the course instructor. Students are responsible for addressing questions about allowable resources with the course instructor. Academic dishonesty such as cheating, plagiarism, and collusion is unacceptable and may result in disciplinary action. This course will follow the NTCC Academic Honesty and Academic Ethics policies stated in the Student Handbook. Refer to the student handbook for more information on these subjects.

ADA Statement:

It is the policy of NTCC to provide reasonable accommodation for qualified individuals who are students with disabilities. This College will adhere to all applicable federal, state, and local laws, regulations, and guidelines with respect to providing reasonable accommodation as required to afford equal educational opportunity. It is the student's responsibility to request accommodation. An appointment can be made with the Academic Advisor/Coordinator of Special Populations located in Student Services and can be reached at 903-434-8264. For more information and to obtain a copy of the Request for Accommodations, please refer to the special populations page on the NTCC website.

Family Educational Rights and Privacy Act (FERPA):

The Family Educational Rights and Privacy Act (FERPA) is a federal law that protects the privacy of student education records. The law applies to all schools that receive funds under an applicable program of the U.S. Department of Education. FERPA gives parents certain rights with respect to their children's educational records. These rights transfer to the student when he or she attends a school beyond the high school level. Students to whom the rights have transferred are considered "eligible students." In essence, a parent has no legal right to obtain information concerning the child's college records without the written consent of the student. In compliance with FERPA, information classified as "directory information" may be released to the general public without the written consent of the student unless the student makes a request in writing. Directory information is defined as: the student's name, permanent address and/or local address, telephone listing, dates of attendance, most recent previous education institution attended, other information including major, field of study, degrees, awards received, and participation in officially recognized activities/sports.

Tentative Course Schedule:

Course Overview In Topical Coverage:

- I. Equations, Functions, and Graphs
 - A. Equations of Lines
 - B. Linear Inequalities
 - C. Functions and Graphs
 - D. Applications of Linear Functions
- II. More Functions; The Mathematics of Finance
 - A. Quadratic Functions with Applications
 - B. Exponential Functions with Applications
 - C. Logarithmic Functions
 - D. Simple Interest and Discount
 - E. Compound Interest
- III. Systems of Linear Equations
 - A. Systems of Linear Equations with Applications
 - B. Matrix Operations with Applications
 - C. Graphing Linear Inequalities in Two Variables
 - D. Linear Programming: The Graphical Method with Applications
 - E. The Simplex Method: Maximization
- IV. Probability Analyses
 - A. Sets, Venn Diagrams, Experiments, Sample Spaces
 - B. Basic Concepts: Rules for Addition, Complements, Odds
 - C. Conditional Probability, Independence
 - D. Probability Distributions and Expected Value
 - E. Multiplication Principle, Permutations, and Combinations
- V. Statistics
 - A. Binomial Distribution
 - B. Measures of Central Tendency
 - C. Measures of Variation
 - D. Normal Distribution
 - E. Normal Approximation to the Binomial Distribution

Course Outline From Textbook: Practice Exercises Are On Blackboard

Chapter 1: Functions and Lines

- Section 1.1 Functions and Function Notation
- 1.2 Domain and Range
- 1.3 Rates of Change and Behavior of Graphs
- 1.4 Linear Function
- 1.5 Graphs of Linear Functions
- 1.6 Modeling with Linear Functions
- 1.7 Fitting Linear Models to Data

Chapter 2: Systems of Equations and Matrices

- Section 2.1 Systems of Equations
- 2.2 Solving Systems using Matrices
- 2.3 Matrix Operations
- 2.4 Solving Systems and Inverses

Chapter 3: Linear Programming

- Section 3.1 Inequalities in One Variable
- 3.2 Linear Inequalities
- 3.3 Graphical Solutions
- 3.4 Simplex Method
- 3.5 Applications of Linear Programming

Chapter 4: Polynomial and Rational Functions

- Section 4.1 Quadratic Functions
- 4.2 Polynomial Functions
- 4.3 Rational Functions

Chapter 5: Exponential and Logarithmic Function

- Section 5.1 Exponential Functions
- 5.2 Logarithmic Functions
- 5.3 Exponential and Logarithmic Models

Midterm Examination and Homework Due November 11, 2026**Chapter 6: Finance**

- Section 6.1 Simple and Compound Interest
- 6.2 Annuities
- 6.3 Payout Annuities
- 6.4 Loans
- 6.5 Multi-stage Finance Problems

Chapter 7: Sets

- Section 7.1 Sets
- 7.2 Venn Diagrams and Cardinality

Chapter 8: Probability

- Section 8.1 Concepts of Probability
- 8.2 Conditional Probability and Bayes Theorem
- 8.3 Counting
- 8.4 Expected Value

Chapter 9: Statistics (Taken from OpenStax Introductory Statistics)

- Section 9.1 Binomial Distribution
- 9.2 Measures of Central Tendency
- 9.3 Measures of Variation
- 9.4 Normal Distribution
- 9.5 Normal Approximation to the Binomial Distribution

Final Examination and Homework Due December 9, 2026