Fall 2025

Math 1650.623 TAMS Precalculus

MW BLB 065 10:00am-10:50am

TR ART 226   9:30am-10:50am

Instructor Information
Name: Joseph Iaia
Pronouns he/his/him
Office Location: GAB 420
Phone Number: 940-565-2155
Office hours: Tues, Thur 11-1 or by appt.

Email: iaia@unt.edu

You may contact me through email or by coming to office hours. I will try to respond to emails as soon as possible.

Course Description
Preparatory course for calculus: trigonometric functions, their graphs and applications; sequences and series; exponential and logarithmic functions and their graphs; graph of polynomial and rational functions; general discussion of functions and their properties. In addition, mathematical induction, vectors, dot product, cross product, equations of lines and planes in three dimensions.

Course Structure
At the beginning of each class, we will go over some recent homework and then there will be a lecture about the topic of the day along with the solution of some problems similar to what will be on that evening's homework assignment.

Course Objectives
The objectives of this class are to prepare the student for Calculus 1, Calculus 2, Statistics, and other higher level mathematics courses such as Calculus 3, Linear Algebra, Real Analysis, Abstract Algebra, and Topology.

By the end of this course, students will be able to:

1. understand polynomials, rational functions, and their graphs
2. understand exponential, logarithmic functions and their graphs
3. understand trigonometric functions and their graphs
4. understand mathematical induction
5. understand vectors

Required/Recommended Materials

- Text: Stewart, Redlin, and Watson, ``Precalculus: Mathematics for Calculus,'' 8th ed.
- This course has digital components. To fully participate in this class, students will need internet access to reference content on the Canvas Learning Management System and if circumstances change, you will be informed of other technical needs to access course content. Information on how to be successful in a digital learning environment can be found at Learn Anywhere (https://online.unt.edu/learn).

Assessing Your Work

Exams will be graded on a 0-100 scale. NO EXAM GRADES ARE DROPPED!

There will be a quiz on Thursday unless we have an exam on that day.

Homework will be collected and graded twice per week. The grader will choose 5 problems on the homework assignment and grade these 5 problems on each student's homework assignment and give students a grade from 0-100. At the end of the semester the average of the homework/quiz grades will be determined, and this average will be your Homework/Quiz Average. Late homework will receive a 10-point deduction on that homework assignment. The deduction will increase with each day the assignment is not turned in.

Your final grade will then be determined by averaging your grades from Exam 1, Exam 2, Exam 3, Final Exam, and Homework/Quiz Average. Your letter grade for the semester will then by determined by the following scheme:

A = 90-100
B = 80-89
C = 70-79
D = 60-69
F = 0-59

Makeup exams will only be given if a student has a doctor's note certifying the student's absence

Please be aware of the Academic Integrity Policy (PDF) (https://policy.unt.edu/policy/06-049)

Course Exam Schedule

Date	Exam Dates	Points	% of Final Grade
09/11	Exam 1	100 points	20%
10/9	Exam 2	100 points	20%
11/6	Exam 3	100 points	20%
12/11	Final Exam	100 points	20%
weekly	Homework/Quiz Average	100 points	20%

Course Daily Schedule

Meeting 1 - mathematical induction
Meeting 2 - induction
Meeting 3 - induction
Meeting 4 - induction problems with inequalities
Meeting 5 - polynomials
Meeting 6 - zeros of polynomials
Meeting 7 - synthetic division and long division of polynomials
Meeting 8 - graphs of polynomials
Meeting 9 - rational functions
Meeting 10 - graphs of rational functions and their asymptotes
Meeting 11 - graphs of rational functions and their asymptotes
Meeting 12 - exponential functions
Meeting 13 - logarithmic functions
Meeting 14 - logarithmic functions
Meeting 15 - review for exam 1
Meeting 16 - Exam 1
Meeting 17 - graphs of exponentials and logarithms
Meeting 18 - solving exponential and logarithmic equations
Meeting 19 - definition of trigonometric functions
Meeting 20 - extension of trig functions to all angles
Meeting 21 - table of well-known values of trig functions
Meeting 22 - graphs of trig functions
Meeting 23 - more on graphs of trig functions
Meeting 24 - more on graphs of trig functions
Meeting 26 - inverse trig functions
Meeting 27 - more on inverse trig functions
Meeting 28 - law of sines
Meeting 29 - law of sines - the ambiguous case
Meeting 30 - law of cosines
Meeting 31 - solving triangles
Meeting 32 - trig identities
Meeting 33 - more on trig identities
Meeting 34 - review for exam 2
Meeting 35 - Exam 2
Meeting 36 - addition and subtraction formulas
Meeting 37 - double angle and half angle formulas
Meeting 38 - trigonometric equations
Meeting 39 - more on trigonometric equations
Meeting 40 - more on trigonometric equations
Meeting 41 - polar coordinates
Meeting 42 - graphs of polar equations

Meeting 43 - graphs of polar equations
Meeting 44- polar form of complex numbers
Meeting 45 - arithmetic sequences
Meeting 46 - geometric sequences
Meeting 47 - more on geometric sequences
Meeting 48 - binomial theorem
Meeting 49 - vectors
Meeting 50 - dot product of vectors
Meeting 51 - length of vectors
Meeting 52 - angles between vectors
Meeting 53 - review for exam 3
Meeting 54 - Exam 3
Meeting 55 - cross product of vectors in three dimensions
Meeting 56 - cross product of vectors in three dimensions
Meeting 57 - equations of lines in three dimensions
Meeting 58 - equations of planes in three dimensions
Meeting 59 - final comments about precalculus
Meeting 60 - review for final exam
Meeting 61 - review for final exam
Meeting 62 - Final Exam

Students will be notified by Eagle Alert if there is a campus closing that will impact a class and the calendar is subject to change, citing the [Emergency Notifications and Procedures Policy](https://policy.unt.edu/policy/06-049) (https://policy.unt.edu/policy/06-049).

How to Succeed in this Course

1. Attend class (TAMS requires that students attend class). An unexcused absence will result in a 10-point deduction on a current homework assignment.
2. Work on the homework assignments daily and practice on other similar problems.
3. Practice, practice, practice problems until you are comfortable with the material.
4. If you are having trouble with the material then come to office hours and/or try to get help from someone who understands the material well.

The University of North Texas makes reasonable academic accommodation for students with disabilities. Students seeking reasonable accommodation must first register with the Office of Disability Access (ODA) to verify their eligibility. If a disability is verified, the ODA will provide you with a reasonable accommodation letter to be delivered to faculty to begin a private discussion regarding your specific needs in a course. You may request reasonable accommodations at any time; however, ODA notices of reasonable 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 reasonable accommodation for every semester and must meet with each faculty member prior to implementation in each class. Students are strongly encouraged to deliver letters of reasonable accommodation during faculty office hours or by appointment. Faculty members have the authority to ask students to discuss such letters during their designated office hours to protect the privacy of the student. For

additional information, refer to the Office of Disability Access website (http://www.unt.edu/oda). You may also contact ODA by phone at (940) 565-4323.

Supporting Your Success and Creating an Inclusive Learning Environment

Every student in this class has the right to learn and engage within an environment of respect and courtesy from others. We will discuss our classroom's habits of engagement and I also encourage you to review UNT's student code of conduct so that we can all start with the same baseline civility understanding (Code of Student Conduct) (https://policy.unt.edu/policy/07-012).

Course Policies

Attendance
Students are expected to attend every class unless one has a doctor's note explaining one's absence.

Class Participation
Classroom participation is highly encouraged.

Late Work

Late work will be accepted but with a 10% reduction of grade. The penalty will increase the longer the assignment is late.

Examination Policy
Exams will be conducted in class on the dates mentioned above.

Assignment Policy
Homework will be submitted on Canvas. See the instructions there for turning in assignments.

Instructor Responsibilities and Feedback

- Students are free to stop by my office and ask questions at any time. I am usually in my office from 8am – 4:30pm except M-F from 10am-11am, TR from 2-3:30pm and F 1pm-2pm.
- Exams will hopefully be returned within 48 hours; homework will be returned on Canvas within one week.

Syllabus Change Policy
Students will be promptly notified of any changes to the syllabus.

Downloading CamScanner

On your phone go to the App Store

Search for CamScanner and click on GET

Open CamScanner

Click on the Camera Icon at the bottom of the page

Slide over to click on ``Batch'' at the bottom of the page

Take a photo of each page you want to scan

Click on scanned pages at the bottom right

Click on check mark at the bottom right

Click on the three dots at the upper right

Click on ``Edit PDF''

Click on ``Share'' at the upper right

Slide over and click on ``Outlook'' at the bottom

Write to: yourname@my.unt.edu and fill in subject line

Click on send icon

This sends the pdf to yourname@my.unt.edu

Uploading Homework

Go to our class on Canvas

Click on ``Assignments''

Click on ``Homework X''

Drag the CamScanner pdf that you just created onto the page

Click on ``Submit Assignment''