

Precalculus

math-2312-003-mayo-fall-2026

Course Description

This course is a study of college algebra, trigonometry, and analytical geometry to prepare students for calculus. The topics we will cover include algebraic functions and their graphs, exponential and logarithmic functions, trigonometric functions and identities, and two- and three- dimensional analytical geometry. Credit will not be given for both MATH2312 and MATH1316. An appropriate score on the TSI, SAT, or ACT is required.

Learning Outcomes

Upon completion of this course, students should be able to do the following:

- Develop analytical reasoning to solve algebraic problems such as finding the solutions to polynomial, rational, logarithmic, and trigonometric equations, as well as finding inverse functions.
- Represent trigonometric functions by drawing relevant pictures on the unit circle, by writing the correct trigonometric definitions, and by verbal descriptions.
- Demonstrate a critical understanding of functions by graphing and analyzing functions, evaluating functions at specific real number and at variable values, computing new functions from old functions through algebraic operations, and applying known theory such as the Factor Theorem to factor polynomials and find their zeros.
- Calculate the values of trigonometric functions based on right-triangular and circular definitions.
- Solve triangles given appropriate information about sides and angles.
- Prove the validity of trigonometric identities.

Required Homework Subscription and Calculator

- *Precalculus A Right-Triangle Approach My Lab* access code (ISBN 9780135676264)
 - Purchasing an actual textbook is **NOT** required because an eBook of the textbook is included with the online purchase.
 - We will be using this resource to complete all homework assignments. You will have two weeks of free access at the beginning of the semester. In order to continue on after that, you must purchase the subscription.
 - If you are using financial aid or scholarship money to purchase this subscription, you must go to the bookstore. If you are using a credit card to purchase this subscription, you can purchase it through Canvas.
 - Go to the Access Pearson link on the sidebar of this course in Canvas to enter your credit card number or your code you receive from the bookstore.
- A TI-30XIIS is the **REQUIRED**, non-graphing, scientific calculator for this course. Right now, you can purchase one for as little as \$10. **If you do not have your own calculator when an assessment is given, you will be required to complete the assessment without one.** I will not provide you with one to use.

Instructor: Mrs. Traci Mayo

Email: tmayo@uttyler.edu

I will respond quicker to your message if you send them through Canvas rather than through email.

Classroom: RBN3035

Class Times: MW 5:40 – 7:05

Office: RBN3035

Office Hours: MW 5:15 – 5:40

Website

We will use Canvas in this course. Go to www.uttyler.edu/canvas to log into Canvas using your regular Patriots account. If you have enrolled in the course, you should have access to our class on Canvas. You will find important documents, grades, and announcements on Canvas. In general, I will notify you on Canvas if there are any disruptions or changes to our class.

Make Up Policy

Make ups for documented absences that are required as a part of a UT Tyler obligation (i.e., athletic events, a debate contest, etc.) or for a religious observation will be granted. For all make ups of this type, ***prior notification and documentation will be required***. Other make ups are granted only in extreme cases such as hospitalization and are at the sole discretion of the instructor. Makeups will not be granted after the fact under any circumstances. Pay close attention to the quiz dates and exam dates.

Course Evaluation

At the end of the semester, you will find your final grade on my.uttyler.edu. It will also be posted on Canvas.

○ $\geq 89.5\%$ is an A. ○ $\geq 79.5\%$ is a B. ○ $\geq 69.5\%$ is a C. ○ $\geq 59.5\%$ is a D. ○ $< 59.5\%$ is an F.

Student Resources

See the Course Information module for a list of resources offered for you at UT-Tyler.

University Policies

See the Course Information module for the policies at UT-Tyler.

Use of Artificial Intelligence

AI is not permitted in this course at all. See the Course Information module for more information.

The Plan

HOMEWORK (15%, drop 3): Homework will be assigned for each section of each chapter through an online platform called My Lab. You will access the assignments through Canvas. In general, a group of assignments will become available when we start a new chapter. Each section's assignment will consist of 15 – 20 problems. That group will be due at 5:40PM on quiz day. You will be provided with instant feedback on your answers, as well as **three** attempts to complete all problems. **You will not be able to submit these assignments after the due date.**

TESTS (60%, drop 1): A test will be given for each chapter we cover. They will be given in class on paper. These tests will assess your knowledge of the material taught in class and practiced on the homework. You are required to be present when a test is given. Make ups are only granted in extreme cases such as hospitalization. For this reason, I will drop 1 test grade. (Please refer to the Make Up Policy section for more information.)

FINAL EXAMS (20%): There will be a cumulative final exam at the end of the semester. It will be given in class on paper. You are required to be present when this exam is given. Make ups are only granted in extreme cases such as hospitalization. (Please refer to the Make Up Policy section for more information.)

ATTENDANCE (5%): Students learn math better in person than they do online. This is a face-to-face class. You signed up to take this class knowing it will meet every Monday and Wednesday from 5:40 – 7:05 PM. Therefore, your attendance is required. Attendance will be taken during each class. You are allowed to have 3 absences this semester and still receive all the points. Your attendance is mandatory on test days and exam days.

PRECALCULUS SEMESTER CALENDAR – FALL 2026

PAY ATTENTION TO DUE DATES AND TEST DATES!

Homework is due at 5:40PM on the day of the chapter test.

Date	Plans for Class	Date	Plans for Class
Mon, 8/24	Class Intro 1.5 – 1.6 Linear Equations and Inequalities	Wed, 10/14	5.1 Inverse Functions 5.2 Exponential Functions
Wed, 8/26	1.1 Graphs 1.2 Functions 1.3 Linear Functions and Slope	Mon, 10/19	5.3 Logarithmic Functions 5.4 Properties of Logarithmic Functions
Mon, 8/31	1.4 Equations of Lines 2.1 Increasing, Decreasing, Piecewise Function	Wed, 10/21	5.5 Solving Exponential and Logarithmic Equations
Wed, 9/2	2.2 The Algebra of Functions 2.3 The Composition of Functions	Mon, 10/26 (H/W due)	Test (Chapter 5)
Mon, 9/7	HOLIDAY – NO CLASS	Wed, 10/28	6.1 Trigonometric Functions of Acute Angles 6.2 Applications of Right Triangle Trigonometry
Wed, 9/9	2.4 Symmetry 2.5 Transformations	Mon, 11/2	6.3 Trigonometric Functions of Any Angle 6.4 Radians
Mon, 9/14 (H/W due)	Test (Chapters 1 – 2)	Wed, 11/4	6.5 Circular Functions (Graphs & Properties) Part 1
Wed, 9/16	3.1 Imaginary Numbers 3.2 Quadratic Equations	Mon, 11/9	Test (The Unit Circle) 6.5 Circular Functions (Graphs & Properties) Part 2
Mon, 9/21	3.3 Quadratic Functions 3.4 Solving Rational and Radical Equations	Wed, 11/11 (H/W due)	Test (Chapter 6)
Wed, 9/23	3.5 Solving Absolute Value Equations	Mon, 11/16	7.1 Identities: Pythagorean and Sum & Difference
Mon, 9/28 (H/W due)	Test (Chapter 3)	Wed, 11/18	7.2 Identities: Cofunction and Double Angle
Wed, 9/30	4.1 Polynomial Functions 4.2 Graphing Polynomial Functions	Mon, 11/30	7.4 Inverses of Trigonometric Functions 7.5 Solving Trigonometric Equations
Mon, 10/5	4.3 Polynomial Division 4.4 Theorems about Zeros of Poly. Functions	Wed, 12/2 (H/W due)	Test (Chapter 7)
Wed, 10/7	4.5 Rational Functions	Mon, 12/7	Review for final
Mon, 10/12 (H/W due)	Test (Chapter 4)	Wed, 12/9	FINAL EXAM 7:15PM – 9:15PM (time could change)

October 19th – Last day to enter midterm grades

October 30th – Last day to withdraw from a 15-week course.

December 15th – Final grades entered by noon (at the latest).