

MATH 2312 Precalculus

The University of Texas at Tyler, Fall 2026

Instructor: Dr. Ivan Ramirez-Zuniga

Email: iramirezzuniga@uttyler.edu

Office: RBN 4005

Website: All materials will be posted on Canvas

Time and Place:

- Section 004: TuTh 9:30 am - 10:50 am at RBN 4025.

Office Hours: TuTh 3:30 pm - 5:00 pm, or request an appointment by email (at least two days in advance).

Preferred method of communication: My preferred method of communication is by email. Please start your emails with a greeting, followed by your full name, course and section.

Textbook: There is no required textbook for this class, as most of the material will be provided by your instructor. However, I will follow Precalculus, 2nd Edition, by OpenStax . Most precalculus textbooks cover the same content in a similar order, so you are welcome to use any calculus resource you prefer. The online edition is free and available at <https://openstax.org/details/books/precalculus-2e>. Print copies can be purchased at a reasonable cost from their website. Additionally, whenever necessary, I will refer to the College Algebra 2nd Edition by OpenStax also available online at <https://openstax.org/details/books/college-algebra-2e>.

Course description: A survey of college algebra, trigonometry and analytical geometry to prepare student for calculus. Topics include algebraic functions and their graphs, exponential and logarithmic functions, trigonometric functions and identities, two and three dimensional analytical geometry.

Course prerequisites:

- Appropriate score on SAT, ACT, or TSI.

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

1. Simplify polynomial, rational, radical, exponential, and logarithmic expressions, including complex fractions.
2. Factor polynomial expressions using appropriate algebraic techniques.
3. Solve linear, quadratic, rational, radical, exponential, logarithmic, and absolute-value equations and inequalities.
4. Identify the domain, range, intercepts, zeros, asymptotes, and other important characteristics of functions.
5. Analyze and graph polynomial, rational, exponential, logarithmic, piecewise-defined, and absolute-value functions.

6. Perform operations on functions, including addition, subtraction, multiplication, division, composition, and inversion.
7. Apply transformations to interpret and construct graphs of functions.
8. Model real-world situations using appropriate algebraic, exponential, logarithmic, and trigonometric functions.
9. Evaluate and analyze trigonometric functions using right-triangle definitions, the unit circle, graphs, and identities.
10. Solve trigonometric equations and apply trigonometric methods to problems involving triangles and periodic phenomena.
11. Use mathematical notation, algebraic reasoning, graphs, tables, and technology to communicate and verify solutions.
12. Interpret solutions in the context of the original problem and determine whether they are mathematically and practically reasonable.

Grading procedure:

- Three midterm exams 60% (20% each).
- Final exam (cumulative) 25%
- Quizzes 15%

Grading scale: A:90-100%, B: 80-89%, C: 70-79%, D: 60–69%, F:<60%.

Midterm Exams: Exams will cover all material presented in class through the week preceding the scheduled exam date. No new material will be included from the week in which the exam is given. **A practice set will be provided in Canvas as a guide to help you prepare; however, this set is not intended to be exhaustive.** In addition to the practice problems, material from homework assignments and any topics covered in class during the relevant period may appear on the exam.

Quizzes: There will be weekly **quizzes every Thursday at the end of class** unless otherwise announced by your professor in the previous lecture. They will generally last for 15 minutes. **Your lowest two quizzes will be dropped** at the end of the semester. Make-up quizzes will not be offered if the student fails to notify the professor before the scheduled quiz is missed. If you know that you will have to miss a quiz for a legitimate reason (medical emergency, athletic commitment, religious observance, etc.), you must notify the professor in advance to schedule a make-up quiz before the following class. Absolutely no make-up quizzes will be given after the class following a scheduled quiz. Missed quizzes that are not made up before the following class will earn a grade of zero. **Quizzes will assess material covered during the previous week and may also include content introduced on the Tuesday of the quiz week. Any material discussed in class during that period may appear on the quiz. A set of practice problems will be assigned for each quiz to aid in preparation; however, these problems should not be considered exhaustive.**

Note: If you have any questions or concerns about a quiz, exam, or any posted grade, **you must contact me within one week of the date the graded assessment is returned (or the grade is posted in Canvas)**, regardless of whether you were present in class that day. After one week, the grade will stand as recorded and no further changes will be made. It is your responsibility to check your grades in Canvas regularly to ensure there are no mistakes.

Make-up policy: Make-ups for documented absences that are required as part of a UT Tyler obligation (e.g. athletes participating in an event, students participating in a debate contest, etc.) or for religious observation will be granted. **For all make-ups of this type, prior notification of at least one week and documentation are required. Other make-ups are granted only in extreme cases and at the sole discretion of the instructor. Valid documentation, such as a medical note from a health professional (dated within 72 hours of the missed evaluation) must be provided to be eligible for the make-up evaluation.** Consider visiting the Health Clinic on Campus for such a request. To make an appointment call (903) 939-7870. It is the responsibility of the student to communicate with me promptly and regularly until arrangements for the missed work have been established. If this criterion is not met, make-up evaluation won't be granted. Leaving early for a break, having a family trip, etc are NOT grounds for a make-up, so please make your travel plans accordingly. In almost all cases, missed quizzes will be assigned a 0. **Keep in mind that the 2 lowest quizzes will be dropped at the end of the semester.**

Attendance: Attendance is **mandatory**. You are expected to attend class on time and prepared. Students are responsible for all announcements made during lecture. **During class, you are expected to remain engaged and should not work on unrelated activities** (e.g., texting, browsing the internet, watching videos, or using a phone/laptop for non-course purposes).

Student Resources:

- **Canvas 101:** To learn how to use Canvas visit: <https://www.uttyler.edu/canvas/>
- **The Mathematics Learning Center (MLC)**, RBN 4021, is an open access computer lab for math students. There are tutors on duty for several hours each day to assist students who are enrolled in early-career courses. For more information about the MLC including the tutoring schedule visit: <https://www.uttyler.edu/academics/colleges-schools/arts-sciences/departments/mathematics/math-learning-center>.
- **Supplemental Instruction program.** The Supplemental Instruction (SI) Program is a peer-led study group, which provides academic support to students in traditionally difficult courses to help them become successful. SI sessions are facilitated by Supplemental Instruction Leaders (SILs), peer students, who have previously completed the targeted course and have demonstrated competency in the course. In sessions, students are introduced to various study skills and strategies in addition to course content practice, which enable them to become successful in all their college courses. Sessions are offered regularly each week in person to ensure maximum engagement. During the typical session, students will have the opportunity to clarify/compare their notes with their classmates, review all required reading assignments, and discuss key course concepts. Though it is important to grasp key functions of the SI Program, it is equally important to understand that SI is not a remedial program. SI is a free and voluntary program that is open to all students, which eliminates the stigma that only certain students should come to sessions. SI strives to maintain a non-remedial, non-threatening, and non-punitive image. For more information visit: <https://www.uttyler.edu/academics/success-services/supplemental-instruction/>.
- **Knack:** Knack provides peer tutoring from UT Tyler students who have successfully completed the same courses they tutor. Tutoring is available one-on-one or in groups, both in person and online. Access to Knack is currently available to new incoming students and select graduate students, with additional student cohorts being added each year. For more information including the tutoring schedule visit: <https://www.uttyler.edu/academics/success-services/tutoring/>.

Calculators: The use of **calculators** and other electronic devices, including **cell phones, earbuds, headphones, etc.**, during exams or quizzes is strictly **prohibited**, so study accordingly.

Cellphones and electronic devices: Cellphones are not permitted during class. At all times, cellphones must be silenced and put away. **During evaluations (quizzes and exams), earbuds, headphones, smartwatches, smart glasses, and any other electronic accessories or devices are not allowed** and must be removed and put away before the assessment begins.

Artificial Intelligence Statement: UT Tyler is committed to exploring and using artificial intelligence (AI) tools as appropriate for the discipline and task undertaken. We encourage discussing AI tools' ethical, societal, philosophical, and disciplinary implications. All uses of AI should be acknowledged as this aligns with our commitment to honor and integrity, as noted in UT Tyler's Honor Code. Faculty and students must not use protected information, data, or copyrighted materials when using any AI tool. Additionally, users should be aware that AI tools rely on predictive models to generate content that may appear correct but is sometimes shown to be incomplete, inaccurate, taken without attribution from other sources, and/or biased. Consequently, an AI tool should not be considered a substitute for traditional approaches to research. You are ultimately responsible for the quality and content of the information you submit. Misusing AI tools that violate the guidelines specified for this course (see below) is considered a breach of academic integrity. The student will be subject to disciplinary actions as outlined in UT Tyler's Academic Integrity Policy.

For this course, **the use of AI tools is permitted as a study aid outside of class ONLY, but it is important to use these tools in ways that support your learning.** AI can be helpful for reviewing concepts, generating additional practice problems, explaining a solution step by step, or providing feedback on your own work. However, relying on AI simply to produce answers can **defeat the purpose of practicing and engaging with the material.** When using AI tools, you are encouraged to write prompts that actively support your learning. For example, you might ask an AI tool to explain why a particular step is valid, generate a similar problem for you to solve, identify an error in your work without immediately giving you the answer, or quiz you on a topic covered in class.

During in-class evaluations (quizzes and exams), the use of AI tools and all electronic devices is prohibited. Therefore, you are responsible for developing the ability to solve problems and explain your reasoning independently.

Ultimately, this course is an opportunity to develop knowledge and skills that will support your future studies and career. **How much you benefit from that opportunity will depend in large part on how actively and honestly you engage with the learning process.**

UT Tyler a Tobacco-Free University: All forms of tobacco will not be permitted on the UT Tyler main campus, branch campuses, and any property owned by UT Tyler. This applies to all members of the University community, including students, faculty, staff, University affiliates, contractors, and visitors. Forms of tobacco not permitted include cigarettes, cigars, pipes, water pipes (hookah), electronic cigarettes (vaping), smokeless tobacco, snuff, chewing tobacco, and all other tobacco products. There are several cessation programs available to students looking to quit smoking, including counseling, quitlines, and group support. For more information on cessation programs please visit <https://www.uttyler.edu/offices/human-resources/wellness/tobacco-cessation/>.

Academic Integrity: Your work must be your own. Violations will be processed according to the established guidelines of the department, college, and university. Violations of academic integrity include, but are not limited to, cheating, fabrication, or plagiarizing. A range of academic sanctions may be taken against a student who engages in academic dishonesty.

Accessibility: The Department of Mathematics at UT Tyler offers accommodations to students with learning, physical, and/or psychological disabilities. If you have a disability for which you are or may be requesting an accommodation, you are encouraged to contact both your instructor and the Student Accessibility and Resources (SAR) as early as possible in the term. SAR will verify your disability and determine reasonable accommodations for this course. You can find more information in their website <https://www.uttyler.edu/academics/success-services/disability-services/>.

Take into account that once an application and supporting documentation is received, the SAR registration process may take 5-7 business days to complete. It is the student's responsibility to apply for and obtain accommodations in a reasonable time frame within the semester. No accommodation reviews will be completed during the final three weeks of the current semester unless the condition is temporary or newly diagnosed.

Policies: See <https://www.uttyler.edu/offices/academic-affairs/files/syllabus-information.pdf> for these and other important University policies including: UT Tyler Honor code, student rights and responsibilities, campus carry, UT Tyler a tobacco-free university, grade replacement and forgiveness, state-mandated course drop policy, student accessibility and resources, student absence for university-sponsored events, social security and FERPA, emergency exits and evacuation, and student standards of academic conduct.

Important Dates: To find these and other important dates visit the University academic calendar at: <https://www.uttyler.edu/academics/academic-calendar-26-27/academic-calendar-15-week-and-summer.php>.

- September 8th. Census date: Date to withdraw without penalty, grade replacement deadline.
- October 30th. Last day to withdraw from one or more courses with a W.
- Midterm 1: September 22nd.
- Midterm 2: October 20th.
- Midterm 3: November 19th.
- Final Exam. Thursday December 10th.