

Precalculus, Mathematics 2312, Section 402 Summer 2025

Instructor: Dr. Katie Anders

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Course Schedule: Class meets MTuWThF in RBN 4019 from 9:00-10:40 A.M.

Course Website: You MUST activate your Canvas account. To do so, go to <https://uttyler.edu/canvas>. This is also the address to login. If you are registered in the course, you already have access to the course. All important documents will be posted on Canvas.

Office hours: Immediately after class and by appointment arranged by email

Required Text: Precalculus from OpenStax. This is an open-access textbook, meaning it is freely available at the following link: www.openstax.org/details/precalculus You can read the book online, or download PDF, iBooks, or Kindle versions of it. If you prefer to have a print copy, you can purchase one. At the OpenStax website listed above, there is a link to order a print copy.

Course Description: This course is a survey of college algebra, trigonometry, and analytic geometry to prepare students for calculus. Topics include algebraic functions and their graphs, exponential and logarithmic functions, trigonometric functions and identities, and two and three dimensional analytic geometry. Credit not given for both MATH 2312 and MATH 1316.

Course Prerequisites: Appropriate score on SAT, ACT, or TSI

Course Outline: Chapters 1-7 of the text and other chapters, in part or in full, as time permits

Student 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, exponential, 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 description
- Demonstrate a critical understanding of functions by graphing and analyzing functions, evaluating functions at specific real numbers 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 zeroes.
- Calculate the values of trigonometric functions based on right-triangular and circular definitions

- Solve right triangles given appropriate information about sides and angles
- Prove the validity of trigonometric identities

Grading: Scores will be posted on Canvas. After the end of the semester, final course grades will be available on my.uttyler.edu. A final course grade of 90% is guaranteed to be at least an A, a final course grade of 80% is guaranteed to be at least a B, a final course grade of 70% is guaranteed to be at least a C, and a final course grade of 60% is guaranteed to be at least a D. All grades below D will be F. The breakdown of your final course grade into categories is given below.

Homework: 10%

Tests: 16% each

Final exam: 26%

If you have any questions about the grading of a particular assessment, you must contact me no more than one week after the day I return the graded assessment in class, whether you are present during that class or not.

Attendance: It is your responsibility to attend class. Attendance is mandatory. This means, among other things, coming to class on time and prepared. Before class begins, you should turn off cell phones and any other electronic devices. Students are responsible for all announcements made during lecture.

Homework: Homework will be assigned each class period via the online platform WeBWorK. Your temporary WeBWorK password is `uttyler` in all lowercase letters. You should change the password immediately upon logging into WeBWorK for the first time. Your WeBWorK username has already been sent to you in an email to your patriots email account, provided you registered for the course before July 3. If you registered after that date, you must email Dr. Anders to let her know you need an account. This is your responsibility, and you must do it immediately. The link to our course's WeBWorK page was also provided to you in the same email and is posted in a Canvas announcement. More information on logging into and using WebWork is available on Canvas in a separate document.

In general, a new homework assignment will become available on WeBWorK after each class. It will usually be due by 5:00 A.M. on Tuesday. The WeBWorK system provides you with instant feedback on your answers, as well as unlimited attempts to complete most problems. You should use this to your advantage. You are required to successfully complete all assigned problems on WeBWorK. Late homework will NOT be accepted. When computing your final homework grade, I will use your total score on all the WeBWorK problems. For example, if there are a total of 150 problems throughout the semester, and you successfully complete 120 of them, your homework grade will be 80%.

Tests: There will be 4 midterm tests. A list of the test dates is given below. This list is preliminary and subject to change. On test days, we will use the first 55 minutes of the class period for the test. During the remaining 45 minutes, we will have class as usual. Should the entire class finish the test early, we will go ahead and proceed with class as usual as soon as the last student's exam has been turned in.

Test 1: Tuesday, July 15

Test 2: Tuesday, July 22

Test 3: Tuesday, July 29

Test 4: Tuesday, August 5

Final Assessment: The final exam will be on Friday, August 8 during the usual class time and will be cumulative.

Cell Phones: Cell phones are not permitted in class. You must silence them and put them away before class begins.

Calculators: Calculators will not be allowed on tests nor on the final exam. You will need to be proficient in fractions and basic computations. Many homework problems will need to be done without calculators. Study accordingly.

Absences: 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. Prior notification is still required. **Under no circumstances will make-ups be granted without prior notification.** Leaving early for a break is NOT grounds for a make-up, so please make your travel plans accordingly. In almost all cases, missed work will be assigned a 0.

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. Below are ideas related to academic integrity.

Resources you are encouraged to utilize in this course include the textbook and unassigned problems, notes from class, assigned homework problems, your fellow Math 2312 students, the Math Learning Center, and your instructor. E-mail is the best way to contact me. I reply to email from 9:00 A.M.–3:00 P.M. Monday–Friday.

A note about a resource NOT allowed in this course: while the internet may be a valuable resource, using it to unethically acquire answers for your work will be considered a violation of academic integrity and processed accordingly. Similarly,

copying answers from other students' assignments, past or present, violates the idea that your work must be your own.

The use of Artificial Intelligence is not permitted in this course at all. All work submitted by a student in this course should be their own. The assignments and assessments are designed to support your learning. Doing your own work, without assistance from artificial intelligence, is an essential part of mastering course learning objectives. In this course, you are expressly forbidden from using ChatGPT or any other artificial intelligence (AI) tools for any stages of the work process, including brainstorming. Deviations from these guidelines will be considered a violation of UT Tyler's Honor Code and academic integrity policies.

University Policies: Thursday, July 10 is this semester's Census Date, the deadline for all registrations, schedule changes, and section changes. Tuesday, July 29 is the last day to withdraw from one or more courses. For university policies concerning Students' Rights and Responsibilities, Grade Replacement/Forgiveness, State-Mandated Course Drop Policy, Disability Services, Student Absence due to Religious Observance, Student Absence for University-Sponsored Events and Activities, Social Security and FERPA Statement, please see the University Policies and Information file on this course's Canvas page.

Contingency Plans: If the entire university moves all classes to Zoom at any point this semester, there will be some changes to the syllabus. These are NOT options that an individual student may choose.

If face-to-face classes are suspended for a short time, tests will be moved so that they can be taken when face-to-face class resumes. In this case, there will be a Canvas announcement giving the new dates for tests.

If face-to-face classes are suspended for a long period of time in the middle of the semester, some tests may be eliminated, combined, and/or rescheduled, and the weights used to compute course averages may be adjusted.

If all university classes must migrate online at some point, then online proctoring may be utilized. For online proctoring, students will need high speed internet, access to Zoom, a webcam, and a microphone. Please note that students can use university computer labs or the university library as a place to take an assessment being proctored online.