Math 2312.002 - Precalculus

Spring 2026
TuTh 9:30 - 10:50 am in RBN 4027

Instructor:	Dr. Maddie Dawsey
Office:	RBN 4048
Office Hours:	Tu 8:15 - 9:15 am, Tu 3:30 - 4:30 pm, We 10:10 am - 12:10 pm, or by appointment
Email:	mdawsey@uttyler.edu
Website:	All course materials will be posted on Canvas

Textbook

Precalculus from OpenStax (Print ISBN: 1938168348).

This is an open-access textbook, so it is freely available here: openstax.org/details/books/precalculus-2e. You can read it online, download a PDF, or buy a print copy for about $40 (paperback) or $58 (hardcover).

Course Description

A survey of college algebra, trigonometry, and analytical 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 analytical geometry.

Course Learning Objectives

We will cover Chapters 1-7. By the end 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.

Important Dates

January 19	Martin Luther King, Jr. Holiday
January 26	Census Date
March 9-13	Spring Break
March 30	Withdrawal Deadline
April 27-May 1	Final Exams

Grading Scheme

Your final letter grade will be determined by the following grading scheme:

In-Class Activities	**10%**	definitely an A	90 - 100
Homework	**10%**	at least a B	80 - 89.99
Knowledge Checks	**15%**	at least a C	70 - 79.99
Midterm Exams	**45% (15% each)**	at least a D	60 - 69.99
Final Exam	**20%**	definitely an F	0 - 59.99

Attendance
Students must attend every class in person. You are responsible for any announcements made during class.

In-Class Activities (10%)
During most class days, we will work on activities together as we learn the required precalculus material. In-class activities will generally be due by the end of the day that they are assigned; due dates will be announced in class. At least one question on each exam will resemble an in-class activity question, and the only effective way to prepare for these exam questions is to attend class and work through the activities yourself using only the allowed resources (lecture notes, textbook, and professor).

In-class activities submitted more than 2 hours late will not be graded and will receive a grade of zero. Your lowest activity grade will be dropped at the end of the semester.

Homework (10%)
Homework from the textbook will be posted on Canvas after each class. Homework assignments are designed to prepare you for activities, quizzes, and exams, so please take them seriously! Each week's homework problems will be due on Canvas by the beginning of class the following Tuesday.

Homework submitted more than two hours late will not be graded and will receive a grade of zero. Your lowest homework grade will be dropped at the end of the semester.

Knowledge Checks (15%)
Each Tuesday, we will have an in-class knowledge check to assess your understanding of the previous week's homework and your ability to correctly apply algebra techniques. Each knowledge check will take 5 minutes and will consist of a few problems to solve. Working through the homework yourself using only the allowed resources (lecture notes, textbook, and professor) is the only effective way to prepare for knowledge checks.

Absence from class on the day of a knowledge check will result in a grade of zero, unless the absent student notifies the professor of the absence in advance, provides documentation for the absence, and arranges for a make-up knowledge check to take place before the next class period. Your lowest two knowledge check grades will be dropped at the end of the semester.

Exams
There will be three midterm exams, each worth 15% of the final course grade, and a cumulative final exam worth 20% of the final course grade. The tentative schedule is:

Exam 1	**Thursday, February 12**
Exam 2	**Thursday, March 19**
Exam 3	**Thursday, April 16**
Final Exam	**Thursday, April 30 at 9:30 - 11:30 am**

You may prepare one 3×5 note card (front side only) to use on each exam, and you must turn in your note card with your exam. You may not include any worked-out problem solutions on your note card; each violation of this policy will result in a deduction of 10 points on your exam.

Make-up exams for documented absences that are required as part of a UT Tyler obligation or for religious observation will be granted. For all make-ups of this type, prior notification and documentation are required. Other make-ups will be granted only in extreme cases and at the discretion of the professor. A missed exam from an excused absence must be made up within one week. Any missed exam that is not made up will be replaced with the final exam grade (which is usually at least one letter grade lower than a midterm exam grade).

Technology
Students must have a device capable of internet access and access to Canvas, as well as either a PDF scanning app (iPhone Notes, Microsoft OneDrive, CamScanner, etc.) or access to a physical scanner. Use of AI is not permitted on any assignments in this class. No laptops, cell phones, calculators, smart watches, headphones, or other devices will be permitted on exams.

Student Resources

The Mathematics Learning Center (MLC), RBN 4021, is an open access computer lab for math students. There are tutors on duty during the fall and spring semesters to assist students who are enrolled in early-career courses. More information can be found here: https://www.uttyler.edu/math/math-learning-center.

The PASS Tutoring Center also offers free tutoring for early-career courses and has walk-in hours. More information, including a current schedule and instructions for making tutoring appointments, can be found here: https://www.uttyler.edu/tutoring.

Other resources that are readily available to you include:

- Your textbook.
- Your professor (via office hours or email).
- Acceptable[1] online resources, such as YouTube videos or free online tutorials.

University Policies

For university policies concerning Students' Rights and Responsibilities, Grade Replacement/Forgiveness, State-Mandated Drop Policy, Disability Services, Student Absence due to Religious Observance, Student Absence for University-Sponsored Events and Activities, Campus Carry, Social Security and FERPA Statement, please see the University Information module on the course Canvas page.

Tentative Schedule

WEEK	DAY	PLANNED MATERIAL
Week 1 1/12–1/16	Tuesday	Algebra Review
	Thursday	Section 1.1
Week 2 1/19–1/23	Tuesday	Section 1.2
	Thursday	Section 1.3
Week 3 1/26–1/30	Tuesday	Section 1.4
	Thursday	Section 1.5
Week 4 2/2–2/6	Tuesday	Section 1.6
	Thursday	Section 1.7
Week 5 2/9–2/13	Tuesday	Section 2.1
	Thursday	EXAM 1 (Chapter 1) and Section 2.2
Week 6 2/16–2/20	Tuesday	Section 2.3
	Thursday	Section 3.1
Week 7 2/23–2/27	Tuesday	Section 3.2
	Thursday	Section 3.3
Week 8 3/2–3/6	Tuesday	Sections 3.4-3.6
	Thursday	Section 3.7
Break 3/9–3/13	Tuesday	*Spring Break*
	Thursday	*Spring Break*
Week 9 3/16–3/20	Tuesday	Sections 4.1-4.2
	Thursday	EXAM 2 (Chapters 2-3) and Section 4.3
Week 10 3/23–3/27	Tuesday	Sections 4.4-4.6
	Thursday	Section 5.1
Week 11 3/30–4/3	Tuesday	Section 5.1
	Thursday	Sections 5.2 and 5.4
Week 12 4/6–4/10	Tuesday	Sections 6.1 and 6.3
	Thursday	Sections 5.3 and 6.2
Week 13 4/13–4/17	Tuesday	Sections 7.1-7.3
	Thursday	EXAM 3 (Chapters 4-6) and Section 7.5
Week 14 4/20–4/24	Tuesday	Chapters 5-7 Examples
	Thursday	Chapters 5-7 Examples
Week 15	Thursday	FINAL EXAM (Chapters 1-7)

[1]The use of artificial intelligence (AI), online Q&A blogs like Math Stack Exchange, and online solution manuals like Chegg is not permitted in this course. Please refrain from using AI tools and online solutions.