

Math 2312-020: Precalculus

Spring 2022

Modifications to the Syllabus

This syllabus, including grade evaluation and course schedule, is subject to modification. In particular, the COVID-19 pandemic may require significant changes in course delivery and content on potentially short notice.

Information About COVID-19

Please refer to ASU's [COVID-19 \(Coronavirus\) Updates](#)¹ web page for current information about campus guidelines and safety standards as they relate to the COVID-19 pandemic.

Instructor Information

Dr. Dionne T. Bailey

Office: MCS 220G

Phone: 325-486-5425

Email: Dionne.Bailey@angelo.edu

Student Hours

I will be available for student hours both in-person and virtually. To meet with me in-person, please come by my office in MCS 220G during the following times. To meet with me virtually during the following times, please call my office phone at 325-486-5425. If you are unable to meet with me during the following times, please email me at Dionne.Bailey@angelo.edu to schedule an appointment.

Days	Times
Monday	10:00 am – 12:00 pm
Tuesday	1:00 pm – 2:00 pm
Wednesday	10:00 am – 12:00 pm
Thursday	1:00 pm – 2:00 pm
Friday	10:00 am – 12:00 pm

Course Information

Class Meetings

Our class meetings are scheduled on Tuesday and Thursday from 8:00 – 9:15 am in MCS 112. This course is face-to-face, and it is not accessible through a live streaming tool. Additionally, in-person attendance is required. All students, faculty and staff are required to complete the wellness screening every day before coming to campus or leaving their residence hall.

Attendance

You will be required to attend class in person. I will use Navigate to record your in-class attendance each day. You will receive 100 for attending class and zero for missing class. If you miss class, you will need to watch the class recording and take notes. If you submit your notes in [Blackboard](#)² by 11:59 PM on the next day, then you will receive 90 in place of the zero.

Technology Requirements

To successfully complete this course, students need to have a smart phone and access to a laptop, desktop computer, or tablet with a reliable internet connection.

Tests

We will have three written tests and a cumulative final exam. All exams must be proctored either by me or an authorized testing center. The exam dates are listed in the course schedule below. Contact me immediately if you are unable to take an exam at the scheduled date.

Standards

This section of Precalculus is utilizing a new approach aimed at improving pass rates and better preparing students for future math courses. It will include passing 5 standards assessments of prerequisite material from College Algebra. While these standards include topics you mastered in College Algebra, some students still struggle with these standards. These topics are essential in Precalculus and Calculus, therefore remediation may be necessary. Below are some important facts about this process.

These “standards” will consist of 5 short “assessments” each consisting of 6 questions. You must get at least 4 of the 6 questions on each standard correct to “pass” that standards assessment. **You must pass all 5 standards assessments in order to pass the class regardless of your overall grade in the course. All 5 standards assessments must be passed by Friday, March 11.** You may take all 5 standards in a week, but you can only take each standards assessment once per week. You can have up to 8 attempts to pass each standards assessment. The grades on the standards assessments will also count 5% of your overall course grade. All standards assessments must be taken in person. No remote testing is allowed.

- Passing a standards assessment by Friday, February 11 will result in a grade of 100 on that standards assessment.
- Otherwise passing a standards assessment by Friday, March 11 will result in a grade of 50 on that standards assessment.

You will take a “pretest” on the first day of class to identify your strengths and weaknesses on these standards. You will also retake the “pretest” after you pass all 5 standards assessments. The scores on this pretest and retake will not affect your grade in the course.

If you fail a standards assessment, there are resources available to help you learn these topics and practice before attempting to retake a standards assessment. You should come see me during office hours to get one-on-one help with any content area. You should also access the

free online textbook (Openstax) and free online standards practice (myOpenMath) with video demonstrations in Blackboard. Go to the math lab located on the third floor of the library to receive assistance on preparing for these standards assessments.

Daily Work

Daily work will consist of homework problems from the textbook. You will complete the homework assignment on paper and include your work. Then you will take a photo/scan of all of your work and use a scanner or a smart phone app to create a pdf file. Then you will submit this pdf file through Blackboard. Contact me immediately if you are unable to complete an assignment.

Grade Calculation

Your grade on attendance will count for 5%, your grade on the standards will count for 5%, your grade on your daily work will count for 10%, your test average will count for 55%, and the cumulative final examination will count for 25%. **You must pass all 5 standards assessments in order to pass the class regardless of your overall grade in the course. All 5 standards assessments must be passed by Friday, March 11.**

The following grading scale is in use for this course:

A = 90.00-100

B = 80.00-89

C = 70.00-79

D = 60.00-69

F = 0-59

Student Learning Outcomes

1. **The students will demonstrate an understanding of factual knowledge including the mathematical notation and terminology used in this course.** Students will read, interpret, and use the vocabulary, symbolism, and basic definitions used in precalculus pertaining to the real numbers; exponents and radicals; polynomials, factoring, and rational expressions; equations and inequalities; functions; polynomial and rational functions; inverse functions; exponential and logarithmic functions; and graphs and their transformations.
2. **The students will describe the fundamental principles including the mathematical rules and theorems arising from the concepts covered in this course.** Students will identify and apply the laws and formulas that result directly from the definitions; for example, rules of exponents, exponential and logarithmic properties, the quadratic formula, slope and formulas for the equations of lines, the Intermediate Value Theorem, and the limit laws.
3. **The students will apply course material using techniques and procedures covered in this course to solve problems.** Students will utilize the facts, formulas, and the techniques learned in this course to simplify algebraic expressions; graph functions; and solve equations.

4. **The students will develop specific skills, competencies, and thought processes sufficient to support further study or work in this field or related fields.** Students will acquire a level of proficiency in the fundamental concepts and applications in precalculus necessary for success in calculus.

Prerequisite

Mathematics 1314 or a suitable score on a placement exam.

Required Texts and Readings

Precalculus: Mathematics for Calculus, 7th Edition, by Stewart, Redlin, and Watson.

Table of Contents

- 1. Fundamentals:** Exponents and Radicals; Algebraic Expressions; Rational Expressions; Equations; Inequalities; The Coordinate Plane; Graphs of Equations; Circles; Lines.
- 2. Functions:** Functions; Graphs of Functions; Getting Information from the Graph of a Function; Average Rate of Change; Linear Functions; Transformation of Functions; Combining Functions; One-to-one Functions and Their Inverse.
- 3. Polynomials and Rational Functions:** Quadratic Functions; Polynomial Functions; Dividing Polynomials; Rational Functions.
- 4. Exponential, and Logarithmic Functions:** Exponential Functions; The Natural Exponential Function; Logarithmic Functions; Laws of Logarithms; Exponential and Logarithmic Equations.
- 13. Limits: A Preview of Calculus:** Finding Limits Numerically and Graphically; Finding Limits Algebraically; Limits at Infinity.

Course Schedule

The subject matter schedule listed below is tentative, and subject to change and adaptation. For current, updated information about course topics, contact the instructor.

Tuesday, January 18, 2022

- Syllabus and Pretest

Thursday, January 20, 2022

- Standards

Tuesday, January 25, 2022

- Section 1.5 Equations
(Due Friday, January 28 at 11:59 PM)

Thursday, January 27, 2022

- Section 1.2 Exponents and Radicals
(Due Tuesday, February 1 at 11:59 PM)

- Section 1.3 Algebraic Expressions
(Due Tuesday, February 1 at 11:59 PM)

Tuesday, February 01, 2022

- Section 1.4 Rational Expressions
(Due Friday, February 4 at 11:59 PM)

Thursday, February 03, 2022

- Section 1.8 Inequalities
(Due Tuesday, February 8 at 11:59 PM)
- Section 1.9 The Coordinate Plane; Graphs of Equations

Tuesday, February 08, 2022

- Section 1.9 The Coordinate Plane; Graphs of Equations
(Due Friday, February 11 at 11:59 PM)
- Section 1.10 Lines
(Due Friday, February 11 at 11:59 PM)

Thursday, February 10, 2022

- Quiz with Cheat Sheet
- Section 2.1 Functions

Tuesday, February 15, 2022

- Exam 1 Review

Thursday, February 17, 2022

- Section 2.1 Functions
(Due Tuesday, February 22 at 11:59 PM)
- Section 2.7 Combining Functions

Exam 1

Thursday, February 17 from 5:00 pm - 7:00 pm

Tuesday, February 22, 2022

- Section 2.7 Combining Functions
(Due Friday, February 25 at 11:59 PM)
- Section 2.8 One-to-one Functions and Their Inverse

Thursday, February 24, 2022

- Section 2.8 One-to-one Functions and Their Inverse
(Due Tuesday, March 1 at 11:59 PM)

- Section 2.2 Graphs of Functions
(Due Tuesday, March 1 at 11:59 PM)

Tuesday, March 01, 2022

- Section 2.3 Getting Information from the Graph of a Function
(Due Friday, March 4 at 11:59 PM)

Thursday, March 03, 2022

- Graphing Quiz
- Section 2.4 Average Rate of Change of a Function
(Due Tuesday, March 8 at 11:59 PM)
- Section 2.5 Linear Functions
(Due Tuesday, March 8 at 11:59 PM)

Tuesday, March 08, 2022

- Exam 2 Review

Thursday, March 10, 2022

- Section 2.6 Transformations of Functions

Exam 2

Thursday, March 10 from 5:00 pm - 7:00 pm

Tuesday, March 15, 2022

- Spring Break

Thursday, March 17, 2022

- Spring Break

Tuesday, March 22, 2022

- Section 2.6 Transformations of Functions

Thursday, March 24, 2022

- Section 2.6 Transformations of Functions
(Due Tuesday, March 29 at 11:59 PM)
- Section 3.1 Quadratic Functions
(Due Tuesday, March 29 at 11:59 PM)

Tuesday, March 29, 2022

- Section 3.2 Polynomial Functions
(Due Friday, April 1 at 11:59 PM)

Thursday, March 31, 2022

- Section 3.3 Dividing Polynomials
(Due Tuesday, April 5 at 11:59 PM)
- Section 3.6 Rational Functions

Tuesday, April 05, 2022

- Section 3.6 Rational Functions

Thursday, April 07, 2022

- Section 3.6 Rational Functions
(Due Tuesday, April 12 at 11:59 PM)
- Section 13.1 Finding Limits Numerically and Graphically
(Due Tuesday, April 12 at 11:59 PM)

Tuesday, April 12, 2022

- Section 13.2 Finding Limits Algebraically
(Due Friday, April 15 at 11:59 PM)

Thursday, April 14, 2022

- Section 13.4 Limits at Infinity
(Due Tuesday, April 19 at 11:59 PM)

Tuesday, April 19, 2022

- Exam 3 Review

Thursday, April 21, 2022

- Section 4.1 Exponential Functions
(Due Tuesday, April 26 at 11:59 PM)
- Section 4.2 The Natural Exponential Function
(Due Tuesday, April 26 at 11:59 PM)

Exam 3

Thursday, April 21 from 5:00 pm - 7:00 pm

Tuesday, April 26, 2022

- Section 4.3 Logarithmic Functions
(Due Friday, April 29 at 11:59 PM)
- Section 4.4 Laws of Logarithms

Thursday, April 28, 2022

- Section 4.4 Laws of Logarithms
(Due Tuesday, May 3 at 11:59 PM)
- Section 4.5 Exponential and Logarithmic Equations

Tuesday, May 03, 2022

- Section 4.5 Exponential and Logarithmic Equations
(Due Friday, May 6 at 11:59 PM)

Thursday, May 05, 2022

- Final Exam Review

Final Exam

Tuesday, March 10 from 8:00 am - 10:00 am

General Policies Related to This Course

All students are required to follow the policies and procedures presented in these documents:

- [Angelo State University Student Handbook](#)³
- [Angelo State University Catalog](#)⁴

Academic Integrity

Students are expected to maintain complete honesty and integrity in all work. Any student found guilty of any form of dishonesty in academic work is subject of disciplinary action and possible expulsion from ASU.

The College of Science and Engineering adheres to the university's [Statement of Academic Integrity](#)⁵ (Page 97).

Accommodations for Students with Disabilities

ASU is committed to the principle that no qualified individual with a disability shall, on the basis of disability, be excluded from participation in or be denied the benefits of the services, programs or activities of the university, or be subjected to discrimination by the university, as provided by the Americans with Disabilities Act of 1990 (ADA), the Americans with Disabilities Act Amendments of 2008 (ADAAA) and subsequent legislation.

Student Disability Services is located in the Office of Student Affairs, and is the designated campus department charged with the responsibility of reviewing and authorizing requests for reasonable accommodations based on a disability. It is the student's responsibility to initiate such a request by contacting an employee of the Office of Student Affairs, in the Houston Harte University Center, Room 112, or contacting the department via email at ADA@angelo.edu. For

more information about the application process and requirements, visit the [Student Disability Services website](#).⁶ The employee charged with the responsibility of reviewing and authorizing accommodation requests is:

Dr. Dallas Swafford
Director of Student Disability Services
Office of Student Affairs
325-942-2047
dallas.swafford@angelo.edu
Houston Harte University Center, Room 112

Incomplete Grade Policy

It is policy that incomplete grades be reserved for student illness or personal misfortune. Please contact faculty if you have serious illness or a personal misfortune that would keep you from completing course work. Documentation may be required. See ASU Operating Policy 10.11 [Grading Procedures](#)⁷ for more information.

Student Absence for Observance of Religious Holy Days

A student who intends to observe a religious holy day should make that intention known in writing to the instructor prior to the absence. See ASU Operating Policy 10.19 [Student Absence for Observance of Religious Holy Day](#)⁸ for more information.

Title IX at Angelo State University

Angelo State University is committed to providing and strengthening an educational, working, and living environment where students, faculty, staff, and visitors are free from sex discrimination of any kind. In accordance with Title VII, Title IX, the Violence Against Women Act (VAWA), the Campus Sexual Violence Elimination Act (SaVE), and other federal and state laws, the University prohibits discrimination based on sex, which includes pregnancy, and other types of Sexual Misconduct. Sexual Misconduct is a broad term encompassing all forms of gender-based harassment or discrimination and unwelcome behavior of a sexual nature. The term includes sexual harassment, nonconsensual sexual contact, nonconsensual sexual intercourse, sexual assault, sexual exploitation, stalking, public indecency, interpersonal violence (domestic violence or dating violence), sexual violence, and any other misconduct based on sex.

You are encouraged to report any incidents involving sexual misconduct to the Office of Title IX Compliance and the Director of Title IX Compliance/Title IX Coordinator, Michelle Miller, J.D. You may submit reports in the following manner:

Online: [Incident Reporting Form](#)⁹
Face to Face: Mayer Administration Building, Room 210
Phone: 325-942-2022
Email: michelle.miller@angelo.edu

Note, as a faculty member at Angelo State, I am a mandatory reporter and must report incidents involving sexual misconduct to the Title IX Coordinator. Should you wish to speak to someone in confidence about an issue, you may contact the University Counseling Center (325-942-2371), the 24-Hour Crisis Helpline (325-486-6345), or the University Health Clinic (325-942-2171).

For more information about resources related to sexual misconduct, Title IX, or Angelo State's policy please visit the [Title IX website](#).¹⁰

¹ <https://www.angelo.edu/covid-19/>

² <https://blackboard.angelo.edu/>

³ <https://www.angelo.edu/current-students/student-handbook/>

⁴ <https://www.angelo.edu/academics/catalog/>

⁵ <https://www.angelo.edu/live/files/27603-student-handbook-2020-21#page=97>

⁶ <https://www.angelo.edu/current-students/disability-services/>

⁷ <https://angelo.policystat.com/policy/10659448/latest/>

⁸ <https://angelo.policystat.com/policy/10659368/latest/>

⁹ <https://www.angelo.edu/incident-form>

¹⁰ <https://www.angelo.edu/title-ix>