Math 2312.030 Spring 2021
Precalculus
Subject to changes and modifications

Instructor: Juan Montemayor
Email: juan.montemayor@angelo.edu
Phone: 325-486-5438 (leave a message)
Office: MCS 219 F

Office Hours:
All office hours are intended to be virtual office hours through Blackboard Collaborate – Blackboard will have updated and official office hours for now - tentative office hours
MWF: 8:30 – 9:00 AM, 2:00 – 3:15 PM,
TTh: 9:00 – 9:30AM, 1:45 - 3:15 PM - Tentative night office hours: TTh: 6:30-7:15 PM

Course Information

Course Description - see course content at end of syllabus for additional information
A review of basic algebraic concepts and terminology of real numbers and subsets of real numbers. We will have a brief review of the set of real numbers, subsets of real numbers, and properties of real numbers. Some additional review on polynomials (factoring), rules and properties of exponents and radicals. We will finish the algebra review by working with algebraic and rational expressions and solving different kinds of equations including but not limited to linear, quadratic, exponential, and logarithmic equations. We will look at a library of basic functions, along with their properties and their graphs. This will include linear, quadratic, polynomial (cubic), exponential, logarithmic, and other functions. We will also study the result of a transformations on the functions just mentioned along with composition of functions and combining functions.
We will also study basic concepts of inverse functions and properties of a function and its corresponding inverse function. The semester will end after discussing systems of equations and inequalities including partial fractions and systems of nonlinear equations. A brief introduction to limits will conclude the study of this course.

**Prerequisite and Co-requisite Courses**

Student should have basic arithmetic and algebraic skills obtained by having successfully completed a college algebra course or some equivalent course. You are not expected to be able to remember all algebraic concepts but you should have some basic knowledge of algebra. The student should be able to perform calculations with and without the use of a calculator. The student should be able to follow written and oral/verbal instructions and also have basic knowledge of computer technology.

**Prerequisite Skills**

Student should be able to access Internet websites, use ASU Library resources as needed, have some proficiency with Microsoft Word and the ability, curiosity, and desire to learn more. Student should be able to use – learn – blackboard, blackboard collaborate, submit documents electronically. Although we do not make as much use of the calculator as you would like, make sure you are able to use non-graphing calculators. If you do happen to have graphing / non-graphing calculators – use them to check your homework problems. Calculators are not allowed on quizzes or exams. Be able to learn how to scan and submit documents such as homework and if necessary – exams and quizzes.

**Student Learning Outcomes**

Upon completion of this course, students will be able to:

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 and systems of 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.

**Course Content**

**Textbook:** NOT REQUIRED but the following TEXTBOOK may be used as an additional resource and is available for purchase

*Precalculus: Mathematics for Calculus,* 7th Edition, by Stewart, Redlin, and Watson. The following chapters including the particular sections listed are covered.

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.

10. **Systems of Equations and Inequalities:** Systems of Linear Equations in Two Variables; Systems of Linear Equations in Several Variables; Partial Fractions; Systems of Nonlinear Equations; Systems of Inequalities.

13. **Limits:** A Preview of Calculus: Finding Limits Numerically and Graphically; Finding Limits Algebraically; Limits at Infinity.
Course Delivery

Statement for Synchronous Remote Sessions
To maintain academic quality while accommodating social distancing needs this semester, this course will use a split delivery model that combines face-to-face teaching with some remote instruction as needed. Be prepared to go online on a moment(day) notice. Online students are expected to be online at the same time as in-person class. This is not an online course – the class video is meant to be seen during class time and not as a recording. You should have class time reserved so that you are able to view material during class time. Attendance will be taken during scheduled class time. Let me know if you will be joining me online at the same class time as in-person class. In class attendance will produce the best academic results.

Most - if not all assignments will be completed and due at the same time as the in-person class. No late assignments will be accepted. In some cases(most), you will also be expected to complete coursework via Blackboard.¹

Please refer to this Health and Safety web page for updated information about campus guidelines as they relate to the COVID-19 pandemic.

Required Texts and Materials- No Textbook is required
Text book is not required. My notes will be sufficient for both in class notes and homework assignments. There cases in which you will be required to print assignments ( quizzes – tests – homework). You may print both notes and assignments as needed. If you feel that you need additional help, you may find it in the following textbook or some other internet site of your choosing.
Not needed but feel free to buy and use as an additional resource.

Technology Requirements
To successfully complete this course, students need to be able to communicate via email(s) and through blackboard/blackboard collaborate. For the few – if any – students that will be viewing the course online, you must have a laptop/PC available – phone is not always sufficient. All answers that are submitted must be non-calculator based ( $3/7 \neq 0.4286$ or $\sqrt{2} \neq 1.414$ ). Laptops / phones are only allowed in the classroom for instructional purposes. The instructor reserves the right to ask you to put away any technology equipment. Homework may be submitted during class times or as suggested(required) by instructor. Phones/laptops can and should be used during submissions.
To successfully complete this course, students may need to have access to a computer with a camera option. If you do assignments online (other than homework) you will be asked to join in through Blackboard Collaborate with a camera on you. Students that are following the class online will need some device that allows them to view the lecture through blackboard collaborate.

A printer and/or a scanner will be useful. I am not requiring you to have a printer. Do have access to scanning software – you will need to be able to scan documents. There are apps that can be used for scanning. For those of you that have an IPAD – lucky you. They seem to work better for downloading documents and writing on the screen. All submitted documents must be submitted as PDF documents. Documents that are not in PDF format will be counted as not being turned in. (Google documents will not be accepted – special permission is normally required and it is difficult to get your permission in a timely manner)

I am not using Top Hat but if you have other classes that use it and you have the knowledge on how to use it, then feel free to use it in this class.

**Communication**

We do not keep the same working hours. Keep that in mind when you send an email at 2:00 AM. I expect your emails to be sent between the hours of 8AM and 5 PM. I will respond as soon as possible. If you send an email, wait a minute (60 seconds) before you leave the site (computer email site). It is possible that I am in the office and will respond to your email within seconds. If you send an email after hours, odds are that I will get it but I may or may not see it. In any case if you send an email and I do not respond, don’t give up – email me again. An unusual number of emails will normally send your email to the bottom of the stack. I will try to respond to emails and/or telephone messages within 24 hours during working hours Monday through Friday. Weekend messages may not be returned until Monday.

Written communication via email: All private communication will be done exclusively through your ASU email address. Your other emails will be of no use for course work. Check frequently for announcements and policy changes – like daily. In your emails to faculty, include the course name and section number in your subject line.

Virtual communication: Office hours and/or advising will be done with the assistance of the telephone and Blackboard Collaborate. Remember that you are sharing blackboard space with the entire class. Keep it official – as much as possible. Work group is encouraged – feel free to join in, work together. No group work on quizzes and exams – those are for individual work.
Grading

**Evaluation and Grades**
Course grades will be determined as indicated in the table below. There will be four testing periods depending on the course. All count the same percentage on semester grade. All testing periods (except for the last one) will consist of homework, quizzes, and an exam. The last testing period will only consist of an exam grade. Within each of the testing period (except the last one)
- Homework = 1/6 of testing period grade,
- Quizzes (total of three for testing period) with each QZ = 1/6 of testing period grade
- Exam (one exam per testing period) = 2/6 of testing period grade

The last testing period will consist of the final exam and nothing else.
- There will be no homework or quizzes for that period, just the final exam.
- Homework = 0/6 of testing period, same for quizzes but exam = 6/6 of grade

<table>
<thead>
<tr>
<th>Assessment for each of the testing periods (except last one)</th>
<th>Percent(fraction) of Total Grade for testing period</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Daily grades and homework</strong></td>
<td>1/6</td>
</tr>
<tr>
<td><strong>Quizzes (three of them) each one is</strong></td>
<td>1/6</td>
</tr>
<tr>
<td>(three of them = 3/6)</td>
<td></td>
</tr>
<tr>
<td><strong>Exams</strong></td>
<td>2/6</td>
</tr>
<tr>
<td><strong>Attendance may be used by instructor on any bonus instructor may give — very likely for no bonus to be given</strong></td>
<td>Up to instructor</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>6/6 = 1 = 100 %</td>
</tr>
</tbody>
</table>

Grade for semester
- Average of all of the testing periods.

**Grading System**
Course grades will be dependent upon completing course requirements and meeting the student learning outcomes.
The following grading scale is in use for this course:
- A = 90.00-100 points
- B = 80.00-89.99 points
- C = 70.00-79.99 points
- D = 60.00-69.99 points
- F = 0-59.99 points (Grades are not rounded up)
Assignment and Activity Descriptions

All assignments (Exams, quizzes, and homework) will be turned in as PDF documents or quizzes and exams taken in class will be turned in as paper documents. When appropriate – and required - scan the document (this does not mean to take a picture – a picture may be part of the process – you are scanning), save the document in PDF format on your computer – or however your phone stores the information. Submit through blackboard as a PDF document (no other way). No late work will be accepted. There is no reason to miss an assignment and I will drop enough homework assignments and quizzes to account for missing one or two of them. In the event that you have a good reason and the instructor accepts your reason for missing one single exam, the final exam may replace the grade of missed exam. A second missed exam will be recorded as a zero.

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
- Angelo State University Catalog

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.
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. The employee charged with the responsibility of reviewing and authorizing accommodation requests is:

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 for more information.
**Plagiarism**

Plagiarism is a serious topic covered in ASU’s Academic Integrity policy in the Student Handbook. Plagiarism is the action or practice of taking someone else’s work, idea, etc., and passing it off as one’s own. Plagiarism is literary theft.

In your discussions and/or your papers, it is unacceptable to copy word-for-word without quotation marks and the source of the quotation. It is expected that you will summarize or paraphrase ideas giving appropriate credit to the source both in the body of your paper and the reference list.

Papers are subject to be evaluated for originality. Resources to help you understand this policy better are available at the ASU Writing Center.

**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 for more information.

**Title IX at Angelo State University**

The University prohibits discrimination based on sex, which includes pregnancy, sexual orientation, gender identity, and other types of Sexual Misconduct. Sexual Misconduct is a broad term encompassing all forms of gender-based harassment or discrimination including: sexual assault, sex-based discrimination, sexual exploitation, sexual harassment, public indecency, interpersonal violence (domestic violence and/or dating violence), and stalking. As a faculty member, I am a Responsible Employee meaning that I am obligated by law and ASU policy to report any allegations I am notified of to the Office of Title IX Compliance.

Students are encouraged to report any incidents of sexual misconduct directly to ASU’s Office of Title IX Compliance and the Director of Title IX Compliance/Title IX Coordinator at:

Michelle Miller, J.D.
Special Assistant to the President and Title IX Coordinator
Mayer Administration Building, Room 210
325-486-6357
michelle.boone@angelo.edu

You may also file a report online 24/7 at www.angelo.edu/incident-form.
If you are wishing to speak to someone about an incident in confidence you may contact the University Health Clinic and Counseling Center at 325-942-2173 or the ASU Crisis Helpline at 325-486-6345.

For more information about Title IX in general you may visit [www.angelo.edu/title-ix](http://www.angelo.edu/title-ix).

**Required Use of Masks/Facial Coverings by Students**
As a member of the Texas Tech University System, Angelo State University has adopted the mandatory [Facial Covering Policy](http://www.angelo.edu/title-ix) to ensure a safe and healthy classroom experience. Current research on the COVID-19 virus suggests there is a significant reduction in the potential for transmission of the virus from person to person by wearing a mask/facial covering that covers the nose and mouth areas. Therefore, in compliance with the university policy students in this class are required to wear a mask/facial covering before, during, and after class. Faculty members may also ask you to display your daily screening badge as a prerequisite to enter the classroom. You are also asked to maintain safe distancing practices to the best of your ability. For the safety of everyone, any student not appropriately wearing a mask/facial covering will be asked to leave the classroom immediately. The student will be responsible to make up any missed class content or work. Continued non-compliance with the Texas Tech University System Policy may result in disciplinary action through the Office of Student Conduct.
Course Schedule – does not apply to this course
Due dates and assignments will be discussed in class

<table>
<thead>
<tr>
<th>Date</th>
<th>Topic or Module</th>
<th>Activities</th>
<th>Homework</th>
<th>Homework Due Date</th>
</tr>
</thead>
</table>

1. [https://blackboard.angelo.edu/](https://blackboard.angelo.edu/)
2. [https://www.angelo.edu/current-students/student-handbook/](https://www.angelo.edu/current-students/student-handbook/)
3. [https://www.angelo.edu/academics/catalog/](https://www.angelo.edu/academics/catalog/)
5. [https://www.angelo.edu/content/files/14197-op-1011-grading-procedures](https://www.angelo.edu/content/files/14197-op-1011-grading-procedures)
6. [https://www.angelo.edu/content/files/14197-op-1011-grading-procedures](https://www.angelo.edu/content/files/14197-op-1011-grading-procedures)
8. [https://www.angelo.edu/current-students/writing-center/academic_honesty.php](https://www.angelo.edu/current-students/writing-center/academic_honesty.php)
9. [https://www.angelo.edu/content/files/14206-op-1019-student-absence-for-observance-of](https://www.angelo.edu/content/files/14206-op-1019-student-absence-for-observance-of)