Syllabus Statement:

PDFs posted in Blackboard for this course are intended for print purposes only. If you use assistive technology to complete your coursework, an alternative format may better meet your needs. Please contact your instructor to obtain an alternative format and to discuss appropriate software or other accommodations for the best student experience.

Instructor: Juan Montemayor

Email: juan.montemayor@angelo.edu
Phone: (325)486-5438
Office: MCS 219F

Office Hours:
MWF: 9:00-10:00AM, 12:00-2:00 PM, 3:00-3:30 PM  TTh: 10:15-11:00 AM

Course Information

Course Description
A review of basic algebraic concepts such as factoring polynomials and solving equations. Introduction to trigonometric ideas such as angles, definition of trigonometric functions, inverse functions, graphs of various functions, identities, equations of trig. functions, polar coordinates, parametric and polar equations and their graphs, vectors, and some conic graphs and equations. See course content for additional description of topics.

Prerequisite and Co-requisite Courses
You should have basic arithmetic skills that allow you to perform calculations with and without the use of a calculator. You should be able to follow written and oral/verbal instructions. Some basic use of computer technology. You should have above average knowledge of basic algebra and have the ability to memorize terminology, definitions, and mathematical techniques.
Other Prerequisite Skills

Be able to access Internet websites, use ASU Library resources as needed, and have some proficiency with Microsoft Word, and the ability, curiosity, and desire to learn more. 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 calculators – use it to check your homework problems. Not allowed on quizzes or exams]. Practice graphs online using sites such as Desmos graphing utilities – use to verify your answers – do

Student Learning Outcomes

Upon completion of this course:

1. **The students will demonstrate 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 trigonometry including definitions of the six trigonometric functions; types of angle measure and notation; equations of conic sections; representing equations in polar coordinates; and the definition of vectors.

2. **The students will describe the fundamental principles including the laws 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, the fundamental identities, properties of angles and triangles, characteristics of the trigonometric functions, inverse trigonometric functions, polar equations (including graphs), and formulas for converting between polar and rectangular coordinates.

3. **Students will apply course material along with techniques and procedures covered in this course to solve problems.** Students will use the facts, formulas, and techniques learned in this course to prove identities and solve trigonometric equations; and solve various types of triangle problems, distance and navigation problems, and linear and angular velocity problems.

4. **The Student 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 necessary for further study in academic areas requiring trigonometry as a prerequisite, or for work in occupational fields requiring a background in trigonometry. These fields might include education, business, finance, marketing, computer science, physical sciences, and engineering, as well as mathematics.
Course Content

Textbook: Is not required for class instructions but feel free to use the following text as a guide and for additional examples. My notes will normally be sufficient.

*Trigonometry: A Unit Circle Approach*, Tenth Edition, by Sullivan. The following chapters including the particular sections listed are covered. (See textbook “Contents.”)

1. **Graphs and Functions.** Graphs of Equations in Two Variables; Circles; Functions and Their Graphs; Properties of Functions; Library of Functions; Piecewise-defined Functions; Graphing Techniques: Transformations; One-to-one Functions; Inverse Functions

2. **Trigonometric Functions.** Angles and Their Measure; Trigonometric Functions: Unit Circle Approach; Properties of the Trigonometric Functions; Graphs of the Sine and Cosine Functions; Graphs of the Tangent, Cotangent, Cosecant, and Secant Functions; Phase Shift; Sinusoidal Curve Fitting

3. **Analytic Trigonometry.** The Inverse Sine, Cosine, and Tangent Functions; The Inverse Trigonometric Functions (continued); Trigonometric Equations; Trigonometric Identities; Sum and Difference Formulas; Double-angle and Half-angle Formulas; Product-to-Sum and Sum-to-Product Formulas

4. **Applications of Trigonometric Functions.** Right Triangle Trigonometry; Applications; Law of Sines; Law of Cosines; Area of a Triangle

5. **Polar Coordinates; Vectors.** Polar Coordinates; Polar Equations and Graphs; Vectors; The Dot Product; Vectors in Space; The Cross Product

6. **Analytic Geometry.** The Parabola; The Ellipse; The Hyperbola; Polar Equations of Conics; Plane Curves and Parametric Equations

Course Delivery

This is a face-to-face course with online components that students are expected to access in Blackboard.¹ From time to time, the class lecture – including completed notes – will be recorded and published to make available to those unable to attend class. No guarantee of this happening or of the quality of the recording. Not being in class will be considered being absent from class.

Required Texts and Materials

Textbook is not required. My notes will be sufficient for both in class notes and homework assignments. There are cases in which you will be required to print assignments (notes, 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.

Technology Requirements
To successfully complete this course, students need to be able to access blackboard colaborate – be able to scan and submit documents through software in a PDF format. Calculators will not be allowed on quizzes or exams – use on HW to check answers – do not use calculators to provide an answer - Answers must always be non-calculator based. You may need an app to submit quizzes at the end of class sessions. You may have to submit documents back to me (quizzes and tests) and that will require use of your phone. There will be a learning curve so do not panic. You will learn faster than I. Let me know as soon as possible if you will be having trouble doing any of this.
A printer and/or a scanner will be useful. I am not requiring you to have a printer – but you will need to be able to scan documents. There are apps that can be used for scanning. All submitted documents must be submitted as PDF documents. Be prepared in an emergency to go online – not likely but possible. I am not using Top Hat but if you have other classes that use it and you have the knowledge to use it, then feel free to use it in this class.

Communication
Use your Angelo State email address for communications between you and I. Include your name and class(section or time class meets ).
No assignment will be taken after due date and time. Be prepared – do not wait till the last minute – give yourself at least 10 minutes of leeway. No excuse will be accepted for being late or not being able to turn in assignment on time. Do not send your assignment via email unless I tell you to do so.
We do not keep the same working hours. Keep that in mind when you send an email at 2:00 AM. The instructor will try to respond to emails and/or telephone messages within 24 hours during working hours Monday through Friday. In the event you do not hear from me, please send me a second and even a third message. I will not be ignoring you but I may be swamped with information – information overload and your email may have gotten lost in the pile. Weekend messages may not be returned until Monday.
Email courtesy – if you send me an email with a question - wait at least 60 seconds for a possible response.

Virtual Office hours held on Blackboard Collaborate will have a link available for you to join me. An email request is strongly suggested during times that I am in the office – if I am already in class, I will be unable to read your message.
Grading

Evaluation and Grades
Course grades will be determined as indicated in the table below.

<table>
<thead>
<tr>
<th>Assessment</th>
<th>Percent of Total Grade</th>
</tr>
</thead>
<tbody>
<tr>
<td>Quizzes / in class on time only</td>
<td>8 %</td>
</tr>
<tr>
<td>Homework Assignments – 0 if late</td>
<td>12 %</td>
</tr>
<tr>
<td>Exams</td>
<td>80 %</td>
</tr>
<tr>
<td>Bonus points – up to instructor – may be given at any time for any reason on a specified assignment (minimal number of points)</td>
<td>Up to instructor as to how many points</td>
</tr>
<tr>
<td>Total</td>
<td>100%</td>
</tr>
</tbody>
</table>

Grading System
Course grades will depend on completing course requirements and meeting the student learning outcomes.

This course uses the following grading scale:

- 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
Assignments will be turned in on time (no late papers accepted / no makeup assignment given). Exams will be given in class and turned in as given. Quizzes and homework will be turned in through blackboard as PDF documents. 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 it, 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.

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
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

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
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.

Information About COVID-19

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

Modifications to the Syllabus

This syllabus, including grade evaluation and course schedule, is subject to modification on potentially short notice based on developing circumstances.
Course Schedule – to be updated during semester will include topics listed under course description page 1. Schedule of exams, and due dates for quizzes and exams can be seen on class calendar posted on the blackboard course.

<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/current-students/disability-services/](https://www.angelo.edu/current-students/disability-services/)
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)
10. [https://www.angelo.edu/incident-form](https://www.angelo.edu/incident-form)
11. [https://www.angelo.edu/title-ix](https://www.angelo.edu/title-ix)
12. [https://www.angelo.edu/covid-19/](https://www.angelo.edu/covid-19/)