Instructor: Juan Montemayor
Email: Juan.Montemayor@angelo.edu
Phone: 325-486-5438
Office: MCS 219 F

Office Hours: Tentatively set for MWF 8:30-9:00 AM, 1:00-2:00 PM, 3:00-3:15 PM
TTh 8:30 – 9:30 AM, 1:45 – 3:15 PM

Course Information – may be updated as needed

Course Description

Course Content

Textbook: *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
Prerequisite and Co-requisite Courses

You should have successfully completed a college algebra course or some equivalent course. Knowledge of basic algebraic concepts are expected.

Prerequisite Skills

Accessing Internet websites including Blackboard, ability to find and use ASU resources such as math lab, and math instructor's office, understanding the instructor's definition of studying – not the day before an exam, but being able to study throughout the semester.

Student Learning Outcomes

Upon completion of this course

Mathematics 1316 – Trigonometry with Analytic Geometry

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 Delivery

This is a face-to-face course with learning resources given in class or class lecture and some supplemental materials posted in Blackboard. Material may also come from class textbook.
Required Texts and Materials

Strongly suggested but not required
Trigonometry: A Unit Circle Approach, Tenth Edition, by Sullivan. The following chapters including the particular sections listed are covered. (See textbook “Contents.”)

Technology Requirements
To successfully complete this course, students need to have a non-scientific calculator. You may not get to use it on quizzes or exams but you are allowed to make use of calculator as a checkpoint on homework assignments. Be able to download documents from blackboard. If you are using a chrome type computer, make sure the printout is complete and accurate.

Communication
You may leave messages via email and/or phone messages. I will respond as promptly as possible during working hours. Email messages should be sent and received through your ASU email address. Check frequently for announcements and policy changes. In your emails to faculty, include course name and section number in your subject line.

Grading

Evaluation and Grades
A more extensive explanation will be given in class on the first day of class. 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>Homework and attendance</td>
<td>approximately 10</td>
</tr>
<tr>
<td>Quizzes</td>
<td>Tentatively 10</td>
</tr>
<tr>
<td>Tests/Exams</td>
<td>Tentatively 80</td>
</tr>
<tr>
<td>Total</td>
<td>100%</td>
</tr>
</tbody>
</table>

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**

Exams make up the largest percentage of your semester grade followed by quiz grades and then homework and attendance. More about the grading process on the first day of class.

**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 Boone, J.D.
Director of Title IX Compliance/Title IX Coordinator
Mayer Administration Building, Room 210
325-942-2022
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.

Course Schedule
Tests dates and quizzes will be posted on blackboard and 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>
<tbody>
<tr>
<td></td>
<td>Four Regularly scheduled Exams plus Final exam</td>
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</tr>
<tr>
<td></td>
<td>Quizzes</td>
<td></td>
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<td></td>
</tr>
<tr>
<td></td>
<td>Daily Homework Assignments</td>
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</tbody>
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1 https://www.angelo.edu/student-handbook/
2 https://www.angelo.edu/catalogs/
3 https://www.angelo.edu/student-handbook/community-policies/academic-integrity.php
4 https://www.angelo.edu/services/disability-services/
5 https://www.angelo.edu/content/files/14197-op-1011-grading-procedures
6 https://www.angelo.edu/student-handbook/community-policies/academic-integrity.php
7 https://www.angelo.edu/dept/writing_center/academic_honesty.php
8 https://www.angelo.edu/content/files/14206-op-1019-student-absence-for-observance-of