Mathematics 1316 – Trigonometry with Analytic Geometry (Fall Semester)

Professor: Mrs. Laura Morris
Room: D-145
Office Hours/ Tutorials: Request a pass to come to advisory; M-F 7:30am; T-TH 3:40 – 4:15pm or by appointment
Email: lmorris@burnetcisd.net

***All rules and procedures outlined in the BHS and ASU Handbooks apply to this classroom.

Contact Information:
Email is the best way to contact me for most needs. Information and announcements will be posted on Google Classroom. The textbook for this course is an online free textbook from OpenStax and will be accessible on Google Classroom in the Resources section. I recommend that you download a PDF in case of internet outages.

Disclaimer
This syllabus is current and accurate as of its posting date however, it subject to change. For the most complete and up-to-date course information, see assignments and announcements on Google Classroom. All assignments will be accessible through Google Classroom. Exams will be given at a standard time determined by instructor with input from students.

2nd Period Google Classroom Code: cl4qvpd
4th Period Google Classroom Code: bwr5woz
7th Period Google Classroom Code: k64ifws

Cell Phone Use
Cell phones are not allowed in class…ever! If you have an issues that requires communication by cell phone, please talk to me and we will arrange the appropriate time and place. I will be enforcing the school’s cell phone policy.

Homework
It is strongly suggested that you attempt every problem assigned for homework. This will help you learn the material and prepare you for exams, and future courses. I will choose a few problems to include on a daily homework check. You will be expected to take all homework checks even if you were absent (you can come to advisory the next day and take the Hwk Check). I will drop some of these grades. These grades will be included in your 20% minor grade category.

Classwork
You will be required to turn in the work you have completed DURING class each day. This plus your Journal will be included in your “other daily” category (10%) in the gradebook.

Attendance
Attendance is essential to learning new material. I will have notes and videos posted on Google Classroom for those of you who miss due to your many extracurricular activities. Please look at these
when you are absent so, you return to class with good questions. If you are absent, the due date for your assignment will be extended one day past the due date. For example, if you are absent on a Friday, you will come to class on Tuesday and your assignment will not be due until Wednesday. Those of you willing to study will find that the notes and homework will provide the best learning tool. Make use of them and the online textbook available to you. Make use of the in-class office hours – ask questions, become comfortable – if you are not comfortable in a group setting, ask for individual time with instructor.

Exams
You will be given five exams plus a final exam. To help your BCISD grade (but not your college grade), there will be an in-class project after you finish your final exam which will count as your 6th exam grade.

Semester Letter Grade
A semester average will be computed based on minor grade, daily grades, and exam grades. An in-person explanation of the grading process will be given on first day in class. Grades will come from exams (70%); Homework Checks (20%); & In-Class work (10%). At the end of the semester, you will take a final exam which is approximately 15% of your total grade.

Student Learning Outcomes

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


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

Grade Calculation:

Minor Grades – 20% (homework checks)  
Daily Grades – 10% (in-class work)  
Major Grades – 70% (exams/ projects)

Minor Grades * 0.2 + Daily Grades * 0.1 + Major Grades * 0.7 = Each 6-Week Average

(Sum of 6 Week Averages) * 0.85 + Final Exam * 0.15 = ASU Semester Grade

August 2021
Assignments are expected to be completed by the due date. A student must arrange IN ADVANCE with Mrs. Morris if an assignment will be late.

If your accommodations require extra time for assignments and/or tests, please talk to me within the 1st two weeks of class so we can come to an agreed upon arrangement for your accommodations.

**Student Responsibilities** The student is solely responsible for:
- Completing each assignment by the specified due date.
- Obtaining assignments and other materials for classes from which they are absent.
- Utilizing, as needed, all available study-aid options (including meeting with the instructor, referring to outside texts, etc.) to resolve any questions that they might have regarding homework, course material, etc.
- Realizing from the beginning of the course the grade that they may need or want to graduate, maintain a scholarship, stay in athletics, etc. … and give as much effort as it takes to obtain this grade.

**Academic honesty**: Academic misconduct includes cheating, plagiarism, collusion, falsifying academic records, misrepresenting facts, violations of published professional ethics/standards, and any act or attempted act designed to give unfair academic advantage to oneself or another student. See the Angelo State University Student Handbook, Part II B: https://www.angelo.edu/student-handbook/community-policies/academic-integrity.php

**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 via Turnitin. Resources to help you understand this policy better are available at the ASU Writing Center.

**Copyright Policy**

Students officially enrolled in this course should make only one printed copy of the given articles and/or chapters. You are expressly prohibited from distributing or reproducing any portion of course readings in printed or electronic form without written permission from the copyright holders or publishers.

**Student Disability Services**

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.

The Office of Student Affairs is the designated campus department charged with the responsibility of reviewing and authorizing requests for reasonable accommodations based on a disability, and it is the student’s responsibility to initiate such a request by contacting Ms. Dallas Swafford, Director of Student Disability Services; Dallas.swafford@angelo.edu

Title IX

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 Boone, J.D. You may submit reports in the following manner:

- Online: www.angelo.edu/incident-form
- Face to Face: Mayer Administration Building, Room 210
- Phone: 325-942-2022
- Email: michelle.boone@angelo.edu

You may also file a report online 24/7 at www.angelo.edu/incident-form.

Observed of Religious Holy Days: http://www.angelo.edu/content/files/14206-op-1019-student-absence-for-observance-of
Grading Procedures: http://www.angelo.edu/content/files/14197-op-1011-grading-procedures
Academic Integrity: http://www.angelo.edu/student-handbook/community-policies/academic-integrity.php
ASU Writing Center: http://www.angelo.edu/dept/writing_center/academic_honesty.php
University Catalog: http://www.angelo.edu/catalogs/