



MATH 105 – Trigonometry

3 credits

Instructor: Patsy Schlosser

Fall 2020

Course Description: A study of angle measure, trigonometric and inverse trigonometric functions, trigonometric identities and equations, polar coordinates, and applications.

Prerequisite: appropriate ACT or Acuplacer score

Course Objectives: Upon completion of the course the learner will be able to:

1. Students will be able to work with angular measure in degrees and radians
2. Students will be able to work with trigonometric and inverse trigonometric functions
3. Students will be able to use trigonometric functions
4. Students will be able to solve trigonometric equations
5. Students will demonstrate an understanding of how to solve real world problems using trigonometry
6. Students will be able to graph equations and polar coordinates

Class Schedule: M-F at 12:34-1:24

Instructor: Patsy Schlosser

Office: Edgeley High School Room 48

Phone: (701) 493-2292

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Office Hours: at school 8:15-3:45

Required Text/Material:

1. Precalculus, Second Edition by Paul Sisson

Course Requirements:

Complete requested lessons, projects, and tests

Tentative Course Outline:

Trigonometric Functions:

- Radian and degree measure of angles
- Trigonometric functions of acute angles
- Trigonometric functions of any angle
- Graphs of trigonometric functions
- Inverse trigonometric functions

Trigonometric Identities and Equations

- Fundamental identities and their uses
- Sum and difference identities
- Product-sum identities
- Trigonometric equations

Additional Topics

- Law of Sines and Law of Cosines
- Polar coordinates and polar equations
- Parametric equations
- Trigonometric form of complex numbers
- Vectors in the Cartesian plane
- Dot product and its use

Classroom Policies: Same as classroom policies for Edgeley High School classes

Grading: *High School:* Quarter 1 and 2 grades will be based 70% on test scores and 30% on section assignments.

Final grade will be based on 40% quarter 1 grade, 40% quarter 2 grade, and 20% semester test grade.

College: Grade will be based on the final high school grade.

Academic Integrity: The academic community is operated on the basis of honesty, integrity and fair play. It is the expectation that all students, as members of the college community, adhere to the highest levels of academic integrity. This means that:

- Students are responsible for submitting their own work. Student work must not be plagiarized.
- Students must not cooperate on oral or written examinations or work together on evaluated assignments without authorization.

- If there is evidence of cheating, the student will receive an F on the assignment or exam.

General Education Goals/Objectives:

- Goal 2: Demonstrates knowledge and application of technology.
 - Objective 2: Uses electronic resources for course related assignments and information
 - Skill 1: Selects appropriate program on the graphing calculator to solve problems
 - Objective 4: Employs problem solving and critical thinking skills in order to solve a variety of different problems

- Goal 3: Demonstrates the ability to convert, calculate, and analyze a variety of mathematical problems
 - Objective 1: Utilizes mathematical equations to solve problems
 - Skill1: Solves equations and problems using the appropriate method
 - Objective 2: Applies practical application of mathematics to everyday life
 - Skill 3: Solves word problems
 - Objective 3: Employs problem solving and critical thinking skills in order to solve a variety of different problems

Relationship to Campus Theme: Mathematics 105 emphasizes technology through the use of graphic calculators and nature through navigation.

Disabilities and Special Needs: Students with designated disabilities and special needs will receive any modifications mentioned in their documentation.