



Dual Credit MATH 107 – Precalculus

Spring 2022

4 credits

Instructor: Patsy Schlosser, Edgeley High School

Course Description:

Equations and inequalities, polynomial, rational, exponential, logarithmic, trigonometric and inverse trigonometric functions, trigonometric identities and equations and applications

Pre-/Co-requisites: appropriate ACT or Acuplacer score

Course Objectives:

- 1.Students will demonstrate an understanding of relations and functions.
- 2.Students will be able to work with equations and inequalities.
- 3.Students will be able to work with complex numbers.
- 4.Students will be able to work with rational and polynomial expressions.
- 5.Students will be successful in working with exponential and logarithmic functions.
- 6.Students will be able to solve systems of linear equations.
- 7.Students will be able to work with angular measure in degrees and radians.
- 8.Students will be able to work with trigonometric and inverse trigonometric functions.
- 9.Students will be able to use trigonometric identities.
- 10.Students will be able to solve trigonometric equations.
- 11.Students will demonstrate an understanding of how to solve real world problems using trigonometry

Instructor: Patsy Schlosser

Office: Edgeley High School Room 48

Office Hours: 8:15-3:45 M-F

Phone: 701-493-2292

Email: patsy.schlosser@k12.nd.us

Lecture/Lab Schedule: M-F at 1:27-2:17

Textbook: Precalculus by Paus Sisson with Courseware through Hawkes Learning System

Tentative Course Outline:

Sets of numbers and interval notation and operations

Solving linear equations/inequalities to include absolute value

Solving quadratic equations/inequalities

Operations with complex numbers

Solving equations/inequalities in two variables

Relations and functions to include transformations, combinations, and inverses

Polynomial functions to include solving and graphing

Exponential and logarithmic functions

Trigonometry

Conic Sections

Matrices

Sequences, Series, Combinatorics, and Probability if time allows.

Course Requirements:

Math is learned best by practice, reflect, and practice some more. Understanding the examples provided by the instructor, ebook, and online resources is a good first step. However, to truly know the material, you should be able to look at a problem, know how to proceed, and carry out the steps WITHOUT ASSISTANCE. The independent practice problem provides opportunities for you to get to that point. Passing grades on tests demonstrate that you have learned the skills taught.

General Education Competency/Learning Outcome(s) OR Competency/Department Learning Outcome(s):

Competency/Goal 3: Demonstrates the ability to solve a variety of mathematical problems
Learning Outcome 1: Utilizes mathematical skills to solve problems
Learning Outcome 2: Employs critical thinking skills to solve problems

Relationship to Campus Theme:

Mathematics 107 emphasizes technology through the use of graphic calculators and nature through population modeling

Classroom Policies:

Same as classroom policies for Edgeley High School classes. Please refrain from any behavior that would disrupt the class. The academic environment is an open and harassment free environment. Participation is encouraged.

Grading:

30% of the grade will be taken from the online lessons through the Hawkes Learning System and paper/pencil reviews. Each lesson that the student certifies on will count as 100% on that lesson. Students have unlimited attempts to certify on a particular lesson. If certification is not done by the due date, 20% will be taken off for each additional day late. 70% of the course grade will come from paper pencil chapter tests taken in class.

Student Email Policy:

Dakota College at Bottineau is increasingly dependent upon email as an official form of communication. A student's campus-assigned email address will be the only one recognized by the campus for official mailings. The liability for missing or not acting upon important information conveyed via campus email rests with the student.

Academic Integrity:

According to the DCB Student Handbook, students are responsible for submitting their own work. Students who cooperate on oral or written examinations or work without authorization share the responsibility for violation of academic principles, and the students are subject to disciplinary action even when one of the students is not enrolled in the course where the violation occurred. The Code detailed in the Academic Honesty/Dishonesty section of the Student Handbook will serve as the guideline for cases where cheating, plagiarism or other academic improprieties have occurred.

Disabilities and Special Needs:

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

Title IX:

Dakota College at Bottineau (DCB) faculty are committed to helping create a safe learning environment for all students and for the College as a whole. Please be aware that all DCB employees (other than those designated as confidential resources such as advocates, counselors, clergy and healthcare providers) are required to report information about such discrimination and harassment to the College Title IX Coordinator. This means that if a student tells a faculty member about a situation of sexual harassment or sexual violence, or other related misconduct, the faculty member must share that information with the College's Title IX Coordinator. Students wishing to speak to a confidential employee who does not have this reporting responsibility can find a list of resources on the DCB Title IX webpage.