Course Prefix/Number/Title: MATH 107 Precalculus

Number of Credits: 4

Course Description: This course covers the following topics: equations and inequalities, polynomial and rational functions, exponential and logarithmic functions, trigonometric functions, trigonometric identities, inverse functions and equations, applications of trigonometry, analytic geometry

Prerequisites: MATH 103 or appropriate math placement test

Course Objectives: The student will be introduced to the topics above which require certain techniques for solutions. We will develop ideas and methods for applying these techniques leading to a solution or resolution of the question. During the course, the student will be exposed to the use and application of the graphing calculator in the appropriate areas.

Instructor: Harmony Richman, M.Ed.

Office: McFarland 427C on the Valley City State University campus

Office Hours: Virtual office hours available upon request via Microsoft Teams, Zoom or Facetime (harmony.richman@vcsu.edu)

Phone: 701-200-3897 (cell)

Email: Harmony.Richman@vcsu.edu

Lecture/Lab Schedule: MWF 8:35 AM - 9:20 PM + 1 additional learning day on Thursday on your own as directed by the instructor.

Textbook(s): Precalculus: An Investigation of Functions 2nd Edition; Lippman and Rasmussen. [Full free PDF or Word version.](#)

Technology tools required: Internet access which is regular and dependable. Internet browser (Firefox or Google Chrome preference), Office 365, Adobe Acrobat Reading, Adobe Flash Player, ability to record audio and/or video, additional free web-based software.

Course Requirements: Students who are in the college classroom either face-to-face or online have made the conscious choice to be a part of the course. In this course, you are viewed as a participant in the learning; hence there are expectations that come with the choice you made to take this course.

- You are expected to put, at a minimum, approximately 5 – 8 hours of preparation and study time per week into this course.
- Actively participate regularly in class discussions through consistent, punctual, prepared and interested attendance.
- Utilize MyOpenMath to support academic assessment work.
- Submit graded assignments by dates posted on the course calendar. On each assignment, you must show ALL YOUR WORK for full credit. If you do not show work, but simply state your answer, you will receive NO credit for the assignment. It is unfair to selectively grant extensions to some students and not others. Therefore, late assignments are not accepted. Addendums to this rule include medical and/or prior approval from the instructor. A zero will be given for any assignment not turned in by the deadline.
- During the course of the semester, if you are experiencing any problems (family difficulties, sick relatives, etc.) that are affecting your academic performance, you must inform me of such problems ASAP if you want me to take them into consideration. The sooner I know about a problem, the more understanding I will be. If you come to me during the last week of the semester, before grades are about to be assigned to discuss difficulties which have affected you throughout the term, you will find that I am not nearly as understanding and that I can do very little to help you with your grade.
- Read assignments as provided by instructor.
- Do ungraded, independent practice exercises.
- Submit work using PDF/JPEG within Blackboard, as needed.
- Complete graded quizzes/tests after each chapter(s).

Tentative Course Outline: See Table 1 Course Schedule below.

General Education Competency/Learning Outcome(s) OR CTE 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 Focus: The course addresses the campus theme by exploring real world applications of mathematics in economics, behavioral, social and life science.

Classroom Policies:
1. Due dates for all assignments will be given throughout the duration of this course. Sufficient notice of due dates for assignments will be given, there is no reason why the assignments cannot be completed on time.
2. It is unfair to selectively grant extensions to some students and not others. Therefore, late assignments are not accepted. Addendums to this rule may include medical and/or prior approval from the instructor. A zero will be given for any assignment not turned in by the deadline.
3. Your final grade is determined by dividing the total points earned by the total points possible. Points will be awarded for thoughtful posts of discussion boards, selected practice activities, reflections, and written reports. There will be no quizzes or tests within the

course as there are formal and informal assessments within your assignments that fully allows me to analyze your understanding of our topics weekly.

4. Grades will be calculated using the following criteria:

A   90% - 100%
B   80% - 89%
C   70% - 79%
D   60% - 69%
F   ≤ 59%

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 or Special Needs:

Students with disabilities or special needs (academic or otherwise) are encouraged to contact the instructor and Disability Support Services.

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.

Table 1 Course Schedule
The Topics are subject to change based on learners, weather, and other components that are unable to be identified before the semester begins.

Week/Module /Topics	Date	Topics, Readings, Assignments, Due Dates, Deadlines

1	January 13th	Welcome MyOpenMath Registration College Algebra Review 1: Graph, Functions and Models
	January 14th	Workshop Day
	January 15th	College Algebra Review 2: More on Functions
2	January 18th	No Class Martin Luther King, Jr. Day
	January 20th	College Algebra Review 3: Quadratic Functions and Equations; Inequalities
	January 21st	Workshop Day
	January 22nd	College Algebra Review 4: Polynomial Functions and Rational Functions
3	January 25th	5.1 Circles
	January 27th	5.2 Angles
	January 28th	Workshop Day
	January 29th	5.3 Points on Circles using Sine and Cosine Part 1
4	February 1st	Unit Circle
	February 3rd	5.3 Points on Circles using Sine and Cosine
	February 4th	Workshop Day
	February 5th	Mid Unit 5 Review
5	February 8th	5.4 The Other Trig Functions Part 1
	February 10th	5.4 The Other Trig Functions Part 2

	February 11th	Workshop Day
	February 12th	5.5 Right Triangle Trigonometry
6	February 15th	No Class President's Day
	February 17th	Workshop Day Unit 5 Review
	February 18th	Unit 5 Assessment
	February 19th	6.1 Sinusoidal Graphs
7	February 22nd	6.2 Graphs of Other Trig Functions
	February 24th	6.3 Inverse Trig Functions
	February 25th	Workshop Day
	February 26th	Mid Unit 6 Review
8	March 1st	6.4 Solving Trig Equations
	March 3rd	6.5 Modeling with Trig Functions
	March 4th	Workshop Day
	March 5th	Unit 6 Review
9	March 8th	Unit 6 Assessment
	March 10th	7.1 Solving Trig Equations and Identities
	March 11th	Workshop Day
	March 12th	7.2 Addition and Subtraction Identities

	March 15h - March 19th	Spring Break No Classes
10	March 22nd	Mid Unit 7 Review
	March 24th	7.3 Double Angle Identities
	March 25th	Workshop Day
	March 26th	7.4 Modeling Changing Amplitude and Midline
11	March 29th	Unit 7 Review
	March 31st	Unit 7 Assessment
	April 1st	Workshop Day
	April 2nd	Holiday - Good Friday No Classes
12	April 5th - Holiday Easter Monday	Holiday - Easter Monday No Classes
	April 7th	8.1 Non-Right Triangles Part 1
	April 8th	Workshop Day
	April 9th	8.1 Non-Right Triangles Part 2
13	April 12th	8.1 Non-Right Triangles Part 3
	April 14th	8.2 Polar Coordinates
	April 15th	Workshop Day Mid Unit 8 Review
	April 16th	8.3 Polar Form of Complex Numbers
14	April 19th	8.4 Vectors

	April 21st	8.5 Dot Product
	April 22nd	Workshop Day
	April 23rd	8.6 Parametric Equations
15	April 26th	Unit 8 Review
	April 28th	Unit 8 Assessment
	April 29th	Workshop Day
	April 30th	Open Day for Schedule Changes or Intro to Limits
16	May 3rd	Open Day for Schedule Changes or Intro to Limits
	May 5th	Open Day for Schedule Changes or Intro to Limits
	May 6th	Workshop Day
	May 7th	Open Day for Schedule Changes or Intro to Limits