

## Dakota College at Bottineau Course Syllabus

### Course Prefix/Number/Title:

Math 107 PreCalculus, 4 credits

### Course Description:

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

### 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.

The student will be introduced to the topics listed above which require certain techniques for solutions. We will develop the ideas and methods for applying these techniques leading to a solution or resolution of the question. During the course the application of the graphing calculator will be emphasized.

### Instructor:

Scott Johnson

### Office:

Nelson Science Center 110

### Office Hours:

MWF 2:00-3:00

### Phone:

(701)-228-5474

**Email:**

scott.johnson@dakotacollege.edu

**Lecture:**

MTWF 10:00-10:50  
Nelson Science Center 125

**Textbook/Calculator:**

Precalculus by Faires and DeFranza, 4th edition Brooks/Cole Publishing,  
TI-83 or TI-84 Series

**Course Requirements:**

The sequential nature of mathematics deems it necessary for students to attend class on a regular basis, therefore one of the course requirements is regular attendance. Grades will be based on exams and selected homework assignments using the following scale. The exams and assignments cannot be made up without special permission from the professor. FINAL EXAM WILL BE GIVEN DURING THE SCHEDULED TIME.

A = 90-100%

B = 80-89%

C = 70-79%

D = 60-69%

F= 59-0%

**General Education Goals/Objectives:****Competency/Goal 3: Demonstrates the ability to solve a variety of mathematical problems****Learning Outcome 1: Utilizes mathematical skills to solve problems**

- Performance Indicator 1: Solves problems using an appropriate method
- Performance Indicator 2: Produces graphs

**Learning Outcome 2: Employs Critical thinking skills to solve problems**

- Performance Indicator 1: Interprets research information
- Performance Indicator 2: Writes conclusions from information collected
- Performance indicator 3: Utilizes pertinent information to provide reasonable answers to word problems

**Relationship to Campus Theme:**

Mathematics 107 emphasizes technology through the use of graphic calculators and graphing applications.

**Classroom Policies:**

Please refrain from any behavior that would disrupt the class. Cell phones can only be used in emergency situations and they must be turned to vibrate. The academic environment is an open and harassment free environment. Participation is encouraged.

**Academic Integrity:**

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

**Disabilities and Special Needs:**

If you have a disability for which you will need accommodation, contact the Learning Center to request disability support services.  
Thatcher Hall 1104; phone 701-228-5477 or toll free 1-888-918-5623.

**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.