

## **Dakota College at Bottineau Course Syllabus**

### **Course Prefix/Number/Title:**

Math 105 Trigonometry, 3 credits

### **Course Description:**

Trigonometric functions, equations and identities, inverse trigonometric functions, solving triangles, complex numbers and polar coordinates.

### **Course Objectives:**

1. To develop an understanding of trigonometric functions.
2. Application of trigonometric functions towards the solution of triangles.
3. Understanding the use and application of a graphing calculator towards the solving of trigonometric exercises.
4. Application of trigonometric functions to graphs, identities, equations, and vectors.

### **Instructor:**

Scott Johnson

### **Office:**

Nelson Science Center 110

### **Office Hours:**

TR 1:00-2:00

### **Phone:**

(701)-228-5474

### **Email:**

scott.johnson@dakotacollge.edu

### **Lecture:**

MWF 1:00-1:50  
Nelson Science Center 104

### **Textbook/Calculator:**

Trigonometry by John D. Baley and Gary Sarell, 3rd edition. McGraw Hill Publishing, 2003.  
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.

A = 90-100%

B = 80-89%

C = 70-79%

D = 60-69%

F= 59-0%

**Tentative Course Outline:**

CH 1 The Measurement of Angles, Arcs, and Sectors

CH 2 The Trigonometric Functions

CH 3 Graphs of the Trigonometric Functions

CH 4 The Inverse Trigonometric Functions

CH 5 Trigonometric Equations

CH 6 Oblique Triangles and Vectors

CH 7 Complex Numbers and Polar Coordinates

**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

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

Skill3: Solves word problems

**Relationship to Campus Theme:**

Mathematics 105 emphasizes technology through the use of graphic calculators and nature through navigation.

**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:**

Please inform instructor of any special needs during the first week of class