North Central State College
MASTER SYLLABUS
2019-2020

A.   Academic Division: Liberal Arts

B.   Discipline: Mathematics

C.   Course Number and Title: MATH1130 Trigonometry

D.   Course Coordinator: Sara Rollo
           Assistant Dean: Dr. Steve Haynes

      Instructor Information:
- Name: Click here to enter text.
- Office Location: Click here to enter text.
- Office Hours: Click here to enter text.
- Phone Number: Click here to enter text.
- E-Mail Address Click here to enter text.

E.   Credit Hours: 4

F.   Prerequisites: MATH1110 (Minimum grade of C- required) or qualifying placement test scores

G.   Syllabus Effective Date: Fall, 2019

H.   Textbook(s) Title:

On Campus Classes:
Algebra & Trigonometry Enhanced with Graphing Utilities, 7e
- Author: Michael Sullivan and Michael Sullivan III
- Copyright Year: 2016
- Edition: 7th
- ISBN: 9780134268200 (Loose-leaf book packaged with My Math Lab)

Note: **Purchase New Books Only – contains My Math Lab access code in bundled package.** If you decide to rent a textbook or buy a used copy, you will also need to purchase the My Math Lab software.

Courses at High Schools
Algebra & Trigonometry Enhanced with Graphing Utilities, 6e
- Author: Michael Sullivan and Michael Sullivan III
- Copyright Year: 2013
- Edition: 6th
- ISBN # 9780321837752 (this is bundle ISBN #)
- (Packaged with My Math Lab)
  Note: a new one-year access code is needed

I.   Workbook(s) and/or Lab Manual: Supplies: TI-83 or TI-84 required.

J. Course Description: This course includes the study of trigonometric functions and inverse trigonometric functions and their graphs; solutions of right and oblique triangles and their applications; solutions of trigonometric equations and inequalities; the use of identities, vectors, and complex numbers; and solutions of polar equations and parametric equations. Students must supply a graphing calculator.

K. College Wide Learning Outcomes:

College-Wide Learning Outcomes	Assessments - - How it is met & When it is met
Communication – Written	
Communication – Speech	
Intercultural Knowledge and Competence	
Critical Thinking	
Information Literacy	
Quantitative Literacy	

L. Course Outcomes and Assessment Methods:

Upon successful completion of this course, the student shall:

Outcomes	Assessments – How it is met & When it is met
1. Define Trigonometric and Inverse Trigonometric functions.	Homework and tests regularly throughout the semester and Final Exam (Weeks 1, 2, 3, 4, 5, 6, 11, 16)
2. Graph Trigonometric and Inverse Trigonometric functions and analyze their graphs.	Homework and tests regularly throughout the semester and Final Exam (Weeks 2, 3, 4, 5, 6, 11, 16)
3. Apply Trigonometric and Inverse Trigonometric functions to model a variety of real-world problem solving applications.	Homework and tests regularly throughout the semester and Final Exam (Weeks 3, 4, 5, 6, 11, 16)
4. Solve a variety of Trigonometric and Inverse Trigonometric equations and solve application problems.	Homework and tests regularly throughout the semester and Final Exam (Weeks 7,9,10 11, 16)
5. Solve right and oblique triangles in degrees and radians for both special and non-special angles.	Homework and tests regularly throughout the semester and Final Exam (Weeks 11, 12, 13, 16)
6. Verify Trigonometric identities using fundamental trigonometric identities.	Homework and tests regularly throughout the semester and Final Exam (Weeks 7,9, 11, 16)
7. Represent vectors graphically in both rectangular and polar coordinates.	Homework and tests regularly throughout the semester and Final Exam (Weeks 14,15,16)
8. Solve application problems using vectors.	Homework and tests regularly throughout the semester and Final Exam (Weeks 14, 16)
9. Graph complex numbers in both rectangular and polar form and perform operations on such numbers.	Homework and tests regularly throughout the semester and Final Exam (Weeks 13,14, 16)
10. Convert points and equations between rectangular and polar form, graph polar functions and solve polar equations.	Homework and tests regularly throughout the semester and Final Exam (Weeks 13,14, 16)
11. Identify and graph a curve defined by parametric equations.	Homework and tests regularly throughout the semester and Final Exam (Weeks 3,4,5,7,11, 16)

M.   Topical Timeline (Subject to Change):

Weeks 1-4	Angles and Their Measure Right Triangle Trigonometry Evaluating Trigonometric Functions of Acute Angles Evaluating Trigonometric Functions of General Angle Unit Circle Approach; Properties of the Trigonometric Functions Graphs of the Sine and Cosine Functions Graphs of the Tangent, Cotangent, Cosecant, and Secant Functions Phase Shift; Building Sinusoidal Models
Weeks 5-8	The Inverse Sine, Cosine, and Tangent Functions The Inverse Trigonometric Functions (Continued) Trigonometric Identities Sum and Difference Formulas Double-angle and Half-angle Formulas Product-to-Sum and Sum-to-Product Formulas Trigonometric Equations (I) Trigonometric Equations (II)
Weeks 9-12	Applications Involving Right Triangles The Law of Sines The Law of Cosines Area of a Triangle
Weeks 13-16	Polar Coordinates Polar Equations and Graphs The Complex Plane; De Moivre's Theorem Vectors The Dot Product

N.   Course Assignments:

1. Test #1 Chapter 7
2. Test #2 Chapter 8
3. Test #3 Chapter 9
4. Test #4 Chapter 10
5. Comprehensive departmental final exam

O.   Recommended Grading Scale:

NUMERIC	GRADE	POINTS	DEFINITION
93–100	A	4.00	Superior
90–92	A-	3.67	Superior
87–89	B+	3.33	Above Average
83–86	B	3.00	Above Average
80–82	B-	2.67	Above Average
77–79	C+	2.33	Average
73–76	C	2.00	Average

70-72	C-	1.67	Below Average
67–69	D+	1.33	Below Average
63-66	D	1.00	Below Average
60-62	D-	0.67	Poor
00-59	F	0.00	Failure

P. **Grading and Testing Guidelines:**

Face to Face:
- Homework 10%
- My Math Lab 10%
- Test/Quizzes 60%
- Final 20%

Online:
- Homework 20%
- Test/Quizzes 60%
- Final 20%

Q. **Examination Policy:**

Click here to enter text.

R. **Class Attendance and Homework Make-Up Policy:**

Click here to enter text.

S. **Classroom Expectations:**

Click here to enter text.

T. **College Procedures/Policies:**

Important information regarding College Procedures and Policies can be found on the syllabus supplement located at https://sharept.ncstatecollege.edu/committees/1/curriculum/SiteAssets/SitePages/Home/SYLLABUS %20SUPPLEMENT.pdf

The information can also be found Choose an item.