

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 term and Final Exam.
2. Graph Trigonometric and Inverse Trigonometric functions and analyze their graphs.	Homework and tests regularly throughout the term and Final Exam.
3. Apply Trigonometric and Inverse Trigonometric functions to model a variety of real-world problem-solving applications.	Homework and tests regularly throughout the term and Final Exam.
4. Solve a variety of Trigonometric and Inverse Trigonometric equations and solve application problems.	Homework and tests regularly throughout the term and Final Exam.
5. Solve right and oblique triangles in degrees and radians for both special and non-special angles.	Homework and tests regularly throughout the term and Final Exam.
6. Verify Trigonometric identities using fundamental trigonometric identities.	Homework and tests regularly throughout the term and Final Exam.
7. Represent vectors graphically in both rectangular and polar coordinates.	Homework and tests regularly throughout the term and Final Exam.
8. Solve application problems using vectors.	Homework and tests regularly throughout the term and Final Exam.
9. Graph complex numbers in both rectangular and polar form and perform operations on such numbers.	Homework and tests regularly throughout the term and Final Exam.
10. Convert points and equations between rectangular and polar form, graph polar functions and solve polar equations.	Homework and tests regularly throughout the term and Final Exam.
11. Identify and graph a curve defined by parametric equations.	Homework and tests regularly throughout the term and Final Exam.

M. 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

N. College Procedures/Policies:

North Central State College believes that every student is a valued and equal member of the community.* Every student brings different experiences to the College, and all are important in enriching academic life and developing greater understanding and appreciation of one another. Therefore, NC State College creates an inclusive culture in which students feel comfortable sharing their experiences.

Discrimination and prejudice have no place on the campus, and the College takes any complaint in this regard seriously. Students encountering aspects of the instruction that result in barriers to their sense of being included and respected should contact the instructor, assistant dean, or dean without fear of reprisal.

* *Inclusive of race, color, religion, gender, gender identity or expression, national origin (ancestry), military status (past, present or future), disability, age (40 years or older), status as a parent during pregnancy and immediately after the birth of a child, status as a parent of a young child, status as a foster parent, genetic information, or sexual orientation*

Important information regarding College Procedures and Policies can be found on the syllabus supplement located at

<https://ncstatecollege.edu/documents/President/PoliciesProcedures/PolicyManual/Final%20PDFs/14-081b.pdf>



North Central State College
SYLLABUS ADDENDUM

Academic Division: <u>Liberal Arts</u>	Discipline: <u>Mathematics</u>
Course Coordinator: <u>Sara K Rollo</u>	
Course Number: <u>MATH 1130 - 920</u>	Course Title: <u>Trigonometry</u>
Semester / Session: <u>Summer 2026</u>	Start / End Date: <u>May 26th – July 16th</u>

Instructor Information

Name: <u>Pamula Robison</u>	Credentials: <u>BA Mathematics / MS Applied Mathematics</u>
Phone Number 419-755-4525 Online at https://ncsc.zoom.us/j/856970747?pwd=UE1JNC9WNjhPM3dkRCs3bjE0SGx3Zz09	E-Mail Address: <u>probison@ncstatecollege.edu</u>
Office Location: <u>kRCs3bjE0SGx3Zz09</u>	Office Hours: <u>Mondays 10:00am – 12:00pm noon Thursdays 4:00 – 6:00pm</u>

I. Topical Timeline (Subject to Change):

MATH 1130	Day 1	Day 2
Week 1 Wednesday, May 27 th Saturday, May 30 th	Complete Assignment: Syllabus Quiz (Canvas) Introductions! (Canvas) Topic 1 Homework due (Lumen) Outcomes/objectives: Learn angles and their measure, especially right triangle trigonometry	Complete Assignment: Topic 2 Homework due (Lumen) Response to Introductions (Canvas) Outcomes/objectives: Compute values of trigonometric functions and learn properties of the trigonometric functions
Week 2 Wednesday, June 3 rd Saturday, June 6 th	Complete Assignment: Topic 3 Homework due (Lumen) Outcomes/objectives: Graph trigonometric functions	Complete Assignment: Test 1: Topics 1 – 3 due (Lumen) Reflection #1 (Canvas)
Week 3 Wednesday, June 10 th Saturday, June 13 th	Complete Assignment: Topic 4 Homework due (Lumen) Growth Mindset #1 (Canvas) Outcomes/objectives: Learn inverse trigonometric functions and solve trigonometric equations	Complete Assignment: Topic 5 Homework due (Lumen) Response to Growth Mindset #1 (Canvas) Outcomes/objectives: Use trigonometric identities and sum and difference formulas
Week 4 Wednesday, June 17 th Saturday, June 20 th	Complete Assignment: Topic 6 Homework due (Lumen) Outcomes/objectives: Use double-angle, half-angle, product-to-sum, and sum-to-product formulas	Complete Assignment: Test 2: Topics 4 – 6 due (Lumen) Reflection #2 (Canvas)
Week 5 Wednesday, June 24 th Saturday, June 27 th	Complete Assignment: Topic 7 Homework due (Lumen) Growth Mindset #2 (Canvas) Outcomes/objectives: Solve applications involving right triangles and learn and use the law of sines	Complete Assignment: Topic 8 Homework due (Lumen) Response to Growth Mindset #2 (Canvas) Outcomes/objectives: Learn and use law of cosines, find the area of triangles and study simple harmonic and damped motion
Week 6 Wednesday, July 1 st Friday, July 3 rd	Complete Assignment: Test 3: Topics 7 & 8 due (Lumen) Reflection #3 (Canvas)	Complete Assignment: Topic 9 Homework due (Lumen) Growth Mindset Applications (Canvas) Outcomes/objectives: Convert points and equations between rectangular and polar form, graph polar functions and solve polar equations

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Week 7 Wednesday, July 8 th Saturday, July 11 th	Complete Assignment: Topic 10 Homework due (Lumen) Outcomes/objectives: Graph complex numbers in both rectangular and polar form and perform operations on such number. Represent vectors graphically in both rectangular and polar coordinates	Complete Assignment: Topic 11 Homework due (Lumen) Outcomes/objectives: Find the dot product of two vectors, and determine if they are parallel or orthogonal
Week 8 Wednesday, July 15 th Thursday, July 16 th	Complete Assignment: Test 4: Topics 9 – 11 due (Lumen) Reflection #4 (Canvas)	Complete Assignment: Comprehensive Final Exam Due (Lumen)

II. Course Assignments (including, but not limited to):

1. Topic 1 Homework
2. Topic 2 Homework
3. Topic 3 Homework
4. Test 1: Topics 1 – 3
5. Topic 4 Homework
6. Topic 5 Homework
7. Topic 6 Homework
8. Test 2: Topics 4 -6
9. Topic 7 Homework
10. Topic 8 Homework
11. Test 3: Topics 7 & 8
12. Topic 9 Homework
13. Topic 10 Homework
14. Topic 11 Homework
15. Test 4: Topics 9 – 11
16. Comprehensive Final Exam

III. Grading and Testing Guidelines (If quizzes are assigned, may be weighted according to instructors’ discretion):

Activity	Found on	Number of Items	Points per Item	Total Points	Percentage
Homework by Topic	Lumen	11	10 or 11	118 pts	11.8 %
Syllabus Quiz	Canvas	1	12	12 pts	1.2 %
Discussions	Canvas	4	varies	50 pts	5.0 %
Reflections	Canvas	4	5	20 pts	2.0 %
Tests	Lumen	4	150	600 pts	60.0 %
Final Exam	Lumen	1	200	200 pts	20.0 %
Totals				1000 pts	100.0 %

IV. Examination Policy:

The tests and quizzes will be found on Lumen. The time limit for each test will be 150 minutes (2.5 hours). The time limit for the Final Exam will be 210 minutes (3 hours 30 minutes). Each test is over the topics immediately preceding. The Final Exam is worth 200 points and is cumulative, meaning it covers the entire course. You have just ONE attempt at each test and final exam. All work on exams and tests is to be independent, involving no other people, no other websites or software or AI but you, Lumen, and your graphing calculator.

The following information is needed for registering onto LUMEN:

Course ID: 99012

Enrollment Key: Trigonometry 3573

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Because I normally grade the work on tests for partial credit, you are to turn in your scratch work onto Canvas (not Lumen) under the test or exam that it falls under. You can simply take a picture of your work and upload it to Canvas. Please organize it so that I can follow it easily. Turning in your scratch work will give you chances for partial credit and will aide me in giving better feedback. Also, there are some problems that ask you to work it using a specific method. The scratch work for proofs (mainly Topics 5 and 6) also needs to be submitted to get full credit. I expect the scratch work to be turned in within 24 hours of your taking the test or exam.

IF YOU DO NOT TURN IN YOUR SCRATCH WORK, YOU WILL RECEIVE A ZERO FOR THE ASSIGNMENT UNTIL I GET YOUR SCRATCHWORK. IF YOU LOSE YOUR SCRATCHWORK, THEN YOU WILL GET AN OPTION TO RETAKE THE TEST, BUT LOSE 30 POINTS OFF YOUR SCORE FOR THE EXTRA WORK AND TIME WASTED.

If for some reason you don't think you can get the test done before the deadline, please do not start it. Ask for an extension. I can give extensions as long as you have not opened the test already. Once you open the test, I cannot give extensions. That is in part because it is difficult in the system to extend tests, but also to prevent cheating.

All assignments are open and available on the first day of class but are to be completed by their due data. Due dates are listed both on Canvas and on Lumen. Canvas will be where you check your grade, not on Lumen.

V. Class Attendance and Homework Make-Up Policy:

Class attendance is not part of your grade. It is however something we keep track of for various college purposes, so a lack of activity online for a week or more will constitute an absence, and I will try to contact you.

Homework sections are worth 10 or 11 points each. They will be graded by the percentage that is correct. I calculate these by taking the percentage, dividing it by 100, then multiplying that by 11. I will round that answer to the nearest point. For the three sections that are worth 10 points, you can get one extra credit point to get 11 points.

The deadlines for homework will be found on Canvas as well as Lumen. Assignments are open from the first day of class, there is no time limit per assignment, and you can have multiple attempts, but they must be completed by the due date.

Late Assignment Policy: We have only 8 weeks for this course, and it is a lot to cover. That is why I have due dates set up, so that everyone can keep on task and not get behind. It helps you because if you keep up, you won't have extra work at the end of the semester. It helps me so that I can better keep track of grades, and I also don't want a lot of extra work to grade at the end of the semester. I want everyone to do their very best, and I want everyone to have extra time if they need it, because I understand that you all have lives outside of school and sometimes life circumstances get in the way. Because of this, I don't take points off for being late. I don't encourage turning everything in late, but I want you to have extra time if you need it. Sometimes that is all you need. Other times, you may need to drop the course because you don't have enough time in your life to devote to this class right now. I respect that you can make that choice for yourself. If you miss a homework assignment, you must contact me to open it again, and I will open it again, usually pushing it to the next due date. This will be true until the end of the semester, when I have to turn grades in. There are natural consequences of getting behind: you will have more work to do in less time, and you may not do as well on tests because you haven't properly prepared for it. I don't feel the need to add to that punishment.

There are also reflection and discussion assignments and one syllabus quiz found on Canvas only. These must be completed.

Updated grades are found on Canvas, not on Lumen.

My personal goal is to grade assignments I have collected within one week and to reply to messages and emails within 48 hours.

VI. Classroom Expectations:

I have typed up notes and posted videos of lessons from each section that is to be covered in this course. The videos will follow a set of typed notes that can be found under Canvas. They will be located in each assignment or can be found under

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Files. I have placed the videos and the template for notes under the assignment they pertain to, found when you click on details for the assignment.

I have set up the course in Module format, one module per week. They contain links to your assignments, as well as videos in which I cover material.

Students that want to contact me directly for questions or assistance can email me at probison@ncstatecollege.edu or make an appointment with me on Zoom. The website for me specifically on Zoom is <https://ncsc.zoom.us/j/856970747?pwd=UE1JNC9WNjhPM3dkRCs3bjE0SGx3Zz09>. You must contact me via email to set up an appointment with me on Zoom, one that we can both agree on. Zoom allows us to see each other and talk to each other rather than writing or texting. I can answer questions live and walk you through a problem or two if that is what you would like.

Tutoring is available online too. There is a button on the home page of this Canvas course that takes you to the tutoring website.