



Competency-Based, Online Math 1316.80A Trigonometry

Course Syllabus: Fall 2026

"Northeast Texas Community College exists to provide personal, dynamic learning experiences empowering students to succeed."

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Office Hours	Monday	Tuesday	Wednesday	Thursday	Friday	Online
	Online Appointment	Online Appointment	Online Appointment	Online Appointment	Online Appointment	Everyday via TEAMS Messaging & Email

This syllabus serves as the documentation for all course policies and requirements, assignments, and instructor/student responsibilities.

Information relative to the delivery of the content contained in this syllabus is subject to change. Should that happen, the student will be notified.

Course Description: Three credit hours.

Three credit hours. The study of trigonometric functions and their applications. Topics include trigonometric functions of angles, right and oblique triangles, inverse trigonometric functions, trigonometric identities, equations, graphs, vectors, polar coordinates, and parametric equations.

Prerequisite(s): Math 1314 with a grade of "C" or better or an appropriate placement score

Student Learning Outcomes: Upon successful completion of this course, students will;

1. Compute values of trigonometric functions using radian and degree measure.
2. Analyze and graph trigonometric functions and their transformations.
3. Prove and apply trigonometric identities.
4. Solve trigonometric equations.
5. Solve right and oblique triangles using trigonometric methods.
6. Apply trigonometry to real-world problems including modeling and vectors.

Competency-Based Course Structure

This course is delivered in an online competency-based format. The course is organized into eight competencies aligned with the Texas ACGM outcomes for MATH 1316. Students' progress by demonstrating mastery rather than seat time. Mastery is defined as earning at least 80% on each competency mastery check, final project and comprehensive final assessment (must be proctored). Three attempts per competency mastery check are allowed. Two attempts are allowed on the comprehensive final assessment. One attempt on the final project.

Pre-Assessments and Accelerated Mastery Option

Prior to beginning each competency module, students will complete a **Pre-Assessment** aligned to the competencies measured by the corresponding **Competency Mastery Check**. The purpose of the pre-assessment is to allow students to demonstrate prior knowledge and accelerate progress where mastery already exists.

- A student who scores **80% or higher** on the pre-assessment may **bypass the associated practice and learning activities** for that competency and proceed **directly to the Competency Mastery Check**.
- Pre-assessments are **optional** and are intended to support flexible pacing and individualized learning pathways.
- Students who score **below 80%** on a pre-assessment are expected to complete the assigned instructional materials, practice, and formative activities before attempting the Competency Mastery Check.
- Pre-assessments **do not count toward the final course grade** and may not be retaken.
- All **Competency Mastery Checks must still be completed**, regardless of pre-assessment performance.

This accelerated mastery option is designed to recognize existing competency while maintaining the rigor and integrity of course outcomes.

Core Curriculum Purpose and Objectives:

Through the core curriculum, students will gain a foundation of knowledge of human cultures and the physical and natural world; develop principles of personal and social responsibility for living in a diverse world; and advance intellectual and practical skills that are essential for all learning.

Courses in the foundation area of mathematics focus on quantitative literacy in logic, patterns, and relationships. In addition, these courses involve the understanding of key mathematical concepts and the application of appropriate quantitative tools to everyday experience.

College Student Learning Outcomes:

Critical Thinking Skills

CT.1 Students will demonstrate the ability to 1) analyze complex issues, 2) synthesize information, and 3) evaluate the logic, validity, and relevance of data.

Communication Skills

CS.1 Students will effectively develop, interpret, and express ideas through written communication.

Empirical and Quantitative Skills

EQS.1 Students will manipulate numerical data or observable facts by organizing and converting relevant information into mathematical or empirical form

EQS.2 Students will analyze numerical data or observable facts by processing information with correct calculations, explicit notations, and appropriate technology.

EQS.3 Students will draw informed conclusions from numerical data or observable facts that are accurate, complete, and relevant to the investigation.

Evaluation/Grading Policy:

A series of online Blackboard engagement opportunities. Competency Mastery Checks with a minimum score of 80% (40% of final grade), online Homework, Final Project (10% - Blackboard Dropbox) and Comprehensive Final Assessment (MOM) will be worth 50% of your final grade. If you are unable to take your proctored final comprehensive assessment at NTCC's Testing Center than you must TEAMS or have an approved proctor. **If the final assessment is not proctored appropriately, a grade of zero will be given.** For TEAMS, students are required to have access to a computer with high-speed internet, a microphone, a webcam, and appropriate system rights to download and install the necessary software. Please note, the college does not provide this equipment.

Students who demonstrate mastery through a pre-assessment may be exempt from completing homework for that competency (see Pre-Assessments and Accelerated Mastery Option).

Homework and Competency Mastery Checks are graded when submitted. Formative assessments are graded within 72 hours after the due date. The Final Assessment is graded when submitted.

*Competency Mastery Checks (MyOpenMath):	40%
*Final Project (Blackboard):	10%
*Comprehensive Final Assessment (MyOpenMath):	50% (Must be Proctored.)

The Comprehensive Final Assessment must be proctored. Failure to meet proctoring requirements will result in a score of zero.

"A"	90 – 100 %
"B"	80 – 89 %
"C"	70 – 79 %
"D"	60 – 69 %
"F"	Below 60 %

*A minimum score of 80% is required to demonstrate mastery of each competency and to earn credit toward the final course grade. Competency Mastery Checks (three tries per competency master check), Final Project (one submission) and Comprehensive Final Assessment (two tries for comprehensive final assessment).

Required Instructional Materials:

MyOpenMath (MOM) accessed through Blackboard.

Textbook: Precalculus: An Investigation of Functions (OpenStax / Lippman & Rasmussen), trigonometry chapters (free digital).

Calculator: Scientific or graphing calculator required.

Publisher: MyOpenMath **ISBN Number:** NA

Optional Instructional Materials:

Print Textbook Precalculus: An Investigation of Functions

Paperback: ISBN-13: 978-1-955576-00-0

Minimum Technology Requirements:

Graphing Calculator is required. TI-83/84 is preferred. A free online TI-83/84 will be available in Blackboard for PCs. Below are some technical requirements for using Blackboard that will help your experience in this course. You will see the NTCC Tech Support email address and phone number below. Please contact them if you run into any technical problems during the semester. Please let your instructor know you are having difficulties as well. If you need further NTCC technical support services, please contact Austin Baker or Mary Lou Pemberton at:

abaker@ntcc.edu or 903-434-8279

mpemberton@ntcc.edu or 903-434-8270

Blackboard will work on both a Mac and a PC. (Chrome Books are known to have issues with Blackboard.) It is best to access Blackboard through Fire-Fox or Chrome as your web browser. If you have trouble with any of the activities working properly, you might change your web browser as your first solution. The Default Browser in Windows 10 is Edge. This browser does not do well with Blackboard! If you will go to Windows Accessories you will find Internet Explorer still on your computer but is not your default browser. If you have any difficulties navigating with Edge, close it and go to Internet Explorer.

You can download Blackboard Student for your smart phone from the Play store or the App store.

More information is available for Technology Requirements and Support under the [Student Resources – Technical Support Tab in Blackboard](#)

Required Computer Literacy Skills:

As an online student you will have a much different "classroom" experience than a traditional student. To ensure that you are fully prepared for your online courses, following is a list of expectations and requirements: Students in a hybrid and/or on-line program should be comfortable with and possess the following skill sets:

1. Self-discipline
2. Problem solving skills
3. Critical thinking skills
4. Enjoy communication in the written word

As part of your online experience, you can expect to utilize a variety of technology mediums as part of your curriculum:

1. Communicate via email including sending attachments
2. Navigate the World Wide Web using a Web browser such as Internet Explorer
3. Use office applications such as Microsoft Office (or similar) to create documents
4. Be willing to learn how to communicate using a discussion board and upload assignments to a classroom Web site
5. Be comfortable uploading and downloading saved files
6. Have easy access to the Internet
7. Navigate Blackboard, including using the email component within Blackboard. Instructions and tutorials for this are provided in your course.

For more information or technical assistance on using the Learning Management System, please refer

to the Home Page, Orientation Module, in the important technical requirement, information and support folder in Blackboard.

Course Structure and Overview:

This is an online competency-based course where students are required to access graded activities on the Blackboard Learning Management System. Students are required to complete online mastery checks, final project, and comprehensive final assessment. It is particularly important students keep up with course materials and assignments since this is a self-paced course. Students are expected to watch instructional videos, read course textbook, and complete online assignments located in the Learning Management System, Blackboard by the course end date.

Communications:

Emails will be responded to within 24 hours. If you do not receive a response within 24 hours, then the email was not received. Posts in the Discussion Forum “Questions, Comments, and/or Concerns?” will be monitored by the instructor. Responses by the instructor will be within 72 hours of post. Students are expected to abide by Netiquette rules when communicating online. See this link for details: [Netiquette Rules](#).

The college’s official means of communication is via your campus email address. I will use your campus email address and Blackboard to communicate with you outside of class. Make sure you keep your campus email cleaned out and below the limit so you can receive important messages.

Institutional/Course Policy:

No late work will be accepted without prior approval by the instructor. Students are always expected to be respectful toward classmates and professor! Review Student Conduct in the Student Handbook. It is the student’s responsibility to check Blackboard for important information/announcements regarding the course. Students should be working on course material via Blackboard every week. Do not wait until the last minute to complete and submit assignments in case of technology issues.

Alternate Operations During Campus Closure and/or Alternate Course Delivery Requirements:

In the event of an emergency or announced campus closure due to a natural disaster or pandemic, it may be necessary for Northeast Texas Community College to move to altered operations. During this time, Northeast Texas Community College may opt to continue delivery of instruction through methods that include, but are not limited to, online through the Blackboard Learning Management System, online conferencing, email messaging, and/or an alternate schedule. It is the responsibility of the student to monitor NTCC’s website (<http://www.ntcc.edu/>) for instructions about continuing courses remotely, Blackboard for each class for course-specific communication, and NTCC email for important general information.

Additionally, there may be instances where a course may not be able to be continued in the same delivery format as it originates (face-to-face, fully online, live remote, or hybrid). Should this be the case, every effort will be made to continue instruction in an alternative delivery format. Students will be informed of any changes of this nature through email messaging and/or the Blackboard course site.

Statement Regarding the Use of Artificial Intelligence (AI) Technology:

Absent a clear statement from a course instructor, use of or consultation with generative AI shall be treated analogously to assistance from another person (collusion). Generative AI is a subset of AI that utilizes machine learning models to create new, original content, such as images, text, or music, based on patterns and structures learned from existing data (Cornell, Center for Teaching Innovation). Unauthorized use of generative AI tools to complete an assignment or exam is not permitted. Students should acknowledge the use of generative AI and default to disclosing such assistance when in

doubt. Individual course instructors may set their own policies regulating the use of generative AI tools in their courses, including allowing or disallowing some or all uses of such tools. Students who are unsure of policies regarding generative AI tools are encouraged to ask their instructors for clarification. **(Adapted from the Stanford University Office of Community Standards-- accessed August 31, 2023)**

NTCC Academic Honesty/Ethics Statement:

NTCC upholds the highest standards of academic integrity. The college expects all students to engage in their academic pursuits in an honest manner that is beyond reproach using their intellect and resources designated as allowable by the course instructor. Students are responsible for addressing questions about allowable resources with the course instructor. Academic dishonesty such as cheating, plagiarism, and collusion is unacceptable and may result in disciplinary action. This course will follow the NTCC Academic Honesty and Academic Ethics policies stated in the Student Handbook. Refer to the student handbook for more information on these subjects.

ADA Statement:

It is the policy of NTCC to provide reasonable accommodations for qualified individuals who are students with disabilities. This College will adhere to all applicable federal, state, and local laws, regulations, and guidelines with respect to providing reasonable accommodations as required to afford equal educational opportunity. It is the student's responsibility to request accommodations. An appointment can be made with the Academic Advisor/Coordinator of Special Populations located in Student Services and can be reached at 903-434-8264. For more information and to obtain a copy of the Request for Accommodations, please refer to the special populations page on the NTCC website.

Eagle Assist

At Northeast Texas Community College, we understand that students often need support that extends beyond the classroom. "Eagle Assist" is the place to start when looking for that type of assistance. Our support system is here to help you succeed in both your academic and personal growth. www.ntcc.edu/eagleassist

Services provided:

- [Mental Health Counseling](#)
- [Classroom Accommodations](#)
- [NTCC Care Center Food Pantry](#)
- [NTCC Care Center Hygiene Closet](#)
- [NTCC Care Center Cook Nook](#)
- [Financial Literacy](#)
- [Child Care Assistance](#)
- [Emergency Aid](#)

Can't find what you are looking for? Send us a message at eagleassist@ntcc.edu

[Mental Health Counseling Services](#) are available to all NTCC students.

Visit the following page to get your account activated:

www.thevirtualcaregroup.com/ntcc

Family Educational Rights and Privacy Act (FERPA):

The Family Educational Rights and Privacy Act (FERPA) is a federal law that protects the privacy of student education records. The law applies to all schools that receive funds under an applicable program of the U.S. Department of Education. FERPA gives parents certain rights with respect to their children's educational records. These rights transfer to the student when he or she attends a school beyond the high school level. Students to whom the rights have transferred are considered "eligible students." In essence, a parent has no legal right to obtain information concerning the child's college records without the written

consent of the student. In compliance with FERPA, information classified as “directory information” may be released to the general public without the written consent of the student unless the student makes a request in writing. Directory information is defined as: the student’s name, permanent address and/or local address, telephone listing, dates of attendance, most recent previous education institution attended, other information including major, field of study, degrees, awards received, and participation in officially recognized activities/sports.

Suggested 16 - Week Competency Pacing Guide

Week 1 - 2: C1 – Angles and Unit Circle

Week 3 - 4: C2 – Right Triangle Trigonometry

Week 5 - 6: C3 – Trigonometric Graphs

Week 7 - 8: C4 – Fundamental Identities

Week 9 - 10: C5 – Advanced Identities

Week 11 - 12: C6 – Trigonometric Equations

Week 13 - 14: C7 – Oblique Triangles and Vectors

Week 15 - 16: C8 – Polar/Parametric Applications & Comprehensive Final Exam