



Walters State Community College Course Syllabus

Course Information

Course Number and Name: MATH 1720 Precalculus Trigonometry

Section ID: 81162.202380

Semester and Year: Fall 2023

Credit Hours: 3

Start Date: August 21, 2023

End Date: December 08, 2023

Course Format: TWY - Two-Way Video/Audio (ITV)

Catalog Course Description: A pre-calculus course in trigonometric functions. Preparation for MATH 1910 and to satisfy the requirements of other technical and pre-professional programs.

Prerequisite(s): ACT Math score of 22 or higher (or equivalent score as determined by the college placement and assessment procedure) or completion of mathematics learning support requirement and MATH 1030: or permission of the Dean of Mathematics. **F,S,Su**

General Education Course Designation: General Education Course

Meeting Details: TR; 08:00AM - 09:25AM; MBSS 227

Course Drop Deadline: October 27, 2023

Required Textbook(s) and Materials

(no textbook is required)

Additional Information

Handouts and Power Points located in the course eLearn "Content" will be used to cover the course material.

TI-84 (or TI-83) graphing calculator is required for course. If you own a different graphing calculator, discuss that with the instructor.

Students will need a hand-held calculator for exams and individual in-class quizzes. No calculator emulators loaded onto cell phones are allowed to be used while taking an exam or an individual in-class quiz.

Homework will include assignments in MyOpenMath. This is a free, open source, online course management system. Students will need a computer and reliable

WiFi to complete the homework assignments. Directions on how to access in MyOpenMath will be given on the first day of class.

(no textbook is required)

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Supplemental or Optional Materials

Optional Online Textbooks: To access the free OpenStax textbook go to <https://openstax.org/> , click on “Subjects” and select “Math” on the dropdown menu.

Optional textbook: Precalculus through Modeling and Visualization, 6th Edition, by Gary K. Rockswold. This textbook is published by Pearson and is available in hardback or embedded in the online MyLab.

Student Learning Outcomes/Objectives

- Course Outcomes
 1. Use trigonometric and inverse trigonometric functions to solve right triangles.
 2. Solve trigonometric equations for angles in a given domain.
 3. Use trigonometry to solve applied problems.
 4. Represent trigonometric functions graphically and symbolically including sinusoidal functions with basic transformations.
 5. Use trigonometric identities such as reciprocal identities, quotient identities, Pythagorean identities, cofunction identities, negative angle identities, sum and

- difference identities, power reducing identities, and double and half angle identities.
6. Simplify trigonometric expressions and verify trigonometric identities.
 7. Solve triangles using Law of Sines and Law of Cosines.
 8. Represent complex numbers in trigonometric form and perform basic operations of complex numbers using trigonometric form.
 9. Represent vectors graphically and perform basic operations with vectors.
 10. Graph polar equations and parametric equations.

Instructional Approach and Methods

This is a lecture based course offered in a two-way video (TWY) format.

- **Attendance**: Attendance is required during the designated class time.
- **Lecture**: Students may attend lectures during the regular class time either in-person on campus or virtually by participating from their computer through TEAMS.
- **Exams**: Attendance on campus is REQUIRED for exams.

On exam day, students will take the exam in class at the Morristown campus during the regular class time. With prior approval, a student may be allowed to take a proctored exam during that time at another WSCC campus.

Students wishing to take a proctored exam at another WSCC campus will need to discuss the details with the instructor. Students must get prior approval from the instructor and schedule the exam at the other campus well in advance of the exam date. Last minute requests to take an exam at another campus may not be able to be accommodated.

Assessment, Evaluation and Testing Procedures

General information: This syllabus sets forth the expectations for the course content, work, and grading as well as expectations for student performance and

conduct. The syllabus does not constitute a contract between the student and the instructor or the College. The information contained here is subject to change at any time. The instructor reserves the right to modify this syllabus at any time with written notification to the students. Though changes are possible, it is expected that the course will be conducted as described in this syllabus.

Attendance: Attendance is required during the designated class time.

Regular attendance is vital for successful completion of the course.

Extra Credit: No extra credit will be given in this college level course.

Honors Students: Honors students must successfully complete all honors assignments on time and must make a grade of A or B in the course to receive honors credit.

Grading Scale: A is 90-100%. B is 80-89%. C is 70-79%. D is 60-69%. F is 0- 59%.

Class Average: Homework Average counts 10%, Quiz Average counts 10%, and Exam Average Counts 80%.

Final Average = $0.80(\text{Exam Average}) + 0.10(\text{Quiz Average}) + 0.10(\text{Homework Average})$

EXAMS (80%)

There will be four (4) in-class exams and a comprehensive final exam.

Each of the four in-class exams must be taken in class on the scheduled test day OR the student must make arrangements to take the exam prior to the test date. (Any in-class exam that is to be completed prior to the scheduled test date must be arranged with the instructor in advance and taken during the instructor's office hours.) Otherwise, a missed in-class exam will receive a score of zero. No make-up for in-class exams will be given after the scheduled test date.

There will be a comprehensive final exam. The in-class exam with the lowest score will be replaced by the final exam score only if the final exam score is higher. In this case, the final exam score will count twice.

Students are not allowed to share calculators, use cell phone, laptops, tablets, or any other electronic device during exams. Students will need a hand-held calculator for exams. No calculator emulators loaded onto cell phones are allowed to be used while taking an exam.

QUIZZES (10%)

There will be in-class individual and/or group quizzes. There may also be take-home quizzes.

A missed quiz will receive a score of zero. A quiz is considered missed if the student does not submit the quiz by the time the quiz is due. Late quizzes will not be accepted.

The lowest two (2) quiz scores will be dropped at the end of the semester.

Students are not allowed to share calculators, use cell phone, laptops, tablets, or any other electronic device during individual quizzes. Students will need a hand-held calculator for individual in-class quizzes. No calculator emulators loaded onto cell phones are allowed to be used while taking an individual in-class quiz.

HOMEWORK (10%)

Students will complete homework assignments in MyOpenMath. MyOpenMath is a free online course management and assessment system. Students will need a computer and WiFi to be able to access the MyOpenMath homework.

Directions on how to access the homework assignments in MyOpenMath will be given on the first day of class and posted in the course eLearn CONTENT.

Homework due dates will be posted on the course eLearn Homepage. Any homework not completed by the due date will receive a score of zero. The lowest two (2) homework scores will be dropped the end of the semester.

School Sponsored Events: Regular attendance is mandatory for success in this course. It is the student's responsibility to contact the instructor **BEFORE** each school-sponsored absence. In such cases, all quizzes and exams require appropriate documentation of the school sponsored event and the quiz or exam must be completed **PRIOR** to the absence. Otherwise the student will receive a score of zero.

Procedures for Military Duty:

Students called to Active Duty Military Service should see the "WSCC Policies & Procedures" for their options. In the case of a short-term Military Temporary Duty with the student able to return to class and complete the course, make-up work may be allowed. The student must provide appropriate documentation, including orders. If possible, the instructor and student will agree on the make-up procedures prior to departure.

Grading Scale

A	90-100%
B	80-89%
C	70-79%
D	60-69%
F	0-59%

Assignments

There will be homework, quizzes, four (4) in-class exams, and a comprehensive final exam.

Exam and homework assignments due dates will be posted on the eLearn Homepage throughout the semester.

Audio Recording of Lectures

Any audio recording of lectures will need prior approval from the instructor. If approved, audio recording of lectures will be allowed for personal use only. Video recording of lectures will not be allowed.

Personal use is defined as use by an individual student for the purpose of studying or completing course assignments. These audio recordings are not to be shared with others.

The only exceptions are for students with a Student Support Plan through the WSCC Disabilities Office who have been approved for audio and/or video recording of lectures as a reasonable accommodation. Such recordings are also limited to personal use.

Academic Program Standards/Policies/Accreditation Information

OPTIONAL textbook: Precalculus through Modeling and Visualization, 6th Edition, by Gary K. Rockswold. This textbook is published by Pearson and is available in hardback or embedded in the online MyLab.

Chapter 6 – Trigonometric Functions

6.1 Angles and Their Measure

6.2 Right Triangle Trigonometry

6.3 The Sine and Cosine Functions and Their Graphs

6.4 Other Trigonometric Functions and Their Graphs

6.5 Graphing Trigonometric Functions

6.6 Inverse Trigonometric Functions

Chapter 7 – Trigonometric Identities and Equations

7.1 Fundamental Identities

7.2 Verifying Identities

7.3 Trigonometric Equations

7.4 Sum and Difference Identities

7.5 Multiple-Angle Identities (optional to omit sum to product and product to sum)

Chapter 8 – Further Topics in Trigonometry

8.1 Law of Sines

8.2 Law of Cosines

8.3 Vectors

8.4 Parametric Equations (*treat as introduction only*)

8.5 Polar equations (*treat as introduction only*)

8.6 Trigonometric Form and Roots of Complex Numbers

Academic Honesty

Faculty expect all students to refrain from acts of academic misconduct including but not limited to:

1. Plagiarism - refers to using another person's ideas or writing without giving proper credit to the original source. Indulging in this type of conduct will subject the student to disciplinary sanctions, which may be imposed through the regular institutional procedures of Walters State Community College as outlined in the Student Handbook. Plagiarism will result in a grade of "0" for the paper/exam/presentation. Student Conduct and Disciplinary Sanctions contained in the college Catalog/Student Handbook apply (see policy 04:18:02 Disciplinary Sanctions).

Plagiarism includes, but is not limited to the following:

- a. Using cut/paste tool from original document with no references given.
 - b. Copying another student's work and submitting it as one's own.
 - c. Forging or otherwise altering signatures.
 - d. Giving or falsifying academic documents or materials.
2. Cheating - construed as attempting to deceive or mislead which includes, but is not limited to the following:
 - a. Utilizing old tests, projects, notes or written papers.
 - b. Providing unauthorized information to a fellow student about exam content.
 - c. Receiving unauthorized aid from any source with quizzes, examinations, or other assignments.

- d. Seeking information in an unacceptable manner during/preceding an exam or other assigned work (cheat sheet, verbal exchange, looking at another person's paper or electronic device, utilizing headphones, using textbook when the test/quiz is not an open book test/quiz, using textbook test bank etc.).
 - e. Consulting with a classmate or others when taking a computerized test.
 - f. Disregarding other specific policies and procedures outlined for a particular class.
 - g. Utilizing unapproved technology/electronic equipment during testing (i.e.: mobile devices such as cell phones, smart devices, or tablets, etc.).
 - h. Using the same Internet Protocol network address (IP address) as another student for testing without approval from the course faculty.
3. The use of any generative artificial intelligence (AI) tool, such as OpenAI's ChatGPT, Google's Bard, or any other pre-trained language model (commonly referred to as "chatbot"), must be cited for any assignment where it has been used and may not be used unless specifically allowed by your instructor. Please see your instructor or the course policies within the syllabus if you have questions.

Student Resources

TUTORING SERVICES

Students in need of tutoring assistance are encouraged to contact the Office of Student Tutoring located as follows:

- Morristown Campus - Student Services Building Room L107 - (423) 585-6920
- Niswonger Campus - GRNV 226 - (423) 798-7982
- Sevierville Campus - MMH Room 210 - (865) 286-2787
- Claiborne Campus - Room 123A - (423) 851-4761

Specific tutoring assistance in mathematics and writing is available in-person and online as follows:

- Morristown Campus - English Learning Lab - HUM 120 - (423) 585-6970

[Walters State English Learning Lab \(opens in new window\)](https://www.walters.edu/academics/humanities/writing-lab)
[ws.edu/academics/humanities/writing-lab](https://www.walters.edu/academics/humanities/writing-lab)

- Morristown Campus - Mathematics Lab - MBSS 222 - (423) 585-6872

[Walters State Mathematics Learning Lab \(opens in new window\)](https://www.walters.edu/academics/mathematics/learning-lab)
[ws.edu/academics/mathematics/learning-lab](https://www.walters.edu/academics/mathematics/learning-lab)

TECHNOLOGY SUPPORT

Students who need assistance with computing and technology issues should contact the IET Helpdesk by phone at Morristown: (423) 318-2742; Niswonger: (423) 798-8186; or Sevierville: (865) 286-2789 or on-line access.

[Walters State Helpdesk \(opens in new window\)](#)
helpdesk.ws.edu

STUDENTS WITH DISABILITIES SUPPORT SERVICES

Students with disabilities must register with Student Support Services each semester in the Student Services Building, Room U134 (phone (423) 585-6892) if they need any special facilities, services, or consideration.

[Walters State Student Support Services \(opens in new window\)](#)
ws.edu/student-services/disability/

SUICIDE PREVENTION STATEMENT

Walters State is committed to and cares about all students. Support services are available for any person at Walters State who is experiencing feelings of being overwhelmed, hopelessness, depression, thinking about dying by suicide, or is otherwise in need of assistance. For immediate help, contact the National Suicide Prevention Lifeline by calling or texting 9-8-8 or the Trevor Lifeline at 1-866-488-7386. Veterans may also contact the Veterans Crisis Line at 1-800-273-8255 (press 1) or Text 838255.

Walters State has a relationship in place with the following community agencies to provide services (may include crisis referral services, prevention screenings, etc.):

- Cherokee Health Systems 423-586-5032
- Frontier Health 423-467-3600

College Policies

STUDENTS HANDBOOK AS OFFICIAL GOVERNING DOCUMENT

This class is governed by the policies and procedures stated in the current Walters State Community College Student Handbook. All students attending Walters State Community College, regardless of the time, location, or format of the class, must abide by the rules and regulations outlined in the current Walters State Catalog/Student Handbook and the current Walters State Timetable of Classes.

[Walters State Catalog.\(opens in new window\)](#)
catalog.ws.edu/

[Walters State Timetable of Classes \(opens in new window\)](#)
ws.edu/admissions/registration/

PURPOSE, LIMITATIONS AND MODIFICATION OF SYLLABUS

This syllabus sets forth the expectations for the course content, work, and grading as well as expectations for student performance and conduct. The syllabus does not constitute a contract between the student and the instructor or the College. The information contained here is subject to change at any time. The instructor reserves the right to modify this syllabus at any time with written notification to the students. Though changes are possible, it is expected that the course will be conducted as described in this syllabus for the semester/year specified in the Course Information section of the syllabus. This syllabus is only valid for the semester/year specified and course requirements are not guaranteed for future semesters.

COURSE GROUND RULES

- Students must attend the first day of on-ground class or contact the instructor prior to the first class. Failure to do this may result in being dropped from the class. Excessive absences may substantially lower the course grade.
- Regular class attendance is a student's obligation for any course regardless of format. (See the Walters State Catalog/Student Handbook). If a student misses class, it is his or her responsibility to contact the instructor regarding missed assignments and/or activities and to be prepared for the next class assignment.
- Students enrolled in web courses must follow the course attendance policy defined for online attendance during the first week of class and throughout the term. Failure to do this may result in being dropped from the class during week one OR may result in the accrual of absences which may negatively impact the student's grade in the course.
- Students who have not paid fees on time and/or are not correctly registered for this class and whose names do not appear on official class rolls generated by the Walters State student information system (MyWS) will not be allowed to remain in class or receive credit for this course.
- Electronic devices must not disrupt the instructional process or college-sponsored academic activity. Use of electronic devices is prohibited unless use of the device is relevant to the activity and use is sanctioned by the faculty member in charge. Electronic devices that are not relevant to the activity or sanctioned by the faculty member in charge should be set so that they will not produce an audible sound during classroom instruction or other college-sponsored academic activity.

FINANCIAL AID

Students receiving any type of financial aid or scholarship should contact the Financial Aid Office before making any changes to their schedule. Schedule changes without prior approval may result in loss of award for the current term and future terms.

All forms of student Financial Aid may be jeopardized or lost due to the lack of Satisfactory Academic Progress in one or multiple courses. Lack of Satisfactory Academic Progress may negatively impact a student's degree/certificate completion pace and further jeopardize Financial Aid eligibility.

CANCELLATION OF CLASSES AND ACADEMIC CONTINUITY

For information related to the cancellation of classes due to inclement weather or other events, please check the Senators Emergency Text system or the college's Web site at:

[Walters State Homepage \(opens in new window\)](https://www.waltersstate.edu/home/)
[ws.edu/home/](https://www.waltersstate.edu/home/)

[Walters State Facebook page \(opens in new window\)](https://www.facebook.com/WaltersState/)
<https://www.facebook.com/WaltersState/>

[Walters State Twitter page \(opens in new window\)](https://twitter.com/waltersstate)
<https://twitter.com/waltersstate>

or call the college's student information line, 1-800-225-4770, option 1; the Sevier County Campus, (865) 774-5800, option 7; the Niswonger Campus (423) 798-7940, option 7; or the Claiborne County Campus, 423-636-6200, option 7. Also, please monitor local TV and radio stations for further announcements.

When an event or disaster interrupts the scheduled operations of the college and the ability to proceed with the academic course activities as planned, the college and your instructor may alter the course plan outlined in the syllabus. Should an event occur, students should refer to their course e-Learn pages and/or class materials previously delivered to receive guidance from their instructor. Students should continue to monitor the official college channels of communication listed in the above paragraph. If you would like to sign up for the Senators Emergency Text system, please go to the following Web site:

[Senator Emergency Text System \(opens in new window\)](https://www.waltersstate.edu/set/)
[ws.edu/set/](https://www.waltersstate.edu/set/)

Dual Enrollment students attending on a high school campus should refer to the high school inclement weather cancellations.

LEARNING MANAGEMENT SYSTEM

Brightspace (commonly known as eLearn or D2L) is the college's Learning Management System (LMS).

Brightspace is committed to accessibility by "deliver[ing] a learning experience that meets the needs of all people, regardless of age or ability." [Brightspace Accessibility Standard \(opens in new window\)](#)

Brightspace is also committed to guarding student data and privacy. [Brightspace Privacy Policy \(opens in new window\)](#).