

MATH 117-012

Fall 2024

**Trigonometry**

10:20-11:15 MWF

COHH 2117

3 credit hours

**Instructor:** Dr. Tom Richmond  
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**Office Hours:** 9:15-10:00 MWF, 3:00-3:45 Tu COHH 3106  
"Drop-ins" and appointments are welcomed.

**Course Description:** "Trigonometry" means the study of "tri-gons", or triangles. Trigonometry is used to determine lengths and distances based upon angles, or vice versa. Students in Math 117 will be able to apply knowledge of the unit circle; trigonometric functions and graphs; trigonometric identities and equations; right triangle trigonometry; laws of sines and cosines; DeMoivre's Theorem; vectors and applications of trigonometry. Further, students will learn to model and solve problems appropriate for the field of study in majors of the sciences.

**Learning Objectives:** This course fulfills the Quantitative Reasoning requirement in the Foundations category of WKU's Colonnade program. Quantitative Reasoning courses teach students to interpret, illustrate, and communicate mathematical and/or statistical ideas. Students will learn to model and solve problems. As part of that program, Math 117 has the following learning objectives:  
Students will demonstrate the ability to:

1. Interpret information presented in mathematical and/or statistical forms.
2. Illustrate and communicate mathematical and/or statistical information symbolically, visually and/or numerically.
3. Determine when computations are needed and execute the appropriate computations.
4. Apply an appropriate model to the problem to be solved.
5. Make inferences, evaluate assumptions, and assess limitations in estimation modeling and/or statistical analysis.

**Prerequisites:** 4 years of high school mathematics including Algebra I and II and geometry, and one of the following:

- (i) Math 116 with a grade of C or better
- (ii) Math ACT of 27 or better
- (iii) (Math ACT  $\geq 22$  or Math SAT  $\geq 510$ ) and (WKU Math Placement Test or KYOTE College Algebra Test score  $\geq 18$ ).

**Course Materials:** This course participates in the Big Red Backpack program. This program is designed to provide immediate access to required materials for all students at prices cheaper than any other option.

The MyLabMath online course software and eBook will be delivered to you automatically (through Blackboard) by enrolling in this course unless you choose to opt-out.

If you opt out, you will have to purchase the MyLabMath access directly from the publisher, and it will be more expensive. By participating in this program, The WKU Store will bill your Student Billing account, and you will see a charge appear under this Term along with Tuition and Fees ("Account Summary by Term" under the Student Services tab) labelled as "The WKU Store Purchases" after the Add/Drop period.

To access the online text and homework assignments, log onto Blackboard, select Math 117-012, and from the content menu, select MyMathLab.

**Math Tutoring Lab:** The Math Lab in COHH 2124 is open to assist you with any math problems you have. The Lab is open (tentatively) 8:30 – 4:30 Monday through Thursday and 8:30 – 2 Friday.

**Attendance Policy:** Registration in a course obligates the student to be regular and punctual in class attendance. Three or more unexcused absences from class may result in an "F" as final course grade. A student absent from class bears full responsibility for subject matter and announcements missed.

**Testing and Grading:** Students are responsible for material presented in class and the material in the text. There will be three one-hour in-class tests, each worth 100 points. The comprehensive final exam, to be given 10:30-12:30 Wednesday, December 4, 2024, is worth 150 points. MyMathLab homework will count for 80 points. There may be between 0 and 40 more points of daily grades, consisting of announced or unannounced quizzes, written homework, or projects. Grading will follow the 10-point scale. An unofficial list of your grades will be available to you on Blackboard. For any graded work not taken in a proctored environment, during the grading process the instructor may require you to satisfactorily explain your solutions by video-chat to receive credit.

**Last day to drop or change to audit:** October 28, 2024

**Academic Dishonesty:** Student who commit any act of academic dishonesty may receive from the instructor a failing grade in that portion of the course work in which the act is detected or a failing grade in a course without possibility of withdrawal. Academic dishonesty includes copying the work of someone else, sharing your work with someone else, or using web tools to solve problems on graded assignments. As with all WKU classes, student work may be checked using plagiarism detection software.

**ADA Accommodation Statement:** In compliance with University policy, students with disabilities who require academic and/or auxiliary accommodations for this course must contact the Student Accessibility Resource Center located in Downing Student Union, Room 1074. The

SARC can be reached by phone number at 270-745-5004 [270-745-3030 TTY] or via email at [sarc.connect@wku.edu](mailto:sarc.connect@wku.edu). Please do not request accommodations directly from the professor or instructor without a faculty notification letter (FNL) from The Student Accessibility Resource Center.

**Pregnant and Parenting Students:** Western Kentucky University does not discriminate against any student or exclude any student from its educational programs or activities, including classes or extracurricular activities, on the basis of pregnancy and/or pregnancy-related conditions such as, but not limited to, childbirth, false pregnancy, termination of pregnancy, or recovery therefrom. Students who seek pregnancy or pregnancy-related accommodations should make their requests as soon as possible via WKU's Title IX Website at [www.wku.edu/titleix/](http://www.wku.edu/titleix/) under the heading, "Pregnancy or Pregnancy-Related Conditions." Students can also contact the Title IX Coordinator, Ena Demir, via email at [ena.demir@wku.edu](mailto:ena.demir@wku.edu) or by phone at (270) 745-6867 to request accommodations or seek assistance. We encourage students and faculty to work together to establish a plan that allows the student to complete the class and coursework without jeopardizing academic integrity and course standards. The Title IX Coordinator can help facilitate conversations between students and faculty regarding appropriate and reasonable accommodations.

If you are a WKU student and believe that you have experienced an incident(s) of discrimination or harassment based on pregnancy (or pregnancy related conditions or issues), please report it to the Title IX Coordinator via email at [ena.demir@wku.edu](mailto:ena.demir@wku.edu) or by phone at (270) 745-6867.

Additional resources for pregnant and parenting students can be found on WKU's Title IX Website at [www.wku.edu/titleix/](http://www.wku.edu/titleix/).

**Title IX/Discrimination & Harassment:** Western Kentucky University (WKU) is committed to supporting faculty, staff and students by upholding WKU's [Sex and Gender-Based Discrimination, Harassment, and Retaliation](#) (#0.070) and [Discrimination and Harassment Policy](#) (#0.2040). Under these policies, discrimination, harassment and/or sexual misconduct based on sex/gender are prohibited. If you experience an incident of sex/gender-based discrimination, harassment and/or sexual misconduct, you are encouraged to report it to the Executive Director, Office of Institutional Equity/Title IX Coordinator, Ena Demir, 270-745-6867 or Title IX Investigators or Michael Crowe, 270-745-5429. Please note that while you may report an incident of sex/gender based discrimination, harassment and/or sexual misconduct to a faculty member, WKU faculty are "Responsible Employees" of the University and MUST report what you share to WKU's Title IX Coordinator or Title IX Investigator. If you would like to speak with someone who may be able to afford you confidentiality, you may contact WKU's [Counseling and Testing Center](#) at 270-745-3159.

**Policies:** "Students who commit any act of academic dishonesty may receive from the instructor a failing grade in that portion of the coursework in which the act is detected or a failing grade in the course without possibility of withdrawal." As with all WKU classes, student work may be checked using plagiarism detection software.

**I reserve the right to make changes to the policies outlined in the syllabus at any time, as needed.**