

**MATH 125-502:  
PLANE TRIGONOMETRY**

**Revised Spring 2007, Fall 2008**

**3 Semester Hours Credit**

**Author and Instructor: William Blubaugh, Ph.D.**

**6 Lessons  
Proctored Mid-Course & Final Tests**

**Office of Extended Studies  
Campus Box 21  
University of Northern Colorado  
Greeley, Colorado 80639  
Greeley (970) 351-2944 or Denver (303) 637-4320  
Toll free (800) 232-1749  
Fax (970) 351-2519**

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## ABOUT YOUR INSTRUCTOR

### INSTRUCTOR:

William Blubaugh, Ph.D.  
Office Telephone: (970) 351-2028  
E-mail Address: bill.blubaugh@unco.edu

Welcome to Plane Trigonometry and to Independent Study. Before you begin, I would like to share a little about myself.



I completed a Bachelor of Science Degree in Mathematics and Science at Kent State University in northeastern Ohio and a Master of Science, also from Kent State University, in Mathematics and Education. In 1984, I received a Ph.D. in Mathematics Education from the University of Colorado at Boulder. My professional experience includes ten years of teaching at the high school level in basic mathematics through calculus, two years of teaching mathematics education at the University of Colorado at Boulder as a graduate student, three years of teaching mathematics education at the University of Texas at Austin, and nineteen years of teaching mathematics and mathematics education courses at the University of Northern Colorado.

I have enjoyed teaching trigonometry to high school and college students in the classroom and working with students, similar to yourself, who have elected to complete algebra by independent study. I enjoy writing and have authored several articles for Mathematics Teacher, School Science and Mathematics, and Mathematics and Computer

\_\_\_\_\_. I have presented at state, regional, and national conferences for various professional and learned societies.

My wife, Karen, and I have been married twenty-three years and we have three children. Cathy is 20 and is a student here at UNC, Becky is 18, and Matthew is 15. We especially enjoy hiking, camping, and skiing in the mountains.

Feel free to contact me at any time by phone (Office: 970-351-2028, Home: 970-667-8793), fax (970-351-1225), email (bill.blubaugh@unco.edu), or the web (<http://hopper.unco.edu/faculty/personal/blubaugh.htm>).

## INFORMATION SPECIFIC TO THIS COURSE

**COURSE NUMBER  
AND PREFIX:**

MATH 125-035

**TITLE AND CREDIT:**

Plane Trigonometry (3 sem. hrs.)

**COURSE  
DESCRIPTION:**

You will study trigonometry functions, their graphs, their applications, right triangle ratios, identities, inverse trigonometric functions, vectors and complex numbers through Demoiivre's Theorem and the nth-Root Theorem.

**PREREQUISITES:**

The prerequisite for this course is successful completion of college algebra or two years of high school algebra.

**COURSE OBJECTIVE:**

The objective of the course is to prepare you to use the language of trigonometry. By the word "language," I mean that trigonometry uses symbols to express ideas; thus, the purpose of the course is to assist you in learning how to read, write and apply trigonometric ideas and problem solving.

**REQUIRED TEXT:**

Dugopolski, Mark. 2007. *Trigonometry*. Second Edition. Pearson Education, Inc.

**OTHER COURSE  
MATERIALS:**

Graphing paper is needed and a graphics calculator is recommended.

**BIBLIOGRAPHY:**

None

**PROCEDURE:**

If you have any questions for me, write them on a separate sheet of paper and clip or staple your questions to the first page of your written work.

- Staple each unit separately.
- Be sure your name is on each page of your written work.
- Make a copy of your written work to save as a back-up in case an assignment is lost in the mail. The university cannot be responsible for your work should this happen, and occasionally it does.
- Fill out and staple a **Course Work Evaluation Cover Sheet** to your written assignment before mailing to:

Office of Extended Studies  
Campus Box 21  
University of Northern Colorado  
Greeley, CO 80639

**DO NOT MAIL YOUR HOMEWORK DIRECTLY TO ME!**

Your assignment will be graded and returned to you.

If you were taking this course on a college campus, you would spend three hours in class each week for fifteen weeks, and I would assume that you were studying about two hours outside of class for each hour in class. Therefore, you should plan to spend about 135 hours of actual study time on this course building your skills and completing practice problems and your homework assignments.

Please show all your work on the problems you submit for grading. I will be able to better assess your work and will possibly award partial credit.

Please use a pencil that writes dark enough so that I can read your work easily.

As in practicing to play a musical instrument, the more exercises or practice you do, the more skill you will develop; so, don't limit your practice to just those exercises which are to be submitted for evaluation. Note that your text provides answers for all of the odd-numbered exercises of each section, and all answers for the Chapter Tests and

Cumulative Reviews. Your assigned problems all have even numbers. Take the time to work numerous odd-numbered exercises. You can look up the correct answer and continue to work the problem until you get the right answer. This will help you build your skills and your confidence for successfully completing the homework assignments. The answers provided for the odd-numbered exercises and the worked examples in the text should provide you with the format I expect you to use for the work that you will submit for evaluation. Please pay careful attention to this format.

You will be studying Chapters 1 through 6 in the textbook for this particular course. While the graphing calculator is a powerful tool utilizing the best of current technology, it is not required but encouraged, for you to complete this course. However, you do need a good scientific calculator - one which is capable of evaluating trigonometric, exponential, and logarithmic functions, and displaying results in scientific notation (all features of which are contained within a graphics calculator). You are encouraged to using a graphics calculator and in fact, if you are going on to other mathematics or science courses, using a graphics calculator here would be a good idea. However, the text - and the course - are accessible to those who will not continue in mathematics.

The secret of success in this course is diligence in doing as many exercises as possible and careful attention to accuracy. I expect the work you submit for grading to be neat and easy to read, and that it will follow the format provided in the examples in your text.

If you have any questions for me, write them on a separate sheet of paper and clip or staple your questions to the first page of your written work.

Staple each unit separately.

Be sure your name is on each page of your written work and your Bear Number and address are included on the **Course Work Cover Sheet**.

Make a copy of your written work to save as a back-up in case an assignment is lost in the mail. The university

cannot be responsible for your work should this happen, and occasionally it does.

You are responsible for the postage necessary to mail your homework to the university for grading.

Along with your first assignment, please write a short paragraph about yourself, explaining why you have chosen to take this course, your educational background, and anything else you might share with an instructor and the class if you were taking this course in a regular classroom setting.

When you have completed the course, please take the time to complete the Student Satisfaction (course evaluation) form included in this syllabus. A self-addressed envelope is enclosed for your convenience.

For “Independent Student Study Guide” go online to <http://www.unco.edu/extendedstudies/independent/handbook.html>.

**EXAMINATIONS:**

When you have completed the first 3 study units you may take the first (Mid-Course Test) of two written tests. When you have finished units 4-6, you may take the second (Final Test) written test. Both tests are proctored (supervised) and open-book tests. You will be allowed to use your calculator in working problems, except when directions indicate otherwise. You will be allowed 3 hours on the first test and 2 hours on the second test. Information on finding a proctor and securing your exam can be found on the yellow Exam Request Form. The tests are patterned after your unit assignments; you will find the same type of problems.

**EVALUATION  
TECHNIQUE:**

The grade you receive will be based on four grading components. Units 1-3 will count 25% of the course grade, the proctored Mid-Course Test will count as 25% of the course grade, Units 4-6 will count as 25% of the course grade and the proctored Final Test will count as 25% of the course grade. All units and both tests will be graded on the basis of 100 points each.

**GRADING**

A : 92.5 to 100 %	A- : 90.0 to 92.4%	
B+ : 87.5 to 89.9%	B : 82.5 to 87.4%	B- : 80.0 to 82.4%
C+ : 77.5 to 79.9%	C : 72.5 to 77.4%	C- : 70.0 to 72.4%
D+ : 67.5 to 69.9%	D : 62.5 to 67.4%	D- : 60.0 to 62.4%
F : below 60%		

**STUDENT  
SATISFACTION  
EVALUATION:**

When you have completed the course, please take the time to complete the Student Satisfaction (course evaluation) form included in this syllabus. A self-addressed envelope is enclosed for your convenience.