Spring 2014 *** MTH 122 – Section 204*** Course Syllabus *** Dr. Ari Aluthge (A-luth-gay)

Course Number: MTH 122 – Section 203 (CRN 2367) – 3 Credit Hours
Course Title: Plane Trigonometry
Textbooks: Trigonometry, 3rd Edition by Cynthia Young, ISBN: 9780470648025
Calculator: A Scientific calculator is required. TI-83 graphing calculator is recommended.
But calculators may not be allowed on some parts of tests.

Prerequisites: MTH 127 or MTH 130 or MTH 130H or 22 on ACT (Math) or 520 on SAT (Math).
Class Meeting Times: TR: 12:30 – 1:45 am
Classroom: Smith 513

Instructor: Dr. Ari Aluthge (A-luth-gay)
Office: ML 109 (Morrow Library – First Floor) Phone: 696 3050 Email: aluthge@marshall.edu
Office Hours: Monday & Wednesday: 1:00 pm – 4:00 pm or by appointment.
(I am in classes: TR: 9:30 – 10:45 and TR: 12:30 – 3:15)

## Course Objectives:

- To give students a solid understanding of trigonometric functions and their applications.
- To help prepare students for a course in calculus with analytic geometry. Students should also take college algebra before attempting calculus
- To help prepare students for study in areas such as physics, engineering, biology, chemistry, pharmacy, geology, medicine, and safety technology.

Course Contents:

- **Right Triangular Ratios ●Trigonometric/Circular Functions**
- **Graphs of Trigonometric/Circular Functions ● Trigonometric Identities**
- **Inverse Trigonometric/Circular Functions and Trigonometric Equations**
- **Applications (Law of Sines, Law of Cosines, Vectors)**
- **Polar Coordinates and Complex Numbers (time permitting)**

**Learner Outcomes**: Upon completion of this course, students will have an understanding of the concepts of trigonometric functions and their properties. They will be able to apply these concepts to solve real world applications. In particular, students will

- analyze, compare, evaluate, and graph the six trigonometric functions.
- analyze, compare, evaluate, and graph the six inverse trigonometric functions.
- use trigonometric functions to solve real-world applications involving triangles and vectors.
- use the definition of radian measure to solve application problems involving linear and angular speed.
- apply trigonometric identities and solve trigonometric equations in other mathematics courses such as calculus.
- apply trigonometric functions to multiply and divide complex numbers and find the powers and roots of complex numbers (time permitting).

**Practicing Learner Outcomes:** Students will practice above learner outcomes by

- reading and studying the textbook.
- by coming to class and participating in class discussions.
- reading and studying the material provided on MUonline.

**Assessing Learner Outcomes:** Learner outcomes will be assessed by homework/quizzes and exams.

Your Grade: Two tests (100 points each), Weekly homework assignments (on WebWork) or quizzes – (150 points total), and a comprehensive final exam (150 points) will be given. I will count 1.5 times the best test score and the 0.5 times the lowest test score. Each HW/quiz will be worth 15 points and the best 10 HW/quiz will be counted. Maximum possible total points = 500

A = [450, 500], B = [400, 450), C = [350, 400), D = [300, 350)
F = [0, 300) or missing the final exam.

Make-up Exams and Missing Assignments: Make-up tests will be given for excused absences only. Students must verify their absences with the associate dean of college or by the dean of students. No late homework will be accepted.

Important Days: Test 1: Thursday, February 20
Test 2: Thursday, April 10
Final Exam: Tuesday, May 6, (12:45 – 2:45)

Class Attendance and Excused Absences: Students are required to attend the class every day. They must come to class on time and stay in the class for the entire period. Students are responsible for the material discussed in the class on each day even if they miss the class on that day. Please refer to section of the Undergraduate Catalog (http://www.marshall.edu/ucomm/catalog/interim.htm) for details regarding the university excused absence policy. Any excused absence must be verified by the assistant/associate dean of the appropriate college or the dean of students. Student must also notify the instructor of any absence at the earliest convenience time. Daily attendance will be taken.

Academic Honesty: I expect my students to be honest and hard working individuals. Students should not attempt to cheat on exams or on assignments. It is not difficult to catch cheating and cheaters will be dealt seriously. Please read the appropriate section of the undergraduate catalog for more details. Students are allowed and encouraged to study and do homework with other students in the class. But students should do their assignments by themselves.

**"Policy for Students with Disabilities:** Marshall University is committed to equal opportunity in education for all students, including those with physical, learning and psychological disabilities. University policy states that it is the responsibility of students with disabilities to contact the Office of Disabled Student Services (DSS) in Prichard Hall 117, phone 304 696-2271 to provide documentation of their disability. Following this, the DSS Coordinator will send a letter to each of the student's instructors outlining the academic accommodation he/she will need to ensure equality in classroom experiences, outside assignment, testing and grading. The instructor and student will meet to discuss how the accommodation(s) requested will be provided. For more information, please visit http://www.marshall.edu/disabled or contact Disabled Student Services Office at Prichard Hall 11, phone 304-696-2271."
**Please visit http://www.marshall.edu/academic-affairs/?page_id=802 for more details.**

**Tentative** Weekly Schedule

| Week | Coverage of material and other assignments |
|---|---|
| Week #1 (1/13 – 1/17) | Sections 1.1 – 1.3 |
| Week #2 (1/20 – 1/24) | Sections 1.3 – 1.5 |
| Week #3 (1/27 – 1/31) | Sections 2.1 – 2.2 |
| Week #4 (2/3 – 2/7) | Sections 2.3 – 2.4 |
| Week #5 (2/10 – 2/14) | Sections 3.1– 3.2 |
| Week #6 (2/17 – 2/21) | Catch up and review for test. Test 1 on Thursday |
| Week #7 (2/24 – 2/28) | Sections 3.3 – 3.4 |
| Week #8 (3/3 – 3/7) | Sections 4.1 – 4.2 |
| Week #9 (3/10 – 3/14) | Sections 4.2 – 4.3 |
| Week #10 (3/17 – 3/21) | Spring Break – No classes |
| Week #11 (3/24 – 3/28) | Sections 5.1 – 5.3 |
| Week #12 (3/31 – 4/4) | Sections 5.3 – 5.4, Review of Inverse Functions (Appendix A.8) |
| Week #13 (4/7 – 4/11) | Catch up and review for test. Test 2 on Thursday |
| Week #14 (4/14 – 4/18) | Sections 6.1 – 6.2 |
| Week #15 (4/21 – 4/25) | Sections 6.3 – 7.2 |
| Week #16 (4/28 – 5/2) | Sections 7.3 – 7.5, review for the final exam |

**Free Tutoring: Free tutoring will be available in Music Smith Hall Room 115 starting January 21, 2014.**

**Cell Phones: Please turn off cell phones before entering the classroom. This will not be tolerated.**