Math 1316.36820/2S

Plane Trigonometry Syllabus

MATHEMATICS DEPARTMENT

Division of Arts and Sciences

South Plains College

Spring, 2020

Charles E. Tabor

Olton High School Dual Credit

Adjunct Professor

Plane Trigonometry General Course Syllabus

Department: Mathematics and Engineering

Discipline: Mathematics

Course Number: Math 1316

Course Title: Plane Trigonometry

Credit: 3 **Lecture:** 3 **Lab:** 0

This course satisfies a core curriculum requirement: Yes – mathematics

Prerequisites: a grade of C or better in Math 1314 or two units of high school algebra

Available Formats: conventional/ITV

Campuses: Levelland Campus, Reese Campus

Textbook: *Trigonometry*, 10th Edition, Lial, Hornsby, Schneider, and Daniels, Pearson, 2013

Supplies: calculator with trigonometric functions (sin, cos, tan)

Course Specific Instructions: None

Course Description: Topics will include trigonometric functions, radian measure, logarithms, oblique triangles, functions of composite angles, trigonometric identities and equations, and inverse trigonometric functions.

Course Purpose/Rational/Goal: The purpose of this course is to provide a fundamental background in trigonometry, to meet the mathematics requirement for the core curriculum, and to provide a basis for further study in mathematics.

Course Requirements: To maximize the potential to complete this course, a student should attend all class meetings, take notes and participate in class, complete all homework assignments and examinations including final examinations.

Course Evaluation: Please see the instructor's course information sheet for specific items used in evaluating student performance.

Attendance Policy: Whenever absences become excessive and, in the instructor's opinion, minimum course objectives cannot be met due to absences, the student will be withdrawn from the course.

Student Learning Outcomes/Competencies:

Upon successful completion of this course, students will:

1. Compute the values of trigonometric functions for key angles in all quadrants of the unit circle measured in both degrees and radians.
2. Graph trigonometric functions and their transformations.
3. Prove trigonometric identities.
4. Solve trigonometric equations.
5. Solve right and oblique triangles.
6. Use the concepts of trigonometry to solve applications.

Core Objectives:

Communication Skills:
effective development, interpretation, and expression of ideas through written, oral, and visual communication.

- Develop, interpret, and express ideas through written communication
- Develop, interpret, and express ideas through oral communication
- Develop, interpret, and express ideas through visual communication

Critical Thinking:
creative thinking, innovation, inquiry, analysis, evaluation, and synthesis of information.

- Generate and communicate ideas by combining, changing, and reapplying existing information
- Gather and assess information relevant to a question
- Analyze, evaluate, and synthesize information

Empirical and Quantitative Competency Skills:
the manipulation and analysis of numerical data or observable facts resulting in informed conclusions.

- Manipulate and analyze numerical data and arrive at an informed conclusion
- Manipulate and analyze observable observable facts and arrive at an informed conclusion

Instructor Contact Information:

Charles E. Tabor
Olton High School
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Olton, TX 79064
(806) 285-2591 ext. 136
ctabor@oltonisd.org

Course grading procedures, attendance policy, make-up work, and behavior expectations are included on Page 3.
Students with excessive absences (more than 5) may be dropped from this class with a grade of "F" without written or verbal notification. This student will continue to receive high school credit as long as the high school attendance guidelines are followed. A student who has not satisfied high school attendance requirements by the end of the semester will not receive a college grade in this class.
By the end of this course a student will be able to:

1. **Solve and graph trigonometric functions;**
2. **Solve trigonometric equations;**
3. **Identify, develop, and simplify trigonometric functions;**
4. **Apply Law of Sine and Law of Cosine in problem solving;**
5. **Analyze and graph trigonometric functions with transformations;**
6. **Problem solving involving angular and linear velocity, area of triangles, vectors, angles of elevation and depression;**

7. Manipulate, develop, and simplicy functions of 2 angles;
8. Solve equations involving inverse trigonometric functions;
9. Solve and graph problems using Polar Coordinates.

Mr. Tabor's Classroom Guidelines – 2019-2020

Materials Needed for Class DAILY!

1. Folder (DO NOT BRING A SPIRAL IN MY CLASSROOM)
2. Paper, Pen, and Pencils

Classroom Guidelines

1. All students will be prepared for class by the time the tardy bell begins to ring.
2. You will be expected to maintain verbal and physical self-control at all times.
3. You are to treat others with the same respect with which you wish to be treated.
4. You are responsible for your own actions.
5. You are not allowed to leave your seat without my permission.
6. Homework and quizzes will be given 2-7 times weekly.
7. If you are absent, you will be expected to have the missed assignment completed and handed in to me within the day(s) absent +1.
8. If you have an unexcused absence, you will be expected to follow the same guidelines as in No. 7.
9. Dishonesty is not allowed, nor necessary.
10. You will receive a "0" on an assignment you do not hand in.
11. You will receive a "0" for dishonesty on any test, quiz, or assignment.
12. All assigned work will be graded, recorded, and included in your grade average.
13. All South Plains College policies will be followed.
14. Work hard, have fun and be successful!
15. Any absences that exceed 5 for the semester must be made up and agreed to by the teacher according to South Plains rules for attendance.

Classroom Procedures

1. Class will normally begin before the tardy bell rings.
2. Except for testing days, we will check homework and/or have a quiz daily.
3. *EVERY PAPER YOU HAND IN MUST HAVE A CORRECT HEADING.*
4. *All classroom notes need to be taken in black or blue ink.*

EXAMPLE:

Subj.-Period-Type of Assignment (HW,PQ,BW,NOTES) YOUR NAME
Chapt.-Section-Page DATE

How Grades Are Calculated

40% Daily Grades and Participation 60% Tests

You will have at least 2 tests each 3-Week grading period plus a notebook grade, Pop Quiz Average and Homework Average.

THIS SHEET MUST BE KEPT IN YOUR NOTEBOOK ALL YEAR!!!!!! You will need to have your parents sign this second sheet and then return it to me.

I _____ have read, understand, and expect these guidelines to be enforced. Signed:_____Date:_____

Parent's Signature:_____Date:_____

Math 2412.368

College Pre-Calculus Syllabus

Taught at Olton High School

MATHEMATICS DEPARTMENT

Division of Arts and Sciences

South Plains College

Fall 201* – Spring 2020

Charles E. Tabor

Olton High School Dual Credit Adjunct Professor

Instructor: Charles Tabor
Olton High School
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Olton, TX 79064
(806) 285-2691
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Course Grading Procedures, Attendance Policy, Make-Up Work, and Behavior expectations are attached on a separate sheet of paper. Olton students will enroll for this dual credit class in January, 2019. This class is taught as a college credit class the entire school year.

By the end of this course a student should be able to (if passing this course):

1. **Solve and graph problems involving linear, quadratic, exponential, and logarithmic functions;**
2. **Solve and graph linear, quadratic, and rational inequalities;**
3. **Identify and simplify complex numbers;**
4. **Combine, calculate, and identify inverse functions;**
5. **Analyze and graph polynomial functions;**
6. **Analyze and graph rational functions;**
7. **Create and solve systems of equations;**
8. **Apply the Binomial Expansion Theorem to expand binomials of higher degree;**
9. **Apply the Rational Zero Theorem;**
10. **Solve and graph the Conic Sections, including circles, parabolas, hyperbolas, and ellipses;**

11. Solve and identify in relation to derivatives the Difference Quotient;
12. Take the derivative of functions using the definition of derivative in limit form and shortcut form;
13. Find equations of normal and tangent lines;
14. Introduce the uses of derivatives in real world settings.

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