Math 112 Churchill High School and Lane Community College Winter Trimester 2018-2019

Trigonometry

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Office Hours: 7:45-8:30 Tuesdays and Fridays
LCC CRN: 33268

Prerequisites:
Precalculus A or equivalent course(s) with grade "C–" or better.

Course Description:
Trigonometry has wide applications in the world around us. It is a vital tool in construction, physics, and engineering. Trigonometry is preparatory for Calculus 1 (Differential Calculus, MTH 251). The major topics covered include radian measure, circular functions and their graphs, right triangle ratios and related trigonometric functions, identities, solving trigonometric equations, law of sines, law of cosines, and applications. Other topics include polar coordinates, parametric equations, vectors, and conic sections. A graphing calculator is required. See current calculator recommendation chart.

Course Objectives:
In order to successfully complete this course, the student should have demonstrated the ability to:
1. Use geometry, algebra, and graphing calculator skills from previous courses;
2. Move easily between degree and radian measure;
3. Identify and use the six trigonometric functions in right triangle applications;
4. Identify, apply, and interpret features of the equations and graphs of the six circular functions;
5. Recall and apply the basic trigonometric identities;
6. Use the sum, difference, double-angle, and half-angle identities;
7. Identify features of and use the three major inverse trigonometric functions;
8. Solve trigonometric equations analytically and with graphing technology;
9. Apply the Law of Sines and Law of Cosines where appropriate;
10. Use polar coordinates and polar equations and transform them to rectangular form and back.
11. Use complex numbers in standard form and in polar form (optional topic–time permitting);
12. Solve problems using vector notation;
13. Use parametric equations;
14. Work with the definitions, equations, and graphs of conic sections;
15. Apply geometric and trigonometric relationships to appropriate multi-step problems;
16. Use a graphing calculator to graph equations and explore concepts for equations in rectangular, parametric, or polar form.

Required Materials:
a. Required Text: *Precalculus: Enhanced with Graphing Utilities*, 3rd edition, by Sullivan & Sullivan
b. A programmable graphing calculator: TI 83 Plus or TI 84 Plus is recommended. TI 83s will work.
c. Graph paper, ruler.

Class Format
Most classes will begin with a warmup. These warmups are for your own benefit. They will be the types of questions you'll see on quizzes or tests. During warmup time, attendance will be taken. After the warmup, we will go over homework questions, then proceed to new material. There will be quizzes or in-class assignments on some days instead of new material.

Classwork
Classwork is an extremely important part of your learning. Math is a very interactive discipline where practice is vital to your understanding. After most lessons you will have an in-class assignment. These will be checked or turned in by the end of class for a score on that assignment. When time is given in class to work on class work or homework you are expected to be working on it. This means you will be working on Calculus and no other subject. Since my class is Calculus you will lose credit for the assignment given if you are working on another subject's work or not working at all. Throughout the course of the trimester we'll have approximately 40 of these assignments. If you have an excused absence you will be excused from the assignment. However, you can still do them. These assignments will be posted on my blog. If you decide to do the assignment please show me at the beginning of class on the day you return.

Homework
Every once in awhile you will have a homework assignment that will be for extra credit. The points will be added to your test scores. These problems are more thought provoking and difficult. They will be due on test day for the chapter we're working on.

Tests and Quizzes
On the last day of every week we will have either a test or a quiz. You will be allowed to use notes on most of the quizzes but not on the tests.

Late Work
No late classwork or homework is accepted. Classwork is due at the end of class and homework at the end of the week. If you miss a quiz or test, you have one week from your return to make it up.

Grading
You will be assigned a letter grade on your transcript based on the following breakdown: 60% of your grade will be based on tests, 20% on quizzes, and 20% on homework and other assignments. You may choose to take this class as a Pass/No Pass grade. You must let me know by midterm grades if you would like this option.

Attendance Policy
I am required to submit attendance online within the first ten minutes of class. If you come to class after the ten minutes are up, you will be required to go to the front office to get an admit slip.

Electronics Policy
Cell phones and ipods are a distraction to your learning. If I see them out during class, I will give you a choice to give them to me for the period or to leave for the class.

Getting Help
1. Come to office hours.
2. Consult with classmates and form study groups – math doesn't have to be a solitary struggle.
3. Get help from a free or paid tutor.
4. Consult your lesson notes which will be posted to remind.com and are also available via email by request.

Si necesita más información en Español sobre esta clase, por favor comuníquese con María Ladona al 541-790-5151 o por correo electrónico schaad_ma@4j.lane.edu.