Syllabus for: Math 25 College Trigonometry	
Semester & Year:	Spring 2014
Course ID and Section Number:	MATH 25 M5584 (035584)
Number of Credits/Units:	4
Day/Time: **Location:**	M,W 6:00p.m. – 8:05 p.m. Room 114
Instructor's Name:	Richard Ries
Contact Information:	Office location and hours: Room 105F Monday 2:50p.m. – 4:30p.m. Wednesday 2:45p.m. – 4:30p.m. Thursday 2:50p.m. – 5:05p.m. Friday 2:45p.m. -3:45p.m. Or by appointment Phone: 707-962-2681 Email: richard-ries@redwoods.edu

Course Description (catalog description as described in course outline): At College of the Redwoods, Math 25 is the course number for our College Trigonometry course. College Trigonometry is a transfer-level math course needed for preparation for the calculus series (Math 50A-B-C). Math 30 (College Algebra) and Math 25 together constitute what is often referred to as "Precalculus". Most students take Math 30 before Math 25, but these two courses may be taken in either order or at the same time.

Prerequisites: Grade of C or better in Math 120 (Intermediate Algebra) or equivalent, or an appropriate score on the **math placement exam.**

Course Description: A study of trigonometric functions, radian measure, solution of right triangles, graphs of the trigonometric functions, inverse trigonometric functions, trigonometric identities and equations, laws of sines and cosines, solution of oblique triangles, polar coordinates, complex numbers in trigonometric form, De Moivre's theorem, and conic sections.

Student Learning Outcomes (as described in course outline):

1. Analyze and solve problems involving trigonometric functions or analytic

geometry. 2. Apply the mathematics of trigonometric functions and analytic geometry to real-world problems and applications. 3. Use graphing technology to visualize trigonometric and polar curves, explore mathematical concepts, and verify results. 4. Write solutions to mathematical exercises in trigonometry and analytic geometry using sound
Special accommodations: College of the Redwoods complies with the Americans with Disabilities Act in making reasonable accommodations for qualified students with disabilities. Please present your written accommodation request at least one week before the first test so that necessary arrangements can be made. No last-minute arrangements or post-test adjustments will be made. If you have a disability or believe you might benefit from disability related services and may need accommodations, please see me or contact Disabled Students Programs and Services. Students may make requests for alternative media by contacting DSPS.
Academic Misconduct: Cheating, plagiarism, collusion, abuse of resource materials, computer misuse, fabrication or falsification, multiple submissions, complicity in academic misconduct, and/ or bearing false witness will not be tolerated. Violations will be dealt with according to the procedures and sanctions proscribed by the College of the Redwoods. Students caught plagiarizing or cheating on exams will receive an "F" in the course. The student code of conduct is available on the College of the Redwoods website at: http://www.redwoods.edu/District/Board/New/Chapter5/AP%205500%20Conduct%20Code%20final%2002-07-2012.pdf
College of the Redwoods is committed to equal opportunity in employment, admission to the college, and in the conduct of all of its programs and activities.

ATTENDANCE: Mathematics Department Policy Regarding "Faculty Withdrawal" of Students after Census Day: A student who is absent from class for the amount of time equal to two weeks of classes, will be withdrawn from the course, unless there are extenuating circumstances that are communicated to the instructor in a timely manner. This "faculty withdrawal" can occur between Week 4 and Week 10 of the semester.

Textbooks

Algebra and Trigonometry (7th edition), by Sullivan, published by Prentice Hall (ISBN #0131430734)

Or

Algebra and Trigonometry (8th edition), by Sullivan, published by Prentice Hall (ISBN #0132329034)
Either edition is satisfactory

Prerequisite Classes

Grade of C or better in Math 120 (Intermediate Algebra) or equivalent, or an appropriate score on the **math placement exam.**

Instructor Philosophy: The focus of learning is the student's analysis of experiences. Skill is required to combine first hand experiences, dialogue, thoughtful analysis and interpretation to give meaning and application of these experiences to life. Learning as an adult is an expansion of one's knowledge (facts and ideas), thinking (ability to assess) and behaviors (skills). Successful learning requires the cooperative efforts of both teachers and students. I am here to provide resources and facilitate the pursuit of your education. Studies have shown that the most successful students are those who ask questions and participate in discussions. I look forward to working with a class who, as adults, understand that the acquisition of knowledge is a matter of personal responsibility that requires active participation.

Goals of This Course: The goal of this course is to help you to become proficient in trigonometry and prepare you for other future math classes, if your major requires it. Many mistakes that cost students dearly in terms of their grades in more advanced courses are trigonometric mistakes. Since mathematics is a subject that builds upon itself, a strong foundation in trigonometry is essential for the rest of your math education. The best way to master any math topic is to practice by doing problems. The more you practice, the better you will become. Other successful learning strategies include forming study groups and outlining reading materials. If you are having difficulty with any topic, please come see me early to get you back on track as soon as possible. You can either see me during my office hours, or make an appointment by email at Richard-Ries@redwoods.edu. Catching me after class is best. With the right attitude, math can be fun^2!

Attendance: It is imperative and vital to your academic success that you attend all classes. Attendance will be monitored through pop quizzes that will be given during class. Prompt arrival and remaining throughout the entire class is required. Tardiness will be counted as an absence. You are allowed 3 absences before you are dropped from the class, so save your absences for emergencies

Student Responsibilities: You are expected to come to class prepared by having read the assigned chapters and handouts, and completed all prior assignments. Proper adult behavior is expected at all times. The instructor reserves the right to dismiss a student from class permanently for disruptive behavior. Disruptive behavior is any behavior that distracts the instructor or other students. The instructor has an obligation to promote the learning of the students of the class and anyone who is disrupting the learning process will be dropped for lack of academic effort. A lack of academic effort also includes, but is not limited to the following: missing or failing assignments, excessive absences, arriving late to class, exiting class before its termination, cheating, plagiarism or other disruptive behaviors. Also, please have your cellular phones off while in class and do not bring food or drink to class.

Homework: Homework will be assigned daily and is due the following class session. For each section that is covered, you will be expected to complete every other odd exercise (and sometimes the odd exercises) at the end of each section we lecture on in your book as well as the hand out assignments that will be distributed after the completion of each section. There will be 20 homework assignments worth a total of 5 points each. Points will be awarded based on two criteria: 3 points will be awarded for the student's attempt to complete the assignment and 1 point for each correct answer of 2 problems selected for grading from each assignment. So, 100 points, or 10% of your class grade, will come from homework.

Quizzes and Group work: There will 10 scheduled quizzes in accordance to the dates posted and an additional 10 Pop quizzes or group activities that will be given at random and unannounced. Quizzes will be generated from the previous two homework assignments. The questions that appear on quizzes will be similar in nature to your homework. During group work, you will be asked to work cooperatively with two, or three, of your classmates to solve a problem that I will assign to you. Your group will then present the solution and explain how your group solved the problem to the rest of the class. Grades from quizzes and group work are worth 5 points each for a total of 100 points, or 10% of your class grade.

Tests: There will be 4 midterm tests and a final in this class. See the attached handout for the dates. Please remember that **only under extreme emergency will I give a make up exam**. Documentation must be provided (e.g. police report, proof of hospitalization, etc.). Calculators are not allowed on any of the exams. Cheating is a very serious offence and anyone caught cheating will receive a grade of "F" for the course, and will be reported to the committee of academic honesty. I expect all problems to be worked out completely and legibly. Please also note that the final is cumulative. Each Midterm exam will be graded out of 150 points and will count for 15% of your class grade. The final will be worth 200 points and will count as 20% of your class grade. **Note: in order to pass this class you must successfully complete the final examination.**

Grade Breakdown:			Grade Record				
Homework	10%	100 pts.	____	____	____	____	____
			____	____	____	____	____
			____	____	____	____	____
			____	____	____	____	____(5 each)
Quizzes/Class projects	10%	100 pts.	____	____	____	____	____
			____	____	____	____	____
			____	____	____	____	____
			____	____	____	____	____(5 each)
Midterm 1	15%	150 pts.	____				
Midterm 2	15%	150 pts.	____				
Midterm 3	15%	150 pts.	____				
Midterm 4	15%	150 pts.	____				
Final Exam	20%	200 pts.	____				
Total	100%	1000 pts.				Total _____	

If you need your course grade as soon as possible, please e-mail me at Richard-Ries@redwoods.edu.

Attendance: I reserve the right to drop from the course any student that has more than three unexcused absences. Reference: Title 5, Sections 55024 and 58004. Approved: 05/01/2012

******* I expect you to attend every class meeting on time and ready to learn. ********

GRADE SYSTEM: Your final grade will be determined as follows

I will be using the plus/minus grade system. The break down is as follows:

A 930-1000	B 830-869	C 700-769
A- 900-929	B- 800-829	D 600-699
B+ 870-899	C+ 770-799	F 0-599

Or in terms of percent's, the break down is as follows:

A 93-100%	B 83-86.9%	C 70-76.9%
B- 90-92.9%	B- 80-82.9%	D 60-69.9%
B+ 87-89.9%	C+ 77-79.9%	F 0-59.9%

This information is subject to change depending on class circumstances.

MATH 25 Weekly Schedules
NOTE: This schedule is approximate and may be modified as the semester progresses.

Week	Topics
1 1/20 holiday 1/22	Section 7.1 Angles and Their Measure Goal: define the fundamental properties of an angle and how to measure them Section 7.2 Right Triangle Trigonometry Goal: to define basic trigonometric operations in terms of right triangles Section 7.3 Computing the values of Trigonometric Functions of Acute Angles Goal: use trigonometry to investigate acute angles Section 7.4 Trigonometric Functions of General Angles Goal: to define trigonometric operations in terms of central angles of a circle
2 1/27 1/29	Section 7.5 Unit Circle Approach; Properties of the trigonometric Functions Goal: to define trigonometric functions in terms of points on the unit circle and understand some of the basic properties of trig functions Section 7.6 Graphs of Sin and Cosine Functions Goal: To be able to understand visual approaches of trigonometric functions Section 7.7 Graphs of the Tangent, Cotangent, and Cosecant, and Secant Functions Goal: to understand trig functions in terms of a visual approach Section 7.8 Phase shift; sinusoidal Cure Fitting Goal: to understand how perturbations in the independent variable of trig functions affect the graph of the function

	3	Review for chapter 7, Exam 1
2/3 2/5		Section 8.1 The inverse Sin, Cosine, and Tangent Functions Goal: to understand trig inverse functions Section 8.2 The Inverse Trigonometric Functions Goal: to further investigate the nature of inverse trig functions.
	4	Exam 1
2/10 2/12		Section 8.3 Trigonometric Identities Goal: to prove trigonometric Identities Section 8.4 Sum and Difference Formulas Goal: To derive and use trigonometric sum and difference formulas Section 8.5 double angle formulas Goal to derive and use double angle formulas
	5	Section 8.6 Product-to-Sum and Sum-to-Product Formulas
2/17 holiday 2/19		Goal: to derive and use product to sum and sum to product formulas Section 8.7 Trigonometric Equations (I) Goal: to solve trigonometric equations Section 8.8 Trigonometric Equations (II) Goal: to solve more advanced trigonometric equations Review for chapter 8 exam, Exam 2
	6	Exam 2
2/24 2/26		Section 9.1 Applications Involving Right Triangles Goal: to solve real world problems using trigonometry Section 9.2 The Law of Sins Goal to derive and apply the law of sins

		SECTION 9.3 THE LAW OF COSINES Goal: to derive and thrive with the law of cosines
3/3 3/5	7	Section 9.4 Area of a Triangle Goal: to calculate the area of a triangle given various types of information Section 9.5 Simple Harmonic Motion; Damped Motion; Combining Waves Goal: to understand physical applications of trigonometry
3/10 3/12	8	Review For Exam 3 Section 10.1 Polar Coordinates Goal: to understand the polar coordinate system Chapter 9 exam, Exam 3
10/21 10/23	9	Section 10.2 Polar Equations and Graphs Goal: to be able to relate polar equations to pictures in the polar coordinate system Section 10.3 The Complex Plane; DeMoivre's Theorem Goal: To understand the relationship between trigonometry and complex numbers

Week		Topics
3/17 spring break no school 3/19 spring break no school 3/24 3/26	10	Section 10.4 Vectors Goal: To understand the notion of a vector and its connection to trigonometry and complex numbers Section 10.5 The Dot Product Goal: to understand how to take two vectors and transform them into a number via the operation we call the dot product
3/31 4/2	11	Section 11.1 Conics

		Goal: to understand the basic aspects of the family of curves know as the conic sections or conics Section 11.2 The Parabola Goal: to understand the properties of the parabola
4/7 4/9	12	Section 11.3 The Ellipse Goal: to understand the properties of the Ellipse Section 11.4 The Hyperbola Goal: to understand the properties of the Hyperbola
4/14 4/16	13	Section 11.5 Rotation of Axes; General form of a conic Goal: To understand rotational perturbations in conics Section 11.6 Polar Equations of Conics Goal: To give polar representations of Conics Section 11.7 Plane Curves and parametric equations Goal: To describe curves using parametric equations
4/21 4/23	14	Review for chapter 10, 11 exam, Exam 4 Chapter 10, 11 exam , Exam 4
5/5 5/7	15	Review for final exam
5/12	16	Final Exam

Homework assignments: TBA