MATH 4A, TRIGONOMETRY (prerequisites are Math 102 or equivalent <u>and</u> Math 103 or equivalent), REEDLEY COLLEGE, MR. PAUL KRYDER (instructor) *[no formal office at RC, home phone is 637-0051, email is paul.kryder@reedleycollege.edu]*

Welcome to Math 4A. The <u>objective</u> of this course is for you to learn the fundamental concepts and techniques of trigonometry, including (but not necessarily limited to) the six trig functions, right triangle trig, radian measure, graphing and inverse trig functions, identities and formulas, equations, triangles, complex numbers and polar coordinates, and meaningful applications of much of the above.

<u>SPRING 2014 SPECIFIC INFORMATION</u>: The class (52935) meets Tu/Th 6 – 7:50 pm (with 10-minute break) in CCI-200 [<u>final exam is 05-22 (Th), regular class time</u>, and we will hold a review for the final exam on 05-20 (Tu), regular class time, My Math Lab Course ID is kryder71565], *When registering for Course Compass, please be SURE that your name appears EXACTLY the way it does in the RC records—NO nicknames please !!!*

<u>Learning Outcomes</u>: Upon successful completion of this course, the student shall be able to (1) calculate all 6 trig function values for an unknown angle, knowing the coordinates of a point on its terminal side, (2) calculate all 6 trig function values for known angles, given in either degrees or radians, (3) calculate values of the trig functions of an angle, given the value of one trig function of that angle and the quadrant of the angle, by either the definition method or the identities method, (4) find all angles in the first principal rotation (in either degrees or radians) which have a given trig function value, (5) do algebraic manipulations and identity proofs, using basic trig identities, (6) solve right triangles by using right triangle trig, (7) convert between radians and degrees, (8) find arc length and sector area, (9) calculate linear and angular velocity and understand the relationship between these quantities, (10) graph trig functions on the coordinate plane, including those with horizontal and/or vertical shifts and/or stretch/squashes, and/or vertical flips, (11) become familiar with and use the sum and difference, double-angle, and half-angle trig identities, (12) solve trig equations, including those requiring use of trig identities and those with multiple angles, (13) solve triangles by using the Law Of Sines and the Law Of Cosines, (14) understand and use vectors, (15) convert between rectangular and trigonometric form of a complex number, (16) do products and quotients of complex numbers in trig form, (17) raise a complex number in trig form to an integer power by using DeMoivre's Theorem, (18) find the roots of a complex number in trig form by using the Root Theorem, and (19) do meaningful applications of much of the above.

<u>Students with disabilities</u> should see me privately for all special arrangements.

<u>My "office" time</u>: I have no formal office at RC since I am not a full-time instructor at RC, but I will be willing to stay after class for any student who needs extra help or has questions of me, on any class day.

<u>Textbook</u> (not essential to bring to class): *Trigonometry*, by Lial, Hornsby, and Schneider, 10th edition. We will cover the chapters generally in order. [Unit 1 = chapter 1, unit 2 = chapter 2 (except 2.5), unit 3 = chapter 3, unit 4 = chapter 4 (except 4.5) plus 6.1, unit 5 = chapter 5 plus 6.2 and 6.3, unit 6 = chapters 7 and 8 (except 8.5 and 8.6; perhaps more will be omitted from unit 6 if time is short)]. There is an optional <u>solution manual</u> to the textbook.

<u>Other required materials</u>:   To all classes, please bring sufficient paper for note-taking, a writing instrument, a scientific or graphing calculator (the TI 30X-IIS is the calculator of choice), graph paper, and a ruler. *(If you use a mechanical pencil, please bring plenty of <u>extra</u> <u>leads</u>.)* PLEASE <u>BE SELF-SUFFICIENT</u>—IT IS INCREDIBLY ANNOYING AND DISTRACTIVE WHEN STUDENTS COME TO CLASS WITHOUT PROPER MATERIALS, AND THEN HAVE TO "BUM" FOR THEM FROM ME OR FROM OTHER STUDENTS!! BE <u>RESPONSIBLE</u> AND COME TO CLASS <u>PREPARED</u>.

<u>Exams, quizzes</u>:   Exams will be announced at least 1 week in advance. 6 unit exams plus 1 comprehensive final exam planned, with the final exam score recorded twice as 2 identical scores.   Each exam score is a maximum 100 points.   1 new large blue book required for each exam—purchase in bookstore for a few cents. Quizzes will typically be short and unannounced ahead of time, and will be used to "enhance" exam scores. *(I will no longer accept frayed-edge paper for quizzes, so be sure to bring at least a few sheets of 8.5" by 11" paper with smooth edges to each class to do your quizzes on.)*   NO makeup quizzes EVER given.

<u>Textbook homework and homework policies</u> are given in the homework list; homework points will also be used to "enhance" exam scores. Homework for each unit is due on the day you take the exam for that unit and will NOT be accepted late for ANY reason.

<u>Online Homework</u>: On line homework is optional via My Math Lab. You may do either the online homework or the textbook homework or both; all are bonus points and it IS possible to get more points by doing both than by doing just one or the other. To register for My Math Lab, go to www.mymathlab.com and register using the course ID (listed near the top of the 1st page of this syllabus) for the section of Math 4A that you are enrolled in AND using the access code that comes with your textbook or which you purchased in a My Math Lab Access Code Kit (or if you prefer, you may buy an access code online with a credit card). The advantage of online homework is that it is interactive and gives you instant feedback.

<u>Early/Late Exams</u>: Exams may NOT be taken early; the first time you miss an exam it must be your drop exam unless the miss is due to (1) a RC conflict, (2) military service, or (3) jury duty. *(In any of these cases written documentation must be provided to enable you to take a makeup exam on the first missed exam.)* On the 2nd missed exam and thereafter you may take a makeup exam with a reasonable excuse subject to verification at my discretion. <u>PLEASE</u> TRY TO AVOID MISSING EXAMS—MAKEUP EXAMS ARE A <u>NUISANCE</u> AND <u>INCREDIBLY</u> TAXING ON ME!!

<u>Cheating</u> on any exam or quiz will NOT be tolerated and will be dealt with according to the RC policy on cheating and plagiarism—see the RC catalog for details.

<u>Semester grades</u>:   Semester grading scale is as follows: F < 60% $\leq$ D < 68% $\leq$ C < 80% $\leq$ B < 91% $\leq$ A. Your total number of points from all exams, except your lowest single exam score, will be calculated and compared to this scale to determine semester grade. *Once the semester is over, NO additional work may be done to raise your grade.*

Incompletes: Given only for the most extreme, serious, and unexpected (and well-documented) circumstances (e.g. automobile accident, serious illness, death in the immediate family) and will NOT be used merely to "bail you out" of getting a bad grade. Everything you have done up to the point of your leaving the class must count and may NOT be repeated.

Outside help: Available free of charge on a drop-in basis from RC instructors in the STEM Center (FEM-1), and from qualified student tutors in the RC Tutorial Center (in the library building). Please contact those centers for their hours.

Expected: That you attend ALL classes ON TIME, with PROPER MATERIALS, and READY TO LEARN and BE ON-TASK. Also that you DO YOUR HOMEWORK ON TIME, and PROPERLY PREPARE FOR ALL EXAMS. Finally, that you GET OUTSIDE HELP IN A TIMELY MANNER IF YOU NEED IT.

Not allowed in class, ever: Rude or distractive behavior, abuse of others' property, babies or very young children, the use of cell phones or pagers or any kind of earphone device (e.g. MP3 players), or use of ANY kind of tobacco product (RC rule).

Blackboard use: Important announcements, documents to print (e.g. practice exams assignment sheets), and student grades (to access grades, first click on "tools") will be posted for this course on Blackboard (BB), which is easily accessible for any enrolled RC student with a student ID # and internet access (go to www.reedleycollege.edu, then click on Blackboard, then proceed; use your student ID # as both your username and your password). *(If you do not have a computer and/or a printer at home, that is no problem—numerous computer labs with internet access and printers exist on campus for your use; for example, in the library, in room FEM-4E, and others.)* Please check the class BB site often for new announcements and documents.

RC Spring 2014 Academic Calendar *(not specific to this class, but required to be on syllabi)*

November 4 (M) Spring 2014 registration begins for continuing students
November 11 (M) Veterans Day holiday (no classes held, campus open)
November 20 (W) Spring 2014 registration begins for new, fi rst-time students (day 1)
November 21 (Th) Spring 2014 registration begins for Transfer, Former students (day 2)
November 28-29 (Th-F) Thanksgiving Day Holiday (no classes held, campus closed)
December 9-13 (M-F) Fall 2013 fi nal exams week
January 2 (Th) Campus re-opens after Winter Break
January 13 (M) Spring 2014 instruction begins
January 13 - March 14 (M-F) Spring 2014 short-term classes, fi rst nine weeks
January 20 (M) Martin Luther King, Jr. Day observed (no classes held, campus closed)
January 24 (F) Last day to request an Enrollment Fee Refund
January 31 (F) Last day to add a full-term class for Spring 2014
January 31 (F) Last day to drop a full-term class to avoid a "W" (in person) for Spring 2014
January 31 (F) Last day to drop a full-term class to avoid a "W" (on WebAdvisor) for Spring 2014
February 13 (Th) Last day to change a class to/from a Pass/No-Pass grading basis
February 14 (F) Lincoln Day observed (no classes held, campus closed)
February 17 (M) Washington Day observed (no classes held, campus closed)
March 14 (F) Last day to drop a full-term class (in person) (letter grades assigned after this date)
March 17 - May 23 (M-F) Spring 2014 short-term classes, second nine weeks
March 20-31 (Th-M) Summer/Fall 2014 registration begins for continuing students (all locations by date)
April 14-17 (M-Th) Spring Recess (no classes, campus open, classes reconvene April 21)
April 18 (F) Spring Holiday observed (no classes, campus closed, classes reconvene April 21)
May 19-23 (M-F) Spring 2014 fi nal exams week
May 23 (F) End of spring semester/commencement