Math 1613.008: Trigonometry
Spring 2012
TR 2:00-3:15 ES 214A

Instructor: Ben Wescoatt	**Telephone:** (405) 744-2307
Office: Math Sciences 432	**Email:** wescoatt@math.okstate.edu
Office Hours: TR 12:30-2:00 (or appointment)	**D2L Website:** oc.okstate.edu

University Catalog Description: Prerequisite(s): 1513 or equivalent, or concurrent enrollment. Trigonometric functions, logarithms, solution of triangles and applications to physical sciences. *No credit for those with prior credit in 1715 or any course for which 1613 is a prerequisite.*

Purpose: We will investigate the applications of triangles and circles to topics in mathematics. Additionally, we will explore trigonometry as a basis for advanced mathematics.

Prerequisites: You should be fully comfortable with algebra and geometry as these subject form the basis for trigonometry.

Some Initial Comments: Together with Math 1513, this course serves as a prerequisite to Math 2144 (Calculus I). To prepare adequately for calculus, you will need to actively participate in your learning and take full ownership of your understanding. Do not be a passive sponge!

Required Book: The book we will use is *Analytic Trigonometry with Applications*, *10th edition* by Barnett, Ziegler, Byleen, and Sobecki.

Course Evaluation: Your understanding in the course will be assessed using the following instruments; the weights of each instrument toward the course are also listed.

Quizzes	21%
Exam 1	18%
Exam 2	18%
Exam 3	18%
Final Exam	25%
Attendance Bonus	Up to 5%

Course Grade: A total score of at least 90% ensures an **A**, a score of at least 80% ensures a **B**, a score of at least 70% ensures at least a **C**, and a score of at least 60% ensures at least a **D**. An **F** may be assigned for a total score below 60%.

Preliminary Exams: The dates of each preliminary exam are listed on the course schedule along with the chapter from the text that each exam covers.

Final Exam: The final exam will be comprehensive. It is a common final exam across all Math 1613 sections and will be given **Tuesday, May 1** from **12:00-1:50**. Our final exam will be held in **PS 101**, and we will take it with section 9.

Quizzes: There will be eleven quizzes, some in-class and some as take-home. The dates for each quiz are listed on the course schedule. These are the subjects for each quiz.

Quiz 1	Algebra and Geometry review
Quiz 2	1.3: Trigonometric Ratios and Right Triangles
Quiz 3	1.4: Right Triangle Applications
Quiz 4	2.3: Trigonometric Functions
Quiz 5	3.2: Graphing Sine and Cosine
Quiz 6	3.3: Graphing Sine and Cosine
Quiz 7	4.2: Verifying Trigonometric Identities
Quiz 8	4.3: Sum, Difference, and Cofunction Identities
Quiz 9	5.1: Inverse Sine, Cosine, and Tangent Functions
Quiz 10	5.3: Trigonometric Equations
Quiz 11	6.1 & 6.2: Law of Sines & Law of Cosines

Each quiz will be weighted equally. Your overall quiz score will be based on the eight highest individual quiz scores.

Attendance: To be blunt, you must ***come to class*** to have a ***successful experience*** in learning trigonometry. If you skip class, you are missing out on a valuable learning experience; additionally everyone else in the class loses the valuable contributions you would make for our learning and understanding.

I will begin taking attendance on Thursday, January 10 and will stop taking attendance on Thursday, April 26. If you miss no more than two class periods, you will receive a 5% attendance bonus to your overall course score. For every absence beyond the second absence, I will decrease your attendance bonus by 1.5%. If you have 6 or more absences, your attendance bonus will be 0%.

To be counted present for the class period, you must arrive on time and be present for the ***entire*** class period. Also, you must arrive with all pertinent materials for the day completed and be actively engaged in the learning process. I have the final decision in determining whether you have been present for the class period. If you sleep, text, take a phone call, surf the internet, etc. during class, I will consider you absent for the class period; I will probably ask you to leave the classroom for these disrespectful actions.

Calculators: You will need at least a scientific calculator for the course. If you have questions about your calculator, feel free to show it to me. You may check out a graphing calculator from the Mathematics Department, but I will not allow its use on exams. Additionally, I will not allow the use of calculator-like devices such as smart phones and tablets during exams.

Other Technology: I will not permit the use of technology beyond a graphing calculator during a class period. This means you must turn off all phones, tablets, and laptops and store them away prior to entering the classroom. Please speak with me if you feel this policy handicaps your learning.

Homework: Working and struggling with concepts is a ***very*** important activity. I expect you to struggle at times. This means significant knowledge is being built. I will assign work for you to do on your own time to help you better understand the course topics. You must complete the work and submit it on the due dates to be counted present for the class period. I will assess your work and provide feedback. You should attempt to understand all concepts within the assigned problems. Please take these opportunities to learn seriously.

Excused Absences: I will be following departmental guidelines regarding absences and make-up work. Here are the guidelines.

      (A) A student shall be offered reasonable accommodation in the event that he or she misses a major assessment activity for a valid and documented reason.

      (B) Appropriate documentation shall be provided by the student in a timely fashion to support his or her request for accommodation.

      (C) Major assessment activities are those such that a zero on that activity could reasonably be foreseen to impact the student's grade substantially; this category includes, but is not limited to, exams.

      (D) Valid reasons include official University activities, activities associated with military service, illness, family emergencies, mandatory court appearances, and any other events of comparable gravity.

      (E) Reasonable accommodation means that the student will be given the opportunity to earn a grade on the assessment activity that is based on criteria as similar as possible to those used to grade his or her classmates. This opportunity should normally be made available in a timely fashion.

I will excuse your presence for a quiz or exam for only serious and/or unavoidable circumstances for which you can provide reasonable documentation to me. Also, as much as it is practicable, you should notify me in advance of the missed class period and work. For an example, a routine doctor's appointment usually is ***not*** a valid reason to miss class as you can schedule the appointment around our class; our class times are set in stone, while appointments are flexible.

Daily Routine: On a normal day, approximately 10 minutes at the beginning of each class will be allotted for answering questions about the previous days' material. The remainder of the class period will be used for new material and/or quizzes. You should come to class each day **having *read the appropriate material in the book*** and having reviewed your notes from the previous class periods. You should bring your notes and your books to each class period.

Mathematics Learning Resource Center (MLRC): The MLRC is a free tutoring service provided by the Mathematics Department. Located on the 4th floor of the Classroom Building, the MLRC is a useful place to receive spot tutoring. To best use the MLRC, you should have honestly attempted the problems before asking the MLRC tutors for help. You should not ask tutors to "teach" topics to you or to work out entire problems. This is counterproductive and interferes with proper, active learning. For more information about the MLRC and for operating hours, visit the MLRC website: http://www.math.okstate.edu/mlrc.

Office Hours: Coming to instructor office hours is another great way to utilize resources. During office hours, you will receive more one-on-one interaction with me. You should come prepared, though. Prior to coming to receive help during office hours, you should actively think about a solution to the problem and propose this solution to me. Do not expect to receive a "re-teaching" of topics or have entire problems worked out. Again, this interferes with proper, active learning.

Academic Integrity: The University has explicit rules governing academic integrity. Please consult the OSU Spring 2012 Syllabus Attachment mentioned below on the web. Working with

another person can be helpful in learning the material. However, all written work submitted must be your own. Copying someone else's problem solution or showing your written work to someone else is prohibited. Such behaviors are regarded as violations of academic integrity and will be treated according to the University's policy. In order to be successful in learning the material and doing well on examinations, you must think very hard about the problems *before* discussing them with anyone else. Having someone else show how to work the entire problem is totally counterproductive and will not lead to lasting or deep understanding of the underlying concepts within the problem.

Special Accommodations for Students: (015 University Health Services) – According to the Americans with Disabilities Act, each student with a disability is responsible for notifying the University of his/her disability and requesting accommodations. If you think you have a qualified disability and need classroom accommodations, contact the Office of Student Disability Services. Please advise the instructor of your disability as soon as possible to ensure timely implementation of appropriate accommodations. Faculty have an obligation to respond when they receive official notice of a disability but are under no obligation to provide retroactive accommodations. To receive services, you must submit appropriate documentation and complete an intake process during which the existence of a qualified disability is verified and reasonable accommodations are identified. Call 405-744-7116 or go to http://sds.okstate.edu/. (OSU Spring 2012 Syllabus Attachment).

Drop and Withdrawal Policy: "Dropping" means you are withdrawing from a specific course, but you are still enrolled in at least one other OSU course; the last day to drop a course with an automatic grade of **W** is April 6, 2012. "Withdrawal" means you are dropping all courses, and you are no longer enrolled for the current semester; the last day to withdraw completely from OSU classes with an assigned grade of **W** or **F** is April 20, 2012. Additional information about "dropping" and "withdrawing" is available on the Spring 2012 Syllabus Attachment. **IT IS YOUR RESPONSIBILITY TO KNOW AND COMPLY WITH ALL DEADLINES.**

Incomplete Grade: The grade of **I** is given to a student who satisfactorily completed the majority of the course work and whose work averages **D** or better, but who has been *unavoidably* prevented from completing the remaining work of the course.

Additional Information: Please consult the OSU Spring 2012 Syllabus Attachment for further guidance on important issues. A copy of the syllabus attachment can be found at: http://academicaffairs.okstate.edu/images/documents/sylatspr.pdf.

Final Note: Remember that you control your learning. I am here to assist and facilitate, but I can't make you or cause you to learn anything. I don't believe in the old philosophies of learning, that students are empty vessels to be filled with information by the instructors. I believe that for the most part, you actively construct your own knowledge from what you already know and based upon what you encounter. I will treat you accordingly and expect you to be an active participant this semester.

Trigonometry – Spring Semester 2012

	Tuesday	Thursday
Week 1	**1/10** Introductions 1.1 & 1.2	**1/12** Quiz 1 due (on D2L) In-class diagnostic 1.2
Week 2	**1/17** 1.3 & 1.4	**1/19** Quiz 2 1.4
Week 3	**1/24** 2.1 & 2.3	**1/26** Quiz 3 2.3
Week 4	**1/31** 2.5	**2/2** Quiz 4 2.5 Review for Exam 1
Week 5	**2/7** Exam 1 (Chapters 1-2) 3.1	**2/9** 3.1 & 3.2
Week 6	**2/14** 3.2 & 3.3	**2/16** Quiz 5 3.3
Week 7	**2/21** 4.1 & 4.2	**2/23** Quiz 6 4.2
Week 8	**2/28** 4.2 & 4.3	**3/1** Quiz 7 4.3
Week 9	**3/6** 4.4	**3/8** Quiz 8 4.4 Review for Exam 2
Week 10	**3/13** Exam 2 (Chapters 3-4) 5.1	**3/15** 5.1
Week 11 **Spring Break!!!**	3/20	3/22
Week 12	**3/27** 5.3	**3/29** Quiz 9 5.3
Week 13	**4/3** 6.1	**4/5** Quiz 10 6.2
Week 14	**4/10** 6.3 & 6.4	**4/12** Quiz 11 6.4 & 6.5
Week 15	**4/17** 6.5 Review for Exam 3	**4/19** Review for Exam 3 Exam 3 (Chapters 5-6)
Week 16 **Pre-Finals**	**4/24** 7.1 & Selected topics	**4/26** Review for Final Exam
Week 17 **Finals**	**5/1** Final Exam, 12-1:50, PS 101	