MATH 1613-503

TRIGONOMETRY **Fall 2012**

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MyMathLab Tech Support: 1-800-677-6337 or
http://www.mymathlab.com/contactus_stu.html

What is Important. Let me begin by saying that I am very concerned about your success as a student at OSU; my goal is to help you learn and ultimately to be successful in all of your learning endeavors not just this course. The information provided in this syllabus and the several links attached to it answer questions most often asked by students enrolled in this course.

Syllabus Attachment. OSU has compiled useful information that applies to all classes at
http://academicaffairs.okstate.edu/images/documents/sylatfa.pdf
This website includes add/drop/withdrawal dates, university holidays, accommodations for students with disabilities, academic resources, and much more. You are responsible for reading this information now and having any questions answered.

OSU Catalog Description. Trigonometric functions, solution of triangles and applications to physical sciences are topics identified in the OSU Catalog to be included in this course.

Course Prerequisites. MATH 1513 or equivalent, or concurrent enrollment. It further states: No credit for those with prior credit in 1715 or any course for which 1613 is a prerequisite.

Course Objectives. 1) To understand the definitions and principles of trigonometry and their applications to problem solving. 2) To complete the college mathematics requirement for further study of mathematics and courses in business, social science, or engineering that are mathematics dependent.

Among the academic deficiencies regularly observed by instructors of entry level mathematics courses are the problems that students have with (1) dealing with mathematical problems presented in prose style, i.e., reading mathematical statements for meaning, (2) modeling mathematical applications geometrically and algebraically, and (3) communicating their results in writing. The application of Trigonometry to the biological sciences is particularly fertile ground for addressing these deficiencies because of the nature of this course of study; it enables us to describe periodic phenomena through readily available mathematical models.

A specially designed online set of materials to help you read and model mathematical problems in the biological sciences has been developed. The name of the project is *Reading and Modeling Mathematical Problems*, or simply *RaMMP*. The purpose of the RaMMP materials is to contribute directly to improving your critical thinking skills by developing units to train you in techniques of reading applied mathematical problems in prose form, developing mathematical models, and drawing conclusions. The problems involve applications related to: (1) blood pressure, (2) biorhythms, (3) body temperature, and (4) predator-prey analysis. The RaMMP materials are on line at the website http://www.math.okstate.edu/~aichele/RaMMP/rammp.html

Course Delivery. You have enrolled in the online section of Trigonometry, MATH 1613-503. This course will be delivered online; all coursework will be completed online. There are no scheduled class meetings during the semester. If you feel that a more traditional delivery

accommodates your learning style better, you are advised to withdraw from this section NOW (within the University's prescribed dates stated in the Spring 2011 Syllabus Attachment); I will help you make a change to another section.

Online Course Materials - MyMathLab. All course work will be completed online with MyMathLab, which is an online system that helps us provide you with a personalized Trigonometry experience. You will complete all homework, homework quizzes, and examinations with MyMathLab, where you will have access to many resources, including videos, an online textbook, sample problems, and instant feedback on your work. You should regularly check MyMathLab for announcements and other course information.

Accessing MyMathLab. To access MyMathLab, you simply click on the link at:
http://www.coursecompass.com/.

Getting started with MyMathLab - Registering. Once you have accessed the CourseCompass page, you will need to Register the first time you go there; click the button "Register" and follow the online instructions to complete this process. As part of the Registration process, you will be asked to identify (1) an *email address* (*use your OSU email address* as the rights to privacy prohibit sending your personal course information to any other electronic address), (2) the *Course ID* (it is: **aichele28374**), and (3) your *student access code* (provided with the textbook package that you purchased for this course). Be sure you have this before attempting to register. After you have completed the registration process, all future LOG INs will be as a Returning User.

Important Note. In order to begin working on the course with the MyMathLab materials, you must be registered with MyMathLab. Being enrolled in MATH 1613-503 does not mean that you have registered for MyMathLab; registration with MyMathLab is a separate process. Consistent with the University enrollment dates for this semester, **you must have completed the MyMathLab registration process no later than the Restrictive Drop/Add Deadline (see Syllabus Attachment)**. If you have not completed the MyMathLab registration process by the Restrictive Drop/Add Deadline, you will need to withdraw from MATH 1613-503 or you will be assigned the grade of F at the end of the semester.

The Mechanics of Using MyMathLab. You will learn about the mechanics of using MyMathLab for all of the coursework through the special lesson entitled **MyMathLab Orientation** (it is listed under the Homework category of activities). This is the starting point of the course and you are required to make 100% on this lesson before attempting any subsequent course activities; you may retake this lesson without penalty as many times as it takes for you to post 100%. Start early!

Introduction. Most of you have already encountered some of the basics of trigonometry in your high school mathematics courses - probably in Algebra I and Algebra II. In this encounter, you were probably asked to solve right triangles in real-world settings, e.g., the height of a building. These applied problems emphasized the manipulation of algebraic expressions in an equation to find an answer rather than the underpinnings of trigonometry. Reflecting back on these experiences, did you ever stop to ask yourself - or anyone else - questions like "What IS Trigonometry?" "Where did 'trigonometry' come from?" "What good is trigonometry?" "Where will I ever use it?" Thinking about these questions is a good place to begin our study of Trigonometry.

It is believed that the early ideas of trigonometry can be attributed to the Egyptians in a part of the Rhind papyrus written by a scribe named Ahmes more than a thousand years before Christ. It is also believed that this work is a copy of a treatise more than a thousand years older. These early notions were not collected into a subject of mathematics until much later, however. Astronomy and the motions of the planets led the Greek astronomer Hipparchus (160 B. C.) to be credited with the invention of trigonometry. He was also the first to determine the location of a

place on the earth as a function of its latitude and longitude. Being well grounded in trigonometry will enable you to continue your study of mathematics in a meaningful and successful manner.

So, what is Trigonometry and how does it differ from the experiences I had with them in my high school algebra course? Good question! In your high school algebra course, you were primarily concerned with some elementary trigonometry applications that dealt with solving right triangles - finding lengths of sides and angles. In Trigonometry, we are concerned with a deeper understanding of these very special functions - from the perspective of functions - and applying them to solve interesting real world problems. You can think of Trigonometry as "the study of functions *and* their applications." One of the goals of this course is that you appreciate trigonometric functions and the role they play in mathematics. Another goal is to be able to use the mathematical ideas of trigonometry to solve problems.

How important are my Algebra Skills? In this course, your ability to perform basic algebraic manipulations is essential. It is assumed that your algebra skills are at a level of having completed 2 years of high school algebra or College Algebra. Trigonometry is the next step in your mathematical growth; in order to be successful in trigonometry your algebra skills must be well grounded. Because we have found that students who are successful in Trigonometry demonstrated strong algebra skills and your success this semester is my primary concern, I want you to have an opportunity to assess your algebra skills. To help you in this regard, there is a special assessment tool that has been developed for you entitled **MyMathLab Algebra Skills Assessment** (it is listed under the Tests category of activities). You are strongly encouraged to take this assessment before attempting to complete the first Homework assignment; you may retake this assessment without penalty as many times as you wish. The questions in this assessment are linked directly to prerequisite algebra skills discussed in Appendix A of the textbook. I hope you will take advantage of this opportunity to address identified areas of weakness found in the assessment.

Course Structure and Available Resources.

- I repeat here that you have enrolled in an **online course.** While there are NO scheduled class meetings during the semester, *there are very specific deadlines for homework, quizzes, and exams*; all university regulations pertaining to the current semester apply to this course (see Syllabus Attachment website above).
- Unlike college courses that are delivered in a traditional format including personal interaction with your instructor, **this online course requires that you develop your own study schedule/routine and follow it**. I have prepared Task Lists and an extensive calendar of the events (homework, quizzes, and exams) of the course; there should be more than ample time to complete them and meet the stated deadlines and qualification requirements for quizzes and examinations. As you study the Task Lists and calendar you will notice that I have attempted to build in some routine to help you study: the deadlines for the homeworks are usually Thursday nights by 11:59 pm; the deadlines for the quizzes are *usually* Friday nights by 11:59 pm, the exception being when there are no classes meeting on Friday. Because you will be submitting your assignments online, **the stated due dates are final and not negotiable;** it is critical that you plan ahead and allow yourself enough time to meet these deadlines.
- You may use your own personal computer or one of those available at one of the university computer labs on campus to complete homework assignments and quizzes.
- I also want to alert you to a resource that you may find helpful. If you wish, you can do much of your studying in the math lab in the **Mathematics Learning Success Center (MLSC)** on the 4th floor of the Classroom building. Tutors are available there free of charge to provide you with one-on-one help in this course. There is also a university computer lab available to you adjacent to the math lab. To learn more about how you can

use the services of the MLSC and its schedule of lab hours, go to the link: http://www.math.okstate.edu/MLRC

Required Textbook Package and Supplies.

- ***Textbook Package***. The required textbook package for the course includes two versions of the textbook (hardback and electronic) and the MyMathLab Student Access Code. The required textbook package is ***Trigonometry - A Unit Circle Approach (9th edition) by M. Sullivan. Pearson Higher Education, 2008 (ISBN 0321772148).***
- ***Scientific Calculator*** ***This study of Trigonometry requires the use of a scientific calculator - one that can evaluate trigonometric and inverse trigonometric functions***; no trigonometry tables are included in the textbook. You may also use a *graphing calculator* but access to one is not assumed or required. As you may have found in studying previous mathematics courses, the graphing calculator can be very helpful in your learning; I recommend it here. If you are planning to use a graphing calculator, be sure you have access to the guidebook for your specific calculator, as this will be an essential resource for answering your technology questions; with the host of calculators available I cannot be expected to know about all of them. You may check out a TI-83/TI-83 Plus graphing calculator from the Math Department (401 MSCS) for use during the semester while the supply lasts; there is NO charge.
- ***Headphones*****. You are required to bring headphones every time you work in the MLRC lab or in one of the campus computer labs** so that you can listen to online explanations without disturbing others**.** The MyMathLab resources that you will be using frequently involve listening to explanations and watching videos.
- ***Journal*****.** You are strongly encouraged to keep a three-ring binder that includes all of your work in this class during the semester. You should take notes on online lectures and the textbook. You should also work out all homework problems and quiz problems in your notebook; write out the detailed solutions*. If you keep your journal entries organized and labeled by date and textbook reference (section and page), it will help you review and study for exams!*

Course Evaluation.

		Total Points	Letter Grade
Homework	100 points		
Homework Quizzes	100 points	630-700	A
Exam 1	100 points	560-629	B
Exam 2	100 points	490-559	C
Exam 3	100 points	420-489	D
Final Exam	200 points	0-419	F
Total	**700 points**		

Note. Final grades will not be curved.

Examinations. There will be three (3) fifty-minute examinations with a maximum possible score of 100 points each and a 100-point comprehensive final examination, which will be recorded twice. There will be **NO MAKE-UP EXAMS** in this course. If an exam is missed, it is understood that the grade of 0 will be recorded for the exam. However, there is one possible exception for missing one exam: if you request and obtain approval from the instructor in **advance** of the exam and only for very **serious and unavoidable** conflicts, then the score on the Final Exam will replace the missed exam score. Note. Prior documented university-sponsored activities can qualify for this missed exam replacement; it would be appreciated if you would please work with me well ahead of time to gain approval. If any additional exam(s) are missed, grade(s) of 0 will be assigned without exception.

Arranging for Examinations. I have worked out a convenient way for you to make arrangements for presenting your examinations regardless of whether you are an on-campus or off-campus student. The process begins by you going to

http://asoutreach.okstate.edu/images/pdf/Proctor_Agreement.pdf

to download a Proctor Agreement form. A completed, approved Proctor Agreement MUST be on file in the A&S Outreach office before you can take the exams. (Contact A&S Outreach at 405-744-5647 if you have questions.) You should complete and submit the Proctor Agreement form no later than the end of the second week of the semester.

All examinations will be presented in the Independent Study Testing Center in 309 Wes Watkins Center or other suitable approved testing center. At least one week ahead of the scheduled date of each exam, you must call the Independent Study Testing Center at 405-744-6390 or other suitable approved testing center to schedule your exam time; you will be allowed to schedule a 75-minute block of time for each 50-minute exam and 2 hours for the Final Exam. *I suggest you schedule all of your exam times, including the Final Exam time, at the beginning of the semester prior to Exam 1*. At the confirmed time of you exam, your testing center administrator will log in with you to access your exam; once you have completed your exam and submitted it, you will receive your exam grade.

Examination Dates. On each of the Exam days, you may opt for a block of time between 8 am and 4 pm. If you do not have an approved Proctor Agreement on file or have not made an appointment ahead of time, you will not be permitted to present the exam and the grade of 0 will be recorded.

Exam 1: Friday, September 28, 2012. Schedule a 75-minute block of time.
Exam 2: Friday, October 26, 2012. Schedule a 75-minute block of time.
Exam 3: Friday, November 30, 2012. Schedule a 75-minute block of time.
Final Exam: Friday, December 14, 2012. Schedule a 2-hour block of time.

Sample Examinations. For each of the exams in the course (including the Final Exam), a Sample Exam has been prepared. These Sample Exams have been designed in content and number of questions specifically to give you an opportunity to test yourself and see how well you have mastered the material before actually taking the exam. Our experience has shown that students who are actively engaged in preparing to take the course examinations have a much better chance of success on them. So, there is a qualification requirement that must be met in order to take any of the course exams: you must present the Sample Exam at least three times with a score of *at least* 60% on one attempt by noon on your scheduled Exam date. For example, in order to qualify to take Exam 1, you must take Sample Exam 1 at least three times with a score of *at least* 60% on one attempt by noon on your scheduled Exam 1 date. If you do not satisfy this qualification requirement for whatever reason, you will be assigned the grade of 0 for that exam. Again, the purpose of having you practice on the Sample Exams in preparation for taking the Exam is to help you be successful ultimately; we believe your success in learning the concepts of trigonometry will be greatly enhanced if you practice on similar problems.

Homework. Doing lots of problems is a great way to learn mathematics. Your homework assignments will all be done with MyMathLab, which provide you with on-demand resources and with immediate feedback. When you get a problem incorrect, I expect you to use the online resources and try again. *You should be able to get 100% on every homework - this should be your goal*. Do not wait until the last minute to do homework as technical difficulties will not excuse an incomplete homework. **Late homework will not be accepted for any reason.** See the Task Lists and calendar for due dates; all homework will be due no later than 11:59pm. At the end of the semester, I will drop your lowest homework score.

Homework Quizzes. While doing regular homework quizzes, you can use online resources and try problems repeatedly; I expect that most of your initial learning will happen doing homework. Homework quizzes, however, give you an opportunity to test yourself and see how well you have mastered the material. Homework quizzes will be done online with MyMathLab, and **no late quizzes will be accepted.** Again, do not wait until the last minute, as technical difficulties will not excuse a missed quiz. See your Task Lists and calendar for due dates; all quizzes will be due no later than 11:59pm. At the end of the semester, I will drop your lowest quiz score.
A few important notes about quizzes:

- Our experience has shown that students who are actively engaged in preparing to take the course quizzes have a much better chance of success on them. So, there is a qualification requirement that must be met in order to take any of the course quizzes: You must get at least an 80% on your homework assignment before MyMathLab will let you attempt the corresponding quiz. You should work on your homework all week and keep trying until you get *at least* an 80%. For example, in order to qualify to take Quiz 1, you must get at least an 80% on Homework 1. If you do not satisfy this qualification requirement for whatever reason, you will be assigned the grade of 0 for that quiz.
- You may attempt each quiz up to ten (10) times before the due date. Your best score will count.

Getting Help. I encourage you to ask me when you have questions or concerns; you can make an appointment to see me or send me an email and I will do my best to respond promptly. I am committed to helping you be successful in this course. In order for me to be most helpful, you should be prepared to ask specific questions. You should have already taken notes on the online lectures, read through and taken notes on the relevant portions of the textbook, and attempted some problems. I also encourage you to use the services of the MLRC lab; the tutors serving there are committed to helping you. Be prepared to tell me or the tutor where you are stuck or what concepts are still confusing to you, and we will be happy to help.

Drop and Withdrawal Policy (General University Policy 2-0206). "Dropping" means withdrawing from a specific course while "withdrawal" means withdrawing *from all courses* and leaving the University for the balance of the term. The drop and withdrawal dates are noted on the attached calendar. IT IS YOUR RESPONSIBILITY TO KNOW AND COMPLY WITH ALL DEADLINES. Reasons similar to those listed below will NOT result in approval for dropping a course after the deadline (from OSU Policy 4.03):

a. Student's lack of knowledge or misunderstanding of the deadline.
b. Student waited to get the results of an exam or other assignment.
c. Student's grades have declined since the deadline.
d. Student doesn't need the course for graduation.
e. Different deadlines existed at a previous school.

To drop this course, you must contact your advisor.

Incomplete Grade. The grade of "I" is given to students who satisfactorily completed the majority of the course work and whose work averages "D" or better, but who have been **unavoidably** prevented from completing the remaining work of the course. A condition that the students must repeat the course in order to remove the "I" is not permitted. The maximum time allowed for a student to remove an "I" is one calendar year.

Academic Integrity. The university has explicit rules governing academic integrity. Please consult the OSU Fall 2012 Syllabus Attachment mentioned above on the web.

Working with another person or in study groups on problems can be helpful in learning the material. I encourage you to work together if you find it helpful. However, **all written and on line work submitted must be your own**. Copying someone else's problem solution, showing

your written solution to someone else, or having another person complete your on line work 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 the examinations you must think very hard about the problems themselves **before** discussing them with anyone else.

Special Accommodations for Students. "If you think you have a qualified disability and need special accommodations, you should notify the instructor and request verification of eligibility for accommodations from the Office of Student Disability Services (315 Student Union, 405-744-7116). Please advise your instructor of your disability as soon as possible, and contact Student Disability Services, 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." (OSU Fall 2012 Syllabus Attachment)

Office Hours. I encourage you to come talk to me during my office hours (or email for an appointment if you can't make any of those times) when you have questions or concerns. When you come to my office hours please come prepared with specific questions. You should have already taken notes on the online lectures, read through and taken notes on the relevant portions of the textbook, and attempted some problems. Be prepared to tell me where you are stuck or what concepts are still confusing to you, and we will be happy to help.

Final Notes.

1. I will communicate any changes in this syllabus to you via the university's email link sent to your official OSU email address.
2. I will send you messages via the university's email link sent to your official OSU email address very frequently, perhaps as many as two messages each week. I hope these messages will help you meet the course deadlines and contribute to your ultimate success in the course.