

# Trigonometry and Analytic Geometry

(CRN 87443)

Mon/Wed: 5:00-6:15pm, UC-262

Course ID: **raridan38672**

(CRN 87444)

Tue/Thur: 6:30-7:45pm, UC-331

Course ID: **raridan49635**

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**Office Hours:** Mon/Wed: 6:15-7:30pm  
Tue/Thur: 3-4pm  
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NOTE: Text items in [blue](#) are clickable hyperlinks.

## Prerequisites

- **COURSEWORK.** MATH 1111 with a grade of “C” or better.
- **TECHNOLOGY.** Basic computer skills such as file management and using e-mail are necessary to succeed in MATH 1112A, however these skills will **not** be taught in MATH 1112A. If help is needed in these areas, please use the services that are offered through [the HUB](#). Other computer skill prerequisites include:
  - Using the Windows<sup>TM</sup> operating system.
  - Accessing and navigating instructor approved web sites.
  - Sending and receiving e-mail using your campus e-mail account via Outlook<sup>TM</sup> or Outlook Express<sup>TM</sup>.
  - Attaching and retrieving files via e-mail or from the instructor’s web site.
  - Installing and running a CD-ROM.

## Course Description

MATH 1112A (3-0-3) is a three (3) semester credit hour course that is a study of trigonometry. Topics include angle measurement, solving triangles, fundamental trigonometric identities, solving trigonometric equations, an introduction to trigonometric functions of real numbers and their graphs, and a study of conic sections and their graphs. Additional topics may include solving nonlinear systems of equations and parametric equations.

For students in MATH 1112A, a grade of “C” or better is a prerequisite for subsequent math courses at Clayton State University.

## Course Materials

The following materials are *required* and should be brought to every class meeting.

- **TEXTBOOK.** The **required** textbook for this course is *Algebra and Trigonometry, 3<sup>rd</sup> ed.*, by Beecher, Penna, Bittinger. The ISBN is 0-321-51780-6.
- **COMPUTER.** A notebook computer is required for MATH 1112A. Students will use the computer during class sessions and tests. Clayton State University **requires** that students have ready access throughout the semester to a notebook computer that meets faculty-approved hardware and software requirements for the student’s academic program. Full details of this university policy can be found on the [ITP Choice Web Page](#). If at any time you should experience problems with your computer, please inform your instructor and contact or visit the HUB.
- **MYMATHLAB.** The textbook is bundled with an activation code that provides access to the [MyMathLab/CourseCompass Web Site](#). The activation code may be purchased separately from the book as well. In addition to the activation code, students in MATH 1112A will need a Course ID, which is located on the first page of this syllabus. Please do not register for MyMathLab until you have both the activation code and the Course ID. Once you have accessed MyMathLab you will need to use the Installation Wizard in order to install necessary software plug-ins. MyMathLab is required to complete online homework and quiz assignments, but access will also provide many other useful resources.
- **MATH SOFTWARE.** This course will rely heavily on the use of a computer algebra system called **Maple** (ISBN 1-897310-71-4). This software may be purchased at a significant discount from the Clayton State University Bookstore.
- **OTHER TOOLS.** The only software that will be used in the course is the Maple computer algebra system. The instructor also will allow students to use the “Accessories Calculator” that is included on the computer. Use of any technology that is not approved by the instructor may constitute Academic Dishonesty.

## Course Content

The following chapters of the text will be covered this semester. Particular sections may be omitted at the discretion of the instructor.

- The Trigonometric Functions (Chapter 5)
- Trigonometric Identities (Chapter 6)
- Applications of Trigonometry (Chapter 7)
- Analytic Geometry (Chapter 9)

## Course Outcomes

The primary outcome for a student who successfully completes MATH 1112A is that the student will have a reasonable expectation of success in future math courses. To this end, a student who successfully completes MATH 1112A will be able to:

- Identify the inherent restrictions on the domain and range of a trigonometric function.
- Understand the interconnectedness of various modes of defining a function (numeric, graphical, generalized) and be able to analyze functions from numeric, graphical, and symbolic points of view; shift among them when appropriate; and justify this through inductive or deductive reasoning.
- Be capable through inductive and deductive reasoning of moving from one to another of those modes of definition.
- Recognize and apply knowledge of trigonometry and analytic geometry to solve a variety of applied problems.
- Use appropriate technology in the evaluation, analysis and synthesis of information in problem-solving situations.

## General Education Outcomes

- **COMMUNICATION.** Students will gain a knowledge base of functions in analytical, graphical and numerical forms. Students will communicate their ideas in classroom discussions and in written form on homework, quizzes and tests.
- **CRITICAL THINKING.** Students will apply their knowledge to solve problems presented in class and on homework, quizzes and examinations. Students will analyze questions, utilize appropriate problem solving techniques, draw conclusions, and provide evidence of a logical answer.

## Grading Policy

Grades in MATH 1112A will be determined via

- **HOMEWORK.** Reading the sections of the textbook corresponding to the assigned homework exercises is considered part of the homework assignment; you are responsible for material in the assigned reading whether or not it is discussed in the lecture. It will be expected that you read the assigned material in advance of each lecture.

Homework problems will be assigned and completed through the [MyMathLab/CourseCompass Web Site](#). There will be homework assignments for each section of the text discussed in class. The lowest two (2) homework assignments will be dropped and the mean of the remaining assignments will constitute the Homework Average, which will account for up to 100 points out of 650 total course points. Homework will usually require **at least** ten (10) total hours of work outside class each week. MyMathLab homeworks are not timed and you are allowed unlimited attempts up to the due date. Homework may be completed early but may not be accepted late without a verifiable excuse.

- **QUIZZES.** Quiz problems will be assigned and completed through the [MyMathLab/CourseCompass Web Site](#). There will be quiz assignments for most sections of the text discussed in class. The lowest quiz assignment grade will be dropped and the mean of the remaining assignments will constitute the Quiz Average, which will account for up to 100 points out of 650 total course points. Quizzes will usually require **at least** two (2) total hours of work outside class each week. Quizzes may be completed early but may not be accepted late without a verifiable excuse.
- **EXAMS.** There will be three (3) in-class exams, each worth 100 points, for a total of up to 300 points out of 650 total course points. Test #1 will cover Sections 5.1 – 5.6. Test #2 will cover Sections 6.1 – 6.5. Test #3 will cover Sections 7.1 – 7.4 and 9.1 – 9.3. Exams will last about one (1) hour each.
- **FINAL EXAM.** The final exam is **comprehensive** and will be worth up to 150 points out of 650 total course points. For the Monday/Wednesday class, the final exam will be administered on Monday, December 6, from 5:00PM to 7:00PM. For the Tuesday/Thursday class, the final exam will be administered on Tuesday, December 7, from 7:15PM to 9:15PM.

No student will be excused from taking exams, and only under exceptional circumstances will a student be allowed to take an exam at any time other than the scheduled time. A make-up exam *may* be considered in cases of illness, death of a family member, or work-required travel.

Because of the concentrated nature of the exams, and the logistical difficulties surrounding make-up exams, students will **not** be given make-up exams unless the instructor is contacted **prior** to the exam in question and is provided a legitimate, verifiable reason. In such a case, the student will be issued an excused absence and will be allowed to make-up the exam. The student is responsible for contacting the instructor to make arrangements for the make-up exam, and must provide documentation of the reason for the missed exam.

Without prior notice and valid documentation, the student will be issued an unexcused absence, resulting in a grade of zero (0) on the missed exam and no make-up exam will be offered. If the student fails to schedule and take the make-up exam in a *timely manner*, that is, before the student attends the next class meeting, then the student will receive a grade of zero (0) on the missed exam. Failure to take the final exam will result in a grade of “F” for the semester.

The following table summarizes the grading policy for MATH 1112A:

Assessment	Points		Percentages
Homework	100		$A \geq 89\%$
Quizzes	100		$79\% \leq B < 89\%$
3 Exams	300		$69\% \leq C < 79\%$
Final Exam	150		$59\% \leq D < 69\%$
Total Points	650		$F < 59\%$

## Course Policies

- **CLASS ATTENDANCE.** Attendance will be taken daily, usually at the beginning of class. Unless prior approval has been obtained, students who arrive after their name is called or leave before the instructor dismisses class will be issued an unexcused absence.
- **BONUS WORK.** Students with no unexcused absences will receive **three (3) bonus points** to their final average. Students accumulating no more than two (2) unexcused absences will be allowed to replace the lowest non-zero test grade with the percentage grade from the final exam, provided it is higher. At the discretion of the instructor, various other rewards may be given to students who regularly participate in classroom discussions.
- **TECHNOLOGY ETIQUETTE.** The computer is used extensively in MATH 1112A. Upon entering class, students should should turn on the computer and open the **Maple** program. The volume should be muted. During

class do not play computer games, play music on the computer, connect to the Internet, pass e-mail “notes”, use computer headphones, or use the computer in any way that is distracting to the instructor or any other student. The only web sites that should be visited are those that the instructor allows. Any student not adhering to this policy may be dismissed from class.

- **E-MAIL ETIQUETTE.** Outside of class, any e-mail sent to the instructor should include your first and last name and identify the class you are taking in the subject heading. Remember to act professionally when sending e-mail to your instructor. Do not use the class list e-mail address for personal correspondence.
- **ELECTRONIC MESSAGES.**
  - The instructor will send e-mail with information vital to your success in the course. Check your e-mail often, at least once a day.
  - The instructor will not send you an e-mail or telephone you to tell you everything you missed in class if you did not attend that day.
  - Voice-mail or e-mail messages to the instructor are usually returned within two (2) business days.
  - Do not send time-sensitive information via e-mail, rather speak to the instructor in person. A delivered e-mail does not relieve you of the responsibility of informing the instructor in person about some concern.

## Student Resources

- **INSTRUCTOR OFFICE HOURS.** I hold regular office hours and am eager to help you when you ask. A list of my office hours for FALL 2010 is given on the first page of this syllabus. My office hours are also posted outside my office door (UC-419) and on [my Web Page](#). Students may [make an appointment](#) to see me individually.
- **CLASS NOTES.** I have posted notes for most sections on the [MATH 1112A Web Site](#). I encourage you to print out these notes and read them carefully.
- **TEXTBOOK.** The textbook is *very expensive*, so make sure to use it! The text has many explanations and examples that are surprisingly helpful when read in conjunction with class discussions.
- **MYMATHLAB.** There are numerous additional study aides provided in the **Multimedia Library** of MyMathLab for each section covered in MATH 1112A. These can provide useful information on new concepts and help to re-enforce necessary skills.

- **CENTER FOR ACADEMIC SUCCESS.** The CAS is located on the lower level of the Library. A complete description of CAS services can be found on the [CAS Web Site](#).

## University Policies

For more details on the following policies, see the up-to-date [Academic Catalog](#).

- **ATTENDANCE POLICY.** Attendance is expected for all class periods and is required for all examination periods. Any absence that is not accompanied by a written excuse from a doctor or other competent authority will be considered unexcused.
- **EXCUSED ABSENCES.** The student is responsible for providing satisfactory evidence to the instructor to substantiate the reason for absence. Among the reasons absences are considered excused by the university are the following:
  - Participation in an activity appearing on the university’s authorized activity list.
  - Death or major illness in a student’s immediate family, which may include: parents, siblings, children, grandparents, grandchildren, spouse, spouse’s children, spouse’s parents, spouse’s grandparents, step-parents, step-siblings, step-grandparents, step-grandchildren, legal guardians, and others as deemed appropriate by the instructor or student’s academic dean.
  - Illness of a dependent family member.
  - Participation in legal proceedings or administrative procedures that require a student’s presence.
  - Injury or illness that is too severe or contagious for the student to attend class. The student should obtain a medical confirmation note, which contains the date and time of the illness and the medical professional’s confirmation of needed absence. An absence for a non-acute medical service does not constitute an excused absence.
  - Required participation in military duties.
- **“NO SHOWS.”** Any paid student who has failed to attend a class by the final payment deadline for the term will be identified as a “no show.” The “no show” student will be administratively withdrawn from the class and a grade of “W” will be posted. Any appeals on the decision must be initiated by discussing the matter with your instructor.
- **“THREE-STRIKES.”** A student who has withdrawn or earned a less-than-satisfactory grade (D, F, U, W, WF) a total of three (3) times in a course at

CSU *will not be allowed to take the course again*. Any appeals on the decision must be made to the Dean of the student's college.

- **MIDTERM GRADES.** The midterm grade for MATH 1112A, which will be issued by Tuesday, October 5, reflects approximately 30% of the final course grade. Based on this grade, a student may choose to withdraw from the course and receive a grade of "W." Any student who wishes to pursue this option must fill out an official withdrawal form (available in the Office of the Registrar) no later than Friday, October 8. Please review the [Withdrawal Information](#) provided by the registrar.
- **STUDENT CONDUCT.** For the health, safety, and general well-being of all students, faculty, and staff, students must abide by the policies set forth in both the [Clayton State University Handbook](#) and the [Basic Undergraduate Student Responsibilities](#).
- **ACADEMIC DISHONESTY.** Any type of activity that is considered dishonest by reasonable standards may constitute academic misconduct. The most common forms of academic misconduct are cheating and plagiarism. **All** instances of academic dishonesty will result in a grade of zero (0) for the work involved and the student will be reported to the [Office of Student Conduct](#).
- **DISRUPTIVE BEHAVIOR.** Behavior which disrupts the teaching-learning process during class activities will not be tolerated. Conditions attributed to physical or psychological disabilities are not considered as a legitimate excuse for disruptive behavior. A student who fails to respond to reasonable faculty direction regarding classroom behavior or behavior while participating in classroom activities may be dismissed from class. A student who is dismissed is entitled to due process and will be afforded such rights as soon as possible following dismissal. If found in violation, a student may be administratively withdrawn and may receive a grade of "WF" (withdrawal-failing) regardless of the current grade in the class. Examples of disruptive behavior and the appeal procedure are provided at the [Disruptive Classroom Behavior Web Page](#).
- **DISTRACTIONS.** The use of pagers, cellular phones, or music players in class is **strictly prohibited** and constitutes disruptive behavior. Out of courtesy and respect for the learning environment, turn these devices off and put them away during class.
- **VISITORS.** It is against university policy to allow any person not registered for a course to attend a class meeting. In particular, it is not reasonable to expect children to be able to sit quietly throughout a class meeting or testing period.

## Important Information

This syllabus is a tentative overview of the course and its policies. The instructor reserves the right to amend this document as needed. The instructor will not change any policies without first discussing the changes with the class.

Important information concerning MATH 1112A during FALL 2010 is available on the [MATH 1112A Web Page](#). The current [Academic Calendar](#) provides important dates (tentative) concerning the FALL 2010 semester.

Students with disabilities who require reasonable accommodations need to register with [Disability Resource Center](#) (DRC) in order to obtain these accommodations. The DRC staff can be contacted by phone at (678) 466-5445 or via e-mail at [disabilityservices@clayton.edu](mailto:disabilityservices@clayton.edu). Students already registered with the DRC who are seeking accommodations for this course should make an appointment with the instructor early in the semester to discuss specific accommodations. The instructor will need a copy of the accommodations letter provided by the DRC.

The content of this course syllabus correlates to education standards established by national and state education governing agencies, accrediting agencies, and learned society/professional education associations. Correlation matrices can be found at [Professional Standards and Program Outcomes](#).