MAC 1114 - Trigonometry

14916 Section 2859
Fall 2023

Instructor:	Fatima Akinola
Class Time:	T/R; P2 (8:30am – 9:20am)
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Class Location:	CHE 0316
Office:	Little Hall 477
Office Hours:	Monday P8 (In Person) & Wednesday P6 (Online), Little Hall 477

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1 Course Description and Objectives

This course is the sequel to MAC1140 Precalculus Algebra, and serves as an introduction to Trigonometry. Topics include a basic introduction to trigonometric functions, graphing trigonometric functions, inverse trigonometric functions, and analytic trigonometry.

This course assumes prior knowledge of intermediate algebra (Algebra 2) and trigonometry. Students should be able to do arithmetic without a calculator.
MAC 1114 begins with a short review of some basic concepts in functions (Homework 0). You should already be competent in working this material.

2 Textbook

In this course, we will be using lecture notes provided in Canvas. There is no required textbook for this course. However, an open-resource textbook which is a good source for additional explanations and supplementary exercises will be linked on Canvas.

3 Canvas

Canvas is located at https://elearning.ufl.edu/; use your Gatorlink username and your password to login. You can find hoemworks, quizzes, bonus quizzes, grades, announcements, lecture outlines, free help information, etc., at this site.
You are responsible for verifying that your grades are accurate. You have one week after a score has been posted to contact your instructor if you believe there has been a grading or a recording error.

Note: Important information may be included in the announcements in Canvas. You are expected to read them.

4   Attendance

It is expected that all students attend every class meeting and complete all assignments. For any exception, contact the instructor as soon as possible.

See the UF attendance policy; https://catalog.ufl.edu/UGRD/ academic-regulations/attendance-policies/

5   Grading

Grades will be based on the following composition:

> Quizzes: 20%
> Xronos: 20%
> Exam 1: 20%
> Exam 2: 20%
> Exam 3: 20%

5.1   Quizzes

A take-home quiz will be assigned on specific weeks, consisting of 3/4 problems. These problems will be graded based on the work and logic shown. I will assess your ability to justify your reasoning, not your ability to calculate the correct answer. You will scan your hand written work to a **pdf format**, and submit via the quiz link on canvas. The quizzes will be available on Tuesday 12:00am and to be turned in on Friday 11:59pm.

5.2   Xronos

Homework will be completed through Xronos. This program should only be accessed through an assignment link in Canvas. All homework will be due at the end of the week at 11:59pm Sunday night.

5.3   Exams

All exams are in person during class times.

5.4   Make-Ups

There will be no make up exams.

If you are participating in an official UF activity (such as music performances, athletic competition or debate, etc), you must contact the instructor at least one week prior to the event and you must present documentation.

If illness or other extenuating circumstances will cause you to miss an exam, contact the instructor immediately before the due date. Send the appropriate documentation to the course instructor. Course materials will be provided to you with an excused absence, and you will be given a reasonable amount of time to make up work. No make-up materials will be provided for undocumented/unexcused absences.

5.5   Extra credit:

Each exam will contain an extra 2 questions which will serve as the extra credit for the class. There will no exam or quiz or Xronos drops.

5.6   Grading Scale:

A	90.00% and above	C	70.00% to 73.99%
A-	87.00% to 89.99%	C-	67.00% to 69.99%
B+	84.00% to 86.99%	D+	64.00% to 66.99%
B	80.00% to 83.99%	D	60.00% to 63.99%
B-	77.00% to 79.99%	D-	57.00% to 59.99%
C+	74.00% to 76.99%	E	56.99% and below

6   Course Schedule (Tentative)

Week 1: Introduction and Review
Week 2: (Mod 1) Angles and Circles
Week 3: (Mod 2) Trigonometric Functions
Week 4: (Mod 3) Right Triangle Trigonometry & Trig Functions of Any Angle
Week 5: (Mod 4) Graphs of Sine & Cosine Functions
Week 6: (Mod 5) (Exam 1) Graphs of Other Trig Functions
Week 7: (Mod 6) Inverse Trig Functions
Week 8: (Mod 12) Law of Sines & Law of Cosines
Week 9: (Mod 7) Applications and Models
Week 10: (Exam 2)
Week 11: (Mod 8) Trigonometric Equations and Identities
Week 12: (Mod 9) Solving Trig Equations
Week 13: (Mod 10) Sum & Difference Formulas
Week 14: (Thanksgiving) (Mod 11) Multiple Angles & Product-to-Sum Formulas
Week 15: (Mod 11) Multiple Angles & Product-to-Sum Formulas
Week 16: Exam 3

7   Administrative Concerns

7.1   Incomplete Policy

A grade of I (incomplete) will be considered only if you meet the Math Department criteria which is found at https://www.math.ufl.edu. If you meet the criteria you must see the instructor before the beginning of finals week to be considered for an I. A grade of I only allows you to make up your incomplete work. You cannot redo any previously completed work.

7.2   Online Course Evaluation

Students are expected to provide feedback on the quality of instruction in this course by completing online evaluations at https://gatorevals.aa.ufl.edu/. Evaluations are typically open during the last two or three weeks of the semester, but students will be given specific times when they are open.

7.3   Advising and Help

1. For issues with technical difficulties for Canvas, please contact the UF Help Desk at:

   > Website: https://helpdesk.ufl.edu
   > Phone: (352) 392-HELP (4357)
   > Walk-in: HUB 132

   Note: Any requests for extensions due to technical issues MUST be accompanied by the ticket number received from the Help Desk when the problem was reported to them. The ticket number will document the time and date of the problem. You MUST e-mail your instructor within 24 hours of the technical difficulty if you wish to request a extension.

2. For all concerns with this course, please talk to your instructor! Office hours will be posted and are regular times when they are available to answer questions, discuss grades, advise students on future classes, or help students in any available way. You do not need an appointment to visit during office hours. If you need to meet outside of office hours, please contact your instructor for an appointment.

3. In addition, there are several other free resources available to you:

   The Teaching Center Math Lab, located at SE Broward Hall, offers free informal tutoring. You may want to attend different hours to find the tutors with whom you feel most comfortable.
   Also the Little 215 Tutoring Center provides free tutoring for courses up to Calculus 1. Go to https://www.teachingcenter.ufl.edu to find their hours. You can also request free one-on-one tutoring.
   A list of qualified tutors for hire is available at https://www.math.ufl.edu.
   Other resources are available at https://www.distance.ufl.edu/getting-help for:

   - Counseling and Wellness resources

   - Disability Resources

   - Resources for handling student concerns and complaints

   - Library Help Desk support

4. Should you have any complaints with your experience in this course please visit

   https://www.distance.ufl.edu/student-complaints to submit a complaint.

7.4   Class Demeanor or Netiquette

All members of the class are expected to follow rules of common courtesy in all email messages, threaded discussions and chats.

7.5   Honor Code

All students are required to abide by the Academic Honesty Guidelines which have been accepted by the University. The academic community of students and faculty at the University of Florida strives to develop, sustain and protect an environment of honesty, trust and respect. Students are expected to pursue knowledge with integrity.

Violations of the Academic Honesty Guidelines shall result in judicial action and a student being subject to the sanctions in paragraph XIV of the Student Code of Conduct. The conduct set forth hereinafter constitutes a violation of the Academic Honesty Guidelines (University of Florida Rule 6C1-4.017). You may find the Student Honor Code and read more about student rights and responsibilities concerning academic honesty at the link https://www.dso.ufl.edu/sccr/.

7.6   Students with Disabilities

Students with disabilities who experience learning barriers and would like to request academic accommodations should connect with the Disability Resource Center by visiting: https://disability.ufl.edu/students/started/. It is important for students to share their accommodation letter with their instructor and discuss their access needs, as early as possible in the semester. If a student does not supply the appropriate documentation in a timely fashion, the instructor may not be able to accommodate the student in a timely manner.

7.7   Changes

The instructor reserves the right to make changes to this syllabus as necessary. Any such changes will be announced both in-class and as an announcement on Canvas.

8   Calculator Policy

The only calculator allowed on exams is the non-scientific calculator provided to you in Canvas. This is not a plug-and-chug calculator course. You need to understand the mathematics and be able to do the algebraic and trigonometric manipulations first, resorting to the calculator only at the ends of the problems (as necessary) to get the approximate answer(s) as the problems may require. Be sure to carefully read each problem since some will expect exact answers (e.g. 1/3) and some will expect decimal approximations (e.g. 0.3333), and these are not usually equal. Unless a problem specifically asks for an approximation, you should assume it requires the exact answer.

When working with approximations, you should keep all digits of the intermediate steps in your calculations, and only round the final answer as required by the problem. Failure to do this can result in a rounding error and failure to receive credit for the question part. I will not grant any credit for rounding errors on your part.

You should try to use the non-scientific calculator (in Canvas) that you will be using on exams for nearly all calculations that you don't do by hand on homework and quizzes, since that will be better practice for exams.

If a problem on any exam would normally require the use of a scientific calculator, then you will be given additional information in the problem, either directly giving certain function values that you may need or giving you function values that can be used to determine the value you need. On every exam, you will be supplied with the approximate values for π and e at the top of the exam, so, if you need, for example, to compute π^{-3}, you can just multiply the approximations then take the reciprocal to get the answer, i.e. calculate $\frac{1}{\pi \times \pi \times \pi}$.

As you can see from the preceding discussion, all types of problems you see in homework can appear on exams even if you use a scientific calculator for the homework (and despite the fact you are NOT allowed to use a scientific calculator on exams) since on the exam you will be given extra information.