

MA104 - Analytic Trigonometry
Syllabus: Fall 2017

Class Meeting: **Section A**
 Clingenpeel Gym 101, Fayette,
 MWF 9:00 AM – 9:50 AM
 FINAL EXAM: Wednesday, 12/13 7:30 AM-9:30 AM

Instructor: Dr. Andrew McCrady
Email: amccrady@centralmethodist.edu
Office: Philips-Robb Recreation Center, Multipurpose Room 101
Office Hours: MWF 10-10:50, TR 1:00-2:00

CMU Mission Statement: Central Methodist University prepares students to make a difference in the world by emphasizing academic and professional excellence, ethical leadership, and social responsibility.

Course Description: Theory and application of the trigonometric functions. Prerequisite: MA103 with grade C or better, or ACT Math subscore of 22 or above. Primarily for students preparing for calculus or physics.

Online Materials: You must register as a student through Pearson Mylab and Mastering:
<https://www.pearsonmylabandmastering.com/northamerica/>

You will need the following course ID: mccrady61072

This will give you access to (1) the electronic textbook *Trigonometry: a Unit Circle Approach, 10/e* by Michael Sullivan, ISBN-13: 9780321978608, and (2) online homework. We will not be using any other features of Mylab and Mastering. All other materials (class notes, quiz/exam solutions, grades, etc.) will be posted on myCMU throughout the semester.

Additional Resources: Students must purchase either a TI-30 or TI-30X calculator. No other calculator is permitted. During quizzes and exams (in class), there will NOT be extra calculators provided by the instructor.

Course Objectives:

Students will study the relationship between trigonometric functions, the unit circle, and triangles. Students will continue to practice algebraic manipulation and intuition for simplifying expressions and solving equations encountered throughout the calculus sequence. Students will develop critical thinking and mathematical reasoning skills.

Measurable Learning Outcomes: Upon successful completion of this class students will be able to:

- Use the unit circle to find values of trigonometric functions.
- Use various college algebra techniques to find the values of trigonometric functions.

- Recognize and analyze the graphs of trigonometric functions.
- Use trigonometric identities to simplify expressions or to prove the validity of certain equations.
- Use trigonometric functions for geometric and physical applications involving circles and triangles.
- Find the amplitude, frequency, and period of various sine and cosine waves.
- Convert between rectangular coordinates and polar coordinates.

Common Core Competencies:

Math Literacy: 6-7. Students will demonstrate mathematical reasoning by applying appropriate methods and procedures.

GENERAL EDUCATION COMPETENCIES:

The university learning principles and outcomes were adopted in Spring 2016. Six of the 9 ULOs will be used to assess the general education common core (31-32 hours). The ULOs are intentionally broad statements that guide a culture of learning and allow for a holistic approach to assessment.

Curiosity (discover, analyze)

1. Students can discover, explore, and seek solutions based on accumulated knowledge and current research.
2. Students can analyze, evaluate, interpret, and summarize data.

Course Policies and Information:

- **Students with Disabilities** – Please refer to the “students with disabilities policy” at <http://www.centralmethodist.edu/learn/disability.php>. A particularly important excerpt is the following:
“Central Methodist University does not discriminate on the basis of race, color, religion, sex, national origin, age, or federally defined disability/state defined handicap ("disability"). This includes but is not limited to recruitment and admission of students, educational programs, services, activities, financial aid, and scholarship programs. The University complies with all federal and state non-discrimination requirements.”
Additional help can be obtained from the Center for Learning and Teaching. It is the responsibility of the student to take the initiative in obtaining accommodations.
- **Email:** Students are responsible for any course information, assignments, course updates or information sent by the instructor or the University to a student’s email of record.
- **Academic Conduct:** Honesty and integrity are expected at all times. All students are expected to do their own work. Quizzes and exams must be taken without the use of any unauthorized resources or help from others. Any student found to have committed academic misconduct may suffer any or all of the following consequences: 1) score of

zero for the work in question; 2) an “F” for the class; 3) Notification sent to the appropriate university officials. Furthermore, said student will come under the auspices of the CMU Academic Conduct Policy (<http://www.centralmethodist.edu/catalogs/clas/policies/sanctions.php>). It is the responsibility of CMU students to familiarize themselves with the policies of the university.

- **Attendance Policy:** Class attendance and participation is very important (see CMU attendance policy at <http://www.centralmethodist.edu/catalogs/clas/policies/academic-regulations.php>). It is the student’s responsibility to find out from a peer what was missed and then catch up on his or her own.
- **Civility Policy:** All students must behave in a manner appropriate to the learning environment. Students are expected to attend class, complete assignments on time, be respectful, act with integrity, participate in class exercises, and follow all policies. In particular,
 - **Everyone** in the classroom must be treated with respect. Rude, disrespectful, distracting, and/or disruptive comments and/or behavior are unacceptable. Examples of such unacceptable behavior are excessive chit-chatting, sleeping, disturbing another student or engaging in behaviors deemed disruptive by the instructor. Offending students will be asked to leave the class, treated as absent for the class, and may be dropped from the course if the behavior is repeated.
 - **Electronic Devices.** Cell phones must be put away during class time. Students using cell phones in class may be asked to leave and treated as absent for the class.

General Assignment Policies

- **All Exams, Homework and Projects must be completed on or before the date scheduled.**
 - There are **NO make up quizzes**. The lowest 2 quiz scores are dropped at the end of the semester to account for any reason a student is unable to take a quiz.
 - There are **NO homework extensions**. The lowest 2 homework scores are dropped at the end of the semester to account for any reason a student is unable to complete a homework assignment.
 - If a student must miss a class date on which an exam will be given the student may make arrangements to take the exam in advance. In rare cases, and at the instructor’s discretion, make up exams **may** be given should a genuine emergency or illness occur and proof of such occurrence (e.g.: police report or doctor’s note) is presented to the instructor.

Course Weighting:

Assignments are divided into four types and weighted as follows:

- Homework (lowest 2 scores dropped): 15%
- Quizzes (lowest 2 scores dropped): 20%
- Midterm Exams 1, 2, 3: 15% each
- Final Exam: 20%

Course Grading:

All grades are based off of the following scale (note that CMU does not use “plus/minus”):

- 90-100 A
- 80-89 B
- 70-79 C
- 60-69 D
- 0-59 F

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	Monday		Wednesday		Friday	
Week 1	8/21	Syllabus 1.1, 1.2	8/23	Finish 1.2, 1.3	8/25	1.4
Week 2	8/28	Finish 1.4	8/30	1.6 Quiz 1 <i>HW 1.1, 1.2, 1.3 Due</i>	9/1	Finish 1.6, 1.7
Week 3	9/4	NO CLASS	9/6	Finish 1.7 Quiz 2 <i>HW 1.4 & 1.6 Due</i>	9/8	2.1
Week 4	9/11	2.2	9/13	Catch up/Review for Exam 1 <i>HW 1.7 & 2.1 Due</i>	9/15	EXAM 1
Week 5	9/18	2.3	9/20	Finish 2.3, 2.4 <i>HW 2.2</i>	9/22	Finish 2.4
Week 6	9/25	2.5	9/27	Finish 2.5 Quiz 3 <i>HW 2.3 & 2.4 Due</i>	9/29	2.6
Week 7	10/2	Finish 2.6, 3.1	10/4	Finish 3.1 Quiz 4 <i>HW 2.5 & 2.6 Due</i>	10/6	3.2
Week 8	10/9	Finish 3.2	10/11	Catch up/Review for Exam 2 <i>HW 3.1 & 3.2 Due</i>	10/13	EXAM 2
Week 9	10/16	3.3	10/18	Finish 3.3, 3.4	10/20	Finish 3.4
Week 10	10/23	NO CLASS	10/25	3.5 Quiz 5 <i>HW 3.3 & 3.4 Due</i>	10/27	3.6
Week 11	10/30	3.7	11/1	4.1 Quiz 6 <i>HW 3.5 & 3.6 Due</i>	11/3	NO CLASS
Week 12	11/6	4.2	11/8	Finish 4.2, 4.3 Quiz 7 <i>HW 3.7 & 4.1 Due</i>	11/10	Finish 4.3
Week 13	11/13	4.4	11/15	Catch up/Review for Exam 3 <i>HW 4.2 & 4.3 Due</i>	11/17	EXAM 3
Week 14	11/20	NO CLASS	11/22	NO CLASS	11/24	NO CLASS
Week 15	11/27	4.5	11/29	5.1 Quiz 8 <i>HW 4.4 & 4.5 Due</i>	12/1	5.2
Week 16	12/4	Finish 5.2, 5.3	12/6	Finish 5.3 Quiz 9 <i>HW 5.1 & 5.2 Due</i>	12/8	Catch up/ Review for Final Exam

THE FINAL EXAM IS WEDNESDAY, 12/13 FROM 7:30 AM-9:30 AM