MATH 123 - Trigonometry

COURSE SYLLABUS

INSTRUCTOR: Moriah Lugar
E-MAIL ADDRESS: mmgibso1@olemiss.edu
OFFICE: Hume 211
OFFICE HOURS: Th 11-12:15, or by appt.

SOFTWARE/TEXT: Trigonometry 11th Edition; Daniels, Callie | Hornsby, John | Lial, Margaret | Schneider, David; ISBN-13: 9780134217437, Publisher: Pearson

LEARNING OUTCOMES:

- Students who successfully complete Math 123 will be able to work with angles in degree or radian measure, write the ratio definitions of the six trigonometric functions, evaluate trigonometric functions of special angles, sketch graphs of trigonometric functions, verify trigonometric identities, solve trigonometric equations, and solve application problems using trigonometric functions and identities.
- See the end of this document for a detailed list of learning objectives covered in the course organized by sections within each test module.

HOMEWORK:

- Homework will be assigned for each section of material covered, and will count for a total of 100 points.
- The lowest homework assignment grade will be dropped at the end of the semester. The homework grade will be an average of the highest 31 completion percentages.
- Homework assignments will be done on the computer using the MyMathLab software.
- Homework assignments may be done as many times as needed before the due date, with only the best score counting toward the student's grade.
- Homework must be submitted by 11:59 p.m. on the due date. **There will be no extensions on homework due dates.**
- Homework assignments may be completed after their due dates until **Sunday, May 3rd 2020** for half credit.

TESTS and PRACTICE TESTS:

- There will be a Practice Test for each of the five tests and the final exam. The Practice Test is taken through the MyMathLab website.
- Practice Tests are due by the **beginning of class** on the day of the corresponding test.
- Practice Tests can be taken an unlimited number of times. The highest score is kept. Each Practice Test is worth a maximum of 5 bonus points applied its associated test
- The purpose of the Practice Tests are to prepare you for the in class tests.
- There will be five (5) major tests during the semester taken in class each worth 100 points (500 points total).
- Tests are taken on paper and in the regular classroom at the regular class meeting time for the course.
- Students must show all work for each test question in order to receive credit.
- Students must number scratch work in order for it to be graded.

REPLACEMENT GRADE POLICY:

- There are no make-up tests given in this class for any reason. If a test is missed for ANY reason, a grade of zero (0) will be given.

- There will be times students must miss test dates for unforeseen reasons. To protect students from these situations, this class employs a Replacement Grade Policy where the percent correct score on the final exam will replace the lowest of the five test grades IF the final exam score is greater than the lowest of the five test grades.
- While the Replacement Grade Policy also applies to students who take all tests, the Replacement Grade Policy is designed to **protect** students who must miss a test due to unforeseen reasons. The Replacement Grade Policy is **not** designed as a buffer for the overall grade.
- Any student who must miss a scheduled test **because of an official University function** must reschedule and take the test at a time BEFORE the scheduled time of the exam. NO OTHER rescheduling will be allowed.

FINAL EXAM:

- The final exam is comprehensive and will count 200 points.
- Any student who must miss the final exam because of an official University function must reschedule the exam on some other mutually satisfactory date.
- Any student having three or more final exams scheduled for the same day will arrange with the instructor to take either the 12:00 p.m. OR the 7:30 p.m. exam on some other mutually satisfactory date.
- Every student must take the final exam at the time scheduled. The only exceptions are the students affected by the two situations above.
- An "I" grade will not be given without the permission of the Department of Mathematics.

FINAL GRADE:

- The cumulative total for the course is 800 points (100 HW, 500 Tests, 200 Final Exam). The following point scale will be used to determine your final grade:

Grade	Points Necessary for Grade
A	720 to 800
A-	704 to less than 720
B+	688 to less than 704
B	640 to less than 688
B-	624 to less than 640
C+	608 to less than 624
C	560 to less than 608
C-	544 to less than 560
D	480 to less than 544
F	below 480

- You can easily calculate your percentage using (Points Earned)/(Points Available)*100.

ATTENDANCE POLICY: There is an attendance policy for this class.

- Students are allowed five (5) absences in a MWF section without penalty.
- Students are allowed three (3) absences in a TTh or MW section without penalty.
- Students who accumulate more absences than are allowed for their specific section will have ten (10) points deducted from their final point total FOR EACH absence above the limit for their respective section.
- Attendance is taken via the student ID card scanners in class and attendance sheets. The scanners open 10 minutes before class starts and close 10 minutes after class begins. Students are required to have their student ID to scan into class.

- Students must take the responsibility of telling the instructor in advance if they must leave early, and must discuss with the instructor immediately after class if they entered the classroom after class has begun. It is the student's responsibility to make sure that their attendance record is correct.
- Attendance fraud is a form of academic dishonesty. Students engaging in fraud will fail the class and be reported to the university for further disciplinary action. If a student must leave class after signing in, it is the responsibility of the student to communicate with the instructor before class begins.
- If an emergency arises and a student must leave class after scanning in, then the student must notify the instructor within 24 hours of the end of class.
- Random attendance checks will be made in the form of role call at some point in class. If a student has been counted present but is not present for random role call, then that student will be found to have fraudulently attended class.

TEST INFORMATION:

- Tests will be administered during regular class meetings in the regular classroom (not the Jackson Avenue Center).
- Each student will be expected to complete the test within the time frame of one class meeting. Students who need accommodations for in-class work should see the Disability Access and Inclusion Section below for more details.
- Under no circumstance will a late or make-up test be given to any student.
- During a test, it is crucial that the test administrator (instructor, professor, TA, etc.) be able to see the eyes of a student taking the test. If any article of clothing obstructs the view of a student's eyes, then the test administrator reserves the right to have the student remove the obstruction. This includes hats, sunglasses, hoods, etc.
- During a test, no student will be allowed to have a cell phone, smart watch, outside calculator, or any other device that communicates to another device wirelessly (medical device accommodations excluded). These types of devices **must** be secured in a closed bag such as a backpack or messenger bag **not in a pocket on an article of clothing**.
- Any student who violates the above policy will receive a zero grade **that cannot be replaced using the Replacement Policy for the course**.

CALCULATORS:

- Basic, four function calculators will be allowed on each test. These calculators will be provided to you on the day of the test. You will not be allowed to use your own calculators on the tests.
- Cell phone or iPod calculators may not be used during tests. If a student is caught using a cell phone or iPod calculator during a test, he/she will we receive a grade of zero (0) on said test **that cannot be replaced**.

ELECTRONIC DEVICES:

- All cell phones, pagers, and other electronic equipment should be turned off and put away during the class period.

CHEATING:

- The following statement is the policy of the Department of Mathematics in MATH 123 regarding cheating:

  Offenses: Cheating on any exam or quiz, theft or attempted theft of exam questions, possession of exam questions prior to an examination, or the use of an illegal calculator on tests shall all be offenses subject to appropriate penalties.

  Penalties: The penalty for commission of any offense set out above is failure in the course and, subject to the approval of the Chancellor, dismissal or suspension from the University.

WITHDRAWAL DEADLINE: Monday, March 2nd

- After the Course Withdrawal Deadline, courses dropped will be recorded on University records and the grade of W will be recorded if the student is not failing the course at the time of withdrawal; otherwise, the grade of F will be recorded. After the course withdrawal deadline, a student may drop a course only in cases of extreme and unavoidable emergency, as determined by the academic dean. Dropping a course after the deadline will not be permitted because of dissatisfaction over an expected grade or because the student is changing his/her major.

DISABILITY ACCESS AND INCLUSION:

- The University of Mississippi is committed to the creation of inclusive learning environments for all students. If there are aspects of the instruction or design of this course that result in barriers to your full inclusion and participation, or to accurate assessment of your achievement, please contact the course instructor as soon as possible. Barriers may include, but are not necessarily limited to, timed exams and in-class assignments, difficulty with the acquisition of lecture content, inaccessible web content, and the use of non-captioned or non-transcribed video and audio files. If you are approved through SDS, you must log in to your Rebel Access portal at https://sds.olemiss.edu to request approved accommodations. If you are NOT approved through SDS, you must contact Student Disability Services at 662-915-7128 so the office can: 1. determine your eligibility for accommodations, 2. disseminate to your instructors a Faculty Notification Letter, 3. facilitate the removal of barriers, and 4. ensure you have equal access to the same opportunities for success that are available to all students.

DETAILED LEARNING OUTCOMES:

- Test 1:
  - Section 1.1: Terminology of Angles, Degree Measure, Standard Position, and Coterminal Angles
  - Section 1.2: Basics of Triangles
  - Section 1.3: Pythagorean Theorem, Trigonometric Functions, and Quadrantal Angles
  - Section 1.4: Reciprocal, Pythagorean, and Quotient Identities
  - Section 2.1: Right-Triangle Definitions of Trigonometric Functions and Trigonometric Function Values of Special Angles
  - Section 2.2: Reference Angles, Special Angles as Reference Angles, Evaluation of Trigonometric Functions of Non-Acute Angles

- Test 2:
  - Section 3.1: Radian Measure, Conversion between Degrees and Radians, and Trigonometric Function Values of Angles in Radians
  - Section 3.2: Arc Length on a Circle and Area of a Sector of a Circle
  - Section 3.3: Circular Functions and Their Values, Function Values as Lengths of Line Segments
  - Section 3.4: Linear and Angular Speed Formulas and Applications

- Test 3:
  - Section 4.1: Determine the Amplitude, Period, and Quarter Points for the Graphs of Sine and Cosine, Sketch Graphs of Sine and Cosine Functions with Amplitude and Change in Period
  - Section 4.2: Determine the Phase Shift, Vertical Shift, and Quarter Points for the Graphs of Sine and Cosine, Sketch Graphs of Sine and Cosine Functions with Phase Shifts and Vertical Shifts
  - Section 4.3: Determine the Vertical Asymptotes and Points for the Graphs of Tangent and Cotangent, Sketch Graphs of Tangent and Cotangent Functions

- Test 4:
    - Section 5.1: Fundamental Identities and Uses
    - Section 5.2: Verifying Trigonometric Identities
    - Section 5.3: Sum and Difference Formulas for Cosine, Expanding and Condensing Expressions using Sum and Difference Formulas for Cosine, Applications of the Sum and Difference Formulas for Cosine
    - Section 5.4: Sum and Difference Formulas for Sine and Tangent, Expanding and Condensing Expressions using Sum and Difference Formulas for Sine and Tangent, Applications of the Sum and Difference Formulas for Sine and Tangent
    - Section 5.5: Double-Angle Identities, Applications of the Double-Angle Identities
    - Section 5.6: Half-Angle Identities, Applications of the Half-Angle Identities

- Test 5:
    - Section 6.1: Definition of Inverse Trigonometric Functions for Sine, Cosine, and Tangent, Evaluation of Inverse Trigonometric Expressions, Evaluation of Composites Trigonometric and Inverse Trigonometric Functions, Evaluation of Inverse Trigonometric Expressions Involving the Sum, Difference, and Double-Angle Formulas/Identities
    - Section 6.2: Evaluation of Trigonometric Equations Using Linear Methods, Zero-Factor Property Method, Quadratic Method, and Identity Substitutions
    - Section 6.3: Evaluation of Trigonometric Equations with Manipulated Arguments
    - Section 6.4: Rewriting Trigonometric/Inverse Trigonometric Equations Using Properties of Inverses and Solving Inverse Trigonometric Equations