MATH 123 - Online
Trigonometry

INSTRUCTOR: Jon-Michael Wimberly
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OFFICE: Hume 205
OFFICE HOURS: MW 12:30-3:30 p.m.
TTh 12:30-2:00 pm.

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.

COMMUNICATION:

- Students are welcome to reach out to me via email or come to my office hours.
- I will attempt to answer emails as quickly as possible during the workday (8 a.m. to 5 p.m. Monday through Friday). Emails sent outside this time frame will be answered during the next workday.

HOMEWORK and LECTURE:

- There are 30 Homework Assignments on MyMathLab that contain lecture notes, video lectures, and the homework problems.
- 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 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 five (5) major tests during the semester each worth 100 points (500 points total).
- The tests are taken **online** through the MyMathLab portal.
- Each test will be available during the testing window on the Course Calendar. Students can take their test beginning at 12:00 a.m. on the first day of the window and ending at 11:59 p.m. on the last day of the window.
    - Note: students are responsible for scheduling tests with adequate time to finish the test **before** the close of the testing window. Extensions will not be given during the testing window as the test closes automatically.
- Each test must be proctored. There are two options for proctoring: DETL and ProctorU. Please see the **TESTING INFORMATION** section below for more information regarding proctoring.

- **Please see the test scheduling videos on Blackboard for more information on how to schedule a test session!**
- There will be a Practice Test for each of the five tests and the final exam that serves as the Review for the associated test.
- **Each Practice Test is worth 20 points toward your grade.** The lowest of the six Practice Test scores will be dropped. The total points for the Practice Test portion of the class is 100 points.
- Practice Tests are due at the end of each testing window.
- 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.

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 900 points (100 HW, 500 Tests, 100 Practice Tests, 200 Final Exam). The following point scale will be used to determine your final grade:

Grade	Points Necessary for Grade
A	810 to 900
A-	792 to less than 810
B+	774 to less than 792
B	720 to less than 774
B-	702 to less than 720
C+	684 to less than 702
C	630 to less than 684
C-	612 to less than 630
D	540 to less than 612
F	below 540

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

TESTING INFORMATION:

- Each test and the final exam must be taken online with a proctor. It is the student's responsibility to schedule the appointments for each proctored assessment. For this class, there will be two options for proctoring the exams: ProctorU and DETL.
- **ProctorU** is a remote proctoring service that allows you to schedule your exam time at any point during the exam window. ProctorU is more flexible than the DETL Lab, but it is a service the student is responsible for paying to use (~$25 per test, ~$30 for Final Exam). To use ProctorU, you must have a computer (not a phone or tablet) with a webcam, a whiteboard (small dry-erase board and markers), and high-speed Internet connection. Students using ProctorU will not be allowed to bring scratch paper to the test – you must use a whiteboard only.
- **DETL (Distance Education Testing Lab)** is a free testing center on campus in the Jackson Avenue Center, Suite F. While testing at DETL is free, there are limitations to dates and times that are available to schedule an appointment to take an exam. To schedule an appointment through DETL, please see the following website: http://www.online.olemiss.edu/testing.html

  Note: DETL cannot assist you in making regional campus testing appointments. Please contact the regional testing centers directly to schedule regional campus appointments. See the contact information below:

Desoto:	Twyla Loftiss	(662) 393-1674	twyla@olemiss.edu
Tupelo:	Carrie Cannon	(662) 690-2017	ckcrouch@olemiss.edu
Booneville:	Kim Gray	(662) 720-7781	kstevens@olemiss.edu
Grenada:	LaTonya Pittman	(662) 227-2348	lspittma@olemiss.edu

  Please report to the testing center at least 10 minutes before your appointment with a valid Ole Miss ID, State issued driver's license, or a passport to take your exam. There will be no exceptions to this rule. Please contact DETL directly if there are issues or questions with forms of identification.

  If you are late to your testing appointment, then you must reschedule your testing appointment or use ProctorU.

CALCULATORS:

- Online Trigonometry students are allowed a basic, four-function calculator for the tests and the final exam. The calculator allowed is the Texas Instruments 503SV Standard Function Calculator. This is the only calculator allowed for testing. The calculator can be purchased online for less than $5. A picture of the calculator can be seen to the right:
- DETL provides calculators for student use during their testing session. ProctorU does not provide calculators.
- It is the student's responsibility to obtain the allowed calculator before the scheduled tests. Any questions regarding appropriate calculators must be handled at least 72 hours before the scheduled test.
- Graphing and Scientific Calculators will not be allowed under any circumstances.

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.

COPYRIGHT STATEMENT:

- Materials used in connection with this course may be subject to copyright protection under Title 17 of the United States Code. Under certain Fair Use circumstances specified by law, copies may be made for private study, scholarship, or research. Electronic copies should not be shared with unauthorized users. Violations of copyright laws could subject you to federal and state civil penalties and criminal liability as well as disciplinary action under University policies.
- The materials on this course Web site are only for the use of students enrolled in this course for purposes associated with this course and may not be retained or further disseminated.

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:
  - **Basics of Angles**: Terminology of Angles, Degree Measure, Standard Position, Coterminal Angles, Degree-Minute-Second Notation
  - **Basics of Triangles**: Angle Sums in Triangles, Types of Triangles, Basic Applications of Triangles
  - **Basics of Trigonometric Functions**: Pythagorean Theorem, Trigonometric Functions, and Quadrantal Angles
  - **Using Definitions of Trigonometric Functions**: Reciprocal, Pythagorean, and Quotient Identities
  - **Trigonometric Functions of Acute and Non-Acute Angles**: Right-Triangle Definitions of Trigonometric Functions and Trigonometric Function Values of Special Angles, Reference Angles, Special Angles as Reference Angles, Evaluation of Trigonometric Functions of Non-Acute Angles

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

- Test 3:
  - **Graphs of Sine and Cosine**: 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
  - **Translations of Sine and Cosine**: 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
  - **Graphs of Tangent and Cotangent**: Determine the Vertical Asymptotes and Points for the Graphs of Tangent and Cotangent, Sketch Graphs of Tangent and Cotangent Functions

- Test 4:
  - **Fundamental Identities**: Fundamental Identities and Uses
  - **Verifying Trigonometric Identities**
  - **Sum and Difference Formulas for Cosine**: 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
  - **Sum and Difference Formulas for Sine and Tangent**: 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
  - **Double-Angle Identities**: Double-Angle Identities, Applications of the Double-Angle Identities
  - **Half Angle Identities**: Half-Angle Identities, Applications of the Half-Angle Identities

- Test 5:
  - **Inverse Trigonometric Functions**: 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

- **Trigonometric Equations I**: Evaluation of Trigonometric Equations Using Linear Methods, Zero-Factor Property Method, Quadratic Method, and Identity Substitutions
- **Trigonometric Equations II**: Evaluation of Trigonometric Equations with Manipulated Arguments
- **Equations Involving Inverse Trigonometric Functions**: Rewriting Trigonometric/Inverse Trigonometric Equations Using Properties of Inverses and Solving Inverse Trigonometric Equations