

MAT 108:

Trigonometry Syllabus

General Information

MAT 108 Trigonometry: 2 hours, 2 credits. Unit Circle, Trigonometry, Radians, Graphing Trigonometric Functions, Inverse Trigonometric Functions, Trigonometric Identities, Law of Sines and Cosines, Applications.

Prerequisite: A grade of C (or better) in MAT 104 or placement by the Department. Students should thoroughly review all material from this subject.

Notes: (1) For students planning to take 172/175 who have not had trigonometry. (2) Students who take this course and 171/172 will be ready for MAT 175.

Instructor: Your instructor will provide contact information, office hours and meeting times for your section

Grading Policy

Expectations: Students are expected to learn both the mathematics covered in class and the mathematics in the textbook and other assigned reading. Completing homework is part of the learning experience. Students should review topics from prior courses as needed and, if needed, go to their instructor's office hours, to the Math Lab or to problem sessions regularly.

Homework: Online homework using Pearson's MyLab will be assigned at the end of each lesson. Students will be required to complete these assignments as part of their final grade.

Grades: Homework will be worth at least 15% of a student's final grade and the uniform final exam will be worth at least 35% of a student's final grade. The precise grading policy for your section will be distributed by your instructor.

Materials, Resources, and Accommodating Disabilities

Textbook Blitzer, *Precalculus (Custom Lehman Version)* Students will receive purchasing information on their first day of class.

Technology: Students can use a Scientific Calculator in class, on homework, and on quizzes/exams. Graphing Calculators are not permitted at all.

Tutoring: Departmental tutoring is available in the Math Lab on the 2nd floor of Gillet Hall Room 233. For updated information please visit the following website (<http://www.lehman.edu/academics/math-lab.php>)

Reserve: Selected books have been placed on reserve in the library.

Accommodating Disabilities: Lehman College is committed to providing access to all programs and curricula to all students. Students with disabilities who may need classroom accommodations are encouraged to register with the Office of Student Disability Services. For more info, contact the Office of Student Disability Services, Shuster Hall, Room 238, 718-960-8441.

Course Objectives

At the end of the course, students will be able to:

1. Use the unit circle to determine the values of trigonometric functions (b,e)
2. Evaluate and Graph all six Trigonometric Functions (a,b,e)
3. Work with Inverse Trigonometric functions: Arcsin, Arccos, Arctan (a,b)
4. State and apply trigonometric identities (b,e)
5. Apply the Law of Sines and the Law of Cosines (b)
6. Solve real-world problems using Trigonometry (bc)

These objectives will be assessed on the final exam along with other important techniques.

Course Topics

There is flexibility in the order and time allotted to each of the topics below, but all topics must be covered by the instructor and understood by the student. *Section numbers refer to the most RECENT edition of the text; consult with your instructor if you are using an older edition.*

Lesson 1: 4.3 – Review of Right Triangle Trigonometry (specifically with diagonal 1 and angles 45, 30, 60)

Lesson 2: 4.1, 4.2 – Radians and the Unit Circle

Lesson 3: 4.4 – Trig Functions of Any Angle (mostly sine and cosine)

Lesson 4: 4.5 – Graphs of Sine and Cosine (Unit Circle Project)

Lesson 5: 4.7 – Inverse Trig Functions

Lesson 6: Review for Midterm

Lesson 7: Midterm Exam

Students who fail the Midterm exam should consider dropping the course.

Please consult with your professor or a math advisor during office hours for more personalized advising.

Bring a copy of your exam and completed homework

Lesson 8: 6.1 – Law of Sines (including the proof using the Unit Circle)

Lesson 9: 6.2 – Law of Cosines (including the proof using the Unit Circle)

Lesson 10: 4.4, 4.6 – Other Trig Functions: Values and Graphs

Lesson 11: 5.1 – Verifying Trigonometric Identities

Lesson 12: 5.2 – Sum and Difference Formulas

Lesson 13: 4.8 – Applications and Models **Lesson**

14: Review for Final Exam

Final Exam: A Uniform Final Exam will be given to all sections of Trigonometry during Finals Week covering the entire course especially topics needed in future courses. A sample final will be distributed. No calculators will be permitted on the final exam.

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Last Updated: Summer, 2022