

# MAT 108: Trigonometry Syllabus

## General Information

**MAT108 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* 6e. Students MUST also have access to the accompanying online homework software, MyLab. Consult with your instructor before you purchase anything.

**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.

**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 Precalculus 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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