MATH 1511 - Trigonometry

Fall 2026 Syllabus, Section 07, CRN 42949,

Credit hours: 3

Instructor

Michele Fredrick-Jacobson

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Public Instructor Information

Instructor Title: Mrs. Fredrick-Jacobson M.S.
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Course Description

1511. Trigonometry. This course, along with MATH 1510 is primarily intended to prepare STEM students for MATH 1570 or MATH 1571. Topics include algebraic structure and graphs of trigonometric functions and inverse trigonometric functions, angle measurements, similar triangles, trigonometric identities, vectors, complex numbers, polar coordinates and solving trigonometric equations with applications. Prereq.: YSU Math Placement Level 35 or higher. 3 s.h.

Course Readings

Group	Title	Author	ISBN
Required	College Algebra and Trigonometry	Julie Miller & Donna#Gerken#with ALEKS 360	9781265173159

- **Inclusive Access**

This course is part of the Inclusive Access program; you should NOT purchase any course materials as they are part of your course registration. In the event you drop this course from your schedule on or prior to the last day of DROP/ADD period, your account will be fully refunded automatically.

- **Opt-out**

By default, students are opted into the content.#If the student decides at that time, they do not want their required course materials to be delivered in this program at the low cost offered, they have the option to OPT-OUT.#We highly encourage students not to opt-out.#If you choose to opt-out, you will be responsible for obtaining the appropriate course materials/textbook/connect at the full price.

The course readings are subject to change in the event of extenuating circumstances, research developments, current events, and/or to ensure better learning.

Schedule of Topics and Assignments

Week of	Reading(s)	Proposed Topic	Due/To Prepare for Class
8/24	5.1-5.7	Trigonometric Functions: Angles and their measures, degrees and radians, right triangle, 6 trigonometric functions of any angle, unit circle, graphs of sine and cosine, Graphs of tangent, cotangent, secant and cosecant, inverse trig functions, composition of trig functions.	

8/31	5.1-5.7	Trigonometric Functions: Angles and their measures, degrees and radians, right triangle, 6 trigonometric functions of any angle, unit circle, graphs of sine and cosine, Graphs of tangent, cotangent, secant and cosecant, inverse trig functions, composition of trig functions.
9/7	5.1-5.7	Trigonometric Functions: Angles and their measures, degrees and radians, right triangle, 6 trigonometric functions of any angle, unit circle, graphs of sine and cosine, Graphs of tangent, cotangent, secant and cosecant, inverse trig functions, composition of trig functions.
9/14	5.1-5.7	Trigonometric Functions: Angles and their measures, degrees and radians, right triangle, 6 trigonometric functions of any angle, unit circle, graphs of sine and cosine, Graphs of tangent, cotangent, secant and cosecant, inverse trig functions, composition of trig functions.
9/21	5.1-5.7	Trigonometric Functions: Angles and their measures, degrees and radians, right triangle, 6 trigonometric functions of any angle, unit circle, graphs of sine and cosine, Graphs of tangent, cotangent, secant and cosecant, inverse trig functions, composition of trig functions.
9/28	6.1 – 6.3, 6.5	Analytic Trigonometry: algebraic manipulation of expressions using trig identities, including Pythagorean, sum and difference of angles, double-angle, power reducing formulas, half angle identities and applications and solving trigonometric equations.
10/5	6.1 – 6.3, 6.5	Analytic Trigonometry: algebraic manipulation of expressions using trig identities, including Pythagorean, sum and difference of angles, double-angle, power reducing formulas, half angle identities and applications and solving trigonometric equations.
10/12	6.1 – 6.3, 6.5	Analytic Trigonometry: algebraic manipulation of expressions using trig identities, including Pythagorean, sum and difference of angles, double-angle, power reducing formulas, half angle identities and applications and solving trigonometric equations.
10/19	6.1 – 6.3, 6.5	Analytic Trigonometry: algebraic manipulation of expressions using trig identities, including Pythagorean, sum and difference of angles, double-angle, power reducing formulas, half angle identities and applications and solving trigonometric equations.

10/26	6.1 – 6.3, 6.5	Analytic Trigonometry: algebraic manipulation of expressions using trig identities, including Pythagorean, sum and difference of angles, double-angle, power reducing formulas, half angle identities and applications and solving trigonometric equations.
11/2	7.1-7.3	Applications of trig functions: right triangles, laws of sines and cosines and real-world applications.
11/9	7.1-7.3	Applications of trig functions: right triangles, laws of sines and cosines and real-world applications.
11/16	8.1, 8.3 – 8.4	Trig applied to polar coordinate system and vectors: plotting points, multiple representations converting coordinate systems, complex numbers in polar form, vectors and real-world applications.
11/23	8.1, 8.3 – 8.4	Trig applied to polar coordinate system and vectors: plotting points, multiple representations converting coordinate systems, complex numbers in polar form, vectors and real-world applications.
11/30	All Sections	Final Exam Review
12/7	Final Exam	Final Exam: Monday, December 7 3:15pm-5:15pm

The course schedule, policies, procedures, and assignments in this course are subject to change in the event of extenuating circumstances, by mutual agreement, and/or to ensure better learning.