

Math 1720 - Trigonometry

Semester:

<u>Purpose:</u>	This course is designed to help students develop basic skills and concepts in trigonometry. It meets specific requirements for programs as outlined in the catalog; although helpful, it does not meet the prerequisites for Calculus I.
<u>Learning outcomes:</u>	Upon completion of this course, the student will have the ability to: <ul style="list-style-type: none">• solve enhanced mathematical problems.• use basic properties of trigonometric functions to find the value of trigonometric functions and sketch trigonometric functions• establish and use trigonometric identities• solve trigonometric equations• calculate exact and approximate values of inverse trigonometric functions• solve right triangles• use the Law of Sines and the Law of Cosines• solve applied problems involving trigonometric functions• use radian measure and solve applied problems involving circular motion
<u>Topical Outline:</u>	This course will include material from Chapters 1-7 of the required text, with an emphasis on applications. For additional information, see the course schedule (below). Topics included in the course consist of: <ul style="list-style-type: none">• Basic definitions of trigonometric functions; techniques for calculating values of trigonometric functions• Solving right triangles• Unit circle and circular functions• Trigonometric identities, including half-angle and double angle formulas• Law of Sines and Law of Cosines• Applications of Trigonometry
<u>Grading:</u>	Knowledge will be assessed and grades will be assigned according to the grading scale . Grading scale:
<u>General information:</u>	<ul style="list-style-type: none">• Attendance policy:• A grade of I will be given only in accordance with University policy.• The last day to drop without a grade is _____• Last day to drop with a "W" is _____• The final exam can be found in the University Calendar. <p>• If you have a disability that may require assistance or accommodation, or you have questions related to any accommodations for testing, note takers, readers, etc., please speak with me as soon as possible. Students may also contact the Office of Disabled Students Services (898-2783) with questions about such services.</p>

• Students receiving the lottery scholarships:

To retain Tennessee Education Lottery Scholarship eligibility, you must earn a cumulative TELS GPA of 2.75 after 24 attempted hours and a cumulative TELS GPA of 3.0 thereafter. A grade of C, D, F, or I in this class may negatively impact TELS eligibility. Dropping a class after 14 days may also impact eligibility; if you withdraw from this class and it results in an enrollment status of less than full time, you may lose eligibility for your lottery scholarship.

- The syllabus may change at the discretion of the instructor.

Sample Schedule

(T/TH – 4 exams)

Semester:	
Text:	<i>Trigonometry</i> 8 th Edition by Lial, Hornsby, and Schneider
Instructor:	
Time & Date:	
Classroom:	

The syllabus may change at the discretion of the instructor.
In particular, the order of the topics may change.

Date	Chapter	Topic
Day 1	Introduction & 1.1	Angles
Day 2	1.3, 1.4	Trigonometric Functions & Using the Definitions of the Trigonometric Functions
Day 3	2.1, 2.2	Trigonometric Functions of Acute Angles & Trigonometric Functions of Non-Acute Angles
Day 4	2.2, 2.3	Trigonometric Functions of Non-Acute Angles & Finding Trigonometric Function Values Using a Calculator
Day 5	2.4	Solving Right Triangles
Day 6	2.5	Further Applications of Right Angles
Day 7		Test I
Day 8	3.1, 3.2, 3.3	Radian Measure, Applications of Radian Measure, & The Unit Circle and Circular Functions
Day 9	3.3, 3.4	The Unit Circle and Circular Functions & Linear and Angular Speed
Day 10	4.1, 4.2	Graphs of the Sine and Cosine Functions & Translations of the Graphs of the Sine and Cosine Functions
Day 11	4.2, 4.3	Translations of the Graphs of the Sine and Cosine Functions & Graphs of the Other Circular Functions
Day 12	4.3	Graphs of the Other Circular Functions
Day 13	4.4	Harmonic Motion
Day 14		Test II
Day 15	5.1	Fundamental Identities

Day 16	5.2	Verifying Trigonometric Identities
Day 17	5.3	Sum and Difference Identities for Cosine
Day 18		Test III
Day 19	5.4	Sum and Difference Identities for Sine and Tangent
Day 20	5.5	Double-Angle Identities
Day 21	5.6	Half-Angle Identities
Day 22	6.1	Inverse Circular Functions
Day 23	6.2	Trigonometric Functions I
Day 24	6.3	Trigonometric Functions II
Day 25	6.4	Equations Involving Inverse Trigonometric Functions
Day 26		Test IV
Day 27	7.1	Oblique Triangles and the Law of Sines
Day 28	7.2	The Ambiguous Case of the Law of Sines
Day 29	7.3	The Law of Cosines
Day 30	7.3	The Law of Cosines
Day 31		Review
		Final

Date	Test
	Test I
	Test II
	Test III
	Test IV
	Final