

Standard  Institutionally Developed College: N/A

EDGE Compatible: No

**Pre-requisites**

MATH 1111 - College Algebra ( 201003 )

**Co-requisites**

**Course Description**

Emphasizes techniques of problem solving using trigonometric concepts. Topics include trigonometric functions, properties of trigonometric functions, vectors and triangles, inverse of trigonometric functions and graphing of trigonometric functions, logarithmic and exponential functions, and complex numbers.

**Course Length**

	Minutes	Contact Unit
Lecture:	2250	
Lab 2:	0	
Lab 3:	0	
Practicum/Internship:	0	
Clinical:	0	
Total:	2250	3

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Semester Credit Hours: 3

**Competencies**

Order	Description	Lecture	Lab2	Lab3	Practicum/Internship	Clinical	Total Minutes	Semester Credit Hrs
1	Trigonometric functions	315	0	0	0	0	315	0
2	Properties of trigonometric functions	450	0	0	0	0	450	0
3	Vectors and triangles	360	0	0	0	0	360	0
4	Inverse of trigonometric functions and graphing of trigonometric functions	405	0	0	0	0	405	0
5	Logarithms and exponential functions	405	0	0	0	0	405	0
6	Complex numbers	315	0	0	0	0	315	0
	<b>Totals for Course MATH 1112 - College Trigonometry ( version 201003 ):</b>	<b>2250</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>2250</b>	<b>3</b>

## Learning Outcomes

### Trigonometric functions

Order	Description	Learning Domain	Level of Learning
1	Define the six trigonometric functions.	Cognitive	Knowledge
2	Determine the trigonometric function of any angle.	Cognitive	Application
3	Perform trigonometric computations with angles measured in degrees and radians.	Cognitive	Application

### Properties of trigonometric functions

Order	Description	Learning Domain	Level of Learning
1	Recognize and verify the trigonometric identities.	Cognitive	Application
2	Prove the validity of trigonometric equations by means of the trigonometric identities.	Cognitive	Analysis

### Vectors and triangles

Order	Description	Learning Domain	Level of Learning
1	Define vector quantities and give examples.	Cognitive	Knowledge
2	Solve oblique triangles using the laws of sines and cosines.	Cognitive	Application

### Inverse of trigonometric functions and graphing of trigonometric functions

Order	Description	Learning Domain	Level of Learning
1	Model trigonometric functions graphically.	Cognitive	Application
2	Solve for an unknown angle using inverse trigonometric functions.	Cognitive	Application

### Logarithms and exponential functions

Order	Description	Learning Domain	Level of Learning
1	Review properties of logarithms.	Cognitive	Comprehension
2	Model exponential and logarithmic functions graphically.	Cognitive	Application
3	Solve exponential and logarithmic applications.	Cognitive	Analysis

### Complex numbers

Order	Description	Learning Domain	Level of Learning
1	Rewrite vectors as complex numbers.	Cognitive	Application
2	Express complex numbers in trigonometric form.	Cognitive	Application
3	Perform mathematical operations using complex numbers.	Cognitive	Application

## References

Order	Reference Type	Description
1	Book with Author(s) Listed	Sullivan. (2008). Algebra and Trigonometry. (8th). Upper Saddle River: Prentice Hall. www.prenticehall.com
2	Book with Author(s) Listed	Aufmann, Barker, Nation. (2008). College Algebra and Trigonometry. (6th). Boston: Houghton Mifflin. www.hmco.com

Order	Reference Type	Description
3	Book with Author(s) Listed	Blitzer. (2010). Algebra and Trigonometry. (4th). Upper Saddle River: Prentice Hall. <a href="http://www.prenticehall.com">www.prenticehall.com</a>