

Standard  Institutionally Developed College: N/A

EDGE Compatible: No

**Pre-requisites**

MATH 1013 - Algebraic Concepts ( 201003 )

**Co-requisites**

**Course Description**

Emphasizes trigonometric concepts, logarithms, and exponential functions. Topics include trigonometric concepts, logarithms and exponentials.

**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 Concepts	1500	0	0	0	0	1500	2
2	Logarithms and Exponentials	750	0	0	0	0	750	1
<b>Totals for Course MATH 1017 - 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 Concepts			
Order	Description	Learning Domain	Level of Learning
1	Define the trigonometric functions of the angles in a right triangle in terms of the sides.	Cognitive	Knowledge
2	Evaluate trigonometric functions using calculators or tables.	Cognitive	Application
3	Solve for unknown sides of a right triangle using the trigonometric functions.	Cognitive	Application

Order	Description	Learning Domain	Level of Learning
4	Solve for unknown angles in a right triangle using inverse trigonometric functions.	Cognitive	Application
5	Solve applied right triangle problems using trigonometric functions.	Cognitive	Analysis
6	Define the trigonometric functions in terms of coordinates of points on the unit circle.	Cognitive	Knowledge
7	Define angle measure in terms of degrees and radians.	Cognitive	Knowledge
8	Convert from one type of angular measurement to the other.	Cognitive	Application
9	Compute arc lengths using radian measure.	Cognitive	Application
10	Define the periodic condition of trigonometric functions.	Cognitive	Knowledge
11	Determine amplitude, period, frequency, and phase angle	Cognitive	Application
12	Graph the trigonometric functions.	Cognitive	Application
13	Graph functions of the form: $a \sin (bx + c)$ and $a \cos (bx + c)$ .	Cognitive	Application
14	Solve for the sides or angles of oblique triangles using the laws of sines and cosines.	Cognitive	Application
15	Define vector notation and represent vectors graphically.	Cognitive	Knowledge
16	Add and subtract vectors.	Cognitive	Application
17	Solve applied problems involving vectors.	Cognitive	Analysis
18	Define complex numbers.	Cognitive	Knowledge
19	Write complex numbers in trigonometric form.	Cognitive	Application
20	Multiply and divide complex numbers in trigonometric form.	Cognitive	Application

#### Logarithms and Exponentials

Order	Description	Learning Domain	Level of Learning
1	Define logarithmic notation.	Cognitive	Knowledge
2	Evaluate logarithmic expressions.	Cognitive	Application
3	Solve logarithmic and exponential equations.	Cognitive	Application
4	Evaluate and graph logarithmic and exponential functions.	Cognitive	Application

#### References

Order	Reference Type	Description
1	Book with Author(s) Listed	Beck & Chopra. (2004). Introduction to trigonometry and geometry. (1st). ?: Educo International.
2	Book with Author(s) Listed	Lial, Hornsby, and Schneider. (200??). Trigonometry. (9th). New York: Addison-Wesley.