MATH 1015 - Geometry and Trigonometry (version 201003)

Posted: 02/10/2010

☑ Standard ☐ Institutionally Developed College: N/A

EDGE Compatible: No

Pre-requisites

MATH 1013 - Algebraic Concepts (201003)

Co-requisites

Course Description

Emphasizes basic geometric and trigonometric concepts. Topics include measurement conversion, geometric terminology and measurements, and trigonometric terminology and functions.

Course Length

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

Competencies

Order	Description	Lecture	Lab2	Lab3	Practicum/ Internship	Clinical	Total Minutes	Semester Credit Hrs
1	Geometric Concepts	900	0	0	0	0	900	1
2	Trigonometric Concepts	1350	0	0	0	0	1350	1
	Totals for Course MATH 1015 - Geometry and Trigonometry (version 201003):	**2250**	**0**	**0**	**0**	**0**	**2250**	**3**

Learning Outcomes

Geometric Concepts

Order	Description	Learning Domain	Level of Learning
1	Convert units of measurement within and between the English and metric systems.	Cognitive	Application

Order	Description	Learning Domain	Level of Learning
2	Identify the terminology associated with points, lines, planes, and angles.	Cognitive	Knowledge
3	Define angle measure in terms of degrees and radians.	Cognitive	Knowledge
4	Convert from one type of angular measurement to the other.	Cognitive	Application
5	Compute arc length.	Cognitive	Application
6	Use the concepts of similarity and congruence to find measures of angles.	Cognitive	Application
7	Determine missing sides or angles using similar triangles.	Cognitive	Application
8	Use the Pythagorean Theorem to solve for missing side of a right triangle.	Cognitive	Application
9	Find the area and perimeter (circumference) of rectangles, squares, triangles, trapezoids, circles, and all regular polygons.	Cognitive	Application
10	Find the volume and surface area of rectangular solids, right circular cylinders, cones, and spheres.	Cognitive	Application

Trigonometric Concepts

Order	Description	Learning Domain	Level of Learning
1	Define the trigonometric functions of 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
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	Use the laws of sines and cosines to solve for sides or angles in oblique triangles.	Cognitive	Application
7	Solve applied problems involving oblique triangles by using the laws of sines and cosines.	Cognitive	Analysis

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	Cleaves & Hobbs. (2002). Essentials of college mathematics. (2nd). Upper Saddle River, NJ: Pearson.