Trigonometry

Course Description:
Trigonometry is a course that consists of the algebraic, graphic, numeric, and modeling approach to the study of angles, trigonometric functions using both a right angle and a unit circle approach, and various applications; with or without technology, and with appropriate symbolic manipulation skills. It includes the use of appropriate mathematical language, including symbolism, to define, evaluate, and analyze the characteristics of trigonometry concepts. At least 70% of the course time must be spent on the essential topics. All essential topics must be addressed. The course must be at least a 3 hour credit course.

Course objectives will stem from these essential topics:
- Trigonometric identities and their proofs
- Application and use of trigonometric identities in solving problems
- Trigonometric functions and their characteristics including graphing of transformations
- Inverses of trigonometric functions including domain and range
- Composition of trigonometric functions
- Degree and radian measurement of angles
- Solving application problems involving right and oblique triangles
- The Law of Sines, The Law of Cosines
- Verify and apply various trigonometric identities including sum and difference and double and half-angle
- Solve a variety of trigonometric and inverse trigonometric equations

Additional optional topics:
- Complex numbers
- Polar coordinates, equations, and graphs
- Polar equations
- Polar graphs
- Product to sum identities
- Vectors and vector applications

Template for Course Inventory

Please fill out the following table and submit attachment(s). Approved courses must be resubmitted every 5 years.

Please attach the following materials:

- Current working syllabus and lab syllabus that contains instructional goals and/or objectives
- Comprehensive final; in the absence of a comprehensive final no more than 5 sample assessments.

Course #			
Course Title			
Beginning Term (when is/was it first offered?)	If more than five years, check box ☐		
	If less than five years, enter date:		
Credit Hours (including the entire course, lecture/lab)	Course:	Lab:	
Co-/Pre-requisite (test scores for placement)		Test	Score
	Co-Req:		
	Pre-Req:		
Successor Course:			
Catalog Description			
All Textbook(s)/Lab Manual	ISBN: Title: Publisher: Author: Edition: Copyright Year:	ISBN: Title: Publisher: Author: Edition: Copyright Year:	

Indicate the percent time spent on each learning objective (should add up to 100%). To indicate where evidence of each learning objective is located in this submission, please check all boxes that apply.

S – Syllabus   T – Topics list   C – Catalog Description   A – Assessment   O – other attachment

Indicate the typical percentage of time spent on each learning outcome/topic	Learning Objective	% Time	S	T	C	A	O
	1. Trigonometric identities and their proofs						
	2. Application and use of trigonometric identities in solving problems						
	3. Trigonometric functions and their characteristics including graphing of transformations						
	4. Inverses of trigonometric functions including domain and range						
	5. Composition of trigonometric functions						
	6. Degree and radian measurement of angles						
	7. Solving application problems involving right and oblique triangles						
	8. The Law of Sines, The Law of Cosines						
	9. Verify and apply various trigonometric identities including sum and difference and double and half-angle						
	10. Solve a variety of trigonometric and inverse trigonometric equations						
Non-essential topics (may not be covered at all)	11. Complex numbers						
	12. Polar coordinates, equations, and graphs						
	13. Polar equations						
	14. Polar graphs						
	15. Product to sum identities						
	16. Vectors and vector applications						
	17. Other:						
Check box	This course uses both right angle and unit circle approaches	☐ Yes ☐ No					
Check box	This course addresses the use of multiple representations of functions including tables, graphs, and equations.	☐ Yes ☐ No					

Additional Comments:	

Name of individual submitting:_____ Date:_____

Email address:_____

Please contact WVHEPC, Academic Affairs with questions