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SUMMARY OF INFORMATION ON EACH COURSE

1.	Name of Course	Trigonometry
2.	Course Code	PTM0145
3.	Status of Course [Applies to (cohort)]	Core
4.	MQF Level/Stage Note : *Certificate – MQF Level 3* *Diploma – MQF Level 4* *Bachelor – MQF Level 6* *Masters – MQF Level 7* *Doctoral – MQF Level 8*	Foundation
5.	Version (State the date of the Senate approval – history of previous and current approval date)	Date of previous version : July 2014 Date of current version: June 2015
6.	Pre-Requisite	Nil
7.	Name(s) of academic/teaching staff	Heng Chai Yen, Mohd Daud Hassan
8.	Semester and Year offered	Trimester 1
9.	Objective of the course in the programme : To expose students to the basic topics in trigonometry and matrices	
10.	Justification for including the course in the programme : To equip students with the basic concepts of trigonometry and matrices	

11. Course Learning Outcomes :

Course Learning Outcomes :	Domain	Level
LO1 Solve problems related to complex numbers	Cognitive	Level 3
LO2 Sketch the graph of straight lines and conic sections	Cognitive	Level 3
LO3 Solve problems related to trigonometric functions, triangles, polar coordinates and complex plane	Cognitive	Level 3
LO4 Use matrices to solve a system of linear equations	Cognitive	Level 3

12. Mapping of Learning Outcomes to Programme Outcomes :

Learning Outcomes	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8
LO1	X	X				X		
LO2	X	X				X		
LO3	X	X				X		
LO4	X	X				X		

13. Assessment Methods and Types :

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	Method and Type	Description/Details	Percentage
	Quiz	Written quizzes	20%
	Test	Written tests	30%
	Final Examination	Written examination	50%

14. Mapping of assessment components to learning outcomes (LOs)

Assessment Components	LO1	LO2	LO3	LO4
Quiz	20	20	20	28.57
Test	30	30	30	
Final Exam	50	50	50	71.43

15. Details of Course

Topics	Mode of Delivery (eg : Lecture, Tutorial, Workshop, Seminar, etc.) Indicate allocation of SLT (lecture, tutorial, lab) for each subtopic	
	Lecture	Tutorial
Trigonometry Trigonometric functions: angles and their measure, trigonometric ratios for a general angle; Graphs of trigonometric functions, inverse trigonometric functions; Trigonometric identities and equations; Law of Sines and Cosines.	14	6
Complex Numbers Algebraic properties of complex numbers; Polar form of complex numbers; The complex plane and De Moivre's Theorem.	4	2
Coordinate Geometry Rectangular coordinates (in 2-D): equations and graphs of the straight lines, parallel and perpendicular lines; Distance and midpoint formulas; Circles; Conic sections; Polar coordinates.	6	3
Matrices Matrix operations: addition, subtraction, scalar multiplication, matrix multiplication; Identity matrix; Transpose of a matrix; Determinant of a square matrix (2x2 and 3x3 matrix only); Cofactor matrix; Adjoint matrix ; Inverse matrix; Solving systems of linear equations using the inverse matrix and Cramer's Rule.	4	2
Total	**28**	**13**

16.

Total Student Learning Time (SLT)	Face to Face / Guided Learning	Independent Learning
Lecture	28	28

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	Tutorials	13	13
	Tests	2	6
	Quizzes	5	5
	Final Exam	2	18
	Sub Total	50	70
	Total SLT	**120**	
17.	Credit Value	**3**	
18.	Reading Materials :		
	Textbooks		
	Sullivan, M., et al. (2011). *Algebra & trigonometry*. Prentice Hall.		
	Reference Material (including 'Statutes' for Law)		
	Sullivan, M. (2012). *Algebra & trigonometry* (9th ed.). Boston: Pearson Education, Inc.		
	Coburn, J.W. (2010). *Algebra and trigonometry* (2nd ed.). New York: McGraw-Hill.		
	Dugopolski, M. (2011). *College algebra & trigonometry: A unit circle approach* (5th ed.). Boston: Pearson Education, Inc.		
	Beecher, J.A., Penna, J.A. & Bittinger, M.L. (2012). *Algebra and trigonometry* (4th ed.). Boston: Pearson Education, Inc.		

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Appendix (to be compiled when submitting the complete syllabus for the programme) :

1. Mission and Vision of the University and Faculty
2. Programme Objectives or Programme Educational Objectives
3. Programme Outcomes (POs)
4. Mapping of POs to the 8 MQF domain
5. Summary of the Bloom's Taxonomy's Domain Coverage in all the Los in the format below :

Subject	Learning Outcomes (please state the learning 0utcomes)	Bloom's Taxonomy Domain		
		Affective	Cognitive	Psychomotor
ABC1234	Learning Outcome 1			
	Learning Outcome 2			
	Learning Outcome 3			
	Learning Outcome 4			
DEF5678	Learning Outcome 1			
	Learning Outcome 2			
	Learning Outcome 3			
	Learning Outcome 4			

6. Summary of LO to PO measurement
7. Measurement and Tabulation of result for LO achievement
8. Measurement Tabulation of result for PO achievement