MULTIMEDIA UNIVERSITY

SUMMARY OF INFORMATION ON EACH COURSE/MODULE

1.	Name of Course/Module/Subject	Trigonometry
2.	Course /Subject Code	PTR0015
3.	Status of Subject	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 last Senate approval)	December 2013
6.	Pre-Requisite/Requirement for Registration	NIL
7.	Name(s) of academic/teaching staff	Mohd Daud Hassan, Heng Chai Yen
8.	Semester and Year offered	Trimester 1
9.	Objective of the course/module/subject in the programme : To equip students with basic knowledge and fundamental principles of mathematics for IT students.	
10.	Justification for including the subject in the programme : To provide students with sound understanding of the basic mathematical concepts in preparation for the degree courses.	

11.

Subject Learning Outcomes :	Domain	Level
LO1: Solve problems related to complex numbers.	Cognitive	3
LO2: Sketch the graph of straight lines and conic sections.	Cognitive	3
LO3: Solve problems related to trigonometric functions, triangles, polar coordinates and complex plane.	Cognitive	3
LO4: Solve problems for systems of linear equations using matrices.	Cognitive	3

12. Mapping of Learning Outcomes to Programme Outcomes :

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

13. Assessment Methods and Types :

Method and Type	Description/Details	Percentage
Quizzes	Written exam	20
Tests	Written exam	30
Final Exam	Written exam	50

14. Details of Subject

Topics	Mode of Delivery (eg : Lecture, Tutorial, Workshop, Seminar, etc.) Indicate allocation of SLT (lecture, tutorial, lab) for each subtopic		
	Lecture (Hours)	Tutorial (Hours)	SLT (Hours)

	1. 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.	13	12	25
	2. Complex Numbers Algebraic properties of complex numbers; Polar form of complex numbers; The complex plane and De Moivre's Theorem.	2	2	4
	3. 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.	9	8	17
	4. 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 and Inverse matrix. Solving systems of linear equations using the inverse matrix and Cramer's Rule.	4	4	8
		28	26	54

15.	Total Student Learning Time (SLT)	Face to Face	Total Guided and Independent Learning
	Lecture	28	56
	Tutorials	26	52
	Quizzes	-	10
	Tests	3	15
	Final Exam	2	22
	Sub Total	59	155
	Total SLT	155	
16.	Credit Value	3 (155 / 40 = 3.875)	
17.	Reading Materials :		
	Textbook	Reference Materials	

		Stewart, J., Redlin, L., and Watson, S. (2011). *Precalculus: Mathematics for Calculus, 6th ed.*, Brooks Cole Publishing Company. Sullivan, M., Fadzilah, S., Goh, W. W., Heng, C. Y., Mohd Daud, H., Ng, L. N., Tan, L. P., and Tay, C. L. (2011). *Algebra & Trigonometry*. Malaysia: Pearson. Blitzer, R. F. (2013). *Algebra and Trigonometry, 5th ed.*, Prentice Hall. Davis, L. (2000). *Applied College Algebra and Trigonometry*, Prentice Hall. Swokowski, E., and Cole, J. A. (2010). *Algebra and Trigonometry with Analytic Geometry, 12th ed.*, Brooks/Cole Publishing Company.

18. 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. Mapping of Los to the POs
6. 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			

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