

## SUMMARY OF INFORMATION ON EACH COURSE/MODULE

1.	Name of Course/Module/Subject	Algebra							
2.	Course /Subject Code	PMT0075							
3.	Status of Subject	Core							
4.	MQF Level/Stage Note : <i>Certificate – MQF Level 3</i> <i>Diploma – MQF Level 4</i> <i>Bachelor – MQF Level 6</i> <i>Masters – MQF Level 7</i> <i>Doctoral – MQF Level 8</i>	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 program : To provide students with sound understanding of basic mathematical concepts								
11.	Subject Learning Outcomes :		Domain				Level		
	LO1: Apply fundamental concepts of algebra and solve problems related to equations and inequalities		Cognitive				3		
	LO2: Sketch the graphs of various functions and solve problems related to functions		Cognitive				3		
	LO3: Prove mathematical statements using Mathematical Induction and use Binomial Theorem to expand a binomial raised to a power		Cognitive				3		
	LO4: Solve problems related to arithmetic and geometric progressions		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)
	<b>1. Fundamentals of Algebra</b> Real numbers, exponents and radicals, algebraic expressions, polynomials, factoring polynomials, rational expressions.	5	5	10
	<b>2. Equations and Inequalities</b> Equations: linear equations, quadratic equations, polynomial equations, rational and radical equations. Inequalities: linear, quadratic, polynomial and rational inequalities. Equations and Inequalities involving absolute value.	6	6	12
	<b>3. Functions, Polynomials and Rational Functions</b> Functions, domain and range, graphs of functions and transformations of functions. Types of functions and their graphs: quadratic functions, polynomial functions, rational functions. Composite and inverse functions. Dividing polynomials, Remainder theorem and Factor theorem.	7	7	14
	<b>4. Exponential Functions and Logarithmic Functions.</b> Exponential and logarithmic functions. Laws of logarithms Exponential and logarithmic equations.	5	5	10
	<b>5. Sequences and Series</b> Introduction to summation notation. Sequence and Series. Arithmetic sequence and Geometric sequence and series. Mathematical induction. Binomial theorem.	5	5	10
		28	28	56
15.	Total Student Learning Time (SLT)	Face to Face		Total Guided and Independent Learning
	Lecture	28		56
	Tutorials (+ Quizzes)	28		56
	Tests	2		10
	Final Exam	2		22
	Sub Total	60		144
	Total SLT	144		
16.	Credit Value	3 (144 / 40 = 3.6)		
17.	Reading Materials :			
	Textbook		Reference Materials	

		Stewart, J., Redlin, L., & Watson, S. (2012) Precalculus: Mathematics for Calculus (6th ed.), Brooks/Cole, Cengage Learning.			
		Sullivan, M. (2012). <i>Algebra and Trigonometry</i> (9 <sup>th</sup> ed.), Pearson Education.			
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 :				
	<b>Subject</b>	<b>Learning Outcomes (please state the learning Outcomes)</b>	<b>Bloom's Taxonomy Domain</b>		
			<b>Affective</b>	<b>Cognitive</b>	<b>Psychomotor</b>
	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				