

1.	Course Title	Mathematics For Information Technology		
2.	Course Code	CMTH1023		
3.	Status	Major		
4.	Credit Hour	Credit hour: 3 (2+1) 2 for lecture (2 hours per week x 14 weeks) 1 for tutorial (1.5 hours per week x 14 weeks)		
5.	Semester/Year	2/1		
6.	Prerequisites	CMTH1013 Foundation Of Mathematics		
7.	Teaching method:	Lecture and Tutorial		
8.	Evaluation	Assessment and Marking Percentage: Quizzes 10 % Assignments 10 % Interactions through discussion board 10 % Mid-Semester Exam 20 % Final Examination 50 %		
9.	Lecturer	Norizawati Bt Zamin		
10.	Objective of the Subject	This subject is designed to enable students to: • understanding the terms and concepts of the derivatives • understand the definition of integration, definite integral and indefinite integral • apply the rules in differentiation and integration • apply the differentiation and integration of trigonometric functions • apply the equation of the tangent and normals and extremum problems in differentiation		
11.	Learning Outcomes	Upon completion of this subject, students should be able to: • explain the terms and concepts of the derivatives • explain the definition of integration, definite integral and indefinite integral • solve the differentiation and integration problems by using basic rules • solve the differentiation and integration of trigonometric functions • solve the equation of the tangent and normals and extremum problems in differentiation		
12.	Synopsis	This subject provides calculus topics such as differentiation and integration. The topics are completely different from those of algebra and geometry because in these topics student will learn important rules for finding derivatives and how to use it to analyze the rate of change of quantity. Integral calculus is concerned with the reverse process of the derivatives. There is one (1) special topic for function; there are logarithmic functions, exponential functions and trigonometric.		
13.	Topics	Details	Lecture (Hrs)	Tutorial (Hrs)
	Topic 1	CHAPTER 1: FUNCTIONS • Logarithmic Functions • Exponential Functions • Trigonometric	4	3
	Topic 2	CHAPTER 2: DIFFERENTIALION • Rules for differentiation • Product rule • Quotient rule • Chain rule • Power rule • Derivatives of logarithmic functions • Derivatives of exponential functions • Derivatives of trigonometric functions • Higher order deprivatives • Applications of differentiation i. Equations of tangents and normals ii. Stationary points: Maxima and minima	16	12

	Topic 3	CHAPTER 3: INTEGRATION • The indefinite integral • Integration with initial conditions • The definite integral • Integration of simple exponential • Integration using partial fractions • Area under the curve	8	6
		Total contact hours	28	21
		Equivalent lecture hours	28	14
		Total lecture hours	42	
		Credit hours	3	
14.	Main reference:	1. Sim O. B., Yong L. K., Siti Eishah Ishak, Fauzi Mohamed Yusof, R. Suzita R. Suleiman, Mathematics for Matriculation Semester 1 : 1st Edition, Penerbit Fajar Bakti Sdn. Bhd. 2. Eng T. C., Sim O. B., Hwa K. B., Soon L. M., Mathematics for Matriculation Semester 2 : 1st Edition, Penerbit Fajar Bakti Sdn. Bhd.		
15	Additional References:	Ann Whitehouse, Pure Mathematics Textbook : HLT Publications: Additional Mathematics: HH Heng, Khoo Cheng, JF Talbert, Longman		
	Other Materials:	All other materials will be available to students online.		