

COURSE INFORMATION

Faculty	General Foundation Programme
Program	Mathematics

1. General Course Information

1.1. Course Title: **Basic Mathematics**

1.2. Course Code: **SET 1**

1.3. Course Level: **GFP**

1.4. Course Credit Units: **NA**

2. Course Learning Outcomes

2.1. Course Learning Outcomes mapping with Program Learning Outcomes

Course Learning Outcomes	Program Learning Outcomes																
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	
Upon completion of the course, students are expected to be able to:																	
A. Knowledge and Understanding																	
A.1. Describe the set of real numbers, all its subsets and their relationship, as well as for the four basic arithmetic operations where applicable .	✓																
A.2. Identify and use the arithmetic properties of subsets of integers, rational, irrational, and real numbers, including closure properties		✓															
A.3. Use the exponent laws, radicals laws, and apply them to simplify expression.			✓	✓													
A.4. Manipulate fractions and percentages.					✓												
A.5. Manipulate decimals and ratios.						✓											
A.6. Change measurements and conversion from one unit to another.							✓										
A.7. Specify the basic algebra concepts such as variables, terms, expressions, brackets, factorization, etc.								✓									
A.8. Perform operations on polynomials and rational expressions, manipulate numerical and polynomial expressions, simplify rational expressions, and rationalize numerators or denominators.									✓								
A.9. Solve first degree equations, and equations involving radicals and fractional expression.										✓							
A.10. Solve linear inequalities.													✓				
A.11. Know the relationship between degree															✓		

and radian measure of an angle.																			
A.12. Find the length of a circular arc and the area of a sector.																			✓
A.13. Determine the trigonometric and circular functions.																			✓
A.14. Solve right-angled triangles using angles of elevation and depression.																			✓
B. Cognitive/Intellectual Skills																			
B.1. Use the quadratic formula to find roots of a second-degree polynomial..																			✓
B.2. Use the fundamental trigonometric identities in various problems.																			✓
C. Practical Skills																			
C.1. Translate worded problems into mathematical expression and model simple real-life problems with linear equations.																			✓
C.2. Translate worded problems into mathematical expression and model simple real-life problems with quadratic equations.																			✓
C.3. Translate linear inequalities worded problems into mathematical expression and model simple real-life problems with linear inequalities.																			✓