



COURSE LEARNING OUTCOMES (CLOs)

Faculty	General Foundation Program							
Program	Mathematics							
Notional hours of learning (direct contact time + other independent activities/study time)	5 hours per week							
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								
1.5. Course Learning Outcomes mapping with Program Learning Outcomes								
Course Learning Outcomes			Program Learning Outcomes					
Upon completion of the course, students are expected to be able to:			1	2	3	4	5	6
A. Knowledge and Understanding								
A.1. Describe the set of real numbers, all its subsets, and their relationship, as well as 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, and radicals' laws, and apply them to simplify expression.					✓			
A.4. Manipulate fractions and decimals.					✓			
A.5. Manipulate ratios and percentages.					✓			
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 the 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 functions.			✓			
B. Cognitive/Intellectual Skills						
B.1. Use the quadratic formula to find the roots of a second-degree polynomial.			✓			✓
B.2. Use the angles of elevation and depression to solve right-angled triangles.			✓			✓
C. Practical Skills						
C.1. Translate worded problems into mathematical expressions and model simple real-life problems with linear equations and inequalities.			✓			✓
C.2. Translate worded problems into mathematical expressions and model simple real-life problems with quadratic equations.			✓			✓