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: **Applied Mathematics**

1.2. Course Code: **SET 2**

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. Use coordinate plane to solve algebraic and geometric problems and understand geometric concepts such as equation of a line, perpendicular, parallel, and tangent lines.			✓			✓
A.2. Determine the geometric concept of the equation of a circle.			✓			✓
A.3. Determine the inverse relationship between exponents and logarithms.			✓			
A.4. Use the inverse relationship between exponents and logarithms relationship to solve related problems.			✓			
A.5. Solve exponential and logarithmic equations.			✓			✓
A.6. Determine the basic concepts of descriptive statistics, mean, median, and mode.			✓			✓
A.7. Summarize data into tables and simple graphs (bar charts, histograms, and pie charts).			✓			✓
A.8. Determine the basic probability concepts.			✓			✓
A.9. Compute the probability of simple events using tree diagrams and formulas for permutations and combinations			✓			✓
A.10. Solve quadratic equations and inequalities.			✓			✓
A.11. Solve two variables' linear equations and inequalities and graphs of two variables' linear equations and inequalities.			✓			✓

A.12. Determine the solution set of a series of three simultaneous inequalities of two variables graphically.			✓			✓
A.13. Determine simple and compound interest.			✓			✓
A.14. Relate compound interest to exponential growth.			✓			✓
A.15. Determine the definition of a function and its graph.			✓			✓
A.16. Sketch the graphs of quadratic, exponential, and logarithmic functions.			✓			✓

A.17. Determine the zeros and the maximum or minimum of a quadratic function.			✓			✓
B. Cognitive/Intellectual Skills						
B.1. Use the three types of symmetry of an equation to sketch its graph.			✓			✓
C. Practical Skills						
C.1. Translate worded problems into mathematical expressions and model simple real-life problems with quadratic equations.			✓			✓