



1. Title: Associate of Arts: Liberal Arts: **Emphasis in Mathematics**
2. Summary of Goals—Learning Outcomes:

Students will demonstrate the ability to perform computations and apply critical thinking to solve problems in a variety of math courses. The student who completes a degree with an Associate of Arts in Liberal Arts with an Emphasis in Mathematics will have completed at least one mathematics course from the typical courses required for a major in Mathematics (Math G180 or higher).

The student who graduates with a degree in Liberal Arts with an Emphasis in Mathematics will be able to:

Solve linear and nonlinear equations in the real and complex number system. (Math G104, Math G115, Math G170)

Calculate probabilities of independent and mutually exclusive events and conditional probability using appropriate formulas and theorems. (Math G103, Math G155, Math G160, Math G100)

Compute derivatives of basic functions and the derivatives of their sums, differences, products, quotients, and compositions. (Math G140, Math G180, Math G185, Math G280).

Solve right and oblique triangles and use appropriate laws to solve applied problems. (Math G120, Math G170)

Perform matrix operations, evaluate determinants, and solve systems of linear equations using appropriate computational techniques. (Math G115, Math G235).

Solve first-order differential equations. (Math G185, Math G282).

3. Course Listing: Choose any combination from the following list to total at least 18 units. Selections must include one math course at the level of Math G180 or above. Students should check with a counselor to see which courses will transfer to their target university.

Math G100 – Liberal Arts Mathematics (3)

Math G103 – Statistics for Elementary Teachers (3)

Math G104 – Mathematics for Elementary Teachers 1 (3)

Math G115 – College Algebra (4)

Math G120 – Trigonometry (3)

Math G140 – Survey of Calculus (4)

Math G155 – Finite Mathematics with Applications (4)

Math G160 – Introduction to Statistics (4)

Math G170 – Pre-Calculus (5)

Math G180 – Calculus I (5)  
Math G185 – Calculus II (5)  
Math G235 – Applied Linear Algebra (4)  
Math G280 – Calculus III (5)  
Math G282 – Ordinary Differential Equations (4)  
Math G285 – Introduction to Linear Algebra and Differential Equations (5)  
Science – One science class from the list identified for the Science Area of Emphasis

Required Subtotal:	18 units
Completion of GE Requirements:	21-41 units
Additional Electives: (as needed to reach 60)	_____
Degree Total:	60 units