

# LIBERAL ARTS - SCIENTIFIC INQUIRY AND QUANTITATIVE REASONING - ASSOCIATE IN ARTS

**Scientific Inquiry and Quantitative Reasoning** courses emphasize the natural sciences which examine the physical universe, its life forms and its natural phenomena. Courses in Math emphasize the development of mathematical and quantitative reasoning skills beyond the level of intermediate algebra. Students will be able to demonstrate an understanding of the methodologies of science as investigative tools. Students will also examine the influence that the acquisition of scientific knowledge has on the development of the world's civilizations.

## Transferability

This major can prepare students with either a narrow or interdisciplinary focus in mathematics and natural science in order to pursue similar majors at four-year institutions. Student should refer to the catalog of their prospective transfer institution and consult a counselor. General Education courses for the A.A. degree, should be selected carefully to meet the requirements of the intended transfer institution. A grade of "C" or better is required in all coursework for the major.

## Program Learning Outcomes

- Explain the methodologies of science as investigative tools.
- Examine the influence that the acquisition of scientific knowledge has on the development of the world's civilizations.

## Major Requirements

Course	Title	Credits
Select 18 units from the following:		18
ASTRO 010	Introduction to Astronomy	3
ASTRO 010L	Introductory Astronomy Lab	1
BIOL 004A	General Principles and Cell Biology	5
BIOL 004B	Biodiversity and Organismal Biology	5
BIOL 020	Human Biology	4
BIOL 021	General Biology	4
BIOL 061	Human Heredity	3
BIOL 063	Ecology	3
BIOL 064	Marine Biology	4
BIOL 071	Human Anatomy	5
BIOL 072	Human Physiology	5
BIOL 074	General Microbiology	5
BUS 060	Fundamentals of Business Statistics	3
CHEM 001A	General Chemistry	5
CHEM 001B	General Chemistry	5
CHEM 010	Everyday Chemistry	4
CHEM 012A	Organic Chemistry	5
CHEM 012B	Organic Chemistry	5
CHEM 015	Fundamentals of Chemistry	4
CHEM 032A	Intro to General, Organic, & Biological Chemistry	4

CHEM 032B	Intro to General, Organic, & Biological Chemistry	4
CHEM 061	Introduction to Fermentation Chemistry	3
CHEM 065	Quantitative Analysis	4
CIS 107	Technest 2: Data Science Coding	3
ENVIR 010	Environmental Science	4
GEOG 010	Introduction to Physical Geography	3
GEOL 010	Physical Geology	3
GEOL 010L	Physical Geology Laboratory	1
GEOL 015	Earth Science	3
GEOL 015L	Earth Science Laboratory	1
MATH 020	College Algebra for Liberal Arts	3
MATH 021	Precalculus Algebra	4
MATH 022	Trigonometry	3
MATH 025	Precalculus Algebra and Trigonometry	6
MATH 051	Mathematics for General Education	3
MATH 052	Mathematics for Elementary Education	3
MATH 061	Finite Mathematics	3
MATH 062	Calculus for Business and the Social Sciences	3
MATH 063	Elementary Statistics	3
MATH 065	Integrated Statistics II	5
MATH 070	Discrete Mathematics	4
MATH 071	Calculus I With Analytic Geometry	5
MATH 072	Calculus II with Analytic Geometry	5
MATH 073	Multivariable Calculus	5
MATH 078	Differential Equations	4
MATH 079	Linear Algebra	3
METEO 010	Weather and Climate	3
OCEAN 010	Descriptive Oceanography	3
PHYS 002A	Algebra/Trigonometry-Based Physics I	4
PHYS 002B	Algebra/Trigonometry-Based Physics II	4
PHYS 004A	General Physics	5
PHYS 004B	General Physics	5
PHYS 004C	General Physics	5
PSYCH 031	Biological Psychology	3

## A.A. Liberal Arts - Scientific Inquiry and Quantitative Reasoning

Course	Title	Credits
Major Requirements		18
General Electives if necessary to reach 60 units		2
General Education Requirements		39
Physical Activity		1
Total Units		60