Liberal Arts: Mathematics & Science (Nontransfer)

Award Type: Associate in Arts

The Associate Degree in Liberal Arts is designed for students who wish to have a broad knowledge of liberal arts and sciences plus additional coursework in an “Area of Emphasis.” The curriculum in liberal arts allows students to develop an appreciation of the beauty and values that have shaped and enriched our culture. The graduate of the AA Program in Liberal Arts (Non Transfer) will: • Complete Allan Hancock College AA degree General Education, Graduation and Proficiency Requirements 21-30 units. • Complete 18 units in one “Area of Emphasis” from those listed below. • Complete a total of 60 associate degree applicable units. Courses emphasize the natural sciences which examine the physical universe, its life forms and its natural phenomena. Courses in mathematics 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.

The graduate of the Associate in Arts in Liberal Arts: Mathematics & Science (Nontransfer) will:

- Demonstrate an ability to think logically and critically in solving problems; explaining conclusions; and evaluating, supporting or critiquing the thinking matters of others.
- Students will develop the use of logical thought, clear and precise expression, and require critical evaluation of communication in whatever symbol system the student uses.
- Understand the facts and principles that form the foundations of living and non-living systems.
- Understand experimental methodology, the testing of hypothesis, the power of systematic questioning and the influence of the scientific method on the world’s civilizations.

Program Requirements

A total of 18 major units is required for the degree with a minimum of one course in biological science, one course in physical science and one course in mathematics. Biological Sciences

Course Number	Course Title	Units
ANTH 101	Introduction to Biological Anthropology	3.0
ANTH 110	Biological Anthropology Lab	1.0
BIOL 100	Introductory Biology	4.0
BIOL 120	Humans and the Environment	3.0
BIOL 124	Human Anatomy	4.0
BIOL 125	Human Physiology	4.0
BIOL 128	Microbiology	4.5
BIOL 132	Marine Biology	4.0
BIOL 150	Cellular Biology	5.0
BIOL 154	General Botany	5.0
BIOL 155	General Zoology	5.0

Mathematics

Course Number	Course Title	Units
MATH 100	Nature of Modern Mathematics	3.0
MATH 105	Mathematics for Teachers	4.0
MATH 121	Trigonometry	3.0
MATH 123	Elementary Statistics	4.0
MATH 131	College Algebra	3.0
MATH 135	Calculus with Applications	4.0
MATH 141	Precalculus	6.0
MATH 181	Calculus 1	4.0
MATH 182	Calculus 2	4.0

MATH 183	Multivariable Calculus	4.0
MATH 184	Linear Algebra/Differential Equations	5.0

Physical Sciences

Course Number	Course Title	Units
ASTR 100	Elementary Astronomy	3.0
CHEM 110	Chemistry and Society	4.0
CHEM 120	Introductory Chemistry	4.0
CHEM 150	General Chemistry 1	5.0
CHEM 151	General Chemistry 2	5.0
GEOG 101	Physical Geography	3.0
GEOL 100	Physical Geology	4.0
GEOL 114	Oceanography	3.0
GEOL 131	Geology Of California	3.0
GEOL 141	Environmental Geology	3.0
PHSC 111	Matter, Energy and Molecules	4.0
PHSC 112	Earth and the Universe	4.0
PHYS 100	Concepts In Physics	3.0
PHYS 141	General Physics 1	4.0
PHYS 142	General Physics 2	4.0
PHYS 161	Engineering Physics 1	4.0
PHYS 162	Engineering Physics 2	4.0
PHYS 163	Engineering Physics 3	4.0