Liberal Arts and Science: Mathematics and Science A.S.

This program is designed for students who plan to transfer and continue their studies in science and mathematics leading to a bachelor's degree.

Degree Requirements
General Education requirements must be met prior to granting of the A.S. degree. For details on General Education requirements, see pages 35-36.

Credit Requirements
A minimum of 62 credits, but fewer than 120, with an average grade of C (2.0).

Curriculum Requirements
The course of study leading to this degree should be an organized curriculum composed of courses in the Liberal Arts and Sciences.

English and Humanities
12 credit hours, to include
- ENGL 101-102 (6 credits)
- ENGL 201-206, 103, 221, 222, 270 (3 credits)
- Humanities: 3 credits from art, foreign languages, music, philosophy, or theatre arts

Behavioral and Social Sciences
9 credit hours, to include
- At least 3 credit hours in ANTH 101, ECON 201, ECON 202, PSY 101 or SOC 101
- 3 credit hours in HIST 101, HIST 102, HIST 201 or HIST 202
- Behavioral and Social Sciences: anthropology, economics, geography, history, political science, psychology, sociology

Natural Sciences and Mathematics
20 credit hours (minimum), to include
- Biology, chemistry, electronics, geology, mathematics, physics
- 8 credit hours natural sciences sequence: biology, chemistry, geology, or physics
- 6-8 credit hours mathematics
  - 3-4 credits MATH 106, 108, 201-204, 212 or 214
  - 3-4 credits MATH 108, 201-204, or 214
- 4-8 credit hours science/mathematics electives

Note: Students who complete a mathematics sequence course with a C or better cannot take a lower sequence course for credit.

Liberal Arts Electives
9 credit hours
See page 37 for definition of Liberal Arts electives.

Electives
9 credit hours
No more than six credit hours total in MUSI 100 and physical education courses carrying fewer than 3 credits may be applied towards the A.S. degree.

Other World Civilizations / The Arts
Three credits from either Other World Civilizations ***or*** The Arts. See pages 35-36 for a listing of acceptable course choices. If any of the listed courses have been taken to meet another requirement, then the "Other World Civilizations or The Arts" requirement has been met.

Health and Physical Education Electives
1 credit hour in Health
2 credit hours in Physical education

Liberal Arts and Science: Mathematics and Science A.S. CONCENTRATIONS

Within the Liberal Arts: Mathematics and Science degree program, concentrations are available in Biology, Chemistry, Geographic Information Systems (GIS), and Geology to emphasize experience in a particular field for career preparation or transfer. The information below lists the courses required to fulfill specific concentrations. To complete a concentration, meet with your academic adviser and select the specified courses as part of Natural Sciences and Mathematics requirements.

These concentrations are not majors, nor are they required to complete the Liberal Arts A.S. degree. The courses required for these concentrations will meet some of the Natural Sciences and Mathematics, Liberal Arts, or General Education electives that must be completed in order to earn a degree in Liberal Arts: Mathematics and Science (see college catalog). Note: Course requirements vary among four-year science programs. It is imperative that students planning to transfer to a four-year college seek assistance from that college as early as possible when planning courses at Cayuga.

Biology Concentration

Designed for students who wish to study Biochemistry, Pharmacy, Pre-Medicine, or other health profession areas.

Required Courses–Year 1

BIOL 103-104 Principles of Biology I–II 8 cr
or BIOL 105-106 Botany and Zoology 8 cr
CHEM 103-104 General Chemistry I–II 8 cr

Required Courses–Year 2

6-8 credits selected from the following:

- BIOL 203/204 Human Anatomy and Physiology I–II 8 cr
- BIOL 208 Conservation and Natural Resources 3 cr
- BIOL 213 Current Issues in Biology 3 cr
- BIOL 214 Cell Biology 4 cr
- BIOL 216 General Microbiology 4 cr

Recommended Courses

PHYS 103-104, MATH 108, MATH 201

Chemistry Concentration

Designed for students who plan to transfer to four-year programs and continue their studies in Chemistry or related areas such as Biochemistry, Pharmacy, Pre-Medicine, or Medical Technology programs.

Required Courses

CHEM 103-104 General Chemistry I-II 8 cr
CHEM 207-208 Organic Chemistry I-II 8 cr
MATH 108, 201 Calculus I-II 8 cr

Recommended Courses

PHYS 103-104

Geographic Information Systems (GIS) Concentration

Designed for students who plan to transfer to a four-year program and continue their studies in Geographic Information Systems or related areas such as Resources Management, Geography, Urban Planning, or Environmental Science. It is strongly recommended that students consult with their chosen school as early as possible to determine the appropriate course selection for optimum transferability.

Required Courses

CHEM 103-104 General Chemistry I-II 8 cr
BIOL 103-106 8 cr
Select two of the following Biology courses:

- BIOL 103 Principles of Biology I
- BIOL 104 Principles of Biology II
- BIOL 105 Botany
- BIOL 106 Zoology

GIS 111 Introduction to GIS 3 cr
GIS 121 Remote Sensing 3 cr
GIS 122 Spatial Modeling with Raster GIS 3 cr

Recommended Courses

GEOL 110 Physical Geology 4 cr
MATH 108 Calculus I 4 cr
MATH 214 Statistics 3 cr

Geology Concentration

Designed for students who plan to transfer and continue studies in Geology or related areas such as Agronomy, Cartography, Land Use Management, Teaching or Environmental Sciences and Engineering.

Required Courses

GEOL 101 Earth Science* 3 cr
*GEOL 101 is a prerequisite for students who have not taken high school earth science, and is strongly recommended for any student planning to enter the teaching profession.
GEOL 110 Physical Geology 4 cr
GEOL 111 Historical Geology 4 cr
CHEM 103-104 General Chemistry I-II 8 cr

Recommended Courses

BIOL 105-106, PHYS 103-104