

# AS Degree in Mathematics and Science

## About the Program

**Program Goal:** Local

**GE Pattern(s):** Butte Local, Cal-GETC

**Program Code:** 44349.00AS

This degree is intended to provide a broad foundation in mathematics and science for students who are interested in transfer to a university in a related major. These courses provide an introduction to a variety of possible paths of study such as Animal Science, Biology, Chemistry, Environmental Science, Mathematics and Physics.

This program may also be appropriate for students pursuing a transfer major not available at Butte College so that they can obtain a degree while fulfilling lower-division requirements for their transfer destination. These major courses may also count toward satisfying university transfer general education requirements. Students are strongly advised to see a counselor to discuss specific choices for their degree and career path.

### Program Learning Outcome(s):

Upon successful completion of the program, the student will be able to:

1. Apply mathematical/quantitative reasoning to theoretical and real world problems.
2. Describe scientific principles, practices, and research methods, and apply the scientific method to practical problems within the sciences.
3. Critically analyze scientific research and the representation of scientific findings in the media and society.

<i>Required courses:</i>		18.00
<i>Select 18 units with at least 3 units from each area: Biological Science, Mathematics, and Physical Science</i>		18.00
<i>Biological Sciences:</i>		
AGS 20	Plant Science	3.00
AGS 40	Introduction to Animal Science	4.00
ANTH 2	Introduction to Biological Anthropology	3.00
BIOL 1	Introduction to Biology	4.00
BIOL 41	Cell and Molecular Biology	5.00
BIOL 42	Organismal Biology	5.00
BIOL 43	Ecology and Evolution	5.00
PSY 3	Introduction to Biological Psychology	3.00
<i>Mathematics:</i>		
MATH 20	Trigonometry	3.00
MATH 26	College Algebra	4.00
MATH 26s	College Algebra with Support	4.00
MATH 28	Precalculus	4.00
MATH 28s	Precalculus with Support	4.00
MATH 30	Analytic Geometry and Calculus I	5.00
<b>MATH 30s</b>	<b>Analytic Geometry and Calculus I with Support</b>	<b>5.00</b>
MATH 31	Analytic Geometry and Calculus II	4.00
STAT C1000	Introduction to Statistics	4.00
STAT C1000E	Introduction to Statistics	4.00
<i>Physical Sciences:</i>		
AGS 50	General Soils	4.00
CHEM 1	General Chemistry I	5.00
CHEM 11	Introduction to Chemistry	4.00
CHEM 21	Organic Chemistry I	5.00
CHEM 51	Elementary Inorganic Chemistry	5.00
CHEM 52	Elementary Organic and Biochemistry	4.00
GEOG 2	Physical Geography	3.00
GEOG 3	Physical Geography Lab	1.00
GEOL 32	Physical Geology with Lab	4.00
GEOL 34	Historical Geology with Lab	4.00
PHYS 10	Concepts of Physics	3.00
PHYS 11	Concepts of Physics Laboratory	1.00
PHYS 21	College Physics I	4.00
PHYS 41	Physics for Scientists and Engineers I	4.00
PSC 10	Introduction to Environmental Science	4.00
PSC 11	Earth Science with Lab	4.00
PSC 12	Concepts in Physical Science	4.00
PSC 30	Introductory Astronomy	4.00
PSC 50	Introduction to Weather	3.00
PSC 51	Weather Lab	1.00
<b>TOTAL</b>		<b>18.00</b>