

## BIOLOGICAL SCIENCE ASSOCIATE OF SCIENCE

Biological Science major leads to the Associate of Science degree and prepares the student for transfer to a four-year institution. Students completing the baccalaureate program or graduate work may be hired in the major or allied fields as a biomedical engineer, geneticist, pharmacologist, botanist, aquatic biologist, clinical lab technologist, food/drug inspector, fish and game warden or environmental specialist. As with all programs, students who intend to transfer to a four-year institution should research the transfer institution's requirements and plan to complete the CSU GE Breadth pattern or IGETC GE pattern.

<b>Required Courses – Major:</b>		<b>Units</b>
BIO 250	Cell and Molecular Biology	4
BIO 255	Botany, Plant Diversity, and Ecology	4
BIO 257	Zoology, Animal Diversity, and Evolution	4
CHM 250	General Chemistry I	5
CHM 251	General Chemistry II	5
<b>Plus 8 additional units selected from either physics options listed below:</b>		<b>Units</b>
PHY 210	General Physics I	4
PHY 211	General Physics II	4
or PHY 220	Physics for Scientists and Engineers I	4
PHY 221	Physics for Scientists and Engineers II	4
or PHY 220	Physics for Scientists and Engineers I	4
PHY 222	Physics for Scientists and Engineers III	4
<b>Plus 9 – 10 additional units selected from the following:</b>		<b>Units</b>
MTH 200	Precalculus Mathematics	5
MTH 210	Calculus and Analytic Geometry I	5
MTH 211	Calculus and Analytic Geometry II	5
MTH 220	Statistics	4
<i>To fully benefit from the Biology program, students should also successfully complete one of the suggested optional electives listed below.</i>		
<b>These courses are not required for the major.</b>		<b>Units</b>
BIO 220	Marine Biology Lecture	3
BIO 220L	Marine Biology Laboratory	1
BIO 243	Biology of Marine Mammals	3
BIO 245	Introduction to Environmental Toxicology	3
<b>Total Major Units</b>		<b>39 – 40</b>
<b>Total Degree Units</b>		<b>60</b>

### *Program Level Student Learning Outcomes:*

1. Analyze major biological concepts and discriminate how these concepts are connected within various areas of the biological and physical sciences.
2. Apply scientific methodology in the form of designing and conducting experiments and evaluating hypotheses.
3. Use standard laboratory equipment, modern instrumentation, classical techniques, and appropriate safety protocols to carry out experiments.