

AA Interdisciplinary Studies, Option 2, Transfer Pattern: Natural Science and Mathematics

The Natural Science and Mathematics are a gateway to a very large number of occupations, many of which require specific coursework for transfer and/or admission to professional schools. In general, careers in the natural sciences require strong computational, communication and analytical thinking skills.

The degree in Interdisciplinary Studies with emphasis in Natural Science and Mathematics prepares students for further study and employment as life and physical scientists, health practitioners, engineers and science technicians.

The Interdisciplinary Studies major is designed for students pursuing broad areas of study and exploration in an area of emphasis as described below. Option 2 enables students to complete the requirements for the Associate degree and to fulfill the general education requirements for the California State University, University of California, or some private and out-of-state universities.

Important: Completion of the CSU or UC patterns does not guarantee admission to any of these institutions. Consult with a counselor for further information.

Option 2, Transfer Pattern: California State University, University of California, or some private and out-of-state universities.

Intended for students who are planning to transfer to a four-year university. Courses should be chosen carefully in consultation with a counselor.

A. Choose a General Education Pattern

- Complete 39 units of the CSU GE requirements (a C or better grade is required in Areas A1, A2, A3 and B4)
- OR**
- Complete 34-37 units of the Intersegmental General Education Transfer Curriculum (IGETC) for UC or CSU (all courses must be completed with a C or better grade)

B. Complete 18 units in the Natural Science and Mathematics Areas of Emphasis as shown below.

C. Remaining 3 to 5 units should be chosen in consultation with a counselor to fulfill Associate Degree competency and specific area requirements and lower-division preparation and/or electives for a total of 60 degree applicable units for an Associate Degree.

Program Learning Outcomes

Students completing this program will be able to:

1. Use the scientific method to investigate scientific questions and critically evaluate and effectively communicate scientific data.
2. Use symbolic, graphical and numerical representation of mathematical ideas to address real world problems.
3. Critically evaluate scientific information and examine its significance and impact on society and the environment.

AA Degree Requirements

Major: Core and Selective Requirements

Selective Courses, choose a minimum of 18 units from the following:

I. Introductory Science Courses**, select a minimum of 9 units:

	Units
1. Biology: a student may choose up to 2 of the following courses to meet this requirement:	
BIOL 110 Principles Of Biology	4 units
BIOL 130 Human Biology	3 units
BIOL 132 Human Biology Laboratory	1 unit
BIOL 310 Nutrition	3 units
2. Chemistry: a student may choose 1 of the following courses to meet this requirement:	
CHEM 192 Elementary Chemistry	4 units
CHEM 210 General Chemistry I	5 units
CHEM 410 Chemistry for Health Sciences	4 units
3. Physics: a student may choose 1 of the following courses to meet this requirement:	
PHYS 210 General Physics I	4 units
PHYS 250 Physics with Calculus I	4 units
4. Other sciences: a student may choose up to 3 of the following courses to meet this requirement:	
ANTH 125 Biological Anthropology	3 units
ASTR 100 Introduction to Astronomy	3 units
AND	
ASTR 101 Astronomy Laboratory	1 unit
CIS 118 Introduction to Computer Science	4 units
OR	



CIS 122	Introduction to Programming: Python	3 units
ENGR 100	Introduction to Engineering	3 units
ENVS 115	Environmental Science	3 units
GEOG 100	Physical Geography	3 units
GEOL 100	Introduction to Geology	3 units
	AND	
GEOL 101	Geology Laboratory	1 unit
HSCI 100	General Health Science	3 units
METE 100	Meteorology - Weather and Climate	3 units
OCEN 100	Oceanography	3 units
	AND	
OCEN 101	Oceanography Lab	1 unit

***At least one introductory OR advanced course MUST have a laboratory experience included or a laboratory course must be taken.*

II. Mathematics Competency, select a minimum of 3 units:

Units

MATH 125	Elementary Finite Mathematics	3 units
MATH 130	Analytical Trigonometry	4 units
MATH 200	Elementary Probability and Statistics	4 units
MATH 225	Path to Calculus	6 units
MATH 241	Business Calculus I	5 units
MATH 251	Analytical Geometry and Calculus I	5 units

III. Advanced Courses, select a minimum of 6 units:**

Units

BIOL 225	Biology Of Organisms	5 units
BIOL 230	Cell and Molecular Biology	5 units
BIOL 240	General Microbiology	4 units
BIOL 250	Human Anatomy	4 units
BIOL 260	Human Physiology	5 units
CHEM 220	General Chemistry II	5 units
CHEM 231	Organic Chemistry I	5 units
CIS 242	Computer Architecture and Assembly Language	3 units
CIS 262	Discrete Mathematics for Computer Science	3 units

MATH 252	Analytical Geometry and Calculus II	5 units
MATH 253	Analytic Geometry and Calculus III	5 units
PHYS 220	General Physics II	4 units
PHYS 260	Physics with Calculus II	4 units
PHYS 270	Physics with Calculus III	4 units

***At least one introductory OR advanced course MUST have a laboratory experience included or a laboratory course must be taken.*

Refer to Option 2 listed above for information on degree requirements that must be fulfilled in order to complete the total of 60 degree applicable units for an Associate Degree.

