

## Program Description Geography

*The Geosciences include the disciplines of Geography, Geographic Information Systems (GIS) and Geology. These disciplines all explore Earth's surface.*

The study of geography prepares students for transfer to four-year institutions and gives them skills to understand the spatial relationships that surround them. Geographic skills compliment many other academic fields. See GIS Certificate Program below. The field of geography explores spatial relationships and the patterns created by humans and the natural environment on Earth's surface. All geography courses are transferable to CSU and UC institutions.

### Staff

*Please dial (661) 722-6300, then the 4 digit extension.*

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## Career Options

Geographers find employment options in the following areas:

Demographics	Meteorology
Environmental Sciences	Regional and Urban Planning
Fire Management	Resource Management
Hazardous Waste Cleanup	Teaching
Homeland Security	Transportation Analysis
Hydrology and Watershed Management	

(Careers may require education beyond the two-year college level.)

## Program Learning Outcomes

### Associate in Arts in Geography for Transfer

1. Students will understand the unifying themes of physical geography and have a working knowledge of the discipline's diverse conceptual and methodological approaches.
2. Students will understand the unifying theses of cultural geography and have a working knowledge of the discipline's diverse conceptual and methodological approaches.
3. Display competency in the graphic expression of geographic/spatial data (maps, photographs, graphs, databases).

## Associate Degree

### Associate in Arts in Geography for Transfer

The Associate in Arts in Geography for Transfer (AA-T in Geography) degree will prepare students to seamlessly transfer to a baccalaureate program in geography at a CSU. The program provides students with a well-rounded introduction to the physical and social science aspects of geography as well as the technology and techniques used by professional geographers. Students working toward the degree will complete survey courses in the two main sub-disciplines: physical and cultural geography. Students will also have the opportunity to focus their studies on one of these sub-disciplines or to continue a broad study of geography.

The Associate in Arts in Geography for Transfer (AA-T in Geography) degree meets the requirements of SB 1440 for Associate Degrees for Transfer (ADT). These degrees are intended to make it easier for students to transfer to California State University campuses, but do not exclude admittance to other colleges or universities.

To earn an Associate in Arts in Geography for Transfer (AA-T in Geography) degree a student must complete the following:

- (1) Completion of 60 semester units or 90 quarter units that are eligible for transfer to the California State University, including both of the following:

(A) The Intersegmental General Education Transfer Curriculum (IGETC) or the California State University General Education – Breadth Requirements.

(B) A minimum of 18 semester units or 27 quarter units in a major or area of emphasis, as determined by the community college district.

- (2) Obtainment of a minimum grade point average of 2.0.

ADTs also require that students must earn a "C" or better in all courses required for the major or area of emphasis. A "P" (Pass) grade is also an acceptable grade for courses in the major if the course is taken on a Pass/No Pass basis.

### Required Courses (7 units):

	units
GEOG 101, Physical Geog: Earth's Surface Landscapes	3
GEOG 101L, Physical Geog Lab: Earth's Surface Landscapes	1
GEOG 105, Cultural Geography	3

### Required Electives A (Select 6-7 units):

	units
GEOG 102, Physical Geog: Earth's Weather & Climate	3
GEOG 106, California Geography	3
GEOG 110, World Regional Geography	3
GEOG 201, Map Interpretation and GPS	4
GEOG 205, Intro to Geographic Information Systems	3
GEOG 299, Special Topics – Field Geography	1

### Required Electives B (Select 6 units):

	units
<i>Or select any List A not already used.</i>	
ANTH 102, Introduction to Cultural Anthropology	3
GEOL 101, Physical Geology	3

Some courses required for the major may also satisfy general education requirements. Consult with a counselor for additional information.

Except in cases of prerequisite requirement, it is not required that courses be taken in exactly this sequence; they are recommended in this order to facilitate success.

<b>Recommended Pathway</b>	
<b>Fall, First Semester</b>	<b>units</b>
GEOG 101, Physical Geography: Earth's Surface Landscapes (CSU GE B1)	3
GEOG 101L, Physical Geography Lab: Earth's Surface Land. (CSU GE B3)	1
CSU GE A1	3
CSU GE A2 (ENGL 101)	3
CSU GE B4 (recommended MATH 115)	4
CSU GE E (recommended NF 100)	3
	<b>Total 17</b>
<b>Spring, Second Semester</b>	
Required Elective A GEOG 110, World Regional Geography (CSU GE D)	3
GEOG 105, Cultural Geography (CSU GE D)	3
CSU GE A3 (recommended ENGL 103)	3
CSU GE C2 (recommended PHIL 106)	3
CSU GE C1 (recommended FTV 108)	3
	<b>Total 15</b>
<b>Fall, Third Semester</b>	
Required Elective A	3
Required Elective B ANTH 102, Intro to Cultural Anthropology	3
CSU GE B2 (recommended ANTH 101)	3
CSU GEC1/C2 (recommended ENGL 256)	3
CSU Elective	3
	<b>Total 15</b>
<b>Spring, Fourth Semester</b>	
Required Elective B GEOL 101, Physical Geology	3
CSU GE F	3
CSU Elective (recommended HIST 108)	3
CSU Elective (recommended POLS 101)	3
CSU Elective	1
	<b>Total 13</b>
	<b>Degree Total 60</b>

\*Electives should be taken from other courses within the major or recommended course as noted.

*Note: If you are following a IGETC GE pattern, please see a counselor.*

## Prerequisite Completion

All prerequisite courses must be completed with a satisfactory grade in order to enroll in the next course. According to Title 5, Section 55200(d), a satisfactory grade is a grade of "A," "B," "C" or "P". Classes in which the Pass/No Pass option is available are indicated with an asterisk (\*) before the course title. See "Pass/No Pass Option" in the catalog for full explanation.

## Geography Courses

### GEOG 101 \*PHYSICAL GEOGRAPHY: EARTH'S SURFACE LANDSCAPES

3 units

3 hours weekly

**Prerequisite:** Completion of Intermediate Algebra or higher or placement by multiple measures.

This course is an introduction to the spatial analysis of Earth's dynamic processes and systems. Students will learn about the planet's position in the solar system and the sun's effects on our atmosphere and surface environments. Students will explore the role of plate tectonics, volcanism and earthquakes in building Earth's surface as well as the forces that erode and modify landforms. The interactions between climates, water, soils, and ecosystems will also be explored. Tools of geographic inquiry are also briefly covered, such as maps, remote sensing, Geographic Information Systems (GIS) and the Global Positioning System (GPS). (C-ID: GEOG 110) (CSU, UC, AVC)

### GEOG 101L \*PHYSICAL GEOGRAPHY LAB: EARTH'S SURFACE LANDSCAPES

1 unit

3 hours weekly

**Prerequisite:** Completion of or concurrent enrollment in GEOG 101. Completion of Intermediate Algebra or higher or placement by multiple measures

Provides students with a hands-on introduction to the processes at work shaping Earth's surfaces. This class provides an introduction to the methods used to present spatial relationships found in our physical environment. Students will identify, explore, analyze, and compare methods used in mapping and expressing spatial relationships. Students will develop fundamental geographic skills that can be used in variety of professional situations. (C-ID: GEOG 111) (CSU, UC, AVC)

## Transfer

Students planning to continue studies at a four-year college or university after AVC should visit the Transfer Resource Center and consult with a counselor as soon as possible. Additional information on official transfer articulation agreements from AVC to many CSU/UC campuses can be found at [www.assist.org](http://www.assist.org)

**GEOG 102 \*PHYSICAL GEOGRAPHY:  
EARTH'S WEATHER AND CLIMATE**

3 units

3 hours weekly

**Advisory:** Eligibility for ENGL 101, Completion of Intermediate Algebra or higher or placement by multiple measures.

This course examines Earth's weather and climate patterns from a geographic perspective. Students explore the basic principles of weather and climate as well as causes and effects. Emphasis is placed on understanding various elements and controls of weather and climate as well as interpreting weather maps and charts. Techniques and principles involved in interpreting weather data, weather charts and maps and weather forecasting will also be introduced. (C-ID: GEOG 130) (CSU, UC, AVC)

**GEOG 102L \*PHYSICAL GEOGRAPHY LAB:  
EARTH'S WEATHER AND CLIMATE**

1 unit

3 hours weekly

**Prerequisite:** Completion of or concurrent enrollment in GEOG 102.

This course provides hands-on experience in understanding, defining and interpreting the basic principles of weather and climate topics presented in GEOG 102. Emphasis is placed on understanding various elements and controls of weather and climate, making and interpreting weather maps and charts. Techniques and principles involved in interpreting weather data, weather charts and maps and weather forecasting will also be introduced. (CSU, UC, AVC)

**GEOG 105 \*CULTURAL GEOGRAPHY**

3 units

3 hours weekly

**Advisory:** Eligibility for ENGL 101 or placement by multiple measures.

An introduction to the fundamental concepts of human geography allowing students to explore the spatial patterns created by the interactions of diverse ethnic groups. Students will use basic geographic concepts to explore relationships between human cultures and their environments, race and ethnicity, diffusion of languages, religions and social customs. Students will explore issues in human population dynamics and migrations and investigate impacts of patterns created by political boundaries and economic development. **NOTE:** Does not meet Physical Science requirement. (C-ID: GEOG 120) (CSU, UC, AVC)

**GEOG 106 \*CALIFORNIA GEOGRAPHY**

3 units

3 hours weekly

**Advisory:** Completion of GEOG 101 or GEOG 105. Eligibility for ENGL 101 or placement by multiple measures.

This course will explore California's diverse physical, cultural and economic geography. We will be exploring the many relationships between the State's past, present and future physical, historical, cultural and economic landscapes as we examine California's modern landscapes. We will also explore issues faced by all Californians including but not limited to growing population, limited resources, water, urbanization, and agriculture. This course will be valuable for geography majors, future teachers, transfer students, and anyone with an interest in California. (C-ID: GEOG 140) (CSU, UC, AVC)

**GEOG 110 \*WORLD REGIONAL  
GEOGRAPHY**

3 units

3 hours weekly

**Advisory:** Eligibility for ENGL 101 or placement by multiple measures.

Survey of the world's culture regions and nations as interpreted by geographers, including physical, cultural, economic features. Emphasis on spatial influences on population growth, transportation networks, and natural environments. Identification and importance of the significant features of regions. (C-ID: GEOG 125) (CSU, UC, AVC)

**GEOG 299 \*SPECIAL TOPICS-FIELD  
GEOGRAPHY**

1 unit

20 hours total

**Advisory:** Completion of or concurrent enrollment in GEOG 101, GEOG 102, GEOG 106, GEOL 101 or ERSC 101.

This course will allow students opportunities to observe geographic phenomenon in field setting covered in classroom lectures. Students will become familiar with some of the basic techniques used in observing, identifying, describing, mapping and recording field data. Specific features to be observed will be chosen for each trip based on destinations and themes. This course will be valuable for all geography, science, natural resource and planning majors, future teachers and anyone interested in our natural environment. (C-ID: GEOG 160) (CSU, AVC)

## Program Description Geographic Information Systems (GIS)

The GIS certificate program allows geography and other majors to transfer into four-year geography programs having completed a documented specialization in GIS that includes marketable job skills that can be used concurrently with the pursuit of advanced degrees. The GIS certificate program will benefit persons with previous training in a variety of fields by allowing them to gain new skills that can be applied in their place of employment. GIS is a multibillion-dollar industry employing hundreds of thousands worldwide in many fields, including Environmental Sciences and Protection, Regional and Urban Planning, and Transportation.

### Career Options

GIS is a multibillion-dollar industry employing hundreds of thousands worldwide in many fields including:

Anthropology	Geomatics Engineering
Archeology	Hazardous Waste Cleanup
Biology	Homeland Security
Business	Meteorology
Criminal Justice	Regional and Urban Planning
Demographics	Resource Management
Epidemiology	Transportation Networks
Environmental Sciences and Protection	Watershed Management
Fire Management	Zoology

(Careers may require education beyond the two-year college level.)

### Program Learning Outcomes

1. Apply the steps to construct a normalized geodatabase.
2. Use the proper cartographic representations necessary to express spatial information.
3. Recognize and apply the proper geoprocessing tools and spatial statistics to solve geographic problems.
4. Be able to successfully design, implement, and complete a GIS project.

### Certificate Program

#### Geographic Information Systems

##### Required Courses (15 units):

	units
GEOG 205, Introduction to GIS	3
GEOG 220, Data Acquisition and Management	3
GEOG 221, Spatial Analysis	3
GEOG 222, Cartography	3
GEOG 298C, Special Studies in GIS	3
<b>Total</b>	<b>15</b>

### Geographic Information Systems Courses

#### GEOG 201 \*MAP INTERPRETATION AND GPS

4 units

4 hours weekly

**Advisory:** Completion of MATH 105, and eligibility for ENGL 101 or placement by multiple measures.

This course will provide students with the skills necessary to interpret maps. Projection and reference systems, scale concepts, coordinate systems, topographic maps, air photo interpretation, use of compasses and clinometers will be explored. Students will also cover the basics of how GPS works and examine some of the ways GPS technologies can be used to solve real-world problems. Students will gain hands-on experience mapping field-collected data and importing the data to computer mapping software. Students will be required to participate in a minimum of 18 hours of supervised off-campus field application sessions. This class will meet needs of geography, geology, archaeology, wildlife biology and fire technology students. (C-ID: GEOG 150) (CSU, UC, AVC)

#### GEOG 205 \*INTRODUCTION TO GEOGRAPHIC INFORMATION SYSTEMS

3 units

3 hours weekly

**Advisory:** Completion of CA 103 and MATH 105, and Completion of or concurrent enrollment in GEOG 201 and Completion of Intermediate Algebra or higher or placement by multiple measures. Eligibility for ENGL 101 or placement by multiple measures.

This course will introduce students to the fundamentals of Geographic Information Systems (GIS). Students will explore the methods, technology and software used to capture, manage, analyze and present geographic data. Students will use their knowledge to complete a GIS project in a field of interest. This course is intended for Geography/GIS majors and persons interested using GIS in professional settings. **NOTE:** Does not meet Physical Science requirement. (C-ID: GEOG 155) (CSU, UC, AVC)

### **GEOG 220 \*DATA ACQUISITION AND MANAGEMENT IN GEOGRAPHIC INFORMATION SYSTEMS (GIS)**

3 units

3 hours weekly

**Prerequisite:** Completion of GEOG 205.

**Advisory:** Completion of CA 131, MATH 105 and Completion of Intermediate Algebra or higher or placement by multiple measures. and Completion of or concurrent enrollment in MATH 115/MATH 116, and eligibility for ENGL 101 or placement by multiple measures.

This course provides a general survey of basic methods of data acquisition, database design and management for GIS. This course focuses on the specific data requirements of GIS. Students will examine methods of digitizing preexisting data and explore database development and management. Students will use their knowledge to complete GIS projects. **BEFORE ENROLLING**, students must have the computer skills, knowledge of georeferencing, coordinate systems, processes of data capture, data management and analysis and the skills necessary to produce a GIS map gained in GEOG 205. This course is intended for Geography/GIS majors and persons using GIS in professional settings. (CSU, AVC)

### **GEOG 221 \*SPATIAL ANALYSIS IN GEOGRAPHIC INFORMATION SYSTEMS (GIS)**

3 units

3 hours weekly

**Prerequisite:** Completion of GEOG 205.

**Advisory:** Completion of MATH 105 and Intermediate Algebra or higher or placement by multiple measures, and Completion of or concurrent enrollment in MATH 115/MATH 116, and eligibility for ENGL 101 or placement by multiple measures.

This course provides a general survey of the fundamentals of spatial information systems and a survey of quantitative techniques applicable to spatial data. This course is focused on the functionality of GIS as an effective tool for modeling and analyzing complex spatial relationships. The applications of a variety of quantitative methods will be explored using GIS software including ArcGIS and ArcInfo. Students will use their knowledge to complete a GIS project. **BEFORE ENROLLING**, students must have computer skills, knowledge of georeferencing, coordinate systems, processes of data capture, data management and analysis and the skills necessary to produce a GIS map. This course is intended for Geography/GIS majors and persons using GIS in professional settings. **NOTE:** Does not meet Physical Science requirement. (CSU, UC, AVC)

### **GEOG 222 \*CARTOGRAPHY FOR GEOGRAPHIC INFORMATION SYSTEMS (GIS)**

3 units

3 hours weekly

**Prerequisite:** Completion of GEOG 205.

This course provides a general survey of basic methods used for the presentation of GIS data and analysis. Students will examine methodology used in the presentation of spatial data. Students will use their cartographic skills to complete their GIS projects. **BEFORE ENROLLING**, students must have the computer skills, knowledge of georeferencing, coordinate systems, processes of data capture, data management and analysis and the skills necessary to produce a GIS map gained in GEOG 205. This course is intended for Geography/GIS majors and persons using GIS in professional settings. (CSU, AVC)

### **GEOG 298C \*SPECIAL STUDIES IN GEOGRAPHIC INFORMATION SYSTEMS (GIS)**

3 units

7 hours weekly

**Prerequisite:** Completion of GEOG 205.

**Advisory:** Completion of MATH 105 and , ENGL 101 and MATH 115/MATH 116.

This course provides students with the opportunity to work independently on a GIS project. Students will use GIS skills to collect data, model, and analyze complex spatial relationships. In GEOG 298C, students will create a project major in scope that will be the equivalent of a 3 unit course. **BEFORE ENROLLING** students must have computer skills, knowledge of georeferencing, coordinate systems, process of data capture, data management and analysis, and the skills necessary to produce a GIS map. This course is intended for Geography/GIS majors and persons interested in using GIS in professional settings. Students will enroll in the section that will match their specific project time commitment and be awarded units accordingly. (CSU, AVC)

## Program Description

### Geology

The chemical composition, age and varied landscapes of the earth are examined through investigation of rocks and minerals. The field of geology explores Earth's geologic features and the processes responsible for their formation. All geology courses are transferable to CSU and UC institutions. The study of geology prepares students for transfer to four-year institutions.

## Career Options

Geologists find employment options in the following areas:

Civil Engineering	Regional and Urban Planning
Environmental Sciences	Resource Management
Hazardous Waste Cleanup	Teaching
Hydrology and Watershed Management	Transportation Analysis

(Careers may require education beyond the two-year college level.)

## Program Learning Outcomes

### Associate in Science in Geology for Transfer

1. Students will understand the unifying principles of physical and historical geology and have a working knowledge of the discipline's diverse conceptual and methodological approaches.
2. Students will understand the relevance of the scientific method and have a working knowledge of how the scientific method applies to the study and evaluation of physical and historical geologic principles.
3. Students will be able to comprehend and explain the interrelationships between geology and the other scientific disciplines.

## Certificate Program

Certificate not applicable.

## Associate Degree

### Associate in Science in Geology for Transfer

The Associate in Science in Geology for Transfer (AS-T in Geology) degree provides a path to students who wish to transfer to a CSU campus in Geology and serves the diverse needs of students who wish to obtain a broad and an in-depth understanding of the field. The Associate in Science in Geology for Transfer (AS-T in Geology) degree allows students to learn the fundamental principles and practices of Geology in order to create a solid foundation for their future personal, academic, or vocational endeavors. The Associate in Science in Geology for Transfer (AS-T in Geology) degree also provides a solid preparation appropriate for a variety of scientific disciplines. The Associate in Science in Geology for Transfer degree (AS-T in Geology) provides students with a major that fulfills the general requirements of the California State University for transfer, and students with the Associate in Science in Geology for Transfer degree (AS-T in Geology) will receive priority admission with junior status to the California State University system.

The Associate in Science in Geology for Transfer (AS-T in Geology) degree meets the requirements of SB 1440 for Associate Degrees for Transfer (ADT). These degrees are intended to make it easier for students to transfer to California State University campuses, but do not exclude admittance to other colleges or universities.

To earn an Associate in Science in Geology for Transfer (AS-T in Geology) degree a student must complete the following:

- (1) Completion of 60 semester units or 90 quarter units that are eligible for transfer to the California State University, including both of the following:
    - (A) The Intersegmental General Education Transfer Curriculum (IGETC) or the California State University General Education – Breadth Requirements.
    - (B) A minimum of 18 semester units or 27 quarter units in a major or area of emphasis, as determined by the community college district.
  - (2) Obtainment of a minimum grade point average of 2.0.
- ADTs also require that students must earn a C or better in all courses required for the major or area of emphasis. A "P" (Pass) grade is also an acceptable grade for courses in the major if the course is taken on a Pass/No Pass basis.

### Required Courses (27 units):

	units
GEOL 101, Physical Geology	3
GEOL 101L, Physical Geology Lab	1
GEOL 102, Historical Geology	3
GEOL 102L, Historical Geology Lab	1
CHEM 110, General Chemistry	5
CHEM 120, General Chemistry	5
MATH 150, Calculus and Analytical Geometry	5
MATH 160, Calculus and Analytical Geometry	4

Some courses required for the major may also satisfy general education requirements. Consult with a counselor for additional information.

Except in cases of prerequisite requirement, it is not required that courses be taken in exactly this sequence; they are recommended in this order to facilitate success.

Recommended Pathway	
<b>Fall, First Semester</b>	<b>units</b>
CHEM 110, General Chemistry (CSU GE B1/B3)	5
MATH 150, Calculus & Analytical Geo (CSU GE B4)	5
GE requirement area I (CSU GE A2 (ENGL 101)	3
CSU GE E (recommended HD 101)	3
	<b>Total 16</b>
<b>Spring, Second Semester</b>	
CHEM 120, General Chemistry	5
MATH 160, Calculus and Analytical Geometry	4
CSU GE A3 (recommended ENGL 103)	3
CSU GE D (recommended GEOG 106)	3
	<b>Total 15</b>
<b>Fall, Third Semester</b>	
GEOL 101, Physical Geology	3
GEOL 101L, Physical Geology Lab	1
CSU GE B2 (recommended BIOL 104 or BIOL 120)	3
CSU GE A1	3
CSU GE D (recommended POLS 101)	3
CSU GE C2 (recommended HIST 110 or HIST 111)	3
	<b>Total 16</b>
<b>Spring, Fourth Semester</b>	
GEOL 102, Historical Geology	3
GEOL 102L, Historical Geology Lab	1
CSU GE C1 (recommended MUS 101 or MUS 105 or MUS 111)	3
CSU GE F	3
CSU GE C1/C2 (recommended PHIL 105)	3
	<b>Total 13</b>
	<b>Degree Total 60</b>

\*Electives should be taken from other courses within the discipline.

*Note: If you are following an IGETC GE pattern, please see a counselor.*

## Geology Courses

### GEOL 101 \*PHYSICAL GEOLOGY

3 units

3 hours weekly

**Prerequisite:** Completion of Intermediate Algebra or higher or placement by multiple measures.

An introduction to the principles of geology with emphasis on Earth processes. This course focuses on the internal structure and origin of the Earth and the processes that change and shape it. (C-ID: GEOL 100) (CSU, UC, AVC)

### GEOL 101L \*PHYSICAL GEOLOGY LAB

1 unit

3 lab hours weekly

**Prerequisite:** Completion of Intermediate Algebra or higher or placement by multiple measures.

**Corequisite:** Completion of or Concurrent enrollment in GEOL 101

**Advisory:** Eligibility for ENGL 101

Physical Geology Laboratory provides students with hands-on identification of rocks and minerals, as well as topographic and geologic map exercises demonstrating the work of water, wind, ice and gravity and effects of tectonic activity. Students who took GEOL 101 more than two years previously should consider auditing GEOL 101. (C-ID: GEOL 100L) (CSU, UC, AVC)

### GEOL 102 \*HISTORICAL GEOLOGY

3 units

3 hours weekly

**Advisory:** Completion of or concurrent enrollment GEOL 101. GEOL 102 and GEOL 102L are the capstone courses for the A.S. - T. in Geology.

**Prerequisite:** Completion of Intermediate Algebra or higher or placement by multiple measures.

Students interested in an introductory geology course to fill general education transfer requirements should consider GEOL 101 and GEOL 101L. Historical geology is an introduction to Earth's history and the life it supports. Subjects include geologic dating, global tectonics, stratigraphy, fossils, biological evolution, the planet's origin and the processes that have influenced paleogeography during the past 4.6 billion years. (C-ID: GEOL 110) (CSU, UC, AVC)

### GEOL 102L \*HISTORICAL GEOLOGY LAB

1 unit

3 hours weekly

**Advisory:** GEOL 102 and GEOL 102L are the capstone courses for the A.S. - T. in Geology.

**Prerequisite:** Completion of Intermediate Algebra or higher or placement by multiple measures.

**Corequisite:** Concurrent enrollment in GEOL 102 or previous passing grade in GEOL 102.

Students interested in an introductory geology course to fill general education transfer requirements should consider GEOL 101 and GEOL 101L. Historical Geology Laboratory provides the laboratory component to an introduction to Earth's history and the life it supports. Subjects include geologic dating, plate tectonics, stratigraphy, fossils, biological evolution, the planet's origin and the processes that have influenced paleogeography during the past 4.6 billion years. (C-ID: GEOL 110L) (CSU, UC, AVC)