Definition

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

Staff

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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

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 Program Description

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.

Distinctive Features

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.

Career Options

Geographers find employment options in the following areas:

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

(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.

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
Or select any List A not already used.	
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.

Recommended Plan of Study

First Semester	units
GEOG 101, Physical Geography: Earth's Surface Landscapes (IGETC 5A § CSU B1)	3
GEOG 101L, Physical Geography Lab: Earth's Surface Land. (IGETC 5C § CSU B3)	1
GE requirement area IGETC 1c § CSU A1 (recommended COMM 101 *CSU only*)	3
GE requirement area IGETC 1a § CSU A2 (ENGL 101)	3
GE requirement area IGETC 2 § CSU B4 (recommended MATH 115)	4
GE requirement area UC elective § CSU E (recommended NF 100 *CSU only*)	3
	Total 17

Second Semester	
Required Elective A GEOG 110, World Regional Geography (IGETC 4 § CSU D)	3
GEOG 105, Cultural Geography (IGETC 4 § CSU D)	3
GE requirement area IGETC 1b § CSU A3 (recommended ENGL 103)	3
GE requirement area IGETC 3H §CSU C2 (recommended PHIL 106)	3
GE requirement area IGETC 3A § CSU C1 (recommended FTV 108)	3
	Total 15

Third Semester	
Required Elective A	3
Required Elective B ANTH 102, Intro to Cultural Anthropology (IGETC 4 § CSU D)	3
GE requirement area IGETC 5b § CSU B2 (recommended ANTH 101)	3
GE requirement area IGETC 3 A/H § CSU C1/C2 (recommended ENGL 256)	3
GE requirement area IGETC LOTE § CSU elective (recommended SPAN 101 *UC only*)	3-5
	Total 15-17

Fourth Semester	
Required Elective B GEOL 101, Physical Geology	3
GE requirement area IGETC 4 § CSU F	3
CSU only GE requirement (recommended HIST 108)	3
CSU only GE requirement (recommended POLS 101)	3
GE requirement area IGETC LOTE § CSU elective (recommended SPAN 102 *UC only*)	3-5
	Total 15-17
	Degree Total 60

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

Geography Courses

GEOG 101 *PHYSICAL GEOGRAPHY: EARTH'S SURFACE LANDSCAPES

3 units
3 hours weekly
Prerequisite: *Completion of MATH 102.*
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 or concurrent enrollment in GEOG 101. Completion of MATH 102.*
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)

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

3 units
3 hours weekly
Advisory: *Eligibility for ENGL 101, MATH 102, 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 or concurrent enrollment in GEOG 102.*
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)

Geographic Information Systems (GIS)

Definition

Geographic Information Systems (GIS) is a computer-based tool used to map and analyze things that exist and happen on the surface of Earth. GIS technology integrates database operations with statistical analysis and presents this information visually using maps. GIS can be used to explain events, predict outcomes and plan for the future.

Students must receive a minimum grade of "C" or better in all required core courses and the specific courses listed as program electives in order to qualify for the degree or certificate.

Program Description

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. All GIS courses are transferable to CSU and UC institutions.

Distinctive Features

Students work in up-to-date computer labs with modern scanners, digitizing equipment, Global Positioning Satellite (GPS), plotters and other specialized equipment. All classes are project-based allowing students opportunities to work with real world data.

Career Options

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

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

Low-Unit Certificate of Achievement

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
	Total 15

Geographic Information Systems Courses

GEOG 201 *MAP INTERPRETATION AND GPS

4 units

3 hours weekly [18 total hours of supervised field application]

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. Eligibility for MATH 102, 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 MATH 102, 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 MATH 102, 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)

Geology

Definition
The chemical composition, age and varied landscapes of the earth are examined through investigation of rocks and minerals.

Program Description
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.

Distinctive Features
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.

Required Courses	**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 Plan of Study

First Semester	**units**
CHEM 110, General Chemistry (IGETC 5a/5b § CSU B1/B3)	5
MATH 150, Calculus & Analytical Geo (IGETC 2 § CSU B4)	5
GE requirement area IGETC 1a § CSU A2 (ENGL 101)	3
CSU only GE requirement area E (recommended HD 101)	[3]
or	
UC only GE requirement area LOTE	[5]
Total 16-18	
Second Semester	
CHEM 120, General Chemistry	5
MATH 160, Calculus and Analytical Geometry	4
GE requirement area IGETC 1b § CSU A3 (recommended ENGL 103)	3
GE requirement area IGETC 4 § CSU D (recommended GEOG 106)	3
Total 15	
Third Semester	
GEOL 101, Physical Geology (IGETC 5a § CSU B1)	3
GEOL 101L, Physical Geology Lab (IGETC 5c § CSU B3)	1
GE requirement area IGETC 5b § CSU B2 (recommended BIOL 104 or BIO 120)	3
GE requirement area IGETC 1c § CSU A1 (recommended COMM 101 *CSU only*)	3
GE requirement area IGETC 4 § CSU D (recommended POLS 101)	3
GE requirement area IGETC 3H § CSU C2 (recommended HIST 110 *or* HIST 111)	3
Total 16	
Fourth Semester	
GEOL 102, Historical Geology (IGETC 5a § CSU B1)	3
GEOL 102L, Historical Geology Lab (IGETC 5c § CSU B3)	1
GE requirement area IGETC 3A § CSU C1 (recommended MUS 101 ***or*** MUS 105 ***or*** MUS 111 *CSU only*)	3
GE requirement area IGETC 4 § CSU F	3
GE requirement area IGETC 3A/H § CSU C1/C2 (recommended PHIL 105)	3
Total 13	
Degree Total 60	

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

Geology Courses

GEOL 101 *PHYSICAL GEOLOGY

3 units
3 hours weekly
Prerequisite: *Completion of MATH 102 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
Advisory: *Eligibility for ENGL 101 or placement by multiple measures.*
Prerequisite: *Completion of MATH 102.*
Corequisite: *Completion or concurrent enrollment in GEOL 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 of GEOL 101. Eligibility for ENGL 101 or placement by multiple measures.*
Prerequisite: *Completion of MATH 102.*
Historical Geology is an overview of the history and development of the Earth and life on Earth. The course will examine geologic processes that have shaped the development of Earth over the past 4.6 billion years. The course will show us how to evaluate and interpret the evolution of the Earth and life on Earth using geologic principles, and how the Earth has evolved over time according to the fossil record. (C-ID: GEOL 110) (CSU, UC, AVC)

GEOL 102L *HISTORICAL GEOLOGY LAB

1 unit
3 hours weekly
Advisory: *Eligibility for ENGL 101 or placement by multiple measures.*
Prerequisite: *Completion of MATH 102.*
Corequisite: *Completion or concurrent enrollment in GEOL 102.*
Historical Geology Laboratory provides students with hands-on introduction to the analysis and identification of common minerals, rocks and fossils. Students will learn how fossils are preserved, the major fossil groups, and when and where they occurred in the Earth's past. The students will learn how fossils are used to establish age and how paleoclimatic conditions can be interpreted from fossils. Basic analytical and geologic skills based on fundamental geologic principles and processes will be utilized. (C-ID: GEOL 110L) (CSU, UC, AVC)