**GEOGRAPHY**

**Program Description**
Geography is the science of space and place. Geographers study spatial distributions and relations within Earth's human-environment systems, incorporating historic and contemporary human activities within the context of the biophysical and cultural environments, and the emergence of humanity as one of the major agents of change on Earth. The geography program exposes students to many of the tools and technologies employed by earth science professionals, including Geographic Information Systems (GIS) and Global Positioning Systems (GPS).

**The Geography Major**
The Associate in Arts Degree in Geography provides for a liberal education and prepares one for positions in business, government, environmental consulting, resource management, teaching, the technology sector, and service in foreign areas.

Many geography courses satisfy GE requirements and appeal to the major and non-major alike. Coursework in geography, which includes Geographic Information Systems (GIS), prepares students for a wide range of jobs that employ computers to gather, manipulate, analyze and report spatial data. There is rapid growth in the use of GIS in natural resource management, urban planning, marketing, real estate, criminology, emergency services, public health, scientific research and many other areas. GIS courses are also useful for transfer students in geography and other environmental and natural science-oriented disciplines. GIS is an important tool for many other disciplines which use maps and spatially referenced data.

**Career Opportunities**
Geographers are trained for a wide variety of exciting careers, including cartography, climatology, demography, ecology, education earth and environmental science, land use planning, meteorology, realty, and regional and urban planning. Jobs include positions as field analysts, foreign area and intelligence analysts, Geographic Information System analysts, map librarians, marketing analysts, park rangers, research analysts, resource economists, surveyors, teachers, transportation analysts, and travel agents.

Trained geographers are involved in a diverse set of research areas including agriculture, atmospheric and oceanic studies, landforms and soils, vegetation, water resources, marketing, political and economic structures, and transportation and urban systems.

**Planning a Program of Study**
In order to plan the best possible program of study to meet individual needs, students are encouraged to contact the Geography Department chairperson, faculty adviser, or counselor assigned to the Sciences Division. These persons are eager to assist students—and they welcome the opportunity to be helpful.

**Preparation for Transfer**
Course requirements for transfer vary depending upon the college or university a student wishes to attend. Therefore, it is most important for a student to consult with his/her counselor and departmental adviser before planning an academic program for transfer. Information sheets for majors, outlining transfer requirements, are available in the Counseling/Transfer Centers.

**Honors and Awards**
The Geography faculty selects one student each year to be honored as “Outstanding Geography Student.” Students are nominated by members of the faculty and selections are made on the basis of academic scholarship and a student's contribution to our community's understanding of geographic events.

**Advising**
In addition to the academic counselors and Career Center staff at SBCC, our faculty are eager to provide information to students seeking to explore career opportunities which relate to Geography as a major or who simply need more information about any of our course offerings. For more information contact Michael Robinson (EBS 113, (805) 892-3741).

**Student Participation**
Students who are interested in exploring geography with their peers are invited to join the Geography Club. See Geordie Armstrong (EBS 114) or Michael Robinson (EBS 113) for further information.

**Programs of Study**

**Credit Programs**
- Geography, Associate in Arts (AA) ([https://catalog.sbcc.edu/academic-departments/geography/geography-aa](https://catalog.sbcc.edu/academic-departments/geography/geography-aa))
- Geography, Associate in Arts for Transfer (AA-T) ([https://catalog.sbcc.edu/academic-departments/geography/geography-aat](https://catalog.sbcc.edu/academic-departments/geography/geography-aat))

**Credit Courses**
**Geography (GEOG)**
- GEOG 101 Physical Geography (3 Units)
  Same as: ERTH 141
  Skills Advisories: Eligibility for ENG 103 and proficiency in MATH 1 or MATH 41.
  Hours: 54 (54 lecture)
  A spatial study of Earth's dynamic physical systems and processes. Interrelationships between the basic elements of the physical and human environments are examined, including geology (plate tectonics; volcanoes and earthquakes), geomorphology (formation and modification of landforms; river, coastal, and glacial processes), meteorology (Earth's atmosphere; weather and climate), and hydrology (water on Earth).
  SBCC General Education: SBCCGE Area A Lecture Transfer Information: CSUGE Area B1, IGETC Area 5A, CSU Transferable, UC Transferable
  C-ID: GEOG 110, GEOG 115.

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**Programs of Study**

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- Geography, Associate in Arts (AA) ([https://catalog.sbcc.edu/academic-departments/geography/geography-aa](https://catalog.sbcc.edu/academic-departments/geography/geography-aa))
- Geography, Associate in Arts for Transfer (AA-T) ([https://catalog.sbcc.edu/academic-departments/geography/geography-aat](https://catalog.sbcc.edu/academic-departments/geography/geography-aat))

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  Skills Advisories: Eligibility for ENG 103 and proficiency in MATH 1 or MATH 41.
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  SBCC General Education: SBCCGE Area A Lecture Transfer Information: CSUGE Area B1, IGETC Area 5A, CSU Transferable, UC Transferable
  C-ID: GEOG 110, GEOG 115.
GEOG 101L Physical Geography Laboratory (1 Unit)
Same as: ERTH 141L
Corequisites: GEOG 101/ERTH 141.
Skills Advisories: Eligibility for ENG 103 and proficiency in MATH 1 or MATH 41.
Hours: 54 (54 lab)
Laboratory approach to a combination of earth science disciplines, including cartography, geology, geomorphology, meteorology and oceanography. Remote sensing techniques are utilized in 75% of laboratory activities.
SBCC General Education: SBCCGE Area A Lab
Transfer Information: CSUGE Area B3, IGETC Area 5C, CSU Transferable, UC Transferable
C-ID: GEOG 111, GEOG 115.

GEOG 102 Human Geography (3 Units)
Skills Advisories: Eligibility for ENG 110 or ENG 110H.
Hours: 54 (54 lecture)
An interpretation of the cultural elements of the geographic landscape and the study of human's changing relationship with the environment. Investigates culture and human processes as seen in global patterns of population and migration patterns, language, religion, political and economic systems, urbanization, and human impact on the physical world.
SBCC General Education: SBCCGE Area B, SBCCGE Area E5
Transfer Information: CSUGE Area D5, IGETC Area 4E, CSU Transferable, UC Transferable
C-ID: GEOG 120.

GEOG 104 World Regional Geography (3 Units)
Skills Advisories: Eligibility for ENG 103.
Hours: 54 (54 lecture)
A global survey of cultural regions, people and environments. Geographic methodologies are employed to evaluate people, resources, landscapes, livelihoods and economies across eleven major geographic regions. The gap between developed and undeveloped economies, global roles and interconnections of countries and regions, and conflicting pressures between cultural diversity and globalization are analyzed.
SBCC General Education: SBCCGE Area B, SBCCGE Area E5
Transfer Information: CSUGE Area D5, IGETC Area 4E, CSU Transferable, UC Transferable
C-ID: GEOG 125.

GEOG 105 Economic Geography (3 Units)
Same as: ERTH 142
Skills Advisories: Eligibility for ENG 103 and proficiency in MATH 1 or MATH 41.
Hours: 54 (54 lecture)
Designed for students majoring in Geography. Addresses regional patterns of principal economic activities of the world, with an emphasis on economic development and the problems of urbanization, transportation and the environment.
SBCC General Education: SBCCGE Area B
Transfer Information: CSUGE Area D2, CSUGE Area D5, IGETC Area 4E, CSU Transferable, UC Transferable

GEOG 106 Geography Of California (3 Units)
Skills Advisories: Eligibility for ENG 110 or ENG 110H.
Hours: 54 (54 lecture)
A non-technical survey of the wide variety of natural and human environments found in California. Includes a regional study of physical landscapes, economic activities, characteristics of population, cities and rural areas, and current environmental problems. California's interaction with other parts of the U.S. and world is also covered.
SBCC General Education: SBCCGE Area B
Transfer Information: CSUGE Area D5, IGETC Area 5A, CSU Transferable, UC Transferable
C-ID: GEOG 140.

GEOG 152 Weather and Climate (3 Units)
Same as: ERTH 152
Skills Advisories: Eligibility for ENG 103 and proficiency in MATH 95.
Hours: 54 (54 lecture)
Fundamentals of meteorology, including the nature of the atmosphere, solar radiation and energy balances, circulation of the atmosphere, air masses and fronts, atmospheric moisture, clouds and fog, precipitation, cyclones, weather analysis and forecasting, climate, and climate change.
SBCC General Education: SBCCGE Area A Lecture
Transfer Information: CSUGE Area B1, IGETC Area 4E, CSU Transferable, UC Transferable
C-ID: GEOG 130.

GEOG 152L Weather and Climate Laboratory (1 Unit)
Same as: ERTH 152L
Corequisites: GEOG 152 or ERTH 152.
Skills Advisories: Eligibility for ENG 103 and proficiency in MATH 95.
Hours: 54 (54 lab)
Laboratory approach to topics covered in the Weather and Climate lecture (ERTH 152/GEOG 152). Exercises introduce fundamentals of meteorology, including the nature of the atmosphere, circulation of the atmosphere, air temperature and humidity, and weather analysis and forecasting. Students collect and analyze a variety of environmental data.
SBCC General Education: SBCCGE Area A Lab
Transfer Information: CSUGE Area B1, IGETC Area 5A, CSU Transferable, UC Transferable

GEOG 171 Introduction To Geographic Information Systems And Maps (2 Units)
Same as: ERTH 171
Corequisites: GEOG 172 or ERTH 172.
Skills Advisories: Eligibility for ENG 103 and proficiency in MATH 4 or MATH 41.
Hours: 36 (36 lecture)
Techniques, tools and theories used to examine geographic information. Includes the structure, uses, and basic operations of a Geographic Information System (GIS). Cartography and cartographic design are incorporated, as well as overviews of aerial photography, remote sensing, and global positioning systems. Includes uses of GIS software in business, urban planning, resource management and scientific research.
Transfer Information: CSU Transferable, UC Transferable
C-ID: GEOG 155.
GEOG 172 Geographic Information Systems: Software Applications (2 Units)
Same as: ERTH 172
Corequisites: GEOG 171 or ERTH 171.
Skills Advisories: Eligibility for ENG 103 and proficiency in MATH 4 or MATH 41.
Hours: 54 (27 lecture, 27 lab)
Extensive practice with a GIS package, accompanied by exploration of the range of applications in which GIS is used (resource management, public works, business, planning, scientific research). Covers key skills for operating GIS software packages, including geographical data acquisition, creation, management, analysis and output.
Transfer Information: CSU Transferable, UC Transferable
C-ID: GEOG 155.

GEOG 175 Raster GIS Applications (2 Units)
Prerequisites: ERTH 172 or GEOG 172.
Skills Advisories: Eligibility for ENG 103 and proficiency in MATH 4 or MATH 41.
Hours: 36 (36 lecture)
Hands-on introduction to basic raster concepts, using ArcGIS Spatial Analyst extension within the ArcGIS environment. The underlying methodology required to solve real world problems is explored through a series of extensive course projects. Key skills in data acquisition, surface creation techniques, map algebra, database design and result reporting are covered.
Transfer Information: CSU Transferable

GEOG 299 Independent Study In Geography (1-3 Units)
Limitations on Enrollment: Completion of a minimum of 12 units at SBCC, with a 2.5 G.P.A., and a minimum of 6 units, with a 3.0 G.P.A. within the department Student works under guidance and direction of sponsoring faculty member on project consistent with interests and abilities.
Hours: 144 (144 lab)
Minimal weekly meetings required. May be taken for one to three (3) units of credit; each unit of credit requires student to devote approximately three (3) hours per week to his/her project. For complete information, see "Independent Study" in the Catalog Index.
Transfer Information: CSU Transferable