

GEOGRAPHY (GEOG)

GEOG 100 **INTRODUCTION TO GEOGRAPHY---PHYSICAL ELEMENTS** **3 UNITS**

Pass/No Pass or Grade is Allowed
 Recommended Preparation: RDG 56 or equivalent or through the Southwestern College multiple measures placement processes.
 Lecture 3 hours
 Offered: ALL
 Focuses on the physical forces that help shape the landscape. Analysis of Earth's interior and exterior characteristics, including oceanographic, climate, pedologic, and biographic patterns. Includes map reading and interpretation. [D; CSU; UC; C-ID GEOG 110]

GEOG 101 **PHYSICAL GEOGRAPHY LABORATORY** **1 UNIT**

Grade Only
 Corequisite: GEOG 100 (may be taken previously).
 Laboratory 3 hours
 Offered: ALL
 Provides laboratory exercises to solidify concepts learned in physical geography. [D; CSU; UC; C-ID GEOG 111]

GEOG 106 **WORLD REGIONAL GEOGRAPHY** **3 UNITS**

Pass/No Pass or Grade is Allowed
 Recommended Preparation: RDG 158 or equivalent or through the Southwestern College multiple measures placement processes.
 Lecture 3 hours
 Offered: FALL, SPRING
 Surveys the world's regions and nations, including physical, cultural, and economic features. Emphasizes regional similarities and differences in human ethnicity, language, religion, urban systems, and political organizations. Includes cultural and historical influences on population growth, transportation networks, and natural environments. [D; CSU; UC; C-ID GEOG 125]

GEOG 107 **REMOTE PILOT GROUND SCHOOL** **1 UNIT**

Pass/No Pass or Grade is Allowed
 Lecture 1 hour
 Offered: FALL, SPRING
 Equips students with knowledge about the regulations and procedures governing the safe and legal operation of small remotely operated aircraft systems (sUAS), commonly referred to as "drones." Coincides with the knowledge areas in the Federal Aviation Administration's (FAA's) Part 107 knowledge test for a Remote Pilot Certificate with a sUAS rating, and is intended to prepare students for the FAA written examination required for students to become commercial sUAS pilots. [D; CSU] (Same as: AERO 107;NC 327)

GEOG 108 **INTRODUCTION TO DRONE TECHNOLOGY AND APPLICATIONS** **3 UNITS**

Pass/No Pass or Grade is Allowed
 Lecture 2 hours, laboratory 4 hours
 Offered: FALL, SPRING
 Introduces remotely operated aircraft systems (drones), including applications, safety, maintenance, mission planning, flying, and data acquisition (multispectral images, photos, and videos). [D; CSU] (Same as: AERO 108;ART 188;FTMA 108;NC 328)

GEOG 110 **INTRODUCTION TO OCEANOGRAPHY** **3 UNITS**

Grade Only
 Recommended Preparation: RDG 158 or equivalent or through the Southwestern College multiple measures placement processes.
 Lecture 3 hours
 Offered: FALL, SPRING
 Introduces the physical, chemical, biological, and geological foundations of the global ocean system. [D; CSU; UC] (Same as: GEOL 110;PHS 110)

GEOG 120 **INTRODUCTION TO GEOGRAPHY: CULTURAL ELEMENTS** **3 UNITS**

Pass/No Pass or Grade is Allowed
 Recommended Preparation: RDG 158 or equivalent or through the Southwestern College multiple measures placement processes.
 Lecture 3 hours
 Offered: FALL, SPRING
 Focuses on the cultural (or human) aspects of geography. Includes demography, languages and religions, urbanization and landscape modification, political units and nationalism, and economic systems and development. [D; CSU; UC; C-ID GEOG 120]

GEOG 130 **WEATHER AND CLIMATE** **3 UNITS**

Pass/No Pass or Grade is Allowed
 Recommended Preparation: RDG 158 or equivalent or through the Southwestern College multiple measures placement processes.
 Lecture 3 hours
 Offered: ALL
 Introduces the Earth's atmosphere: topics include atmospheric structure and composition, solar radiation and energy balances, temperature, seasonal changes, atmospheric moisture, clouds and fog, precipitation, air pressure, winds, air masses and fronts, cyclones, weather forecasting, climate and climate change. [D; CSU; UC; C-ID GEOG 130]

GEOG 145
INTRODUCTION TO MAPPING AND GEOGRAPHIC INFORMATION SYSTEMS (GIS)
3 UNITS

Pass/No Pass or Grade is Allowed
Recommended Preparation: RDG 158 or equivalent or through the Southwestern College multiple measures placement processes.
Lecture 3 hours
Offered: FALL, SPRING
Provides an introduction to Geographic Information Systems (GIS), cartography, and spatial analysis. Includes assessment of vector and raster systems, scale, resolution, map projection, coordinate systems, georeferencing, and Global Positioning Systems (GPS). [D; CSU; C-ID GEOG 155]

GEOG 150
EXPLORING OUR WORLD-MAPS AND GEOSPATIAL SCIENCE
3 UNITS

Pass/No Pass or Grade is Allowed
Recommended Preparation: RDG 158 or equivalent or through the Southwestern College multiple measures placement processes.
Prerequisite: Intermediate algebra proficiency, as determined through the Southwestern College Multiple Measures Process.
Lecture 3 hours
Offered: FALL, SPRING
Introduces fundamental concepts of geospatial analysis and map interpretation. Includes technologies such as Geographic Information Systems (GIS), Global Positioning Systems (GPS), cartography, remote sensing, geovisualization and interpretation, Internet mapping, and spatial statistics. Explores how geospatial technologies and tools are used in data collection, analysis, presentation, and problem solving. [D; CSU; UC; C-ID GEOG 150]

GEOG 152
GIS PROJECT DESIGN AND APPLICATIONS
3 UNITS

Pass/No Pass or Grade is Allowed
Lecture 3 hours
Offered: FALL, SPRING
Focuses on the diverse applications of geographic information systems (GIS). Covers a series of GIS tutorials and assignments using industry leading GIS software, culminating in a larger GIS project of their choice. Includes GIS project design and development, data acquisition, spatial analysis and modeling, cartography, and project presentation. [D; CSU; UC]

GEOG 153
GIS INTERNSHIP
3 UNITS

Pass/No Pass Only
Prerequisite: GEOG 152 or equivalent.
Laboratory 9 hours
Offered: FALL, SPRING
Provides students with the opportunity to apply classroom instruction to real-world GIS problem-solving by working with a government or private agency. Requires supervision of an instructor from the college and an advisor from the agency. [D; CSU]

GEOG 154
INTRODUCTION TO REMOTE SENSING
3 UNITS

Pass/No Pass or Grade is Allowed
Recommended Preparation: Intermediate algebra proficiency, as determined through the Southwestern College Multiple Measures Process; RDG 158 or equivalent or through the Southwestern College multiple measures placement processes.
Lecture 3 hours
Offered: FALL
Introduces fundamental concepts of electromagnetic radiation and its interactions with various media. Explores commonly used sensors and techniques of remote sensing. [D; CSU] (Same as: PHS 154)

GEOG 155
INTRODUCTION TO IMAGE ANALYSIS
3 UNITS

Pass/No Pass or Grade is Allowed
Lecture 3 hours
Offered: SPRING
Introduces principal concepts related to processing, analysis, enhancement, correction, and interpretation of images. Includes photogrammetry, information extraction, and scientific visualization. [D; CSU] (Same as: PHS 155)

GEOG 160
GEOGRAPHY OF CALIFORNIA
3 UNITS

Pass/No Pass or Grade is Allowed
Recommended Preparation: RDG 158 or equivalent or through the Southwestern College multiple measures placement processes.
Lecture 3 hours
Offered: ALL
Provides a detailed study of the physical and cultural elements of California focusing on California's diverse physical and human landscapes. [D; CSU; UC; C-ID GEOG 140]

GEOG 190
INTRODUCTION TO DRONE SAFETY AND APPLICATIONS
1 UNIT

Pass/No Pass or Grade is Allowed
Lecture 1 hour
Offered: ALL
Surveys the regulations governing small unmanned aircraft systems (sUAS) operations and safety considerations. Covers existing and emerging trends of sUAS applications in various industries. [D; CSU]

GEOG 299
INDEPENDENT STUDY
1-3 UNITS

Pass/No Pass or Grade is Allowed
Limitation on Enrollment: Eligibility for independent study.
Lecture 3 hours
Offered: ALL
Individual study or research in some area of geography of particular interest to the student and not included in regular courses of the college. [D; CSU; **UC] (**UC Limitation: credit for variable topics courses is given only after a review of the scope and content of the courses by the enrolling UC campus.