

# Geography

## Overview

The Department of Geography provides a broad-ranging perspective on humans as inhabitants of Earth, both as transformers of nature and as the creators of social spaces. Geography provides an environmental bridge between the natural and human sciences and an interdisciplinary link among the social sciences and humanities through its concern with space and spatial relations. As geographic theory and research has expanded their horizons over the past quarter-century, three research focuses have emerged to define geography at UC Berkeley:

### 1. Earth System Science

Earth System Science is the study of the interconnected components of our environment—the atmosphere, hydrosphere, lithosphere, cryosphere, and biosphere—and how they interact to produce an integrated whole. It utilizes the fundamental disciplines of mathematics, physics, chemistry, and biology and applies them in the context of human activities and landscapes to understand the Earth, at scales ranging from single watersheds to the entire globe. It provides a physical basis for understanding the Earth and its changes in the past, present, and future, equipping us with the scientific knowledge we need to find solutions for a sustainable planet.

The research of our Earth Systems Science faculty epitomizes this interdisciplinary and global approach, and with expertise in biogeochemistry, biogeography, climate dynamics and climate change, geomorphology, glaciology, hydrology, and terrestrial ecology. Our research spans all corners of the world—from the swamps of the Everglades to the tundra of Alaska, from the ocean-atmosphere systems of the tropical Pacific to the vast ice sheets of Antarctica.

### 2. Human Geography

Human Geography is a social science distinguished by its attention to the relation of humanity to the earth, in two regards. The first is the interaction of people with nature, including the extraction of natural resources, the environmental impact of people and their activities, and the effects of natural forces on society. The second is the spatial organization of societies at all scales from the local to the global (and from minutes to millennia) and the production of place, territory, and landscape by human imagination and activity.

We build on Berkeley Geography's long tradition of cutting-edge research that combines diverse methods to address questions of public importance in creative and compelling ways. Our faculty and graduate students work all around the world and explore an enormous range of topics: forest and range utilization in North America, urban development in China, agrarian change and resource extraction in Africa, conflict and human rights in Latin America, and much more. We examine borders and migration; conservation and development; globalization and governance; while attending closely to the roles of race, gender, and class and of science, technology and economy in shaping the world around us.

We encourage work that spans disciplinary divides, both between physical and human geography and between geography and other fields. We are proud of our longstanding commitment to advancing theoretical inquiry through research that is solidly grounded in the real

world and to teaching and scholarship that address public problems and needs.

### 3. Geospatial Representation and Analysis

Advances in digital technologies have revolutionized how scholars, governments, businesses, and non-profit organizations collect, store, analyze and represent information about space, place, flows and locations. Even as the use of Geographic Information Systems (GIS) has become ubiquitous, it has been superseded for research purposes by advances in spatial analysis, simulation modeling, remote sensing, web-based mapping, and geo-visualization. These technologies apply to the study of biophysical and social systems alike, and they are beginning to show the potential to erode the practical and pedagogical obstacles that have historically separated quantitative and qualitative methods, Human and Physical Geography. Our faculty use them to model global climate and coastal sediment dynamics, gentrification, segregation, transit and public health. We encourage students to use these tools critically and creatively to answer pressing questions about the contemporary world. Geography students are expected to have diverse interests and independent thought. The department welcomes students from a variety of backgrounds, including those with professional experience who wish to deepen their education. Students are encouraged to roam freely through the curriculum and to follow their inspiration where it leads while working in tandem with faculty advisers. Graduate students often use two or three faculty members in equal measure (including faculty affiliates and members from other departments) and collaborate with faculty on research, writing, and teaching. Students are expected to read extensively, develop their research, technical, and teaching skills, and produce well-crafted papers, projects, theses, and dissertations.

## Undergraduate Programs

Geography (<http://guide.berkeley.edu/archive/2020-21/undergraduate/degree-programs/geography/>): BA, Minor

## Graduate Program

Geography (<http://guide.berkeley.edu/archive/2020-21/graduate/degree-programs/geography/>): PhD

## Geography

Expand all course descriptions [+] Collapse all course descriptions [-]

## **GEOG N1 Global Environmental Change 3 Units**

Terms offered: Summer 2019 Second 6 Week Session

The global pattern of climate, landforms, vegetation, and soils. The relative importance of natural and human-induced change, global warming, forest clearance, accelerated soil erosion, glacial/postglacial climate change and its consequences.

Global Environmental Change: Read More [\[+\]](#)

### **Rules & Requirements**

**Credit Restrictions:** Students will receive no credit for Geography N1 after completing Geography 1. A deficient grade in Geography 1 maybe removed by taking Geography N1.

### **Hours & Format**

**Summer:** 6 weeks - 7.5 hours of lecture per week

### **Additional Details**

**Subject/Course Level:** Geography/Undergraduate

**Grading/Final exam status:** Letter grade. Final exam required.

Global Environmental Change: Read Less [\[-\]](#)

## **GEOG 4 World Peoples and Cultural Environments 4 Units**

Terms offered: Summer 2014 10 Week Session, Summer 2014 Second 6 Week Session, Summer 2013 Second 6 Week Session

Historical and contemporary cultural-environmental patterns. The development and spread of cultural adaptations, human use of resources, transformation and creation of human environments.

World Peoples and Cultural Environments: Read More [\[+\]](#)

### **Hours & Format**

**Fall and/or spring:** 15 weeks - 3 hours of lecture and 1 hour of laboratory per week

### **Summer:**

6 weeks - 7.5 hours of lecture and 2.5 hours of discussion per week

8 weeks - 6 hours of lecture and 2 hours of discussion per week

### **Additional Details**

**Subject/Course Level:** Geography/Undergraduate

**Grading/Final exam status:** Letter grade. Final exam required.

World Peoples and Cultural Environments: Read Less [\[-\]](#)

## **GEOG N4 World Peoples and Cultural Environments 3 Units**

Terms offered: Summer 2021 Second 6 Week Session, Summer 2020 Second 6 Week Session, Summer 2019 Second 6 Week Session

Historical and contemporary cultural-environmental patterns. The development and spread of cultural adaptations, human use of resources, transformation and creation of human environments.

World Peoples and Cultural Environments: Read More [\[+\]](#)

### **Rules & Requirements**

**Credit Restrictions:** Students will receive no credit for Geography N4 after completing Geography 4. A deficient grade in Geography 4 maybe removed by taking Geography N4.

### **Hours & Format**

**Summer:** 6 weeks - 7.5 hours of lecture per week

### **Additional Details**

**Subject/Course Level:** Geography/Undergraduate

**Grading/Final exam status:** Letter grade. Final exam required.

World Peoples and Cultural Environments: Read Less [\[-\]](#)

## GEOG 10 Worldings - Regions, Peoples and States 4 Units

Terms offered: Fall 2018, Fall 2017, Fall 2016

Geography is a way of thinking deeply and expansively about the world we inhabit and this course is designed to transform how you think about, understand and engage in its makings and re-makings. Ideas central to the field of geography such as space, nature, empire and globalization animate the histories and politics of each of these issues and many other cases. Our approach will not be to simply learn about the regions of the world, but to think critically and geographically about how region's, peoples and states and other foundational concepts have come into being and how they might be otherwise.

Worldings - Regions, Peoples and States: [Read More](#) [+]

### Objectives & Outcomes

#### Student Learning Outcomes: #

Discuss how some of the most consequential forces of modernity organized people into populations; lands into territory; and nations into states.

#

Discuss the violent and contested history surrounding the organization of regions, parks, cities, and neighborhoods whose enduring forms produce and reproduce racism, poverty, and gender inequalities.

#

Explain the practices and processes through which we have transformed climates, oceans, landforms and hydrological cycles and how these changes are creating new vastly uneven vulnerabilities.

#

Apply a solid working knowledge of how to approach politics with a geographic mindset.

#

Articulate a critical understanding of the core themes in human geography (Space, Nature, Empire, and Globalization) and explain their role in constituting the contemporary world.

#

Imagine new possibilities and alternative ways of engaging in and critically thinking about key geopolitical, social, and environmental issues that shape our modern world.

### Hours & Format

**Fall and/or spring:** 15 weeks - 3 hours of lecture and 1 hour of discussion per week

### Additional Details

**Subject/Course Level:** Geography/Undergraduate

**Grading/Final exam status:** Letter grade. Final exam required.

**Instructor:** Kosek

Worldings - Regions, Peoples and States: [Read Less](#) [-]

## GEOG 10AC Worldings: Regions, Peoples and States 4 Units

Terms offered: Fall 2021, Fall 2020, Fall 2019

Geography is a way of thinking deeply and expansively about our place in the world and this course is designed to transform how you think about America though understanding its place within a global context. Through concepts central to the field of geography such as space, nature, empire and globalization we will explore the issues of race, culture, ethnicity that pepper the pages of newspapers almost every day in stories of immigration, police violence, global warming, ethnic cleansing, and terrorism. We explore these issues in a way that will change how you understand both America and the world.

Worldings: Regions, Peoples and States: [Read More](#) [+]

### Objectives & Outcomes

**Student Learning Outcomes:** Understand the complexities of different racial/ethnic groups and their role in the making of America through comparative study in their global context

Articulate a critical understanding of the core themes in human geography (Space, Nature, Empire, and Globalization) and explain their role in constituting forms of difference (race, ethnicity etc.) in the contemporary world.

Discuss the violent and contested histories of regions, cities, and neighborhoods whose enduring material structures produce and reproduce racial inequalities in spatial form.

Explain the processes through which environmental changes are creating new vastly uneven vulnerabilities among different racial, ethnic and class groups.

Explain how concepts of nature have been a means for making and fixing of ethnic and racial difference in America.

Explain how global uneven development and racial and economic inequities are connected to debates around immigration, citizenship and wealth/poverty in America.

### Rules & Requirements

**Credit Restrictions:** Students who have taken Geog 10 or Geog W10AC may not take Geog 10AC additionally. Also, students that have taken Geog 10AC may not take Geog 10 or Geog W10AC.

**Requirements this course satisfies:** Satisfies the American Cultures requirement

### Hours & Format

**Fall and/or spring:** 15 weeks - 3 hours of lecture and 1 hour of discussion per week

### Additional Details

**Subject/Course Level:** Geography/Undergraduate

**Grading/Final exam status:** Letter grade. Final exam required.

**Instructor:** Kosek

Worldings: Regions, Peoples and States: [Read Less](#) [-]

## GEOG 20 Globalization 4 Units

Terms offered: Spring 2021, Spring 2020, Spring 2019

How do processes of production, exchange and consumption work in our contemporary era of volatility and fragility? This course takes a historical and geographical approach to understand how areas of the world have been incorporated into contemporary global processes differently.

Globalization: [Read More](#) [+]

### Hours & Format

**Fall and/or spring:** 15 weeks - 3 hours of lecture and 1 hour of discussion per week

### Additional Details

**Subject/Course Level:** Geography/Undergraduate

**Grading/Final exam status:** Letter grade. Final exam required.

Globalization: [Read Less](#) [-]

## GEOG N20 Globalization 3 Units

Terms offered: Summer 2021 First 6 Week Session, Summer 2019 First 6 Week Session, Summer 2018 Second 6 Week Session

Global economics and politics are undergoing a revolution. Transnational enterprises, international trade, and digitized finance are merging its formerly separate national economies. New regional and transnational treaties and institutions, from the EU and NAFTA to the IMF, the WTO and the World Bank, are arising to regulate the new global economy.

Power is being transferred from national states to these institutions, not always smoothly or in predictable ways. This course is about this medley.

Globalization: [Read More](#) [+]

### Hours & Format

#### Summer:

6 weeks - 7.5 hours of lecture per week

8 weeks - 5.5 hours of lecture per week

### Additional Details

**Subject/Course Level:** Geography/Undergraduate

**Grading/Final exam status:** Letter grade. Final exam not required.

Globalization: [Read Less](#) [-]

## GEOG 24 Freshman Seminar 1 Unit

Terms offered: Fall 2021, Fall 2020, Spring 2020

The Freshman Seminar Program has been designed to provide new students with the opportunity to explore an intellectual topic with a faculty member in a small seminar setting. Freshman seminars are offered in all campus departments, and topics vary from department to department and semester to semester. Enrollment limited to 15 freshmen.

Freshman Seminar: [Read More](#) [+]

### Rules & Requirements

**Repeat rules:** Course may be repeated for credit without restriction.

### Hours & Format

**Fall and/or spring:** 15 weeks - 1 hour of seminar per week

### Additional Details

**Subject/Course Level:** Geography/Undergraduate

**Grading/Final exam status:** The grading option will be decided by the instructor when the class is offered. Final exam required.

Freshman Seminar: [Read Less](#) [-]

## GEOG 31 Justice, Nature, and the Geographies of Identity 3 Units

Terms offered: Summer 2020 Second 6 Week Session, Fall 2017, Spring 2014

The intersection of nature, identity, and politics pepper the pages of newspapers almost every day from stories of toxic waste sites, crime, genetic engineering to indigenous struggles, and terrorist tendencies. In all these and many other cases, ideas of race, class, and gender intersect with ideas of nature and geography in often tenacious and troubling ways. Our approach will be to understand these traditional ideas of environmental justice as well as to examine less traditional sites of environmental justice such as the laboratory, the war zone, the urban mall, and the courtroom.

Justice, Nature, and the Geographies of Identity: [Read More](#) [+]

### Hours & Format

**Fall and/or spring:** 15 weeks - 3 hours of lecture per week

**Summer:** 6 weeks - 7.5 hours of lecture per week

### Additional Details

**Subject/Course Level:** Geography/Undergraduate

**Grading/Final exam status:** Letter grade. Alternative to final exam.

**Instructor:** Kosek

Justice, Nature, and the Geographies of Identity: [Read Less](#) [-]

## GEOG 32 Global Geographies of Imperialism 3 Units

Terms offered: Prior to 2007

European, Japanese, and American empires have covered large portions of the surface of the earth and collectively transformed the lives of billions of people. Today, China is also increasingly influential at the global scale. Focusing on the twentieth century into the present moment, this survey course explores global geographies of imperialism and hegemonic transitions. What drives imperialism? Are militarism and war inherent to global capitalism? How do historical relations of colonialism relate to uneven capitalist development today at the global scale? The course introduces key theories and debates on the topic of imperialism and explores the themes of race, gender, territory, development, resource extraction, finance, and militarism.

Global Geographies of Imperialism: [Read More](#) [+]

### Hours & Format

**Summer:** 6 weeks - 7.5 hours of lecture per week

### Additional Details

**Subject/Course Level:** Geography/Undergraduate

**Grading/Final exam status:** Letter grade. Final exam required.

**Instructor:** Martin

Global Geographies of Imperialism: [Read Less](#) [-]

## GEOG C32 Introduction to Global Studies 4 Units

Terms offered: Fall 2021, Spring 2021, Fall 2020

This course is designed as an introduction to Global Studies. Using a social science approach, the course prepares students to think critically about issues of international development, conflict, and peace in a variety of societies around the world. As such, it provides students with a basic theoretical introduction to the impact of global interaction as well as an opportunity to explore such interaction in a variety of case studies.

Introduction to Global Studies: [Read More](#) [+]

### Rules & Requirements

**Credit Restrictions:** Students will receive no credit for GLOBAL C10A/ GEOG C32 after taking DEV STD C10, GEOG C32, GLOBAL 10A, or PACS 10.

### Hours & Format

**Fall and/or spring:** 15 weeks - 3 hours of lecture and 1 hour of discussion per week

### Additional Details

**Subject/Course Level:** Geography/Undergraduate

**Grading/Final exam status:** Letter grade. Alternative to final exam.

**Formerly known as:** Development Studies C10/Geography C32

**Also listed as:** GLOBAL C10A

Introduction to Global Studies: [Read Less](#) [-]

## GEOG 35 Global Ecology and Development 4 Units

Terms offered: Spring 2014, Summer 2013 First 6 Week Session, Summer 2012 First 6 Week Session

Problems of Third World poverty and development have come to be seen as inseparable from environmental health and sustainability. The course explores the global and interconnected character of environment and development in the less developed world. Drawing on case studies of the environmental problems of the newly industrializing states, food problems, and environmental security in Africa, and the global consequences of tropical deforestation in Amazonia and carbon dioxide emissions in China, this course explores how growth and stagnation are linked to problems of environmental sustainability.

Global Ecology and Development: [Read More](#) [+]

### Hours & Format

**Fall and/or spring:** 15 weeks - 3 hours of lecture and 1 hour of discussion per week

### Summer:

6 weeks - 8 hours of lecture and 2 hours of discussion per week

8 weeks - 6 hours of lecture and 1.5 hours of discussion per week

### Additional Details

**Subject/Course Level:** Geography/Undergraduate

**Grading/Final exam status:** Letter grade. Final exam required.

**Instructor:** Watts

Global Ecology and Development: [Read Less](#) [-]

## GEOG 37 The Politics of Science and Technology 4 Units

Terms offered: Spring 2014, Spring 2012

This course examines how shifting understandings of science and technology have radically remade some of our most basic social and biological categories and concepts. The course explores the field of science and technology studies. In particular, students will explore formations and understandings of truth, objectivity, universality of science and technology, and the consequences of these cultural formations in contemporary debates around the world.

The Politics of Science and Technology: [Read More](#) [+]

### Hours & Format

**Fall and/or spring:** 15 weeks - 3 hours of lecture and 1 hour of discussion per week

### Additional Details

**Subject/Course Level:** Geography/Undergraduate

**Grading/Final exam status:** Letter grade. Final exam required.

**Instructor:** Kosek

The Politics of Science and Technology: [Read Less](#) [-]

## GEOG 40 Introduction to Earth System Science 4 Units

Terms offered: Fall 2021, Spring 2021, Fall 2020

The goals of this introductory Earth System Science course are to achieve a scientific understanding of important problems in global environmental change and to learn how to analyze a complex system using scientific methods. Earth System Science is an interdisciplinary field that describes the cycling of energy and matter between the different spheres (atmosphere, hydrosphere, biosphere, cryosphere, and lithosphere) of the earth system. Under the overarching themes of human-induced climate change, stratospheric ozone depletion, and biodiversity loss, we will explore key concepts of solar radiation, plate tectonics, atmospheric and oceanic circulation, and the history of life on Earth.

Introduction to Earth System Science: Read More [\[+\]](#)

### Hours & Format

**Fall and/or spring:** 15 weeks - 3 hours of lecture and 2 hours of laboratory per week

### Summer:

6 weeks - 7.5 hours of lecture and 5 hours of laboratory per week

8 weeks - 5.5 hours of lecture and 4 hours of laboratory per week

### Additional Details

**Subject/Course Level:** Geography/Undergraduate

**Grading/Final exam status:** Letter grade. Final exam required.

**Instructors:** Chiang, Cuffey, Rhew, Larsen

Introduction to Earth System Science: Read Less [\[-\]](#)

## GEOG 50AC California 4 Units

Terms offered: Fall 2021, Spring 2021, Fall 2020

California had been called "the great exception" and "America, only more so." Yet few of us pay attention to its distinctive traits and to its effects beyond our borders. California may be "a state of mind," but it is also the most dynamic place in the most powerful country in the world, and would be the 8th largest economy if it were a country. Its wealth has been built on mining, agriculture, industry, trade, and finance. Natural abundance and geographic advantage have played their parts, but the state's greatest resource has been its wealth and diversity of people, who have made it a center of technological and cultural innovation from Hollywood to Silicon Valley. Yet California has a dark side of exploitation and racialization.

California: Read More [\[+\]](#)

### Hours & Format

**Fall and/or spring:** 15 weeks - 3 hours of lecture and 1 hour of discussion per week

### Summer:

6 weeks - 8 hours of lecture and 2 hours of discussion per week

8 weeks - 6 hours of lecture and 1.5 hours of discussion per week

### Additional Details

**Subject/Course Level:** Geography/Undergraduate

**Grading/Final exam status:** Letter grade. Final exam required.

California: Read Less [\[-\]](#)

## GEOG N50AC California 3 Units

Terms offered: Summer 2021 First 6 Week Session, Summer 2020 First 6 Week Session, Summer 2019 First 6 Week Session

California had been called "the great exception" and "America, only more so." Yet few of us pay attention to its distinctive traits and to its effects beyond our borders. California may be "a state of mind," but it is also the most dynamic place in the most powerful country in the world, and would be the 8th largest economy if it were a country. Its wealth has been built on mining, agriculture, industry, trade, and finance. Natural abundance and geographic advantage have played their parts, but the state's greatest resource has been its wealth and diversity of people, who have made it a center of technological and cultural innovation from Hollywood to Silicon Valley. Yet California has a dark side of exploitation and racialization.

California: Read More [\[+\]](#)

### Hours & Format

**Summer:** 6 weeks - 8 hours of lecture per week

### Additional Details

**Subject/Course Level:** Geography/Undergraduate

**Grading/Final exam status:** Letter grade. Final exam required.

California: Read Less [\[-\]](#)

## GEOG C55 Introduction to Central Asia 3 Units

Terms offered: Fall 2021, Fall 2020, Fall 2018

This course will introduce the student not only to ancient and modern Central Asia, but also to the role played by the region in the shaping of the history of neighboring regions and regimes. The course will outline the history, languages, ethnicities, religions, and archaeology of the region and will acquaint the student with the historical foundations of some of the political, social and economic challenges for contemporary post-Soviet Central Asian republics.

Introduction to Central Asia: Read More [\[+\]](#)

### Rules & Requirements

**Credit Restrictions:** Students will receive no credit for NE STUD C26 after completing GEOG 55, or NE STUD 26. A deficient grade in NE STUD C26 may be removed by taking NE STUD 26.

### Hours & Format

**Fall and/or spring:** 15 weeks - 3 hours of lecture per week

### Additional Details

**Subject/Course Level:** Geography/Undergraduate

**Grading/Final exam status:** Letter grade. Final exam required.

**Formerly known as:** Near Eastern Studies C26/Geography C55

**Also listed as:** MELC C26

Introduction to Central Asia: Read Less [\[-\]](#)



## GEOG 70AC THE URBAN EXPERIENCE: RACE, CLASS, GENDER & THE AMERICAN CITY 4 Units

Terms offered: Summer 2021 Second 6 Week Session, Spring 2021, Summer 2020 Second 6 Week Session

In this course, students will observe and analyze how the American city has been built, experienced, imagined, and transformed. Using recent scholarship and primary sources, we will track the historical evolution of the city and assess change and continuity in major themes of urban life: race, gender, and difference, industry and labor, community and culture, and power and politics. These themes become increasingly intertwined throughout the course. We will focus on the particularities of place and the experiences of ordinary people but also seek to understand how broader political and economic processes shape the inequalities and opportunities that structure everyday life.

THE URBAN EXPERIENCE: RACE, CLASS, GENDER & THE AMERICAN CITY: Read More [+]

### Objectives & Outcomes

#### Course Objectives: •

Be familiar with important trends and forces behind the reshaping of historical geographies of race, class, and gender in the city;

•

Develop an eye for “looking at cities” and being able to ask questions about the processes that produce urban form;

•

Understand historical and contemporary patterns of social inclusion and exclusion in cities and be able to identify their underlying causes and effects;

•

Develop a theoretical understanding of race and ethnicity based on geographically- and historically-specific accounts of African Americans, Asian Americans, Latinx, and European Americans;

•

In addition to geographical inquiry, identify and explore approaches and insights from a range of fields, including political economy and cultural studies.

### Hours & Format

**Fall and/or spring:** 15 weeks - 3 hours of lecture and 1 hour of discussion per week

### Additional Details

**Subject/Course Level:** Geography/Undergraduate

**Grading/Final exam status:** Letter grade. Final exam required.

**Instructor:** Summers

THE URBAN EXPERIENCE: RACE, CLASS, GENDER & THE AMERICAN CITY: Read Less [-]

## GEOG 72AC The Bay Area 3 Units

Terms offered: Summer 2021 First 6 Week Session, Spring 2021

This course examines the distinct but ill-defined San Francisco Bay Area. Our approach will be neither to simply learn about the individual places that compose the Bay Area nor to study a succession of detached periods of development. Instead, we will think critically about the creations, contestations, and transformations of Bay Area spaces—landscapes, communities, neighborhoods, cities, suburbs, and the metropolitan region. Topics include indigenous geographies, colonialism, industrialization and economic geography, cities and suburbs, gentrification and displacement, regional racial formation and place-based identities, and resistance and rebellion.

The Bay Area: Read More [+]

### Hours & Format

**Fall and/or spring:** 15 weeks - 3 hours of lecture per week

**Summer:** 6 weeks - 7.5 hours of lecture per week

### Additional Details

**Subject/Course Level:** Geography/Undergraduate

**Grading/Final exam status:** Letter grade. Final exam required.

**Instructor:** Lunine

The Bay Area: Read Less [-]

## GEOG 80 Digital Worlds: An Introduction to Geospatial Technologies 4 Units

Terms offered: Fall 2021, Fall 2020, Fall 2019

An introduction to the increasingly diverse range of geospatial technologies and tools including but not limited to geographical information systems (GIS). Via a mix of lecture and lab-based instruction, students will develop knowledge and skills in web-mapping and GIS. How these tools are used to represent fundamental geographic concepts, and the wider socioeconomic context of these technologies will also be explored.

Digital Worlds: An Introduction to Geospatial Technologies: Read More [+]

### Rules & Requirements

**Prerequisites:** Basic computer literacy (e.g., Excel or similar)

### Hours & Format

**Fall and/or spring:** 15 weeks - 2 hours of lecture and 2 hours of laboratory per week

### Additional Details

**Subject/Course Level:** Geography/Undergraduate

**Grading/Final exam status:** Letter grade. Final exam required.

**Instructor:** O'Sullivan

Digital Worlds: An Introduction to Geospatial Technologies: Read Less [-]

## GEOG N80 Digital Worlds: An Introduction to Geospatial Technologies 4 Units

Terms offered: Summer 2019 8 Week Session, Summer 2018 8 Week Session, Summer 2017 8 Week Session

An introduction to the increasingly diverse range of geospatial technologies and tools including but not limited to geographical information systems (GIS). Via a mix of lecture and lab-based instruction, students will develop knowledge and skills in web-mapping and GIS.

How these tools are used to represent fundamental geographic concepts, and the wider socioeconomic context of these technologies will also be explored.

Digital Worlds: An Introduction to Geospatial Technologies: Read More [+]

### Hours & Format

**Summer:** 8 weeks - 3 hours of lecture and 4 hours of laboratory per week

### Additional Details

**Subject/Course Level:** Geography/Undergraduate

**Grading/Final exam status:** Letter grade. Final exam required.

Digital Worlds: An Introduction to Geospatial Technologies: Read Less [-]

## GEOG 84 Sophomore Seminar 1 or 2 Units

Terms offered: Fall 2020

Sophomore seminars are small interactive courses offered by faculty members in departments all across the campus. Sophomore seminars offer opportunity for close, regular intellectual contact between faculty members and students in the crucial second year. The topics vary from department to department and semester to semester. Enrollment limited to 15 sophomores.

Sophomore Seminar: Read More [+]

### Rules & Requirements

**Prerequisites:** At discretion of instructor

**Repeat rules:** Course may be repeated for credit when topic changes.

### Hours & Format

#### Fall and/or spring:

5 weeks - 3-6 hours of seminar per week  
10 weeks - 1.5-3 hours of seminar per week  
15 weeks - 1-2 hours of seminar per week

#### Summer:

6 weeks - 2.5-5 hours of seminar per week  
8 weeks - 1.5-3.5 hours of seminar per week

### Additional Details

**Subject/Course Level:** Geography/Undergraduate

**Grading/Final exam status:** The grading option will be decided by the instructor when the class is offered. Final exam required.

Sophomore Seminar: Read Less [-]

## GEOG 88 Data Science Applications in Geography 2 Units

Terms offered: Spring 2019, Spring 2018, Spring 2017

Data science methods are increasingly important in geography and earth science. This course introduces some of the particular challenges of working with spatial data arising from characteristics specific to such data. These issues will be explored in a series of modules deploying data science methods to investigate contemporary topics in geography and earth science, relating to climate science, hydrology, population census and remote sensing of environment. No prior knowledge is assumed or expected.

Data Science Applications in Geography: Read More [+]

### Hours & Format

**Fall and/or spring:** 7 weeks - 2 hours of lecture and 4 hours of laboratory per week

### Additional Details

**Subject/Course Level:** Geography/Undergraduate

**Grading/Final exam status:** Letter grade. Final exam not required.

Data Science Applications in Geography: Read Less [-]

## GEOG 98 Directed Group Study 1 - 4 Units

Terms offered: Spring 2021, Spring 2020, Spring 2019

Lectures and small group discussion focusing on topics of interest that vary from semester to semester.

Directed Group Study: Read More [+]

### Rules & Requirements

**Repeat rules:** Course may be repeated for credit without restriction.

### Hours & Format

**Fall and/or spring:** 15 weeks - 1-4 hours of directed group study per week

#### Summer:

6 weeks - 1-4 hours of directed group study per week  
8 weeks - 1-4 hours of directed group study per week

### Additional Details

**Subject/Course Level:** Geography/Undergraduate

**Grading/Final exam status:** Offered for pass/not pass grade only. Final exam not required.

Directed Group Study: Read Less [-]



## GEOG 100 Field Study of Cuba: Landscapes of Power, Production, Promise 6 Units

Terms offered: Summer 2017 Second 6 Week Session, Fall 1979, Fall 1967

Field course in the cultural geography. Using the landscape as our reference, we will explore the historical transformation of Cuban cities, town, and countryside from colonial times up to the present. Focus our exploration through two particular perspectives: attention to production in key sectors of the Cuban economy at different historical moments, and the ways their attendant forms of labor, ownership, technology, and trade shape the cultural landscape. The other major point of reference for this course is representations of Cuba as a place: what has Cuba stood for over time, to Cubans and to outsiders, and how have these stories played out in the forms and functions of the Cuban land

Field Study of Cuba: Landscapes of Power, Production, Promise: Read More [+]

### Hours & Format

**Summer:** 6 weeks - 15 hours of seminar per week

### Additional Details

**Subject/Course Level:** Geography/Undergraduate

**Grading/Final exam status:** Letter grade. Alternative to final exam.

**Instructor:** Vasile

Field Study of Cuba: Landscapes of Power, Production, Promise: Read Less [-]

## GEOG 104 The Black City: Oakland California 3 Units

Terms offered: Fall 2011, Spring 2002, Fall 2000

Since the late 1990s, Oakland has experienced considerable racial and economic restructuring. Oakland's formerly prominent Black population has dwindled precipitously, as the city lost nearly 25% of its Black population since 2010. Cultural institutions, like churches, barbershops, blues clubs, and restaurants that once served its vast working-class population were replaced by trendy shops and hipster outlets. Students will engage the sense of loss and possibility arising in the city as they participate in a series of in-class workshops to learn various field methods. They will also work in neighborhoods with community leaders and groups to document residents' valued places and how these places have changed over time.

The Black City: Oakland California: Read More [+]

### Hours & Format

**Summer:** 3 weeks - 15 hours of seminar per week

### Additional Details

**Subject/Course Level:** Geography/Undergraduate

**Grading/Final exam status:** Letter grade. Alternative to final exam.

**Instructor:** Summers

The Black City: Oakland California: Read Less [-]

## GEOG 105 Black Geographic Thought 3 Units

Terms offered: Prior to 2007

Black Geographies considers the concept of geography to examine multiple orientations through engaging critical race, black feminist, diaspora and queer studies. The course covers approaches to the geographical categorization of blackness through two organizing frameworks. The first, the 'black geographic,' 'geography' serves as a productive analytic for examining the lived experiences, conceptual limits, and theoretical purchase of blackness through the reading of some seminal and contemporary texts by black geographers. The second, 'geographic blackness,' considers how blackness as a modality of analysis gives insight and shape to the discipline of geography through texts by non-geographers that engage or invoke geographic themes.

Black Geographic Thought: Read More [+]

### Hours & Format

**Summer:** 3 weeks - 15 hours of seminar per week

### Additional Details

**Subject/Course Level:** Geography/Undergraduate

**Grading/Final exam status:** Letter grade. Final exam required.

**Instructor:** Lewis

Black Geographic Thought: Read Less [-]

## GEOG 107 Waste Matters: Exploring the Abject, Discarded, and Disposable 3 Units

Terms offered: Summer 2020 Second 6 Week Session, Fall 1996, Spring 1992

This experiential undergraduate seminar seeks to interrupt traditional managerial discourses about waste that view it as a technocratic problem and instead understand waste as deeply embedded in society, culture, and politics. In this class we will explore the myriad sociocultural, political, and economic processes on “the problem of waste” and also open up the classroom setting to an intimate and immersive engagement with the various lived experiences of people whom inhabit and are entangled ‘with/in/by waste’. To do so, the course combines weekly seminar discussions of key academic texts, supplemented with three ‘discovery experiences’ that speak to the multiple socio-political workings of waste. Waste Matters: Exploring the Abject, Discarded, and Disposable: Read More [+]

### Objectives & Outcomes

- Course Objectives:**
- To critically reflect upon the creation and destruction of value through examining discourses and practices of waste.
  - To explore concepts and histories of development in a diverse set of contexts through a close examination of the politics of consumption and disposal.
  - To better understand questions of sustainability, urban ecological design, and people's relationship to nature in the city through unpacking our relationship to trash.
  - To consider the role of stigmatized labor in constructing and upholding gender, race, and class difference.
  - To consider our own practices of consumption and waste through examining the specific waste geographies of the Bay Area.
  - To explore a set of social movements and artistic practices derived from the creative power of waste.

### Rules & Requirements

**Credit Restrictions:** Students will receive no credit for GEOG 107 after completing GEOG 107. A deficient grade in GEOG 107 may be removed by taking GEOG 107.

### Hours & Format

**Summer:** 6 weeks - 7.5 hours of seminar per week

### Additional Details

**Subject/Course Level:** Geography/Undergraduate

**Grading/Final exam status:** Letter grade. Alternative to final exam.

**Instructor:** Laudati

Waste Matters: Exploring the Abject, Discarded, and Disposable: Read Less [-]

## GEOG 108 Geographies of Energy: The Rise and Fall of the Fossil Fuel Economy 3 Units

Terms offered: Summer 2021 Second 6 Week Session, Summer 2020 Second 6 Week Session, Summer 1999 10 Week Session

This course surveys the historical relationship between fossil fuels and the capitalist economy. Beginning with the origin of intensive fossil fuel use in the early modern world, and then moving through the industrial epochs of coal and then oil, this course asks how have fossil fuels shaped the trajectory of our modern economic world? Students will investigate the broad, structural impact these resources have had on labor relations, economic development, culture, the environment, politics, and more. Framed around the current, contested transition off of coal, oil, and gas, this course also asks what the future of fossil fuels look like. Will we disentangle ourselves from these sources of energy – what does the future hold?

Geographies of Energy: The Rise and Fall of the Fossil Fuel Economy: Read More [+]

### Objectives & Outcomes

**Course Objectives:** Cultivate an understanding of the relationship of fossil fuels and energy, more broadly, to the geographic and historic development of the modern economy. Familiarize students with debates about the relationship of energy to the origin of capitalism. Develop students' understanding of the complex impacts of the advent of both coal and oil. Promote a fundamental understanding of how these resources are extracted, and the conflicts and difficulties surrounding their production. Introduce students to theoretical debates about resource crises that developed in the 1970s. Examine, in detail, the conflict today to end fossil fuels: the barriers in the way, the political actors involved, and the economic complexities of the transition. Students will also participate in a short research project that will encourage source-finding, thesis development, and relational thinking across disciplines.

### Rules & Requirements

**Credit Restrictions:** Students will receive no credit for GEOG 108 after completing GEOG 108. A deficient grade in GEOG 108 may be removed by taking GEOG 108.

### Hours & Format

**Summer:** 6 weeks - 7.5 hours of lecture per week

### Additional Details

**Subject/Course Level:** Geography/Undergraduate

**Grading/Final exam status:** Letter grade. Final exam required.

**Instructor:** Eckhouse

Geographies of Energy: The Rise and Fall of the Fossil Fuel Economy: Read Less [-]

## GEOG 110 Critical Economic Geographies 4 Units

Terms offered: Spring 2021, Spring 2020, Fall 2018

This course examines the fundamentally geographic nature of our current, historically unique system of material reproduction—capitalism—and how capitalist logics have shaped places and forms of life over the course of the system's growth and change. We will explore how capitalist processes shape the rise (and inevitable fall) of places, techniques, social worlds, and divisions of labor, and pay close attention to the power relations and spatial organization that accompany them. The course provides a grounding in critical perspectives such as the Marxian, Black radical, and feminist traditions to equip students with theoretical tools to understand and interpret the spatiality of contemporary capitalism.

Critical Economic Geographies: [Read More](#) [+]

### Objectives & Outcomes

**Course Objectives:** Students who engage meaningfully with this course will be able to successfully: use texts to explain and discuss key concepts and theories in economic geography, including their history and relevance to specific places; draw on theories and concepts from economic geography to analyze contemporary capitalism; critically reflect on economic geography as a discipline; use a range of media to produce economic geographic knowledge for a lay audience; and provide critical peer feedback on work in development and submitted work.

### Rules & Requirements

**Prerequisites:** 20 or prior courses in economic or regional development strongly suggested

### Hours & Format

**Fall and/or spring:** 15 weeks - 3 hours of lecture and 1 hour of discussion per week

### Additional Details

**Subject/Course Level:** Geography/Undergraduate

**Grading/Final exam status:** Letter grade. Final exam required.

**Instructor:** Fields

Critical Economic Geographies: [Read Less](#) [-]

## GEOG C112 Global Development: Theory, History, Geography 4 Units

Terms offered: Spring 2021, Spring 2020, Spring 2019

This course examines whether the convergence between the 'new Right' and the 'new Left' has successfully addressed the central challenge of contemporary global development studies. It asks students to assess the multiple, nonlinear, and interconnected paths of change in Africa, Asia, Latin America, and the Middle East that are now taking place. It explores the context of intensified global integration and capitalist development. Students will consider what changes in this context mean for larger social change, especially given ongoing global economic crises and rapidly evolving relations.

Global Development: Theory, History, Geography: [Read More](#) [+]

### Rules & Requirements

**Credit Restrictions:** Students can replace deficient grades in DEV STD C100, GLOBAL C100D, GEOG C112, or GLOBAL 100D by passing GLOBAL C100D, GEOG C112, or GLOBAL 100D.

### Hours & Format

**Fall and/or spring:** 15 weeks - 3 hours of lecture and 1 hour of discussion per week

### Additional Details

**Subject/Course Level:** Geography/Undergraduate

**Grading/Final exam status:** Letter grade. Final exam required.

**Formerly known as:** Development Studies C100/Geography C112

**Also listed as:** GLOBAL C100D

Global Development: Theory, History, Geography: [Read Less](#) [-]

## **GEOG 114 Thinking Globally, Acting Regionally: Geographies of Climate Change 3 Units**

Terms offered: Prior to 2007

This writing-intensive course engages all fields of inquiry and forms of evidence in the geographies of climate change. Course topics include impacts on human and biophysical systems; mitigation and adaptation; global, regional and local policy efforts; gender and climate; and environmental justice and human rights. Regional and historical approaches underlie all topics.

Students will use common rhetorical strategies in writing; trans-disciplinary forms of evidence for characterizing, analyzing, narrating and explaining; additional focus on the arguments, evidence, and rhetorical strategies that climate skeptics use. Includes a research project. Open to non-majors.

Thinking Globally, Acting Regionally: Geographies of Climate Change: Read More [+]

### **Objectives & Outcomes**

#### **Student Learning Outcomes: 1.**

Using writing for understanding, characterizing, synthesizing, questioning, and communicating with academic, civic, and practitioner audiences;

2. Critical and tactical reading; summarizing and evaluating peer-reviewed articles, policy reports, and narratives, among others;

3. Drafting, revising, and finalizing thesis-driven writing that uses appropriate forms of evidence, with attention to grammar conventions;

4. Peer assessment, editing, and critique of drafts, including for grammar conventions;

5. Collaborating on shared research activities;

6. Creating a research topic from scratch, including research questions and a research proposal; compiling, analyzing, integrating, and communicating research findings;

7. Using library and online research tools, including archival materials; assessing the veracity of information obtained from source materials; documenting sources using standard bibliographic and citation formats.

### **Hours & Format**

**Summer:** 6 weeks - 7.5 hours of seminar per week

### **Additional Details**

**Subject/Course Level:** Geography/Undergraduate

**Grading/Final exam status:** Letter grade. Alternative to final exam.

**Instructor:** Isom

Thinking Globally, Acting Regionally: Geographies of Climate Change: Read Less [-]

## **GEOG 123 Postcolonial Geographies 4 Units**

Terms offered: Fall 2015, Fall 2013, Fall 2012

Postcolonial studies focus on how processes of colonialism/imperialism continue even after the formal dissolution of empire. A central argument of this course is that critical human geography can make important contributions to understanding the interconnections between forces at play in different parts of the world. Drawing on concepts of space, place, culture, power, and difference, its purpose is to provide a set of tools for grappling with the conditions in which we find ourselves, and for thinking about the possibilities for social change.

Postcolonial Geographies: Read More [+]

### **Hours & Format**

**Fall and/or spring:** 15 weeks - 4 hours of lecture per week

### **Additional Details**

**Subject/Course Level:** Geography/Undergraduate

**Grading/Final exam status:** Letter grade. Final exam required.

**Instructor:** Hart

Postcolonial Geographies: Read Less [-]

## GEOG 124 Urban Sites and City Life 3 Units

Terms offered: Spring 2021, Spring 2020

This course explores historical, cultural, and socio-economic geographies of cities, city life, and the organization of metropolitan political power. It is primarily focused on the U.S., but will draw on select examples from abroad. We will investigate urbanization as a general process and the resulting physical, social, cultural, and political economic forms of cities and examine the ways that cities have addressed tensions emerging from segregation and urban renewal. We will also look at both the ways in which social inequality is reinforced through the politics, policies, and design of the built environment as well as strategies for fostering and nurturing inclusive and equitable urban spaces through city design and policy.

Urban Sites and City Life: Read More [+]

### Objectives & Outcomes

#### Course Objectives:

- Be familiar with important trends and forces behind the reshaping of geographies of race, class, and gender in the city today;
- Engage thoughtfully, respectfully, and honestly with community residents and other students around issues of race, urban inequality, and cultural difference;
- Demonstrate self-reflexivity with regard to the ways in which issues of race and inequality affect their own ideas about and experiences of urban space;
- Develop and eye for “looking at cities” and being able to ask questions about the processes that produce urban form;
- Understand historical and contemporary patterns of social inclusion and exclusion in cities and be able to identify their underlying causes and effects;
- Understand how local experiences and conditions of urban life are affected by broader social, economic, and political processes including industrialization, globalization, and economic restructuring of cities.

### Hours & Format

**Fall and/or spring:** 15 weeks - 3 hours of lecture per week

### Additional Details

**Subject/Course Level:** Geography/Undergraduate

**Grading/Final exam status:** Letter grade. Alternative to final exam.

**Instructor:** Summers

Urban Sites and City Life: Read Less [-]

## GEOG 125 The American City 4 Units

Terms offered: Fall 2014, Spring 2010, Spring 2009

The American city, palimpsest of a nation. It all comes together in the modern metropolis: economy, society, politics, culture, and geography. Cities as the economic engines of capitalism, centers of industry, finance, business, consumption, and innovation. Cities as political powers and political pawns, and the government of cities, suburbs, and metropolitan areas. Cities as magnificent constructs, built of concrete, credit and land rents, from skyscrapers to housing tracts, freeways to shopping malls, airports to open spaces. Cities as landscapes of social division by class, race and nationality, and the turf battles from mean ghetto streets to the hideaways of privilege.

The American City: Read More [+]

### Hours & Format

**Fall and/or spring:** 15 weeks - 3 hours of lecture and 1 hour of discussion per week

### Additional Details

**Subject/Course Level:** Geography/Undergraduate

**Grading/Final exam status:** Letter grade. Final exam required.

The American City: Read Less [-]

## GEOG 129 Ocean Worlds 3 Units

Terms offered: Fall 2020

This course explores oceanic connections, movements, livelihoods, developments and imaginations in the modern world. We read the oceanic novel Moby Dick and think across themes including the geography of the Mediterranean, the riotous Atlantic, the imperial Pacific, the anticolonial Caribbean and the Muslim Indian Ocean; and we look at ports, containers, oceanic infrastructure and precarious marine livelihoods today. We read thinkers from our oceanic planet to imagine an oceanic way of thinking.

Ocean Worlds: Read More [+]

### Objectives & Outcomes

**Course Objectives:** To understand oceanic connections in the modern world, and to develop skills in human geographic thinking, writing and communication.

### Rules & Requirements

**Credit Restrictions:** Students will receive no credit for GEOG 129 after completing GEOG 129. A deficient grade in GEOG 129 may be removed by taking GEOG 129.

### Hours & Format

**Fall and/or spring:** 15 weeks - 3 hours of lecture per week

### Additional Details

**Subject/Course Level:** Geography/Undergraduate

**Grading/Final exam status:** Letter grade. Final exam required.

**Instructor:** Chari

Ocean Worlds: Read Less [-]

## GEOG 130 Food and the Environment 4 Units

Terms offered: Spring 2021, Spring 2020, Spring 2019

How do human populations organize and alter natural resources and ecosystems to produce food? The role of agriculture in the world economy, national development, and environmental degradation in the Global North and the Global South. The origins of scarcity and abundance, population growth, hunger and obesity, and poverty.

Food and the Environment: Read More [\[+\]](#)

### Hours & Format

**Fall and/or spring:** 15 weeks - 3 hours of lecture and 1 hour of discussion per week

### Summer:

6 weeks - 7.5 hours of lecture and 2.5 hours of discussion per week

8 weeks - 6 hours of lecture and 2 hours of discussion per week

### Additional Details

**Subject/Course Level:** Geography/Undergraduate

**Grading/Final exam status:** Letter grade. Final exam required.

**Instructors:** Sayre, Watts

Food and the Environment: Read Less [\[-\]](#)

## GEOG N130 Food and the Environment 3 Units

Terms offered: Summer 2021 First 6 Week Session, Summer 2019 First 6 Week Session, Summer 2018 First 6 Week Session

How do human populations organize and alter natural resources and ecosystems to produce food? The role of agriculture in the world economy, national development, and environmental degradation in the Global North and the Global South. The origins of scarcity and abundance, population growth, hunger and obesity, and poverty.

Food and the Environment: Read More [\[+\]](#)

### Hours & Format

### Summer:

6 weeks - 7.5 hours of lecture per week

8 weeks - 5.5 hours of lecture per week

### Additional Details

**Subject/Course Level:** Geography/Undergraduate

**Grading/Final exam status:** Letter grade. Final exam required.

Food and the Environment: Read Less [\[-\]](#)

## GEOG C135 Water Resources and the Environment 3 Units

Terms offered: Spring 2018, Spring 2016

Distribution, dynamics, and use of water resources in the global environment. Water scarcity, water rights, and water wars. The terrestrial hydrologic cycle. Contemporary environmental issues in water resource management, including droughts, floods, saltwater intrusion, water contamination and remediation, river restoration, hydraulic fracturing, dams, and engineering of waterways. The role of water in ecosystem processes and geomorphology. How water resources are measured and monitored. Basic water resource calculations. Effects of climate change on water quantity, quality, and timing.

Water Resources and the Environment: Read More [\[+\]](#)

### Hours & Format

**Fall and/or spring:** 15 weeks - 3 hours of lecture per week

### Additional Details

**Subject/Course Level:** Geography/Undergraduate

**Grading/Final exam status:** Letter grade. Alternative to final exam.

**Instructor:** Larsen

**Also listed as:** ESPM C133

Water Resources and the Environment: Read Less [\[-\]](#)

## GEOG C136 Terrestrial Hydrology 4 Units

Terms offered: Spring 2021, Spring 2020, Spring 2019, Spring 2014

A quantitative introduction to the hydrology of the terrestrial environment including lower atmosphere, watersheds, lakes, and streams. All aspects of the hydrologic cycle, including precipitation, infiltration, evapotranspiration, overland flow, streamflow, and groundwater flow. Chemistry and dating of groundwater and surface water. Development of quantitative insights through problem solving and use of simple models. This course requires one field experiment and several group computer lab assignments.

Terrestrial Hydrology: Read More [\[+\]](#)

### Rules & Requirements

**Prerequisites:** CHEM 1A, MATH 1A, MATH 1B, and PHYSICS 7A; or consent of instructor

### Hours & Format

**Fall and/or spring:** 15 weeks - 3 hours of lecture per week

### Additional Details

**Subject/Course Level:** Geography/Undergraduate

**Grading/Final exam status:** Letter grade. Alternative to final exam.

**Instructor:** Larsen

**Also listed as:** CIV ENG C103N/ESPM C130

Terrestrial Hydrology: Read Less [\[-\]](#)



## GEOG 137 Top Ten Global Environmental Problems 4 Units

Terms offered: Spring 2018, Spring 2016, Spring 2015

Conceptualizing global environmental problems is difficult because of the complexity of the issues, the magnitude of the problems, and the different time scales of action versus reaction. These issues apply both to the natural earth system as well as human societies. This course will examine the scientific basis underlying the largest environmental threats, and then reframe the issues to explore the societal basis of those problems. Class is not open to freshmen.

Top Ten Global Environmental Problems: Read More [+]

### Rules & Requirements

**Prerequisites:** Geography 40, ESPM 15, or equivalent

### Hours & Format

**Fall and/or spring:** 15 weeks - 3 hours of lecture and 1 hour of discussion per week

### Additional Details

**Subject/Course Level:** Geography/Undergraduate

**Grading/Final exam status:** Letter grade. Alternative to final exam.

**Instructor:** Rhew

Top Ten Global Environmental Problems: Read Less [-]

## GEOG 138 Global Environmental Politics 4 Units

Terms offered: Fall 2021, Fall 2020, Summer 2020 Second 6 Week Session

Political factors affecting ecological conditions in the Third World. Topics include environmental degradation, migrations, agricultural production, role of international aid, divergence in standard of living, political power, participation and decision making, access to resources, global environmental policies and treaties, political strife and war. Global Environmental Politics: Read More [+]

### Hours & Format

**Fall and/or spring:** 15 weeks - 3 hours of lecture per week

**Summer:** 6 weeks - 7.5 hours of lecture per week

### Additional Details

**Subject/Course Level:** Geography/Undergraduate

**Grading/Final exam status:** Letter grade. Final exam required.

Global Environmental Politics: Read Less [-]

## GEOG C139 Atmospheric Physics and Dynamics 3 Units

Terms offered: Fall 2020, Fall 2019, Fall 2018

This course examines the processes that determine the structure and circulation of the Earth's atmosphere. The approach is deductive rather than descriptive: to figure out the properties and behavior of the Earth's atmosphere based on the laws of physics and fluid dynamics. Topics will include interaction between radiation and atmospheric composition; the role of water in the energy and radiation balance; governing equations for atmospheric motion, mass conservation, and thermodynamic energy balance; geostrophic flow, quasigeostrophic motion, baroclinic instability and dynamics of extratropical cyclones.

Atmospheric Physics and Dynamics: Read More [+]

### Rules & Requirements

**Prerequisites:** Mathematics 53, 54; Physics 7A-7B-7C

### Hours & Format

**Fall and/or spring:** 15 weeks - 3 hours of lecture per week

### Additional Details

**Subject/Course Level:** Geography/Undergraduate

**Grading/Final exam status:** Letter grade. Final exam required.

**Instructors:** Chiang, Fung

**Also listed as:** EPS C181

Atmospheric Physics and Dynamics: Read Less [-]

## GEOG 140A Physical Landscapes: Process and Form 4 Units

Terms offered: Spring 2021, Spring 2020, Spring 2019

Understanding the physical characteristics of the Earth's surface, and the processes active on it, is essential for maintaining the long-term health of the environment, and for appreciating the unique, defining qualities of geographic regions. In this course, we build an understanding of global tectonics, rivers, hillslopes, and coastlines and discover how these act in concert with the underlying geologic framework to produce the magnificent landscapes of our planet. Through our review of formative processes, we learn how physical landscapes change and are susceptible to human modifications, which are often unintentional.

Physical Landscapes: Process and Form: Read More [+]

### Rules & Requirements

**Prerequisites:** 1 or equivalent

### Hours & Format

**Fall and/or spring:** 15 weeks - 3 hours of lecture per week

### Additional Details

**Subject/Course Level:** Geography/Undergraduate

**Grading/Final exam status:** Letter grade. Final exam required.

**Instructor:** Cuffey

Physical Landscapes: Process and Form: Read Less [-]

## GEOG 140B Physiography and Geomorphologic Extremes 4 Units

Terms offered: Fall 2021, Fall 2020, Fall 2018

In this course we review the physical landscapes and surface processes in extreme environments: hot arid regions, glacial and periglacial landscapes, and karst terrane. Using this knowledge, plus an understanding of tectonics and temperate watersheds (gained from prerequisite courses), we explore how unique combinations of geomorphic processes acting on tectonic and structural provinces have created the spectacular and diverse landscapes of North America. Regions to be explored include the Colorado Plateau, Sierra Nevada, North Cascades, Northern and Southern Rockies, Great Plains, Appalachian Highlands, and Mississippi Delta.

Physiography and Geomorphologic Extremes: Read More [\[+\]](#)

### Rules & Requirements

**Prerequisites:** 140A (formerly 140), or Geology 117, or equivalent

### Hours & Format

**Fall and/or spring:** 15 weeks - 3 hours of lecture per week

### Additional Details

**Subject/Course Level:** Geography/Undergraduate

**Grading/Final exam status:** Letter grade. Final exam not required.

**Instructor:** Cuffey

Physiography and Geomorphologic Extremes: Read Less [\[-\]](#)

## GEOG 142 Climate Dynamics 4 Units

Terms offered: Spring 2021, Fall 2017, Fall 2016

The course presents a conceptual basis for understanding of the workings of the global climate system, and how they conspire to bring about change. The goal is to give the student a climate dynamics basis for understanding global climate change. Covered topics include observations of the climate system; the earth's energy balance; atmospheric radiative transfer; atmospheric circulation; the role of the ocean and the cryosphere; climate variability on various timescales; climate feedbacks and climate change.

Climate Dynamics: Read More [\[+\]](#)

### Rules & Requirements

**Prerequisites:** Consent of instructor needed if student has not taken an introductory-level undergraduate physics course

### Hours & Format

**Fall and/or spring:** 15 weeks - 3 hours of lecture and 1 hour of discussion per week

### Additional Details

**Subject/Course Level:** Geography/Undergraduate

**Grading/Final exam status:** Letter grade. Final exam required.

**Instructor:** Chiang

Climate Dynamics: Read Less [\[-\]](#)

## GEOG 143 Global Change Biogeochemistry 3 Units

Terms offered: Fall 2019, Fall 2014, Spring 2013

How does the chemical makeup of Earth make it suitable for life? And how does life in turn alter the chemistry of our planet? Biogeochemistry is the field of science that explores the imprint of biota (including humans) on the chemistry of the ocean, land and atmosphere. This interdisciplinary field addresses global problems, including climate change feedbacks, air quality, land use change, and marine ecosystem health. We will provide an overview of the major biogeochemical cycles, discuss the biogeochemistry of major ecosystems, and introduce the major biogeochemical questions being asked today. We also cover measurement techniques, including hands-on activities to introduce students to experimental methods and data analysis.

Global Change Biogeochemistry: Read More [\[+\]](#)

### Rules & Requirements

**Prerequisites:** Chemistry 1A or equivalent

### Hours & Format

**Fall and/or spring:** 15 weeks - 3 hours of lecture per week

### Additional Details

**Subject/Course Level:** Geography/Undergraduate

**Grading/Final exam status:** Letter grade. Final exam required.

**Instructor:** Rhew

Global Change Biogeochemistry: Read Less [\[-\]](#)

## GEOG 144 Principles of Meteorology 3 Units

Terms offered: Spring 2019, Spring 2011, Fall 2008

Weather development in relation to different scales of atmospheric circulation including analysis and forecasting with examples from the Northeastern Pacific-Western North American area.

Principles of Meteorology: Read More [\[+\]](#)

### Hours & Format

**Fall and/or spring:** 15 weeks - 3 hours of lecture per week

### Additional Details

**Subject/Course Level:** Geography/Undergraduate

**Grading/Final exam status:** Letter grade. Final exam required.

Principles of Meteorology: Read Less [\[-\]](#)

## GEOG 145 Platform Geographies 4 Units

Terms offered: Fall 2021, Fall 2013, Spring 1998

This course explores how digital platforms are reshaping urban and rural geographies. Theories of city and country, the history and current state of platforms, and connections between technology and social hierarchies are the foundation for this course. We examine smart cities and rural data centers, logistics landscapes, gig work and 'the hustle economy', property technologies and gentrification, and digitized policing and carceral geographies. Students will critically reflect on notions of city and country and the role of technology in producing urban-rural landscapes, examine the uneven socio-spatial consequences of technology, and reflect on how to build digital geographies that refuse domination, extraction, and predatory inclusion.

Platform Geographies: [Read More](#) [+]

### Rules & Requirements

**Credit Restrictions:** Students will receive no credit for GEOG 145 after completing GEOG 145, or GEOG 145. A deficient grade in GEOG 145 may be removed by taking GEOG 145, or GEOG 145.

### Hours & Format

**Fall and/or spring:** 15 weeks - 3 hours of lecture per week

### Additional Details

**Subject/Course Level:** Geography/Undergraduate

**Grading/Final exam status:** Letter grade. Alternate method of final assessment during regularly scheduled final exam group (e.g., presentation, final project, etc.).

**Instructor:** Fields

Platform Geographies: [Read Less](#) [-]

## GEOG C146 Communicating Ocean Science 4 Units

Terms offered: Spring 2020, Spring 2018, Spring 2016, Spring 2015

For undergraduates interested in improving their ability to communicate their scientific knowledge by teaching ocean science in elementary schools or science centers/aquariums. The course will combine instruction in inquiry-based teaching methods and learning pedagogy with six weeks of supervised teaching experience in a local school classroom or the Lawrence Hall of Science with a partner. Thus, students will practice communicating scientific knowledge and receive mentoring on how to improve their presentations.

Communicating Ocean Science: [Read More](#) [+]

### Rules & Requirements

**Prerequisites:** One course in introductory biology, geology, chemistry, physics, or marine science required and interest in ocean science; junior, senior, or graduate standing; consent of instructor required for sophomores

### Hours & Format

**Fall and/or spring:** 15 weeks - 3 hours of lecture and 2 hours of fieldwork per week

### Additional Details

**Subject/Course Level:** Geography/Undergraduate

**Grading/Final exam status:** Letter grade. Final exam required.

**Instructor:** Rhew

**Formerly known as:** Earth and Planetary Science C100/Geography C146/Integrative Biology C100

**Also listed as:** EPS C100/INTEGBI C100

Communicating Ocean Science: [Read Less](#) [-]

## GEOG 147 Communicating Climate Science 3 Units

Terms offered: Fall 2020, Fall 2018, Fall 2017

For upper division undergraduate students interested in improving their conceptual understanding of climate science and climate change through engaging in activities, demonstrations, and discussions, while also developing their science communication skills to advance the public's climate literacy. The course will combine science content, active teaching and learning methods based on how people learn, and how to engage in effective interactions.

Communicating Climate Science: Read More [+]

### Objectives & Outcomes

**Course Objectives:** As a result of this course, students will be able to 1) describe and use models to illustrate the processes, interactions and mechanisms contributing to climate change; 2) demonstrate an understanding of how people learn, and the importance and impact of social, cultural and worldview belief systems on behavior related to climate change, through effectively communicating ideas and engaging in meaningful discussions with diverse, non-expert audiences.

### Rules & Requirements

**Prerequisites:** Prior coursework in climate change science

### Hours & Format

**Fall and/or spring:** 15 weeks - 3 hours of lecture per week

### Additional Details

**Subject/Course Level:** Geography/Undergraduate

**Grading/Final exam status:** Letter grade. Final exam required.

**Instructors:** Rhew, Halversen, Chiang

Communicating Climate Science: Read Less [-]

## GEOG C148 Biogeography 4 Units

Terms offered: Fall 2021, Fall 2020, Fall 2019

The course will provide a historical background for the field of biogeography and the ecological foundations needed to understand the distribution and abundance of species and their changes over time. It will also discuss developing technologies (including genomic tools and environmental models) together with the availability of big data and increasingly sophisticated analytical tools to examine the relevance of the field to global change biology, conservation, and invasion biology, as well as sustainable food systems and ecosystem services.

Biogeography: Read More [+]

### Rules & Requirements

**Prerequisites:** BIO 1B

### Hours & Format

**Fall and/or spring:** 15 weeks - 3 hours of lecture and 3 hours of laboratory per week

### Additional Details

**Subject/Course Level:** Geography/Undergraduate

**Grading/Final exam status:** Letter grade. Final exam required.

**Instructor:** Gillespie

**Also listed as:** ESPM C125/INTEGBI C166

Biogeography: Read Less [-]

## GEOG 149A Climates of the World 3 Units

Terms offered: Fall 2021, Fall 2020, Fall 2019

This course provides a very basic description of atmospheric physics and dynamics at the large scale, followed by region-specific climate systems and response. We examine the inter-relationships between the role of climate variations and change to impacts, risk and adaptation. Each week's reading will be integrated into class participation with examples from recent weather events. Class begins with a brief weather review that focuses on a specific geographic region, followed by the topic of the day, a break, and class discussion of weather events and impacts related to the topic. There will be four homework sets, four quizzes, a mid-term and final exam.

Climates of the World: Read More [+]

### Objectives & Outcomes

**Course Objectives:** This course is geared to students in the social sciences with an interest in understanding climate processes and climate change. The objectives are to provide a foundation in basic meteorological processes derived primarily from conservation laws. Through repetition with applications to the real world and reinforcement of concepts students with little mathematical training will grasp the main concepts and apply their understanding to understand climate trends.

### Hours & Format

**Fall and/or spring:** 15 weeks - 3 hours of lecture per week

### Additional Details

**Subject/Course Level:** Geography/Undergraduate

**Grading/Final exam status:** Letter grade. Final exam required.

**Formerly known as:** Geography 149

Climates of the World: Read Less [-]

## GEOG 149B Climate Impacts and Risk Analysis 3 Units

Terms offered: Spring 2021, Spring 2020

Climate impacts and risk analysis is the study of weather-related catastrophes such as heat waves, floods, droughts, fires, and tropical cyclones, and builds on material from GEOG 149A: Climates of the World.

We will review how large-scale climate and local weather patterns set up, learn detection and attribution to climate change, risk probabilities and the types of impacts incurred.

Climate Impacts and Risk Analysis: Read More [+]

### Objectives & Outcomes

**Course Objectives:** The objective is to provide an understanding of climate attribution, risk probabilities and socio-economic and ecological impacts of climate change and strategies of risk reduction. Through class discussions and homework assignments students will learn of historic climate catastrophes, how different societies have responded and what we can learn from these responses in terms of building climate resilience. We will go through simplified physical processes associated with recent climate events and delve into the details of how they occur and to what extent climate extremes are trending. One of the important learning objectives is to provide dual learning, that is, I propose to offer upper level undergraduates that lack sufficient mathematics and physics, while at the same provide graduate students and atmospheric science/statistics undergraduates a detailed understanding of climate impacts and risks. Graduate students have an augmented set of homework problems.

**Student Learning Outcomes:** An expected learning outcome is the ability to articulate climate risk with clear descriptions of mechanisms of change, degree and likelihood of impacts and methods of risk reduction. This class and Climates of the World will essentially be a two-semester sequence that (1) introduces students to the basic concepts of meteorology, climate change, climate extremes and (2) the types of risks and strategies that are currently being implemented and are in planning stages.

### Rules & Requirements

**Prerequisites:** Geog 149A or equivalent course

### Hours & Format

**Fall and/or spring:** 15 weeks - 3 hours of lecture per week

### Additional Details

**Subject/Course Level:** Geography/Undergraduate

**Grading/Final exam status:** Letter grade. Alternative to final exam.

**Instructor:** Miller

Climate Impacts and Risk Analysis: Read Less [-]

## GEOG C155 Race, Space, and Inequality 4 Units

Terms offered: Spring 2020, Spring 2019, Spring 2018

This course examines the the spatial configurations of inequality and poverty and their relationship to race through an analysis of the historical, theoretical and ethnographic conceptualizations, practices, and lived experiences of that relationship. The course will cover the topics of race, space, and inequality through four interwoven thematic lenses of formation, implementation, normalization, and resistances.

Race, Space, and Inequality: Read More [a]

### Hours & Format

**Fall and/or spring:** 15 weeks - 3 hours of lecture per week

### Additional Details

**Subject/Course Level:** Geography/Undergraduate

**Grading/Final exam status:** Letter grade. Final exam required.

**Instructor:** Lewis

**Also listed as:** AFRICAM C156

Race, Space, and Inequality: Read Less [-]

## GEOG 157 Decolonizing Nature: Race, Empire and the Environment 4 Units

Terms offered: Prior to 2007

This course seeks to trace the rise of the anthropogenic epoch as a political epistemology, changing material milieu, and amorphous and contested political signifier. The notion of the Anthropocene challenges the very boundaries of nature and culture that have plagued and defined modernity. Natural forces and inanimate objects from storms and bodies, ocean flows and river currents, soil layers and chemical reactions are more and more commonly understood as always already natural/cultural. What are the differential ways that the universal categories of the human at the heart of the concept of the Anthropocene mask the differential responsibility and liability for these epochal changes?

Decolonizing Nature: Race, Empire and the Environment: Read More [a]

### Hours & Format

**Fall and/or spring:** 15 weeks - 4 hours of lecture per week

### Additional Details

**Subject/Course Level:** Geography/Undergraduate

**Grading/Final exam status:** Letter grade. Final exam required.

**Instructor:** Kosek

Decolonizing Nature: Race, Empire and the Environment: Read Less [-]

## GEOG C157 Central American Peoples and Cultures 4 Units

Terms offered: Spring 2014, Fall 2012, Spring 2011, Fall 2004

A comparative survey of the peoples and cultures of the seven countries of the Central American Isthmus from a historical and contemporary perspective.

Central American Peoples and Cultures: Read More [a]

### Hours & Format

**Fall and/or spring:** 15 weeks - 3 hours of lecture per week

### Additional Details

**Subject/Course Level:** Geography/Undergraduate

**Grading/Final exam status:** Letter grade. Final exam required.

**Instructor:** Manz

**Also listed as:** CHICANO C161

Central American Peoples and Cultures: Read Less [-]

## GEOG 159AC The Southern Border 4 Units

Terms offered: Fall 2019, Fall 2018, Fall 2017

The southern border--from California to Florida--is the longest physical divide between the First and Third Worlds. This course will examine the border as a distinct landscape where North-South relations take on a specific spatial and cultural dimension, and as a region which has been the testing ground for such issues as free trade, immigration, and ethnic politics.

The Southern Border: Read More [a]

### Rules & Requirements

**Prerequisites:** Upper division standing

**Requirements this course satisfies:** Satisfies the American Cultures requirement

### Hours & Format

**Fall and/or spring:** 15 weeks - 3-3 hours of lecture and 1-1 hours of discussion per week

### Additional Details

**Subject/Course Level:** Geography/Undergraduate

**Grading/Final exam status:** Letter grade. Final exam required.

**Instructors:** Manz, Shaiken

**Also listed as:** EDUC 186AC/ETH STD 159AC

The Southern Border: Read Less [-]



## GEOG 160 American Landscapes: History, Culture, and the Built Environment 4 Units

Terms offered: Spring 2021, Spring 2020, Spring 2019

This course introduces ways of seeing, describing, interpreting, and speculating on how everyday American built environments have given shape and meaning to social life. To that end, it surveys transformations in the country's vernacular urban, suburban, and (to some extent) rural landscapes, at several scales: houses, yards, storefronts, parks, street patterns, workplaces, transit infrastructures, billboards, gas stations, and more. Addressed at one level to landscape as material culture, the course also assembles an eclectic intellectual history of lay and official attempts to study, define, critique, make sense of, represent, and intervene on ordinary Americans and their space. Readings include primary as well as secondary sources.

American Landscapes: History, Culture, and the Built Environment: Read More [+]

### Hours & Format

**Fall and/or spring:** 15 weeks - 3 hours of lecture and 1 hour of discussion per week

### Additional Details

**Subject/Course Level:** Geography/Undergraduate

**Grading/Final exam status:** Letter grade. Final exam required.

**Instructor:** Ekman

American Landscapes: History, Culture, and the Built Environment: Read Less [-]

## GEOG 160B American Cultural Landscapes 4 Units

Terms offered: Spring 2016, Spring 1997, Spring 1996

Introduces ways of seeing and interpreting American histories and cultures, as revealed in everyday built surroundings--homes, highways, farms, factories, stores, recreation areas, small towns, city districts and regions. Encourages students to read landscapes as records of past and present social relations, and to speculate for themselves about cultural meaning.

American Cultural Landscapes: Read More [+]

### Hours & Format

**Fall and/or spring:** 15 weeks - 3 hours of lecture and 1 hour of discussion per week

### Additional Details

**Subject/Course Level:** Geography/Undergraduate

**Grading/Final exam status:** Letter grade. Final exam required.

**Instructor:** Ekman

American Cultural Landscapes: Read Less [-]

## GEOG C160A American Cultural Landscapes, 1600 to 1900 4 Units

Terms offered: Fall 2014, Fall 2013, Fall 2012, Fall 2011

Introduces ways of seeing and interpreting American histories and cultures, as revealed in everyday built surroundings-- houses, highways, farms, factories, stores, recreation areas, small towns, city districts, and regions. Encourages students to read landscapes as records of past and present social relations and to speculate for themselves about cultural meaning.

American Cultural Landscapes, 1600 to 1900: Read More [+]

### Hours & Format

**Fall and/or spring:** 15 weeks - 3 hours of lecture and 1 hour of discussion per week

### Additional Details

**Subject/Course Level:** Geography/Undergraduate

**Grading/Final exam status:** Letter grade. Final exam required.

**Instructor:** Groth

**Also listed as:** AMERSTD C112A/ENV DES C169A

American Cultural Landscapes, 1600 to 1900: Read Less [-]

## GEOG C160B American Cultural Landscapes, 1900 to Present 4 Units

Terms offered: Spring 2017, Spring 2015, Spring 2014

Introduces ways of seeing and interpreting American histories and cultures, as revealed in everyday built surroundings--homes, highways, farms, factories, stores, recreation areas, small towns, city districts, and regions. Encourages students to read landscapes as records of past and present social relations, and to speculate for themselves about cultural meaning.

American Cultural Landscapes, 1900 to Present: Read More [+]

### Hours & Format

**Fall and/or spring:** 15 weeks - 3 hours of lecture and 1 hour of discussion per week

### Additional Details

**Subject/Course Level:** Geography/Undergraduate

**Grading/Final exam status:** Letter grade. Final exam required.

**Instructor:** Groth

**Also listed as:** AMERSTD C112B/ENV DES C169B

American Cultural Landscapes, 1900 to Present: Read Less [-]

## GEOG 164 Global China 3 Units

Terms offered: Spring 2021, Spring 2020, Summer 2019 First 6 Week Session

This course focuses on four issues in contemporary China: (1) the transformation of the socialist state, (2) the environmental politics, (3) the interplay of gender and class in the transitional society, (4) urban expansion and the changing rural-urban dynamics, and (5) global China. Each of these issues will be examined with reference to critical theories of development and histories of China's modernization. This is a lecture course designed mainly for upper level undergraduate students with preliminary background in East Asian-Chinese studies or development studies.

Global China: Read More [+]

### Hours & Format

**Fall and/or spring:** 15 weeks - 3 hours of lecture per week

### Additional Details

**Subject/Course Level:** Geography/Undergraduate

**Grading/Final exam status:** Letter grade. Alternative to final exam.

**Instructor:** Chang

Global China: Read Less [-]

## GEOG 167AC Border Geographies, Migration and Decolonial Movements of Latin America 4 Units

Terms offered: Spring 2021, Spring 2020

This course examines how today's bounded geographies were shaped by racialized and regionalized discourse and practice, setting the foundation for contemporary struggles over political, economic and social identities along and across Latin America. Specifically, the course incorporates the study of the United States' historical relationship with Mexico, Central America, and the Caribbean in order to understand how these histories map onto the productions of borders, regimes of migration and citizenship, and movements that increasingly articulate a decolonial turn in intellectual thought and within political and social action.

Border Geographies, Migration and Decolonial Movements of Latin America: Read More [+]

### Hours & Format

**Fall and/or spring:** 15 weeks - 3 hours of lecture per week

### Additional Details

**Subject/Course Level:** Geography/Undergraduate

**Grading/Final exam status:** Letter grade. Alternative to final exam.

**Instructor:** Negrin da Silva

Border Geographies, Migration and Decolonial Movements of Latin America: Read Less [-]

## GEOG 170 Special Topics in Geography 3 Units

Terms offered: Spring 2021, Fall 2020, Summer 2020 Second 6 Week Session

This course is designed to provide a vehicle for instructors to address a topic with which they are especially concerned; usually more restricted than the subject matter of a regular lecture course. Topics will vary with instructor. See departmental announcements.

Special Topics in Geography: Read More [+]

### Rules & Requirements

**Repeat rules:** Course may be repeated for credit when topic changes.

### Hours & Format

**Fall and/or spring:** 15 weeks - 3 hours of lecture per week

**Summer:** 6 weeks - 7.5 hours of lecture per week

### Additional Details

**Subject/Course Level:** Geography/Undergraduate

**Grading/Final exam status:** Letter grade. Final exam required.

Special Topics in Geography: Read Less [-]

## GEOG 171 Special Topics in Physical Geography 3 Units

Terms offered: Fall 2018, Fall 2016, Summer 2016 First 6 Week Session

This course is designed to provide a vehicle for instructors to address a topic in physical geography with which they are especially concerned; usually more restricted than the subject matter of a regular lecture course. Topics will vary with instructor. See departmental announcements.

Special Topics in Physical Geography: Read More [+]

### Rules & Requirements

**Repeat rules:** Course may be repeated for credit when topic changes.

### Hours & Format

**Fall and/or spring:** 15 weeks - 3 hours of lecture per week

**Summer:** 6 weeks - 7.5 hours of lecture per week

### Additional Details

**Subject/Course Level:** Geography/Undergraduate

**Grading/Final exam status:** The grading option will be decided by the instructor when the class is offered. Final exam required.

Special Topics in Physical Geography: Read Less [-]

## GEOG 172 Topics in Social Geography 4 Units

Terms offered: Fall 2012, Fall 2011, Fall 2009

This course is designed to provide a vehicle for instructors to address a topic in social geography with which they are especially concerned; usually more restricted than the subject matter of a regular lecture course. Topics will vary with instructor. See departmental announcements.

Topics in Social Geography: [Read More](#) [+]

### Rules & Requirements

**Repeat rules:** Course may be repeated for credit with instructor consent.

### Hours & Format

**Fall and/or spring:** 15 weeks - 4 hours of lecture per week

### Additional Details

**Subject/Course Level:** Geography/Undergraduate

**Grading/Final exam status:** Letter grade. Final exam required.

Topics in Social Geography: [Read Less](#) [-]

## GEOG 173A Cross-listed Topics in Human Geography 1 - 4 Units

Terms offered: Spring 2010, Spring 2007

This course is designed to accommodate cross-listed courses offered through other departments, the content of which is applicable to geography majors. Content and unit values vary from course to course. Cross-listed Topics in Human Geography: [Read More](#) [+]

### Rules & Requirements

**Repeat rules:** Course may be repeated for credit without restriction.

### Hours & Format

**Fall and/or spring:** 15 weeks - 1-4 hours of lecture per week

### Additional Details

**Subject/Course Level:** Geography/Undergraduate

**Grading/Final exam status:** Letter grade. Final exam required.

Cross-listed Topics in Human Geography: [Read Less](#) [-]

## GEOG 175 Undergraduate Seminars 4 Units

Terms offered: Fall 2018, Fall 2015, Fall 2014

A reading and research seminar for undergraduate students. Topics will vary with instructor.

Undergraduate Seminars: [Read More](#) [+]

### Rules & Requirements

**Repeat rules:** Course may be repeated for credit with instructor consent.

### Hours & Format

**Fall and/or spring:** 15 weeks - 3 hours of seminar per week

### Additional Details

**Subject/Course Level:** Geography/Undergraduate

**Grading/Final exam status:** Letter grade. Final exam required.

Undergraduate Seminars: [Read Less](#) [-]

## GEOG C179A GC-Maker Lab I: Skills and Theory 2 Units

Terms offered: Fall 2016

In the environmental and biological sciences, one of the biggest challenges in transitioning from student to researcher is learning how to measure something without an off-the-shelf device. This course will provide the theoretical background and the practice of building a Gas Chromatograph (GC) system for environmental research. The first semester is for students who seek to develop fundamental skills in instrumental development and design. The second semester (c179b) is only open to those who have taken this first semester course and will entail the construction of a working gas chromatograph system. This class will be especially useful for students who wish to pursue research following graduation.

GC-Maker Lab I: Skills and Theory: [Read More](#) [+]

### Rules & Requirements

**Prerequisites:** Chem 3AL, or instructor permission

### Hours & Format

**Fall and/or spring:** 15 weeks - 2 hours of laboratory per week

### Additional Details

**Subject/Course Level:** Geography/Undergraduate

**Grading/Final exam status:** Letter grade. Alternative to final exam.

**Instructor:** Rhew

**Also listed as:** ESPM C179A

GC-Maker Lab I: Skills and Theory: [Read Less](#) [-]

## GEOG C179B GC-Maker Lab II: Instrument development 4 Units

Terms offered: Spring 2017

In the environmental and biological sciences, one of the biggest challenges in transitioning from student to researcher is learning how to measure something without an off-the-shelf device. This course will involve the actual building a gas chromatograph (GC) system for environmental research. In addition, we will provide the option of building a mini datalogging sensor for measuring basic environmental parameters using the Arduino platform. This course offered in the spring semester is only open to those who have taken this first semester course (c179A), which covers the fundamental skills required to undertake this project. This class is designed for upper division undergraduates to early graduate students.

GC-Maker Lab II: Instrument development: Read More [\[+\]](#)

### Rules & Requirements

**Prerequisites:** Chem 3AL, GC-Maker Lab I (fall semester)

### Hours & Format

**Fall and/or spring:** 15 weeks - 6 hours of laboratory per week

### Additional Details

**Subject/Course Level:** Geography/Undergraduate

**Grading/Final exam status:** Letter grade. Alternative to final exam.

**Instructor:** Rhew

**Also listed as:** ESPM C179B

GC-Maker Lab II: Instrument development: Read Less [\[-\]](#)

## GEOG 180 Field Methods for Physical Geography 5 Units

Terms offered: Spring 2020, Spring 2019, Spring 2018

Field introduction to geomorphology, biogeography, and California landscapes. Students conduct field experiments and mapping exercises. Results of field projects are analyzed and presented as a technical report. Oral field reports are required for some trips.

Field Methods for Physical Geography: Read More [\[+\]](#)

### Rules & Requirements

**Prerequisites:** 1 or equivalent, and consent of instructor

### Hours & Format

**Fall and/or spring:** 15 weeks - 0 hours of lecture per week

### Additional Details

**Subject/Course Level:** Geography/Undergraduate

**Grading/Final exam status:** Letter grade. Final exam required.

Field Methods for Physical Geography: Read Less [\[-\]](#)

## GEOG 181 Urban Field Study 4 Units

Terms offered: Spring 2020, Spring 2019, Spring 2016

Introduction to the metropolitan Bay Area: its history, economy, social makeup. Evolution of urban landscapes and spatial patterns. Social justice and conflict in the city. Business and industry location, real estate and housing, producing and consuming in the city. Regional characteristics of class, race, gender and politics.

Urban Field Study: Read More [\[+\]](#)

### Rules & Requirements

**Prerequisites:** Consent of instructor

### Hours & Format

**Fall and/or spring:** 15 weeks - 9 hours of fieldwork per week

### Additional Details

**Subject/Course Level:** Geography/Undergraduate

**Grading/Final exam status:** Letter grade. Final exam not required.

Urban Field Study: Read Less [\[-\]](#)

## GEOG 182 Field Study of Buildings and Cities 3 Units

Terms offered: Summer 2019 First 6 Week Session, Summer 2018 First 6 Week Session, Summer 2017 First 6 Week Session

Traveling on foot and by BART—and with on-site lectures and discussions about architecture, urban design, cultural landscapes, and spatial patterns in Berkeley, Oakland, San Francisco, and Pleasanton—students in this course will explore the historical geography of the American city since 1850. Enrollment limited to 25 students. No pre-requisites. Both undergraduate and graduate students are welcome. Field Study of Buildings and Cities: Read More [\[+\]](#)

### Objectives & Outcomes

**Course Objectives:** The goal of this course is to introduce ways of seeing various building types, street and block forms, land use patterns, and other cultural features of the Bay Area as records of social relations and of repeating processes of American geographical history: cyclical periods of investment and disinvestment, migration and immigration, economic production and consumption, connection and disconnection, reinforcement of individual and social identities, as well as day-to-day maintenance and care

### Hours & Format

**Summer:** 6 weeks - 7.5 hours of lecture per week

### Additional Details

**Subject/Course Level:** Geography/Undergraduate

**Grading/Final exam status:** Letter grade. Alternative to final exam.

**Instructor:** Groth

Field Study of Buildings and Cities: Read Less [\[-\]](#)

## GEOG 183 Cartographic Representation 5 Units

Terms offered: Fall 2021, Spring 2021, Fall 2020

Problems in the representation of quantitative and qualitative data on thematic maps.

Cartographic Representation: [Read More](#) [+]

### Hours & Format

**Fall and/or spring:** 15 weeks - 2 hours of lecture and 4 hours of laboratory per week

### Additional Details

**Subject/Course Level:** Geography/Undergraduate

**Grading/Final exam status:** Letter grade. Final exam not required.

Cartographic Representation: [Read Less](#) [-]

## GEOG 185 Earth System Remote Sensing 3 Units

Terms offered: Spring 2021, Spring 2020, Spring 2019

This lecture-lab course is focused on Earth system remote sensing applications, including a survey of methods and an accompanying lab. This first part of the course will cover general principles, image acquisition and interpretation, and analytical approaches. The second part will cover global change remote sensing applications that will include terrestrial ecosystems, Earth sciences, the hydrosphere, and human land-use.

Earth System Remote Sensing: [Read More](#) [+]

### Hours & Format

**Fall and/or spring:** 15 weeks - 2 hours of lecture and 1.5 hours of laboratory per week

### Additional Details

**Subject/Course Level:** Geography/Undergraduate

**Grading/Final exam status:** Letter grade. Final exam required.

**Instructor:** Chambers

Earth System Remote Sensing: [Read Less](#) [-]

## GEOG 186 Web Cartography 5 Units

Terms offered: Spring 2019, Summer 1999 10 Week Session, Summer 1998 10 Week Session

This course will focus on the application of cartographic principles to the design of interactive web maps. We will explore the capabilities and limits of web tools for representing geographic data and examine how recent developments in geospatial technologies have influenced how we both use and produce maps. Students will create their own thematic web maps.

Web Cartography: [Read More](#) [+]

### Hours & Format

**Fall and/or spring:** 15 weeks - 2 hours of lecture and 4 hours of laboratory per week

### Additional Details

**Subject/Course Level:** Geography/Undergraduate

**Grading/Final exam status:** Letter grade. Alternative to final exam.

**Instructor:** Cowart

Web Cartography: [Read Less](#) [-]

## GEOG 187 Geographic Information Analysis 4 Units

Terms offered: Fall 2018, Spring 2018, Spring 2017

A spatial analytic approach to digital mapping and GIS. Given that recording the geolocation of scientific, business and social data is now routine, the question of what we can learn from the spatial aspect of data arises. This class looks at challenges in analyzing spatial data, particularly scale and spatial dependence. Various methods are considered such as hotspot detection, interpolation, and map overlay. The emphasis throughout is hands on and practical rather than theoretical.

Geographic Information Analysis: [Read More](#) [+]

### Rules & Requirements

**Prerequisites:** Basic computer literacy, e.g., Excel or similar, some previous GIS or mapping useful, but not required

### Hours & Format

**Fall and/or spring:** 15 weeks - 2 hours of lecture and 4 hours of laboratory per week

### Additional Details

**Subject/Course Level:** Geography/Undergraduate

**Grading/Final exam status:** Letter grade. Final exam required.

**Instructor:** O'Sullivan

Geographic Information Analysis: [Read Less](#) [-]

## GEOG C188 Geographic Information Systems 4 Units

Terms offered: Fall 2021, Fall 2020, Fall 2019

This course introduces the student to the rapidly expanding field of Geographic Information Systems (GIS). It addresses both theory and application and provides the student with a dynamic analytical framework within which temporal and spatial data and information is gathered, integrated, interpreted, and manipulated. It emphasizes a conceptual appreciation of GIS and offers an opportunity to apply some of those concepts to contemporary geographical and planning issues.

Geographic Information Systems: Read More [+]

### Rules & Requirements

**Prerequisites:** Some computer experience

### Hours & Format

**Fall and/or spring:** 15 weeks - 3 hours of lecture and 2 hours of laboratory per week

### Additional Details

**Subject/Course Level:** Geography/Undergraduate

**Grading/Final exam status:** Letter grade. Final exam required.

**Instructor:** Radke

**Formerly known as:** C188X

**Also listed as:** LD ARCH C188

Geographic Information Systems: Read Less [-]

## GEOG H195A Honors Course 1 - 4 Units

Terms offered: Fall 2021, Spring 2021, Fall 2020

Required for Honors in Geography. Students will write a thesis. One or two semesters, at the instructor's option; if two semesters, credit and grade to be awarded upon completion of the sequence.

Honors Course: Read More [+]

### Rules & Requirements

**Prerequisites:** Admission to Honors Program

**Repeat rules:** Course may be repeated for credit without restriction.

### Hours & Format

**Fall and/or spring:** 15 weeks - 1-4 hours of independent study per week

### Summer:

6 weeks - 2.5-10 hours of independent study per week

8 weeks - 1.5-7.5 hours of independent study per week

### Additional Details

**Subject/Course Level:** Geography/Undergraduate

**Grading/Final exam status:** Letter grade. This is part one of a year long series course. A provisional grade of IP (in progress) will be applied and later replaced with the final grade after completing part two of the series. Final exam not required.

Honors Course: Read Less [-]

## GEOG H195B Honors Course 1 - 4 Units

Terms offered: Fall 2021, Spring 2021, Fall 2020

Required for Honors in Geography. Students will write a thesis. One or two semesters, at the instructor's option; if two semesters, credit and grade to be awarded upon completion of the sequence.

Honors Course: Read More [+]

### Rules & Requirements

**Prerequisites:** Admission to Honors Program

**Repeat rules:** Course may be repeated for credit without restriction.

### Hours & Format

**Fall and/or spring:** 15 weeks - 1-4 hours of independent study per week

### Summer:

6 weeks - 2.5-10 hours of independent study per week

8 weeks - 1.5-7.5 hours of independent study per week

### Additional Details

**Subject/Course Level:** Geography/Undergraduate

**Grading/Final exam status:** Letter grade. This is part two of a year long series course. Upon completion, the final grade will be applied to both parts of the series. Final exam not required.

Honors Course: Read Less [-]

## GEOG 197 Field Study in Geography 1 - 4 Units

Terms offered: Fall 2021, Spring 2021, Fall 2020

Supervised experience in application of geography in off-campus organizations. Regular individual meetings with faculty sponsor and written reports required.

Field Study in Geography: Read More [+]

### Rules & Requirements

**Prerequisites:** Consent of instructor

**Repeat rules:** Course may be repeated for credit without restriction.

### Hours & Format

**Fall and/or spring:** 15 weeks - 0 hours of independent study per week

### Summer:

6 weeks - 1-4 hours of independent study per week

8 weeks - 1-5 hours of independent study per week

### Additional Details

**Subject/Course Level:** Geography/Undergraduate

**Grading/Final exam status:** Offered for pass/not pass grade only. Final exam not required.

Field Study in Geography: Read Less [-]



## GEOG 198 Directed Group Study 1 - 4 Units

Terms offered: Fall 2021, Spring 2021, Fall 2020

Directed Group Study: Read More [\[+\]](#)

### Rules & Requirements

**Prerequisites:** Consent of instructor

**Repeat rules:** Course may be repeated for credit without restriction.

### Hours & Format

**Fall and/or spring:** 15 weeks - 1-4 hours of directed group study per week

### Summer:

6 weeks - 2.5-7.5 hours of directed group study per week

8 weeks - 1.5-7.5 hours of directed group study per week

### Additional Details

**Subject/Course Level:** Geography/Undergraduate

**Grading/Final exam status:** Offered for pass/not pass grade only. Final exam not required.

Directed Group Study: Read Less [\[-\]](#)

## GEOG 199 Supervised Independent Study 1 - 4 Units

Terms offered: Fall 2021, Summer 2021 Second 6 Week Session, Spring 2021

Supervised Independent Study: Read More [\[+\]](#)

### Rules & Requirements

**Prerequisites:** Senior standing. Overall GPA in major of 3.00

**Repeat rules:** Course may be repeated for credit without restriction.

### Hours & Format

**Fall and/or spring:** 15 weeks - 0 hours of independent study per week

### Summer:

6 weeks - 1-5 hours of independent study per week

8 weeks - 1-5 hours of independent study per week

### Additional Details

**Subject/Course Level:** Geography/Undergraduate

**Grading/Final exam status:** Offered for pass/not pass grade only. Final exam not required.

Supervised Independent Study: Read Less [\[-\]](#)

## GEOG 200A Contemporary Geographic Thought 5 Units

Terms offered: Fall 2021, Fall 2020, Fall 2019

The class has several goals. One is to give students a sound basis upon which to judge arguments. A second is to help students see, think, and write geographically--that is, to interpret the making and meaning of our physical and human landscapes. A third goal is to introduce students to the tremendous range of geographical inquiry and what is probably the major strength of geography as a form of thought: to wit, making links across space, among peoples, and between humans and the earth. The fall semester class also serves to introduce students to the practices and expectations of scholarly work more generally, including professionalization, publishing, and public speaking.

Contemporary Geographic Thought: Read More [\[+\]](#)

### Rules & Requirements

**Prerequisites:** Required of all first year graduate students

### Hours & Format

**Fall and/or spring:** 15 weeks - 5 hours of seminar per week

### Additional Details

**Subject/Course Level:** Geography/Graduate

**Grading:** Letter grade.

Contemporary Geographic Thought: Read Less [\[-\]](#)

## GEOG 200B Contemporary Geographic Thought 2 (Geographical Difference and Differentiation) 5 Units

Terms offered: Spring 2021, Spring 2020, Spring 2019

'Geographical Difference/Differentiation' is a 5 unit course with Seminar and Workshop components. The Seminar reads canonical work in social theory against contemporary Geography, including metropolitan traditions of critique of capitalism, urbanization, space and time, discipline-biopower-sovereignty, and the now; Southern traditions of agrarian, subaltern and materialist postcolonial studies; Black radical and oceanic traditions that stretch Geography in new ways; and finally, geo-graphy as a form of Earth-writing concerned with the unraveling subject, ruined landscapes mixtures of form. The Workshop runs in parallel on particular weeks, focusing on geographic problematization and the research process.

Contemporary Geographic Thought 2 (Geographical Difference and Differentiation): Read More [\[+\]](#)

### Rules & Requirements

**Prerequisites:** Required of all first-year graduate students

### Hours & Format

**Fall and/or spring:** 15 weeks - 3 hours of seminar and 2 hours of workshop per week

### Additional Details

**Subject/Course Level:** Geography/Graduate

**Grading:** Letter grade.

Contemporary Geographic Thought 2 (Geographical Difference and Differentiation): Read Less [\[-\]](#)

## GEOG 200C Foundations in Geographic Thought 5 Units

Terms offered: Spring 2021

This course is meant as a Foundation in Geography theory. But this course is more about geographic methods of dissolution or abolition than it is about constructing a coherent, systematic body of work founded in a unified body of geographic thought and/or tradition. We will read some texts that are often considered foundational but we will read them with and through people who contested, undermined, and remade them. We will engage with similar undoings of the work of both Geographers and people who have been central to geographic thought. Foundations in Geographic Thought: Read More [\[+\]](#)

### Objectives & Outcomes

**Course Objectives:** The ultimate course goal will be (1) to learn some of the key foundational concepts and approaches central in contemporary geographic thought; (2) to develop the critical skills necessary to splinter, crack, and shatter these foundations and approaches, and finally (3), with the shards, ashes, and remnants collectively reconstruct a form of Geographic thought that might be of some utility for this political moment.

### Hours & Format

**Fall and/or spring:** 15 weeks - 4 hours of seminar per week

### Additional Details

**Subject/Course Level:** Geography/Graduate

**Grading:** Letter grade.

**Instructor:** Kosek

Foundations in Geographic Thought: Read Less [\[-\]](#)

## GEOG 203 Nature and Culture: Social Theory, Social Practice, and the Environment 4 Units

Terms offered: Fall 2016, Fall 2011, Fall 2008

The relationship between societies and natural environments lies at the heart of geographical inquiry and has gained urgency as the rate and scale of human transformation of nature have grown, often outstripping our understanding of causes and effects. The physical side of environmental science has received most of the emphasis in university research, but the social basis of environmental change must be studied as well. Recent developments in social theory have much to offer environmental studies, while the latter has, in turn, exploded many formerly safe assumptions about how and what the social sciences and humanities ought to be preoccupied with. This seminar allows students to explore some classics in environmental thought as well as recent contributions that put the field on the forefront of social knowledge today. Nature and Culture: Social Theory, Social Practice, and the Environment: Read More [\[+\]](#)

### Hours & Format

**Fall and/or spring:** 15 weeks - 3 hours of seminar per week

### Additional Details

**Subject/Course Level:** Geography/Graduate

**Grading:** Letter grade.

**Instructor:** Sayre

Nature and Culture: Social Theory, Social Practice, and the Environment: Read Less [\[-\]](#)

## GEOG 205 Black Geographies 4 Units

Terms offered: Spring 1998, Spring 1997

This graduate seminar explores the inextricable connection between blackness and geography.

Considering Katherine McKittrick's claim that Black geographies are "the terrain of political struggle itself" or where the imperative of a perspective of struggle takes place," we will situate the spatial relations of blackness by placing Black people at the core of spatial production and examine the mechanisms by which this takes place. In this course we ask: what are the limitations and possibilities of traditional geographies? How does Black geographic thought produce wider material and conceptual space for geographic knowledge? How does Geography account for and understand blackness as condition, experience, and imaginary?

Black Geographies: Read More [+]

### Objectives & Outcomes

**Course Objectives:** The course is organized around on two themes: (1) "Black Spatial Matters" involves our analysis of critical approaches to nature, space, place, and other geographic matters that meaningfully contribute to theorizations of blackness; and (2) "Black Space Matters," through which we will focus on the political economic means by which the production of Black space is foundational to imaginative Black placemaking, self-actualization, and ways to catalogue future and existing spaces. Each text that falls under the "Black Spatial Matters" category will be followed by a corresponding "Black Space Matters" text. The two texts should be thought directly in relation to one another. Throughout the course we will engage such themes as Black cities, Black economies, Black poetics, and Black value by drawing on intellectual histories and politics of Black feminist, queer, indigenous, post-colonial, and critical race studies.

### Hours & Format

**Fall and/or spring:** 15 weeks - 3 hours of seminar per week

### Additional Details

**Subject/Course Level:** Geography/Graduate

**Grading:** Letter grade.

**Instructor:** Summers

Black Geographies: Read Less [-]

## GEOG 206 Research Seminar in Comparative Urban Studies 3 Units

Terms offered: Spring 2020

In this seminar students will discuss research design, method, writing, and engage with one another's research and dissertation projects. Two-thirds of each class meeting will be devoted to discussion of students' work in progress. Each student will present their ongoing projects 3-4 times throughout the semester and receive constructive feedback from the seminar participants. One third of each class meeting is used for professional development workshops on topics of analyzing fieldnotes, engaging literature, publishing journal articles, gender and racial dynamics in academia, job talks and Job market, converting dissertation into a book, using maps, tables, and numbers in presentation, and doing a social science with something to say.

Research Seminar in Comparative Urban Studies: Read More [+]

### Rules & Requirements

**Credit Restrictions:** Students will receive no credit for GEOG 206 after completing GEOG 206. A deficient grade in GEOG 206 may be removed by taking GEOG 206.

### Hours & Format

**Fall and/or spring:** 15 weeks - 3 hours of seminar per week

### Additional Details

**Subject/Course Level:** Geography/Graduate

**Grading:** Letter grade.

**Instructor:** Hsing

Research Seminar in Comparative Urban Studies: Read Less [-]

## GEOG 214 Development Theories and Practices 4 Units

Terms offered: Spring 2011, Spring 2010, Spring 2009

This course examines how concepts and theories of "development" have been produced, maintained, used, and challenged in different regions of the world economy. It will offer a framework for analyzing how changing and contending models of development both reflect and shape social processes and practices.

Development Theories and Practices: Read More [+]

### Hours & Format

**Fall and/or spring:** 15 weeks - 3 hours of lecture per week

### Additional Details

**Subject/Course Level:** Geography/Graduate

**Grading:** Letter grade.

**Instructor:** Hart

Development Theories and Practices: Read Less [-]

## GEOG 215 Seminar in Comparative and International Development 4 Units

Terms offered: Fall 2020, Spring 2019, Spring 2017

This seminar is designed for students intending to do research on topics of comparative development, the organization of work, and access to resources in different regions of the world economy. Participants in the seminar will be expected to write a research proposal and to participate actively in reading and responding to each other's work.

Seminar in Comparative and International Development: Read More [+] **Hours & Format**

**Fall and/or spring:** 15 weeks - 3 hours of seminar per week

**Additional Details**

**Subject/Course Level:** Geography/Graduate

**Grading:** Letter grade.

**Instructors:** Hart, Hsing

Seminar in Comparative and International Development: Read Less [-]

## GEOG 220 Capital, Value, and Scale 4 Units

Terms offered: Spring 2013, Spring 2009, Spring 2007

This seminar focuses on major works in political economy and social theory concerning capitalism, human action, and space-time. We grapple with what "value" means in "Capital", paying particular attention to issues of historical specificity, abstract labor time, and the "value theory of labor." We spatialize the argument by a close reading of David Harvey, and we look at attempts to understand capital's relation to human action and other forms of value, in anthropology and the work of Pierre Bourdieu. Finally, we take up the issue of scale in hope of formulating a coherent conceptual framework for integrating across scales, from the human-body (or even smaller scales) up to global, economic, cultural and ecological processes

Capital, Value, and Scale: Read More [+]

**Hours & Format**

**Fall and/or spring:** 15 weeks - 3 hours of seminar per week

**Additional Details**

**Subject/Course Level:** Geography/Graduate

**Grading:** Letter grade.

**Instructor:** Sayre

Capital, Value, and Scale: Read Less [-]

## GEOG 221 Speculative World-Building: Games and Simulation 4 Units

Terms offered: Spring 2018

This class will introduce the theory, background, and practice of (analog) gaming, and simulation, or, more generally speculative world-building. These activities are increasingly important in contemporary culture, and also in science, policy, business, planning, and government, in situations where understanding how the world works, how the world might work, or how things might work differently are important. In addition to approaching games as objects of study, students will design new games on topics of their choice, alone or in groups, as a practical component of this class.

Speculative World-Building: Games and Simulation: Read More [+]

**Objectives & Outcomes**

**Course Objectives:** This class is a revised version of a class called 'Spatial simulation modeling' (Geography 228), but replaces computer simulation with board games as a vehicle for exploring how to abstractly represent processes and relations in the world. The aim is to develop an understanding of practices of 'world-building', using board games as an accessible point of entry to these practices. To do computer simulation requires learning how to program ('to code' as people insist of calling it today), which is a fine ambition but is distinct from the much more fundamental practices of abstraction, quantification, systems analysis, and so forth that underpin building simulation models. Working with board games instead of computational models will help us get to the heart of those practices a lot more easily without the distraction of learning to program.

**Student Learning Outcomes:** It is important to note that this is not a game design class; it is not a game theory class; and it is not a cultural studies of games class, although students may learn a little (or even a lot) about all these things, particularly the first. We will look at a lot of games during the semester, as a way to understand games as systems of interacting mechanics, preparatory to student projects which will develop either entirely new games or (probably more likely) develop variants of existing games to align the game's model of the world more closely with aspects they wish to explore.

**Hours & Format**

**Fall and/or spring:** 15 weeks - 3 hours of seminar per week

**Additional Details**

**Subject/Course Level:** Geography/Graduate

**Grading:** Letter grade.

**Instructor:** OSullivan

Speculative World-Building: Games and Simulation: Read Less [-]

## GEOG 228 Spatial Simulation Modeling 4 Units

Terms offered: Spring 2015

Simulation is now a widely adopted approach to science. This class will examine what simulation models are, and why and how they are used.

Models that focus

on spatial processes (aggregation, segregation, diffusion, movement, growth) will be closely considered. A particular concern will be to explore how simulation

models may help elucidate the relationships between processes and the spatial outcomes they produce.

Spatial Simulation Modeling: Read More [+]

### Rules & Requirements

**Prerequisites:** Computer literacy, some programming background may help, but is not required, as all necessary skills will be covered in the class

### Hours & Format

**Fall and/or spring:** 15 weeks - 2 hours of seminar per week

### Additional Details

**Subject/Course Level:** Geography/Graduate

**Grading:** Letter grade.

**Instructor:** O'Sullivan

Spatial Simulation Modeling: Read Less [-]

## GEOG 230 Economies of Race 4 Units

Terms offered: Prior to 2007

This course examines the economy as a domain of social analysis for understanding the black experience. Throughout the course we will examine what forms economic institutions and practices take across the black Diaspora. We will examine the central place of race within capitalist economies, largely overlooked by mainstream economic analyses and unpack its implications for equality in wider capitalist markets, state systems, and policy initiatives. Through historical and ethnographic accounts we will explore how people across the Diaspora cope with crises and inequality, both individually and collectively, and how historical narratives are brought to bear on those methods, and on notions of the future.

Economies of Race: Read More [+]

### Hours & Format

**Fall and/or spring:** 15 weeks - 3 hours of lecture per week

### Additional Details

**Subject/Course Level:** Geography/Graduate

**Grading:** Letter grade.

**Instructor:** Lewis

Economies of Race: Read Less [-]

## GEOG C241 Glaciology 4 Units

Terms offered: Spring 2021, Spring 2020, Spring 2018, Spring 2017

A review of the mechanics of glacial systems, including formation of ice masses, glacial flow mechanisms, subglacial hydrology, temperature and heat transport, global flow, and response of ice sheets and glaciers. We will use this knowledge to examine glaciers as geomorphologic agents and as participants in climate change.

Glaciology: Read More [+]

### Rules & Requirements

**Prerequisites:** Graduate standing or consent of instructor

### Hours & Format

**Fall and/or spring:** 15 weeks - 3 hours of lecture per week

### Additional Details

**Subject/Course Level:** Geography/Graduate

**Grading:** Letter grade.

**Instructor:** Cuffey

**Formerly known as:** 241

**Also listed as:** EPS C242

Glaciology: Read Less [-]

## GEOG 244 Complex Environmental Systems 3 Units

Terms offered: Spring 2016, Spring 2014, Spring 2013

Applying a complex-systems approach to environmental problems can yield valuable insight into risk, potential drivers of change, likely outcomes of perturbation, and whether it is even possible to forecast or manage system behavior. This course explores complex-systems theory and applications in geography, ecology, and earth science. Case studies include climate change, coupled human-environmental systems, vegetation community change, river networks, forest fires, earthquakes, and peatlands.

Complex Environmental Systems: Read More [+]

### Hours & Format

**Fall and/or spring:** 15 weeks - 3 hours of seminar per week

### Additional Details

**Subject/Course Level:** Geography/Graduate

**Grading:** Letter grade.

**Instructor:** Larsen

Complex Environmental Systems: Read Less [-]

## GEOG 246 Geomorphology of California 4 Units

Terms offered: Fall 2011, Fall 2009, Fall 2006

Numerous tectonic and Earth surface processes act in concert to produce the physical landscapes of our planet. This course examines three major regions of California (the Sierra Nevada, the Basin and Range, and the Southern Coast Ranges) as specific case studies for demonstrating how landscapes can be understood using concepts from tectonics, geomorphology, and geography. Two four-day field trips and preparatory readings for them will illuminate the integrated action of tectonics, geologic structure and lithology, drainage network development, hydraulics, soil production, hillslope transport, fluvial transport, aeolian transport, and glacial/periglacial processes. A term project will be required.

Geomorphology of California: [Read More](#) [+]

### Rules & Requirements

**Prerequisites:** Graduate standing in either geography or earth and planetary science and consent of instructor. Undergraduates need consent of instructor and 140A-140B or 140B and Earth and Planetary Science 117

**Repeat rules:** Course may be repeated for credit without restriction.

### Hours & Format

**Fall and/or spring:** 15 weeks - 4 hours of seminar per week

### Additional Details

**Subject/Course Level:** Geography/Graduate

**Grading:** Letter grade.

**Instructor:** Cuffey

Geomorphology of California: [Read Less](#) [-]

## GEOG 249 Spatiotemporal Data Analysis in the Climate Sciences 3 Units

Terms offered: Fall 2008

This graduate seminar teaches objective techniques for spatiotemporal data analysis focusing primarily on Empirical Orthogonal Function (EOF) analysis and its derivatives. The context will be climate data analysis, but the technique is readily translatable to other fields. The goal is to get the student sufficiently comfortable with the technique so they can use it in their research.

Spatiotemporal Data Analysis in the Climate Sciences: [Read More](#) [+]

### Rules & Requirements

**Prerequisites:** A first course in linear algebra. Access to MATLAB

### Hours & Format

**Fall and/or spring:** 15 weeks - 3 hours of seminar per week

### Additional Details

**Subject/Course Level:** Geography/Graduate

**Grading:** Letter grade.

**Instructor:** Chiang

Spatiotemporal Data Analysis in the Climate Sciences: [Read Less](#) [-]

## GEOG C250 Seminar in Sociology of Forest and Wildland Resources 3 Units

Terms offered: Spring 2020, Fall 2014, Spring 2014, Fall 2013

Individual projects and group discussions concerning social constraints to, and effects of, natural resource planning and management.

Application of sociological theories to problems of managing wildland ecosystems. Students will examine topics of individual interest related to the management of wildland uses. Enrollment limited.

Seminar in Sociology of Forest and Wildland Resources: [Read More](#) [+]

### Rules & Requirements

**Prerequisites:** Consent of instructor

### Hours & Format

**Fall and/or spring:** 15 weeks - 3 hours of lecture per week

### Additional Details

**Subject/Course Level:** Geography/Graduate

**Grading:** Letter grade.

**Instructor:** Fortmann

**Also listed as:** ESPM C255

Seminar in Sociology of Forest and Wildland Resources: [Read Less](#) [-]

## GEOG 251 Topics in Cultural Geography 4 Units

Terms offered: Fall 2020, Fall 2017, Spring 2015

Research seminar on selected topics in cultural geography.

Topics in Cultural Geography: [Read More](#) [+]

### Rules & Requirements

**Repeat rules:** Course may be repeated for credit without restriction.

### Hours & Format

**Fall and/or spring:** 15 weeks - 2 hours of seminar per week

### Additional Details

**Subject/Course Level:** Geography/Graduate

**Grading:** Letter grade.

**Instructor:** Groth

Topics in Cultural Geography: [Read Less](#) [-]



## GEOG 252 Topics in Economic Geography 4 Units

Terms offered: Fall 2021, Spring 2016, Spring 2015

Research seminar on selected topics in economic geography.

Topics in Economic Geography: [Read More](#) [+]

### Rules & Requirements

**Repeat rules:** Course may be repeated for credit without restriction.

### Hours & Format

**Fall and/or spring:** 15 weeks - 3 hours of seminar per week

### Additional Details

**Subject/Course Level:** Geography/Graduate

**Grading:** Letter grade.

**Instructors:** Hsing, Watts

Topics in Economic Geography: [Read Less](#) [-]

## GEOG 253 Topics in Urban Geography 4 Units

Terms offered: Spring 2014, Fall 2012, Spring 2012

Research seminar on selected topics in urban geography.

Topics in Urban Geography: [Read More](#) [+]

### Rules & Requirements

**Repeat rules:** Course may be repeated for credit without restriction.

### Hours & Format

**Fall and/or spring:** 15 weeks - 2 hours of seminar per week

### Additional Details

**Subject/Course Level:** Geography/Graduate

**Grading:** Letter grade.

**Instructors:** Groth, Hsing

Topics in Urban Geography: [Read Less](#) [-]

## GEOG 254 Topics in GIS 4 Units

Terms offered: Fall 2016

Research seminar on selected topics in GIS.

Topics in GIS: [Read More](#) [+]

### Rules & Requirements

**Repeat rules:** Course may be repeated for credit without restriction.

### Hours & Format

**Fall and/or spring:** 15 weeks - 3 hours of seminar per week

### Additional Details

**Subject/Course Level:** Geography/Graduate

**Grading:** Letter grade.

**Instructor:** O'Sullivan

Topics in GIS: [Read Less](#) [-]

## GEOG 255 Topics in Political Geography 4 Units

Terms offered: Spring 2021, Fall 2019, Spring 2019

Research seminar on selected topics in political geography.

Topics in Political Geography: [Read More](#) [+]

### Rules & Requirements

**Repeat rules:** Course may be repeated for credit without restriction.

### Hours & Format

**Fall and/or spring:** 15 weeks - 2 hours of seminar per week

### Additional Details

**Subject/Course Level:** Geography/Graduate

**Grading:** Letter grade.

**Instructors:** Hart, Kosek

Topics in Political Geography: [Read Less](#) [-]

## GEOG 257 Topics in Climatology 4 Units

Terms offered: Fall 2018, Fall 2017, Fall 2016

Research seminar on selected topics in climatology.

Topics in Climatology: [Read More](#) [+]

### Rules & Requirements

**Repeat rules:** Course may be repeated for credit without restriction.

### Hours & Format

**Fall and/or spring:** 15 weeks - 2 hours of seminar per week

### Additional Details

**Subject/Course Level:** Geography/Graduate

**Grading:** Letter grade.

**Instructor:** Chiang

Topics in Climatology: [Read Less](#) [-]

## GEOG 260 Topics in Biogeography 4 Units

Terms offered: Spring 2015, Spring 2013, Fall 2012

Research seminar on selected topics in biogeography.

Topics in Biogeography: [Read More](#) [+]

### Rules & Requirements

**Repeat rules:** Course may be repeated for credit without restriction.

### Hours & Format

**Fall and/or spring:** 15 weeks - 2 hours of seminar per week

### Additional Details

**Subject/Course Level:** Geography/Graduate

**Grading:** Letter grade.

**Instructor:** Byrne

Topics in Biogeography: [Read Less](#) [-]

## **GEOG 279 Statistics and Multivariate Data Analysis for Research 3 Units**

Terms offered: Fall 2017, Spring 2015

An introduction to advanced statistical methods for research. Topics include hypothesis testing, distribution fitting, ANOVA and MANOVA, PCA, cluster analysis, ordination, discriminant analysis, regression, time series analyses, causality, and data mining techniques. Students will complete assignments that use real datasets and will gain feedback in working with their own datasets.

Statistics and Multivariate Data Analysis for Research: Read More [a]

### **Rules & Requirements**

**Prerequisites:** Basic probability/statistics; familiarity with MATLAB or other programming is helpful but not required

### **Hours & Format**

**Fall and/or spring:** 15 weeks - 3 hours of lecture per week

### **Additional Details**

**Subject/Course Level:** Geography/Graduate

**Grading:** Letter grade.

**Instructor:** Larsen

Statistics and Multivariate Data Analysis for Research: Read Less [-]

## **GEOG 280 Advanced Field Study in Geography 3 - 7 Units**

Terms offered: Fall 2020, Fall 2019, Fall 2018

All day Saturday. Each additional unit requires four hours of field work per week. Extended field project required.

Advanced Field Study in Geography: Read More [a]

### **Rules & Requirements**

**Repeat rules:** Course may be repeated for credit without restriction.

### **Hours & Format**

**Fall and/or spring:** 15 weeks - 1 hour of lecture and 11 hours of fieldwork per week

### **Additional Details**

**Subject/Course Level:** Geography/Graduate

**Grading:** Letter grade.

Advanced Field Study in Geography: Read Less [-]

## **GEOG 282 Geographic Information Systems: Applications in Geographical Research 4 Units**

Terms offered: Spring 2009

This course introduces graduate students to a range of applications of Geographic Information Systems (GIS) in geographical research, and theoretical considerations of the meaning, strengths, and limitations of the methods. We first review, in general, how geographic variables can be represented in a database. This leads to an extended discussion of the application of GIS methods to a variety of problems in physical and human geography, using topographic data, census data, and other sources, manipulated by widely used GIS software. Students build skills and understanding through work on example problems. Finally, the broad question of how GIS represents geographic variables, and the strengths and limitations of the technique, are re-visited using perspective gained from examples. Students will be expected to elaborate these issues in the context of their own research programs.

Geographic Information Systems: Applications in Geographical Research: Read More [a]

### **Hours & Format**

**Fall and/or spring:** 15 weeks - 2 hours of lecture and 2 hours of laboratory per week

### **Additional Details**

**Subject/Course Level:** Geography/Graduate

**Grading:** Letter grade.

Geographic Information Systems: Applications in Geographical Research: Read Less [-]

## GEOG 285 Topics in Earth System Remote Sensing 3 Units

Terms offered: Fall 2021, Fall 2020, Spring 2019

Questions asked about a changing planet are strongly influenced by data collected across a variety of spatial and temporal scales. Remote sensing of globally distributed ecosystems and human landscapes enables the exploration of questions not possible without the extension of those dimensions. This course will focus on developing scalable Earth system research questions using a variety of tools including advanced remote sensing methods, image acquisition including UAV systems, data synthesis and analytical approaches, literature review, progress reporting, and student presentations.

Topics in Earth System Remote Sensing: Read More [\[+\]](#)

### Objectives & Outcomes

**Course Objectives:** To develop a better understanding of what questions can be approached across a range of geographical dimensions, and further develop the student's toolbox for exploring those questions and presenting results.

### Hours & Format

**Fall and/or spring:** 15 weeks - 2 hours of lecture and 1 hour of laboratory per week

### Additional Details

**Subject/Course Level:** Geography/Graduate

**Grading:** Letter grade.

**Instructor:** Chambers

Topics in Earth System Remote Sensing: Read Less [\[-\]](#)

## GEOG 295 Geography Colloquium 1 Unit

Terms offered: Fall 2021, Spring 2021, Fall 2020

Invited lectures on current research and field work.

Geography Colloquium: Read More [\[+\]](#)

### Rules & Requirements

**Prerequisites:** Required of all graduate students not yet advanced to candidacy

**Repeat rules:** Course may be repeated for credit without restriction.

### Hours & Format

**Fall and/or spring:** 15 weeks - 3 hours of colloquium per week

### Additional Details

**Subject/Course Level:** Geography/Graduate

**Grading:** Offered for satisfactory/unsatisfactory grade only.

Geography Colloquium: Read Less [\[-\]](#)

## GEOG 296 Directed Dissertation Research 1 - 12 Units

Terms offered: Fall 2021, Spring 2021, Fall 2020

Directed Dissertation Research: Read More [\[+\]](#)

### Rules & Requirements

**Prerequisites:** Advancement to Ph.D. candidacy

**Repeat rules:** Course may be repeated for credit without restriction.

### Hours & Format

**Fall and/or spring:** 15 weeks - 0 hours of independent study per week

### Additional Details

**Subject/Course Level:** Geography/Graduate

**Grading:** Offered for satisfactory/unsatisfactory grade only.

Directed Dissertation Research: Read Less [\[-\]](#)

## GEOG N296 Directed Dissertation Research 1 - 4 Units

Terms offered: Summer 2021 10 Week Session, Summer 2020 10 Week Session, Summer 2019 Second 6 Week Session

Directed Dissertation Research: Read More [\[+\]](#)

### Rules & Requirements

**Prerequisites:** Advancement to Ph.D. candidacy

**Repeat rules:** Course may be repeated for credit without restriction.

### Hours & Format

#### Summer:

6 weeks - 1-4 hours of independent study per week  
8 weeks - 1-4 hours of independent study per week

10 weeks - 1-4 hours of independent study per week

### Additional Details

**Subject/Course Level:** Geography/Graduate

**Grading:** Letter grade.

Directed Dissertation Research: Read Less [\[-\]](#)

## **GEOG 297 Directed Field Studies 1 - 6 Units**

Terms offered: Fall 2019, Spring 2019, Fall 2018

Directed Field Studies: Read More [\[+\]](#)

### **Rules & Requirements**

**Prerequisites:** Open to students directly engaged in field studies

**Repeat rules:** Course may be repeated for credit without restriction.

### **Hours & Format**

**Fall and/or spring:** 15 weeks - 1-6 hours of fieldwork per week

### **Additional Details**

**Subject/Course Level:** Geography/Graduate

**Grading:** Offered for satisfactory/unsatisfactory grade only.

Directed Field Studies: Read Less [\[-\]](#)

## **GEOG 298 Directed Study for Graduate Students 1 - 6 Units**

Terms offered: Fall 2021, Spring 2021, Fall 2020

Special tutorial or seminar on selected topics not covered by available courses or seminars.

Directed Study for Graduate Students: Read More [\[+\]](#)

### **Rules & Requirements**

**Repeat rules:** Course may be repeated for credit without restriction.

### **Hours & Format**

**Fall and/or spring:** 15 weeks - 0 hours of independent study per week

### **Additional Details**

**Subject/Course Level:** Geography/Graduate

**Grading:** The grading option will be decided by the instructor when the class is offered.

Directed Study for Graduate Students: Read Less [\[-\]](#)

## **GEOG 299 Individual Research 1 - 8 Units**

Terms offered: Fall 2021, Spring 2021, Fall 2020

Individual research for graduate students in consultation with staff member.

Individual Research: Read More [\[+\]](#)

### **Rules & Requirements**

**Repeat rules:** Course may be repeated for credit without restriction.

### **Hours & Format**

**Fall and/or spring:** 15 weeks - 0 hours of independent study per week

### **Additional Details**

**Subject/Course Level:** Geography/Graduate

**Grading:** Letter grade.

Individual Research: Read Less [\[-\]](#)

## **GEOG N299 Individual Research 1 - 4 Units**

Terms offered: Summer 2021, Summer 2021 10 Week Session, Summer 2020 Second 6 Week Session

Individual research for graduate students in consultation with staff member.

Individual Research: Read More [\[+\]](#)

### **Rules & Requirements**

**Repeat rules:** Course may be repeated for credit without restriction.

### **Hours & Format**

#### **Summer:**

6 weeks - 1-4 hours of independent study per week

8 weeks - 1-4 hours of independent study per week

### **Additional Details**

**Subject/Course Level:** Geography/Graduate

**Grading:** Letter grade.

Individual Research: Read Less [\[-\]](#)

## **GEOG 301 Professional Training: Teaching Practice 1 - 4 Units**

Terms offered: Spring 2020, Spring 2019, Spring 2018

Professional Training: Teaching Practice: Read More [\[+\]](#)

### **Rules & Requirements**

**Repeat rules:** Course may be repeated for credit without restriction.

### **Hours & Format**

**Fall and/or spring:** 15 weeks - 0 hours of independent study per week

### **Additional Details**

**Subject/Course Level:** Geography/Professional course for teachers or prospective teachers

**Grading:** Offered for satisfactory/unsatisfactory grade only.

Professional Training: Teaching Practice: Read Less [\[-\]](#)

## GEOG C301 Communicating Ocean Science 4 Units

Terms offered: Spring 2021, Spring 2020, Spring 2019, Spring 2015, Fall 2014, Spring 2014, Spring 2013

For graduate students interested in improving their ability to communicate their scientific knowledge by teaching ocean science in elementary schools or science centers/aquariums. The course will combine instruction in inquiry-based teaching methods and learning pedagogy with six weeks of supervised teaching experience in a local school classroom or the Lawrence Hall of Science with a partner. Thus, students will practice communicating scientific knowledge and receive mentoring on how to improve their presentations.

Communicating Ocean Science: Read More [\[+\]](#)

### Rules & Requirements

**Prerequisites:** One course in introductory biology, geology, chemistry, physics, or marine science required and interest in ocean science, junior, senior, or graduate standing; consent of instructor required for sophomores

### Hours & Format

**Fall and/or spring:** 15 weeks - 2.5 hours of lecture, 1 hour of discussion, and 2 hours of fieldwork per week

### Additional Details

**Subject/Course Level:** Geography/Professional course for teachers or prospective teachers

**Grading:** Letter grade.

**Instructor:** Ingram

**Also listed as:** EPS C301/INTEGBI C215

Communicating Ocean Science: Read Less [\[-\]](#)

## GEOG C302 Effective Scientific Communication 3 Units

Terms offered: Fall 2009, Fall 2007

This course will introduce methods of organizing and delivering oral presentations, initiating and organizing manuscripts, and utilizing digital communication methods, such as web-based media. Students will develop effective communication techniques through in-class experience. This class will have an emphasis on the sciences but will be useful and open to graduate students of all disciplines.

Effective Scientific Communication: Read More [\[+\]](#)

### Hours & Format

**Fall and/or spring:** 15 weeks - 2 hours of seminar per week

### Additional Details

**Subject/Course Level:** Geography/Professional course for teachers or prospective teachers

**Grading:** Letter grade.

**Instructors:** Resh, Rhew

**Also listed as:** ESPM C302

Effective Scientific Communication: Read Less [\[-\]](#)

## GEOG 601 Individual Study for Master's Students 1 - 6 Units

Terms offered: Fall 2021, Fall 2020, Spring 2020

Individual study for comprehensive or language requirements in consultation with the field adviser.

Individual Study for Master's Students: Read More [\[+\]](#)

### Rules & Requirements

**Prerequisites:** For candidates for master's degree

**Credit Restrictions:** Course does not satisfy unit or residence requirements for master's degree.

**Repeat rules:** Course may be repeated for credit without restriction.

### Hours & Format

**Fall and/or spring:** 15 weeks - 0 hours of independent study per week

### Additional Details

**Subject/Course Level:** Geography/Graduate examination preparation

**Grading:** Offered for satisfactory/unsatisfactory grade only.

Individual Study for Master's Students: Read Less [\[-\]](#)

## GEOG N601 Individual Study for Master's Students 1 - 3 Units

Terms offered: Summer 2009 10 Week Session

Individual study for comprehensive or language requirements in consultation with the field adviser.

Individual Study for Master's Students: Read More [\[+\]](#)

### Rules & Requirements

**Prerequisites:** For candidates for master's degree

**Credit Restrictions:** Course does not satisfy unit or residence requirements for master's degree.

**Repeat rules:** Course may be repeated for credit without restriction.

### Hours & Format

#### Summer:

6 weeks - 2.5-7.5 hours of independent study per week

8 weeks - 1.5-5.5 hours of independent study per week

### Additional Details

**Subject/Course Level:** Geography/Graduate examination preparation

**Grading:** Offered for satisfactory/unsatisfactory grade only.

Individual Study for Master's Students: Read Less [\[-\]](#)

## **GEOG 602 Individual Study for Doctoral Students 1 - 6 Units**

Terms offered: Fall 2021, Spring 2021, Fall 2020

Individual study in consultation with the major field adviser, intended to provide an opportunity for qualified students to prepare themselves for the various examinations required of candidates for the Ph.D.

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### **Rules & Requirements**

**Prerequisites:** For candidates for Ph.D

**Credit Restrictions:** Course does not satisfy unit or residence requirements for doctoral degree.

**Repeat rules:** Course may be repeated for credit without restriction.

### **Hours & Format**

**Fall and/or spring:** 15 weeks - 0 hours of independent study per week

### **Additional Details**

**Subject/Course Level:** Geography/Graduate examination preparation

**Grading:** Offered for satisfactory/unsatisfactory grade only.

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