

# Geography (GEOG)

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## COURSES

### **GEOG 2301. PHYSICAL GEOGRAPHY. 3 Hours. (TCCN = GEOG 1301)**

Survey of geographies of the natural environment and human-environment interactions with an emphasis on spatial patterns and processes.

### **GEOG 2302. HUMAN GEOGRAPHY. 3 Hours. (TCCN = GEOG 1302)**

An introduction to geographical perspectives. An exploration of human activities from a local to a global scale. Emphasis on mapping and interpreting patterns and processes of human geography.

### **GEOG 2303. WORLD REGIONAL GEOGRAPHY. 3 Hours. (TCCN = GEOG 1303)**

Survey of the geography of major world regions. Introduces global issues from a regional perspective with an emphasis on developing an understanding of the connections between and differences among world regions.

### **GEOG 3300. RESEARCH METHODS IN GEOGRAPHY. 3 Hours.**

An introduction to geographic research that includes generating research questions, research design, methods of quantitative and qualitative data collection and analysis, and communication of research results. Prerequisite: GEOG 2302.

### **GEOG 3305. MAPS AND MAPMAKERS. 3 Hours.**

A history of geography and cartography with an emphasis on the development of geographical ideas and mapmaking from antiquity to the modern era. Offered as GEOG 3305 and HIST 3305; credit will be granted only once.

### **GEOG 3310. GEOGRAPHY OF THE UNITED STATES AND CANADA. 3 Hours.**

A survey of the geography of the United States and Canada. Includes environmental, cultural, economic, and political geographies with an emphasis on spatial patterns and processes.

### **GEOG 3315. GEOGRAPHY OF LATIN AMERICA AND THE CARIBBEAN. 3 Hours.**

A regional survey of Latin American geography including Mexico, the Caribbean, Central America, and South America. Focuses on environmental, cultural, economic, political, and urban geographies with an emphasis on spatial patterns and processes.

### **GEOG 3320. GEOGRAPHY OF AFRICA. 3 Hours.**

A survey of the human and physical geography of the whole continent of Africa. It assesses environmental, demographic, cultural, economic, and political geographies with an emphasis on spatial patterns and processes.

### **GEOG 3327. CITIES AND SUBURBS IN THE UNITED STATES. 3 Hours.**

Explores the urban and suburban development of the United States from pre-colonial indigenous settlements to the present with an emphasis on the transformation of urban and suburban spaces over time and across regions. Attention to population, migration, land use, economics, politics, social and cultural identities, nature, and sustainability as factors in urban growth and change. Course taught as HIST 3327 and GEOG 3327. Credit will be granted only once.

### **GEOG 3334. HISTORICAL GEOGRAPHY OF NORTH AMERICA. 3 Hours.**

Examines the intersection of the disciplines of geography and history including the creation of cultural landscapes, the spatial organization of human activities over time, and the interaction of humans with their environment over time with an emphasis on North America. Course taught as HIST 3334 and GEOG 3334. Credit will be granted only once.

### **GEOG 3336. ENVIRONMENTAL HISTORY OF THE UNITED STATES. 3 Hours.**

People and the natural environment from the colonial period to the present. Ecological change, conservation movements, and artistic and literary interpretations of landscape and nature. Listed as GEOG 3336 and HIST 3336; credit will be granted only once.

### **GEOG 3347. AMERICA'S BORDERS AND BORDERLANDS. 3 Hours.**

Covers the historical evolution of U.S. borders from independence to the present, and of the hybrid societies that have emerged along with them. Examines how borders have changed over time, and the people, commodities, ideas, and cultures, etc. that have crossed or straddled them. Particular attention is given to changing patterns of migration, border enforcement, and cultural hybridization, and the impact these have had on American society and politics. Offered as GEOG 3347 and HIST 3347; credit will be granted only once.

### **GEOG 3380. THE SPATIAL HUMANITIES. 3 Hours.**

Introduction to the Spatial Humanities, including theory and methods concerning deep mapping, sense of place, and online open-source geospatial technology. Helps to develop an understanding of spatial and "palatial" thought and practice, drawing on perspectives found in literary, cultural, social, philosophical, linguistic, historical, artistic, dramatic, cinematographic, and media studies.

### **GEOG 4191. CONFERENCE COURSE. 1 Hour.**

Topics assigned on an individual basis covering personal research or study in designated areas. Prerequisite: permission of the instructor.

### **GEOG 4291. CONFERENCE COURSE. 2 Hours.**

Topics assigned on an individual basis covering personal research or study in designated areas. Prerequisite: permission of the instructor.

### **GEOG 4330. UNDERSTANDING GEOGRAPHIC INFORMATION SYSTEMS. 3 Hours.**

A practical introduction to GIS and methods of creating, maintaining and displaying spatial data using the ArcGIS software. This course is offered as GEOL 4330 and GEOG 4330; credit will not be granted for both. Prerequisite: Junior standing.

**GEOG 4331. ANALYSIS OF SPATIAL DATA. 3 Hours.**

Analyzing spatial data using ArcGIS, Spatial Analyst, and 3-D Analyst, topological surface analysis and modeling; 3-D visualization and viewscales; spatial statistics and data quality management. Course taught as GEOL 4331 and GEOG 4331. Credit will be granted in only one department. Prerequisite: GEOL 4330 or GEOG 4330.

**GEOG 4332. GLOBAL POSITIONING SYSTEM. 3 Hours.**

Review of the NAVSTAR Global Positioning System and its segments: space, operational control, and GPS receivers. Mechanics of the satellite constellation; GPS signal structure; datums and coordinate systems; precision and accuracy; error factors; absolute (point) versus relative (differential) positioning. Various positioning techniques using several types of GPS receivers; field data collection and input into GIS programs for data analysis and presentation. Course taught as GEOL 4332 and GEOG 4332. Credit will be granted in only one department. Prerequisite: GEOL 4330 or GEOG 4330.

**GEOG 4333. REMOTE SENSING FUNDAMENTALS. 3 Hours.**

The electromagnetic spectrum and the interaction of EM waves with matter; various types of sensing devices; spectral and spatial resolution parameters; airborne and satellite sensor platforms; aerial photographs and false-color images. The sequence of data acquisition, computer processing, and interpretation; sources of data; the integration of remote sensing data with other data types in GIS. Course taught as GEOL 4333 and GEOG 4333. Credit will be granted in only one department. Prerequisite: GEOL 4330 or GEOG 4330.

**GEOG 4334. GEOGRAPHIC DATA ANALYSIS. 3 Hours.**

Acquisition, processing and analysis of a set of spatial data selected by the student with approval of the instructor. A written report of the results is required. Course taught as GEOL 4334 and GEOG 4334. Credit will be granted in only one department. Prerequisite: GEOL 4330 or GEOG 4330; or cons. inst.

**GEOG 4340. GEOGRAPHIES OF FILM. 3 Hours.**

An exploration of film geographies with a focus on cinema as both a topic and a method for geographical representation, analysis, and learning.

**GEOG 4341. IMAGES OF THE SOUTHWEST BORDERLANDS. 3 Hours.**

Examines the changing culture, architecture, and landscapes of the American Southwest as depicted in literature, art, film, television, and advertising, including the role of popular culture and commerce in creating and marketing a regional "Southwestern style." Offered as GEOG 4341 and HIST 4341; credit will be granted only once.

**GEOG 4350. SPECIAL TOPICS IN MODERN GEOGRAPHY. 3 Hours.**

Selected topics in an identified area of geography. The course may be repeated for credit.

**GEOG 4391. CONFERENCE COURSE. 3 Hours.**

Topics assigned on an individual basis covering personal research or study in designated areas. Prerequisite: permission of the instructor.

**GEOG 5330. UNDERSTANDING GEOGRAPHIC INFORMATION SYSTEMS. 3 Hours.**

A practical introduction to GIS and methods of creating, maintaining and displaying spatial data using the ArcGIS software. This course is offered as GEOL 5330 and GEOG 5330; credit will not be granted for both.

**GEOG 5331. ANALYSIS OF SPATIAL DATA. 3 Hours.**

Analyzing spatial data using ArcGIS, Spatial Analyst, and 3-D Analyst, topological surface analysis and modeling; 3-D visualization and viewscales; spatial statistics and data quality management. Course taught as GEOL 5331 and GEOG 5331. Credit will be granted in only one department.

**GEOG 5334. GEOGRAPHIC DATA ANALYSIS PROJECT. 3 Hours.**

Acquisition, processing and analysis of a set of spatial data selected by the student with the approval of the instructor. A written report of the results is required. Offered as GEOL 5324 and GEOG 5334. Credit will not be given for both. Prerequisite: GEOL 5320, or GEOL 4330 or GEOG 4330, or cons. inst.