

# GEOGRAPHY

## Description

Geography is a comprehensive discipline that, via spatial patterns analysis, reveals the intricate attributes and connectivity of human cultures and the natural environment. As such, geography is critical to understanding the complexities of global change. Students may specialize in one of many areas, including climate and weather, cultural/human geography, geographic information systems, historical geography of the Great Plains, natural resources, physical geography, pre-community and regional planning, regional studies, or remote sensing.

An education in geography prepares students for careers in government agencies as well as those involved with foreign service, land management, tourism, health care delivery systems, environmental assessment, transportation development, land use planning, air traffic control, and GIS and cartographic analysis, and in a wide variety of businesses, particularly those concerned with environmental mapping, geographic information systems, and planning. A geography major also prepares students for graduate-level degrees in geography, law (especially environmental law), international business, urban and regional planning, and teaching at all levels.

**Program Assessment.** In order to assist the department in evaluating the effectiveness of its programs, majors will be required to complete written and oral examinations in the Senior Seminar, GEOG 402, over knowledge in all components of the major, as well as over more detailed knowledge in the student's area of focus. Students will be informed of the scheduling and format of assessment exams in the Senior Seminar. Students will also be given exit interviews prior to graduation to gather their views on the effectiveness of the major. Results of participation in this assessment activity will in no way affect a student's GPA or graduation.

## College Admission

The entrance requirements for the College of Arts and Sciences (CAS), including any of the majors or minors offered through the college, are the same as the UNL General Admission Requirements. In addition to these requirements, the College of Arts and Sciences strongly recommends a third and fourth year of one foreign language in high school. Four years of high school coursework in the same language will fulfill the College of Arts and Sciences' language requirement. It will also allow students to continue language study at a more advanced level at UNL and provide more opportunity to study abroad.

## ACADEMIC AND CAREER Advising

### Academic and Career Advising Center

The Academic and Career Advising Center in 107 Oldfather Hall is the undergraduate hub for CAS students in all majors. Centrally located and easily accessed, students encounter friendly, knowledgeable people who are eager to help. Students visit the Advising Center in 107 Oldfather Hall to:

- Choose or change their major, minor, or degree program.
- Check in on policies, procedures, and deadlines.
- Get a college approval signature from the Dean's representative, Sr. Director of Advising and Student Success.

While the assigned academic advisor should be the student's primary contact, there are daily walk-ins from 12-3 where a general academic advisor can answer a quick question. In addition, the CAS Career Coaches

are located here. They help students explore majors and minors, gain experience, and develop a plan for life after graduation. Not sure where to go or who to ask? The Advising Center team can help.

### Assigned Academic Advisors

Academic advisors are critical resources dedicated to students' academic, personal, and professional success. Every CAS student is assigned an academic advisor based on their primary major. Since most CAS students have more than just a single major, it is important to get to know the advisor for any minors or additional majors. Academic advisors work closely with the faculty to provide the best overall support and the discipline-specific expertise.

Assigned advisors are listed in MyRED (<https://its.unl.edu/myunl>) and their offices may be located in or near the department of the major for which they advise or in the Academic and Career Advising Center. Students who have declared a pre-health or pre-law area of interest will also work with advisors in the Exploratory and Pre-Professional Advising Center (Explore Center) in 127 Love South, who are specially trained to guide students preparing to enter a professional school.

For complete and current information on advisors for majors, minors, or pre-professional areas, contact the Arts and Sciences Academic and Career Advising Center, 107 Oldfather Hall, 402-472-4190, <http://cas.unl.edu/advising>.

### Career Coaching

The College believes that **Academics + Experience = Opportunities** and encourages students to complement their academic preparation with real-world experience, including internships, research, education abroad, service, and leadership. Arts and sciences students have access to a powerful network of faculty, staff, and advisors dedicated to providing information and support for their goals of meaningful employment or advanced education. Arts and sciences graduates have unlimited career possibilities and carry with them important career competencies—communication, critical thinking, creativity, context, and collaboration. They have the skills and adaptability that employers universally value. Graduates are not only prepared to effectively contribute professionally in the real world, but they have a solid foundation to excel in an increasingly global, technological, and interdisciplinary world.

Students should contact the career coaches in the Arts and Sciences Academic and Career Advising Center in 107 Oldfather, or their assigned advisor, for more information. The CAS career coaches help students explore career options, identify ways to build experience, and prepare to apply for internships, jobs, or graduate school, including help with resumes, applications, and interviewing.

## ACE Requirements

Students must complete one course for each of the ACE Student Learning Outcomes below. Certified course choices are published in the degree audit, or visit the ACE website (<http://ace.unl.edu>) for the most current list of certified courses.

### ACE Student Learning Outcomes

ACE 1 : Write texts, in various forms, with an identified purpose, that respond to specific audience needs, integrate research or existing knowledge, and use applicable documentation and appropriate conventions of format and structure.

ACE 2: Demonstrate competence in communication skills.

ACE 3: Use mathematical, computational, statistical, logical, or other formal reasoning to solve problems, draw inferences, justify conclusions, and determine reasonableness.

ACE 4: Use scientific methods and knowledge to pose questions, frame hypotheses, interpret data, and evaluate whether conclusions about the natural and physical world are reasonable.

ACE 5: Use knowledge, historical perspectives, analysis, interpretation, critical evaluation, and the standards of evidence appropriate to the humanities to address problems and issues.

ACE 6: Use knowledge, theories, and research perspectives such as statistical methods or observational accounts appropriate to the social sciences to understand and evaluate social systems or human behaviors.

ACE 7: Use knowledge, theories, or methods appropriate to the arts to understand their context and significance.

ACE 8: Use knowledge, theories, and analysis to explain ethical principles and their importance in society.

ACE 9: Exhibit global awareness or knowledge of human diversity through analysis of an issue.

ACE 10: Generate a creative or scholarly product that requires broad knowledge, appropriate technical proficiency, information collection, synthesis, interpretation, presentation, and reflection.

## College Degree Requirements

### College Distribution Requirements – BA and BS

The College of Arts and Sciences distribution requirements are common to both the bachelor of arts and bachelor of science degrees and are designed to ensure a range of courses. By engaging in study in several different areas within the College, students develop the ability to learn in a variety of ways and apply their knowledge from a variety of perspectives. All requirements are in addition to University ACE requirements, and no course can be used to fulfill both an ACE outcome and a College Distribution Requirement.

- A student may not use a single course to satisfy more than one College Distribution Requirement, with the exception of CDR Diversity. Courses used to meet CDR Diversity may also meet CDR Writing, CDR Humanities, or CDR Social Science.
- Independent study or reading courses and internships cannot be used to satisfy distribution requirements.
- Courses from interdisciplinary programs will be applied in the same area as courses from the home/cross-listed department.

#### College Distribution Requirements

*CDR: Written Communication* 3

Select from courses approved for ACE outcome 1.

*CDR: Natural, Physical, and Mathematical Sciences with Lab* 4

Select from biochemistry, biological sciences, chemistry, computer science, geology, meteorology, mathematics, physics, and statistics. Must include one lab in the natural or physical sciences. Lab courses may be selected from biochemistry, biological sciences, chemistry, geology, meteorology, and physics.

Some courses from geography and anthropology may also be used to satisfy the lab requirement above.<sup>1</sup>

*CDR: Humanities* 3

Select from classics, English, history, modern languages and literatures, philosophy, and religious studies.<sup>2</sup>

*CDR: Social Science* 3

Select from anthropology, communication studies, geography, political science, psychology, or sociology.<sup>3</sup>

*CDR: Human Diversity in U.S. Communities* 0-3

Select from a set of approved courses as listed in the degree audit.

*CDR: Language* 0-16

Fulfilled by the completion of the 6-credit-hour second-year sequence in a single foreign language in one of the following departments: Classics and religious studies or modern languages and literatures. Instruction is currently available in Arabic, Chinese, Czech, French, German, Greek, Japanese, Latin, Russian, and Spanish.

A student who has completed the fourth-year level of one foreign language in high school is exempt from the languages requirement, but encouraged to continue on in their language study.

Credit Hours Subtotal: 13-32

<sup>1</sup> See Degree Audit or a College of Arts and Sciences advisor for approved geography and anthropology courses that apply as natural science.

<sup>2</sup> Language courses numbered 220 and below do not fulfill the CDR Humanities.

<sup>3</sup> See Degree Audit or College of Arts and Sciences advisor for list of natural/physical science courses in anthropology, geography, and psychology that do not apply as social science.

### Language Requirement

UNL and the College of Arts and Sciences place great value on academic exposure and proficiency in a second language. The UNL entrance requirement of two years of the same foreign language or the College's language distribution requirement (CDR: Language) will rarely be waived and only with relevant documentation. See the main College of Arts and Sciences page for more details.

### Scientific Base - BS Only

The bachelor of science degree requires students to complete 60 hours in mathematical, physical, and natural sciences. Approved courses for scientific base credit come from the following College of Arts and Sciences disciplines: actuarial science, anthropology (selected courses), astronomy, biochemistry (excluding BIOC 101), biological sciences (excluding BIOS 100 or BIOS 203), chemistry (excluding CHEM 101), computer science (excluding CSCE 10), geography (selected courses), geology, life sciences, mathematics (excluding courses below MATH 104), meteorology, microbiology (excluding MBIOL 101), and physics.

See your Degree Audit or your assigned academic advisor for a complete list, including individual classes that fall outside of the disciplines listed above. Up to 12 hours of scientific and technical courses offered by other colleges may be accepted toward this requirement with approval of the College of Arts and Sciences. See your assigned academic advisor to start the approval process.

## Minimum Hours Required for Graduation

A minimum of 120 semester hours of credit is required for graduation from the College of Arts and Sciences. A cumulative grade point average of at least 2.0 is required.

## Grade Rules

### Restrictions on C- and D Grades

The College will accept no more than 15 semester hours of C- and D grades from other domestic institutions except for UNO and UNK. All courses taken at UNO and UNK impact the UNL transcript. No transfer of C- and D grades can be applied toward requirements in a major or a minor. No UNL C- and D grades can be applied toward requirements in a major or a minor. International coursework (including education abroad) with a final grade equivalent to a C- or lower will not be validated by College of Arts and Sciences departments to be degree applicable.

### Pass/No Pass Privilege

The College of Arts and Sciences adheres to the University regulations for the Pass/No Pass (P/N) privilege with the following additional regulations:

- Pass/No Pass hours can count toward fulfillment of University ACE requirements and college distribution requirements up to the 24-hour maximum.
- Most arts and sciences departments and programs do not allow courses graded Pass/No Pass to apply to the major or minor. Students should refer to the department's or program's section of the catalog for clarification. By college rule, departments can allow up to 6 hours of Pass/No Pass in the major or minor.
- Departments may specify that certain courses of theirs can be taken only on a P/N basis.
- The college will permit no more than a total of 24 semester hours of P/N grades to be applied toward degree requirements. This total includes all Pass grades earned at UNL and other U.S. schools. **NOTE:** This 24-hour limit is more restrictive than the University regulation.

## Grading Appeals

A student who feels that he/she has been unfairly graded must ordinarily take the following sequential steps in a timely manner, usually by initiating the appeal in the semester following the awarding of the grade:

1. Talk with the instructor concerned. Most problems are resolved at this point.
2. Talk to the instructor's department chairperson.
3. Take the case to the Grading Appeal Committee of the department concerned. The Committee should be contacted through the department chairperson.
4. Take the case to the College Grading Appeals Committee by contacting the Dean's Office, 1223 Oldfather Hall.

## Course Level Requirements

### Courses Numbered at the 300 or 400 Level

Thirty (30) of the 120 semester hours of credit must be in courses numbered at the 300 or 400 level. Of those 30 hours, 15 hours (1/2) must be completed in residence at UNL.

## Residency Requirement

Students must complete at least 30 of the 120 total hours for their degree at UNL. Students must complete at least 1/2 of their major coursework, including 6 hours at the 300 or 400 level in their major and 15 of the 30 hours required at the 300 or 400 level, in residence. Credit earned during

education abroad may be used toward the residency requirement only if students register through UNL.

## Catalog to Use

Students must fulfill the requirements stated in the catalog for the academic year in which they are first admitted to and enrolled as a degree-seeking student at UNL. In consultation with advisors, a student may choose to follow a subsequent catalog for any academic year in which they are admitted to and enrolled as a degree-seeking student at UNL in the College of Arts and Sciences. Students must complete all degree requirements from a single catalog year. Beginning in 1990-1991, the catalog which a student follows for degree requirements may not be more than 10 years old at the time of graduation.

## Learning Outcomes

Graduates of geography will be able to:

1. Understand spatial variations in physical geography—climate, vegetation, and soils—on the surface of the earth.
2. Understand and appreciate the spatial, ecological, and regional dimensions of human life on the surface of the earth.
3. Understand how to use geospatial techniques such as cartographic representation, GIS, and remote sensing in order to analyze and interpret geographic dimensions of life in the world.
4. Appreciate how the global and local are connected.
5. Have an appreciation of the history and philosophy of geography, both past and present.

## Major Requirements

At least 33 hours, including geography Core Requirements, Techniques, and Electives with at least 14 hours at the 300 or 400 level and at least one of the Techniques courses at the 400 level.

## Core Requirements

### Required Courses

|                                |   |    |
|--------------------------------|---|----|
| GEOG 111 / ANTH 111 / GLST 111 | Academic Success and Decision Making in a Globalized World      | 1  |
| GEOG 140 or GEOG 120           | Introductory Human Geography or Introductory Economic Geography | 3  |
| GEOG 155                       | Elements of Physical Geography                                  | 4  |
| GEOG 181                       | Quality of the Environment                                      | 3  |
| GEOG 272                       | Geography of World Regions                                      | 3  |
| GEOG 311 / ANTH 311 / GLST 311 | Seminar in Launching Academic and Professional Careers          | 1  |
| GEOG 402                       | Undergraduate Seminar (Senior Seminar)                          | 3  |
| Credit Hours Subtotal:         |   | 18 |
| Total Credit Hours             |   | 18 |

## Specific Major Requirements

### Technique Courses

|   |                                    |     |
|---|------------------------------------|-----|
| Select two courses from the following, with one at the 400 level. |                                    | 6-8 |
| ANTH 389  | GIS in Archaeology                 |     |
| CRPL 432  | Advanced Spatial Analysis with GIS |     |

|                                       |   |       |
|---------------------------------------|---|-------|
| CRPL 495                              | Selected Topics in Community and Regional Planning                  |       |
| GEOG 217                              | Principles of GIS   |       |
| GEOG 312                              | Introduction to Spatial Sciences                                    |       |
| GEOG 317                              | Cartography I: Introduction to Cartography                          |       |
| GEOG 412                              | Introduction to Geographic Information Systems                      |       |
| GEOG 414                              | Spatial Analysis and Modeling                                       |       |
| GEOG 415                              | Introduction to Computer Mapping                                    |       |
| GEOG 417                              | Web GIS   |       |
| GEOG 418                              | Introduction to Remote Sensing                                      |       |
| GEOG 419                              | Applications of Remote Sensing in Agriculture and Natural Resources |       |
| GEOG 420                              | Digital Image Analysis of Remote Sensing Data                       |       |
| GEOG 421                              | Field Techniques in Remote Sensing                                  |       |
| GEOG 422                              | Advanced Techniques in Geographic Information Systems               |       |
| GEOG 425                              | Scientific Visualization in Cartography                             |       |
| GEOG 427                              | Introduction to the Global Positioning System (GPS)                 |       |
| GEOG 432                              | Programming, Scripting, and Automation for GIS                      |       |
| GEOG 444                              | Geo-demographic and Geographic Information Systems (GIS)            |       |
| GEOG 461                              | Geospatial Approaches in Digital Humanities and Social Sciences     |       |
| GEOG 483                              | Cognitive Processes in Map Comprehension and Use                    |       |
| GEOG 498                              | Advanced Special Problems   |       |
| Credit Hours Subtotal:                |   | 6-8   |
| <b>Additional Geography Courses</b>   |   |       |
| Select three additional GEOG courses. |   | 9-12  |
| Credit Hours Subtotal:                |   | 9-12  |
| Total Credit Hours                    |   | 15-20 |

## ADDITIONAL MAJOR REQUIREMENTS

### Grade Rules

#### C- and D Grades

A grade of C or above is required for all courses in the major and minor.

#### Pass/No Pass

No more than 6 hours of courses taken Pass/No Pass will be counted toward the major or minor.

## Requirements for Minor Offered by Department

Eighteen (18) hours of geography courses, including 10 hours in courses numbered 300 or above.

### Grade Rules

#### C- and D Grades

A grade of C or above is required for all courses in the major and minor.

#### Pass/No Pass

No more than 6 hours of courses taken Pass/No Pass will be counted toward the major or minor.

#### GEOG 101 Discover Geography

**Notes:** Recommended for any student considering a career and a major or minor in Geography. The course is required for declared Geography majors.

**Description:** An orientation to the field of Geography, discussion of career opportunities, an overview of requirements for the major, and an introduction to resources available at UNL and in the Lincoln community. Learn about unique contributions that geographers are making to address issues in management of natural resources, public health, water and food security, international trade, immigration and other areas.

**Credit Hours:** 1

**Max credits per semester:** 1

**Max credits per degree:** 1

**Grading Option:** Graded

#### GEOG 109 Water in Society

**Crosslisted with:** SCIL 109, AECN 109, NRES 109, ENVR 109

**Description:** Introduction to the scientific, social, and economic dimensions of historical and contemporary water systems. Students will develop an understanding of hydrologic systems and analyze and engage in decision-making about complex challenges associated with water resource use.

**Credit Hours:** 3

**Max credits per semester:** 3

**Max credits per degree:** 3

**Grading Option:** Graded with Option

**Offered:** FALL

**Prerequisite for:** SCIL 300

**ACE:** ACE 8 Civic/Ethics/Stewardship ACE 4 Science

#### GEOG 111 Academic Success and Decision Making in a Globalized World

**Crosslisted with:** GLST 111, ANTH 111

**Notes:** Pass/No Pass only.

**Description:** Course focused on student success, academic planning, and career development for all majors in Anthropology, Geography and Global Studies.

**Credit Hours:** 1

**Max credits per semester:** 1

**Max credits per degree:** 1

**Grading Option:** Pass No Pass

**Prerequisite for:** GLST 311, ANTH 311, GEOG 311

**Groups:** Introductory

#### GEOG 120 Introductory Economic Geography

**Description:** Basic factors influencing the location of economic activity. Influence of space and location on the evolution and development of economic systems. World and regional patterns of economic activities.

**Credit Hours:** 3

**Max credits per semester:** 3

**Max credits per degree:** 3

**Grading Option:** Graded with Option

**Groups:** Human-Economic Geography



**GEOG 140 Introductory Human Geography**

**Notes:** Students who have previously taken GEOG 100 may not receive credit for GEOG 140.

**Description:** Human populations, cultures, and landscapes, with particular attention to human-environment relations and global interconnections.

**Credit Hours:** 3

**Max credits per semester:** 3

**Max credits per degree:** 3

**Grading Option:** Graded with Option

**ACE:** ACE 9 Global/Diversity

**Groups:** Human-Economic Geography

**GEOG 155 Elements of Physical Geography**

**Notes:** Students who earn credit toward the degree in GEOG 155 may not earn credit toward the degree in GEOG 150 or in the combination of GEOG 150 and 152.

**Description:** Investigation of the basic elements of the physical environment of the earth and its atmosphere. Includes atmospheric processes, temperature distributions, weather systems, severe weather, climates, water balance, vegetation and soil distributions, landforms and their processes, and natural hazards. Modifying influences that humans have on the physical environment and atmosphere examined.

**Credit Hours:** 4

**Max credits per semester:** 4

**Max credits per degree:** 4

**Grading Option:** Graded with Option

**Prerequisite for:** GEOG 308, GEOL 308, NRES 308

**ACE:** ACE 4 Science

**Groups:** Physical Geography

**GEOG 170 Introduction to Great Plains Studies**

**Crosslisted with:** ANTH 170, GPSP 170, NRES 170, SOCI 170

**Description:** Interdisciplinary study of the natural environment, social environment, human heritage, arts and humanities of the Great Plains.

**Credit Hours:** 3

**Max credits per semester:** 3

**Max credits per degree:** 3

**Grading Option:** Graded with Option

**Groups:** Regional Geography

**GEOG 181 Quality of the Environment**

**Description:** Analysis of human's role in altering the quality of the environment through their impact on eco-health, transformation of the landscape, and spatial organization and behavior.

**Credit Hours:** 3

**Max credits per semester:** 3

**Max credits per degree:** 3

**Grading Option:** Graded with Option

**ACE:** ACE 9 Global/Diversity ACE 6 Social Science

**Groups:** Human-Economic Geography

**GEOG 198 Special Topics in Geography**

**Description:** Offered from time to time by faculty members who wish to examine current problems in geography. May take a variety of forms including the freshman seminar and the minicourse.

**Credit Hours:** 1-3

**Min credits per semester:** 1

**Max credits per semester:** 3

**Max credits per degree:** 3

**Grading Option:** Graded with Option

**GEOG 200 Landscape and Environmental Appreciation**

**Crosslisted with:** HORT 200, LARC 200

**Description:** Values and processes in human landscapes and natural environments. Concepts and tools to understand the context of local and global environments and significant historical landscapes. Landscape as an indicator of aesthetic quality, design principles and processes as integrators of humans and nature, and the garden as a model for creating sustainable landscapes.

**Credit Hours:** 3

**Max credits per semester:** 3

**Max credits per degree:** 3

**Grading Option:** Graded with Option

**Prerequisite for:** HORT 265; HORT 267

**ACE:** ACE 7 Arts ACE 9 Global/Diversity

**Groups:** Human-Economic Geography

**GEOG 217 Principles of GIS**

**Description:** Introduction to theories and methods of Geographic Information Science (GIScience) and Geographic Information Systems (GISystems). Focuses on spatial thinking, analysis skills, and the fundamental knowledge needed to use GIS effectively, accurately, and ethically. Topics include: geodesy, cartography and geovisualization, map projections, geospatial data collection, GPS, spatial data models, spatial databases, and spatial analysis.

**Credit Hours:** 4

**Max credits per semester:** 4

**Max credits per degree:** 4

**Grading Option:** Graded with Option

**Offered:** FALL

**Groups:** Techniques

**GEOG 271 Geography of the United States**

**Description:** Introduction to the regional geography of the United States. Attention to the significance of location, advantages and limitations of the natural environment, population distribution, and economic development considered regionally.

**Credit Hours:** 3

**Max credits per semester:** 3

**Max credits per degree:** 3

**Grading Option:** Graded with Option

**Groups:** Regional Geography

**GEOG 272 Geography of World Regions**

**Description:** Appraisal of the interaction between the physical environment, the human resources, and economic activities for the major regions of the world. Application of fundamental geographical concepts to regional analysis.

**Credit Hours:** 3

**Max credits per semester:** 3

**Max credits per degree:** 3

**Grading Option:** Graded with Option

**ACE:** ACE 9 Global/Diversity

**Groups:** Regional Geography

**GEOG 281 Introduction to Water Science****Crosslisted with:** NRES 281, WATS 281**Prerequisites:** High school chemistry or one semester college chemistry; one course in geology or physical geography or soil.**Description:** Survey of the water science from the perspective of both natural and social sciences. Water budget, precipitation, evapotranspiration, runoff and stream flow, groundwater, water quality parameters, economics of water, water policy, water law and water politics.**Credit Hours:** 3**Max credits per semester:** 3**Max credits per degree:** 3**Grading Option:** Graded with Option**Prerequisite for:** NRES 319**Groups:** Physical Geography**GEOG 283 Space, the Environment and You****Description:** Experiments to help individuals develop awareness of the extent to which their feelings and behavior are influenced by the spatial and environmental dimensions of their surroundings.**Credit Hours:** 3**Max credits per semester:** 3**Max credits per degree:** 3**Grading Option:** Graded with Option**Groups:** Human-Economic Geography**GEOG 289 People and the Land: Human Environmental Interactions on the Great Plains****Crosslisted with:** NRES 289**Description:** Explore human environmental interaction on the Great Plains. Samples a variety of Great Plains cultures and time periods to explore past use of the Great Plains environment. Evaluation of attributes and related data critical to the operation of past social-ecological systems with reference to changing climatic/ecological dynamics, human environmental impacts, and the sustainability of various indigenous and western modes of land use on the Great Plains. Investigate knowledge of these processes and how they can be of relevance to contemporary issues of Great Plains land management and resource utilization.**Credit Hours:** 3**Max credits per semester:** 3**Max credits per degree:** 3**Grading Option:** Graded with Option**ACE:** ACE 6 Social Science ACE 5 Humanities**GEOG 308 Biogeography****Crosslisted with:** GEOL 308, NRES 308**Prerequisites:** GEOG 155 or BIOS 101 and 101L or GEOL 101.**Notes:** Biogeography is a highly interdisciplinary science, relying heavily on ecology, geological science, and climatology. It is global in scope and offers the latest knowledge in understanding organism distributions, and the factors that determine those distributions.**Description:** Introduction to the basic concepts of biogeography, the study of distributions of plants and animals, both past and present.**Credit Hours:** 3**Max credits per semester:** 3**Max credits per degree:** 3**Grading Option:** Graded with Option**Groups:** Physical Geography**GEOG 311 Seminar in Launching Academic and Professional Careers****Crosslisted with:** GLST 311, ANTH 311**Prerequisites:** ANTH/GEOG/GLST 111**Notes:** Pass/No Pass (PNP)**Description:** Online seminar focused on academic and career development for Anthropology, Geography and Global Studies majors.**Credit Hours:** 1**Max credits per semester:** 1**Max credits per degree:** 1**Grading Option:** Pass No Pass**GEOG 312 Introduction to Spatial Sciences****Crosslisted with:** NRES 312**Notes:** Recommended to have basic computer skills**Description:** Overview of digital technology and concepts in spatial sciences. Geographic Information Systems, Remote Sensing, Geographic position systems and other spatial technology.**Credit Hours:** 3**Max credits per semester:** 3**Max credits per degree:** 3**Grading Option:** Graded with Option**Offered:** FALL/SPR**GEOG 317 Cartography I: Introduction to Cartography****Prerequisites:** 6 hrs geography.**Description:** Introduction to maps and mapping with emphasis on applied and theoretical considerations in map design and construction. Students create computer maps from specifications of instructor. Opportunity to actively participate in the technical processes of data collection, cartographic design, and construction normally associated with the actual production of maps.**Credit Hours:** 4**Max credits per semester:** 4**Max credits per degree:** 4**Grading Option:** Graded with Option**Groups:** Techniques**GEOG 334 Historical Geography of the Great Plains****Description:** Traces the sequence of the human occupancy of the Great Plains from prehistoric times to the present. Focus on the changing perception and utilization of the Great Plains environment, leading to the emergence of a distinctive contemporary region.**Credit Hours:** 3**Max credits per semester:** 3**Max credits per degree:** 3**Grading Option:** Graded with Option**ACE:** ACE 5 Humanities**Groups:** Human-Economic Geography**GEOG 361 Urban Geography****Description:** Geography of cities and metropolitan areas of the past, present, and future. Spatial structures of urban settlements in North America and elsewhere examined both theoretically and descriptively.**Credit Hours:** 3**Max credits per semester:** 3**Max credits per degree:** 3**Grading Option:** Graded with Option**ACE:** ACE 6 Social Science**Groups:** Human-Economic Geography

**GEOG 370 Geography of Nebraska**

**Description:** Survey of the physical and cultural features of the geography of Nebraska as related to the changing patterns in the human occupancy of the geographic regions of the state.

**Credit Hours:** 3

**Max credits per semester:** 3

**Max credits per degree:** 3

**Grading Option:** Graded with Option

**Groups:** Regional Geography

**GEOG 372 European Landscapes and Cultures**

**Description:** The physical and human geographies of Europe. Population migrations, landscape change, and diversity of culture in Europe and selected sub-regions of Europe.

**Credit Hours:** 3

**Max credits per semester:** 3

**Max credits per degree:** 3

**Grading Option:** Graded with Option

**Groups:** Regional Geography

**GEOG 375 Geography of Asia**

**Description:** Patterns of physical features, population, and economic activities and other cultural aspects. Attention to India, China, and Japan.

**Credit Hours:** 3

**Max credits per semester:** 3

**Max credits per degree:** 3

**Grading Option:** Graded with Option

**Groups:** Regional Geography

**GEOG 377 Women of the Great Plains**

**Crosslisted with:** GPSP 377, WMNS 377

**Description:** The intersection of gender, identity, power, and representation throughout time and space in the Great Plains of the United States and Canada.

**Credit Hours:** 3

**Max credits per semester:** 3

**Max credits per degree:** 3

**Grading Option:** Graded

**ACE:** ACE 5 Humanities ACE 9 Global/Diversity

**GEOG 378 Geography of Latin America**

**Description:** Introduction to the geography of Mexico, Central America, West Indies, and South America. Advantage and limitations of the natural environment, population distribution, and economic development are considered regionally.

**Credit Hours:** 3

**Max credits per semester:** 3

**Max credits per degree:** 3

**Grading Option:** Graded with Option

**ACE:** ACE 9 Global/Diversity

**Groups:** Regional Geography

**GEOG 380 Geography of Africa**

**Crosslisted with:** ETHN 380, NRES 380

**Description:** Overview of the major physical and human landscapes in Africa. Prominent past and current events will be placed into a spatial context in an attempt to develop insight into the interrelationships that exist among people, cultures, countries, economies, and the environment, not only within Africa, but between Africa and the rest of the world.

**Credit Hours:** 3

**Max credits per semester:** 3

**Max credits per degree:** 3

**Grading Option:** Graded with Option

**ACE:** ACE 9 Global/Diversity

**Groups:** Regional Geography

**GEOG 398 Special Topics in Geography**

**Prerequisites:** Permission.

**Description:** Selected topic possessing areal implications.

**Credit Hours:** 1-24

**Min credits per semester:** 1

**Max credits per semester:** 24

**Max credits per degree:** 24

**Grading Option:** Graded with Option

**GEOG 399 Independent Study in Geography**

**Prerequisites:** Permission.

**Credit Hours:** 1-24

**Min credits per semester:** 1

**Max credits per semester:** 24

**Max credits per degree:** 24

**Grading Option:** Graded with Option

**GEOG 399H Honors Course**

**Prerequisites:** Permission.

**Credit Hours:** 1-4

**Min credits per semester:** 1

**Max credits per semester:** 4

**Max credits per degree:** 4

**Grading Option:** Graded

**GEOG 402 Undergraduate Seminar**

**Prerequisites:** Junior standing

**Notes:** Serves as the capstone course for the GEOG major.

**Description:** The history and philosophy of geography. Contemporary issues in geography.

**Credit Hours:** 3

**Max credits per semester:** 3

**Max credits per degree:** 3

**Grading Option:** Graded with Option

**ACE:** ACE 10 Integrated Product

**GEOG 406 Spatial and Environmental Influences in Social Systems**

**Crosslisted with:** GEOG 806

**Description:** How space, spatial structure, and spatially oriented behavior operate in social systems, emphasizing their influence on interpersonal communication and/or social exchange.

**Credit Hours:** 3

**Max credits per semester:** 3

**Max credits per degree:** 3

**Grading Option:** Graded with Option

**Groups:** Human-Economic Geography

**GEOG 408 Microclimate: The Biological Environment**

**Crosslisted with:** AGRO 408, HORT 408, METR 408, NRES 408, WATS 408, AGRO 808, GEOG 808, HORT 808, METR 808, NRES 808

**Prerequisites:** Junior standing, MATH 106 or equivalent, 5 hrs physics, major in any of the physical or biological sciences or engineering.

**Description:** Physical factors that create the biological environment. Radiation and energy balances of earth's surfaces, terrestrial and marine. Temperature, humidity, and wind regimes near the surface. Control of the physical environment through irrigation, windbreaks, frost protection, manipulation of light, and radiation. Applications to air pollution research. Instruments for measuring environmental conditions and remote sensing of the environment.

**Credit Hours:** 3

**Max credits per semester:** 3

**Max credits per degree:** 3

**Grading Option:** Graded with Option

**Prerequisite for:** AGRO 907, HORT 907, METR 907, NRES 907; BSEN 954, NRES 954

**Groups:** Physical Geography

**GEOG 409 Human Dimensions of Natural Resources**

**Crosslisted with:** NRES 409

**Prerequisites:** Junior standing; 12 credit hours in natural resources, environmental studies, or closely related fields

**Description:** Overview of the human dimensions of natural resources issues. Exploration of the socioeconomic, cultural, and political aspects of human behavior and how these interact with, might influence, or are influenced by the environment.

**Credit Hours:** 3

**Max credits per semester:** 3

**Max credits per degree:** 3

**Grading Option:** Graded with Option

**GEOG 412 Introduction to Geographic Information Systems**

**Crosslisted with:** GEOG 812, NRES 412, NRES 812

**Description:** Introduction to conceptual foundations and applications of computer-based geographic information systems (GIS). GIS database development, spatial data analysis, spatial modeling, GIS implementation and administration.

**Credit Hours:** 4

**Max credits per semester:** 4

**Max credits per degree:** 4

**Grading Option:** Graded with Option

**Prerequisite for:** GEOG 422, GEOG 822; GEOG 922, NRES 922

**Groups:** Techniques

**GEOG 414 Spatial Analysis and Modeling**

**Crosslisted with:** GEOG 814

**Prerequisites:** GEOG 412 and STAT 218 or STAT 380

**Description:** Advanced spatial analysis techniques, algorithms, and methods used in solving geographic problems. Topics include: cluster analysis, spatial autocorrelation, spatial regression, spatial sampling, and gravity models.

**Credit Hours:** 3

**Max credits per semester:** 3

**Max credits per degree:** 3

**Grading Option:** Graded with Option

**Offered:** SPRING

**Groups:** Techniques

**GEOG 415 Introduction to Computer Mapping**

**Crosslisted with:** GEOG 815

**Prerequisites:** GEOG 317.

**Description:** Introduction to the tools, techniques, and analytical uses of computer mapping. Programming necessary for producing own computer mapping programs.

**Credit Hours:** 3

**Max credits per semester:** 3

**Max credits per degree:** 3

**Grading Option:** Graded with Option

**Prerequisite for:** GEOG 915

**Groups:** Techniques

**GEOG 417 Web GIS**

**Crosslisted with:** GEOG 817

**Prerequisites:** GEOG 317 or GEOG 412

**Description:** Introduction to Internet-based GIS and web cartography. Focus on programming concepts underlying the creation and implementation of quality web mapping applications.

**Credit Hours:** 3

**Max credits per semester:** 3

**Max credits per degree:** 3

**Grading Option:** Graded with Option

**Offered:** SPRING

**Prerequisite for:** GEOG 483, GEOG 883; GEOG 915

**Groups:** Techniques

**GEOG 418 Introduction to Remote Sensing**

**Crosslisted with:** GEOG 818, NRES 418, NRES 818

**Prerequisites:** 9 hours of GEOL, NRES or GEOG.

**Notes:** Advanced standing in geography, natural resources, environmental sciences, engineering or agronomy recommended.

**Description:** Introduction to remote sensing of the earth from aerial and satellite platforms. Aerial photography, multispectral scanning, thermal imaging and microwave remote sensing techniques. Physical foundations of remote sensing using electromagnetic energy, energy-matter interactions, techniques employed in data acquisition and methods of image analysis. Weekly laboratory provides practical experience in visual and digital interpretation of aerial photography, satellite imagery, thermal and radar imagery. Applications in geographic, agricultural, environmental and natural resources analyses.

**Credit Hours:** 4

**Max credits per semester:** 4

**Max credits per degree:** 4

**Grading Option:** Graded with Option

**Prerequisite for:** GEOG 420, GEOG 820; GEOG 421, GEOG 821, NRES 421, NRES 821

**Groups:** Techniques

**GEOG 419 Applications of Remote Sensing in Agriculture and Natural Resources**

**Crosslisted with:** AGRO 419, GEOL 419, NRES 420, AGRO 819, GEOG 819, GEOL 819, NRES 820

**Notes:** GEOG 418/NRES 418 recommended

**Description:** Introduction to the practical uses of remote electromagnetic sensing in dealing with agricultural and water-resources issues.

**Credit Hours:** 4

**Max credits per semester:** 4

**Max credits per degree:** 4

**Grading Option:** Graded with Option

**Groups:** Techniques



**GEOG 420 Digital Image Analysis of Remote Sensing Data****Crosslisted with:** GEOG 820**Prerequisites:** GEOG 418/818 or GEOG 419/819.

**Description:** Principles and methods of digital image processing of remotely sensed data. The biophysical basis of remote sensing and the various sensor systems typically used for monitoring terrestrial and aquatic environments. Algorithms for the preprocessing, enhancement, classification and mapping of digital data for agricultural, urban, geological, environmental, and natural resource management problems.

**Credit Hours:** 4**Max credits per semester:** 4**Max credits per degree:** 4**Grading Option:** Graded with Option**Groups:** Techniques**GEOG 421 Field Techniques in Remote Sensing****Crosslisted with:** GEOG 821, NRES 421, NRES 821**Prerequisites:** GEOG 418/818

**Description:** Field techniques as they relate to remote-sensing campaigns. Research methods, systematic approaches to data collection, field spectroscopy, collecting ancillary information linked with spectroscopic data sets as well as aircraft or satellite missions and subsequent analyses of acquired data.

**Credit Hours:** 3**Max credits per semester:** 3**Max credits per degree:** 3**Grading Option:** Graded with Option**Groups:** Techniques**GEOG 422 Advanced Techniques in Geographic Information Systems****Crosslisted with:** GEOG 822**Prerequisites:** GEOG 412/812.

**Description:** Vector and quadtree data structures, use of relational database management systems, topologically structured databases, query languages, digital terrain modeling, advanced data analysis methods and research issues in GIS. Extensive practical experience with the current GIS software.

**Credit Hours:** 4**Max credits per semester:** 4**Max credits per degree:** 4**Grading Option:** Graded with Option**Prerequisite for:** GEOG 922, NRES 922**Groups:** Techniques**GEOG 425 Scientific Visualization in Cartography****Crosslisted with:** GEOG 825**Prerequisites:** GEOG 317 and either GEOG 415 or GEOG 417

**Description:** Explores cartographic applications of computer animation and multimedia for the dual purposes of assisting visual thinking in map-oriented research and data exploration, and in communicating geographic ideas to others.

**Credit Hours:** 4**Max credits per semester:** 4**Max credits per degree:** 4**Grading Option:** Graded with Option**Groups:** Techniques**GEOG 427 Introduction to the Global Positioning System (GPS)****Crosslisted with:** GEOG 827, NRES 427, NRES 827**Prerequisites:** Junior standing.**Notes:** Familiarity with mapping and GIS recommended.

**Description:** Integrated lectures, lab exercises and field experience provide an understanding of GPS technology and applications. Students will learn to collect, correct and use GPS data in a geographic information system (GIS) environment.

**Credit Hours:** 2**Max credits per semester:** 2**Max credits per degree:** 2**Grading Option:** Graded with Option**GEOG 431 Cultural Geography****Crosslisted with:** GEOG 831

**Description:** The history of cultural geography from von Humboldt through Carl Sauer to the 'new' cultural geographies of Don Mitchell, Gillian Rose and Noel Castree. The current theoretical debates of feminism, post-structuralism, post-colonialism and environmentalism, and the influences of literary and cultural studies in the development of cultural geography and the various methodologies involved.

**Credit Hours:** 3**Max credits per semester:** 3**Max credits per degree:** 3**Grading Option:** Graded with Option**Groups:** Human-Economic Geography**GEOG 432 Programming, Scripting, and Automation for GIS****Crosslisted with:** GEOG 832**Prerequisites:** GEOG 217

**Notes:** Practical experience or other formal preparation in GIS may be substituted for prerequisite by permission.

**Description:** GIS-focused programming, scripting, and spatial analysis using the Python and R programming languages. Topics include: the ArcPy library, algorithm development, open source geospatial libraries, and the manipulation and analysis of geospatial data.

**Credit Hours:** 3**Max credits per semester:** 3**Max credits per degree:** 3**Grading Option:** Graded with Option**Offered:** SPRING**GEOG 435 Cultural Survival: Indigenous People's Rights****Crosslisted with:** GEOG 835

**Description:** Threats against indigenous peoples' lands, resources and cultural patrimony, languages and knowledge systems more than 500 years after Columbus instigated European colonialism, creating the first global world order. The responses of Indigenous peoples to the imposition of Western dominated economic and political systems. Land rights, economic development, and women's rights from the perspective of different Indigenous communities around the world.

**Credit Hours:** 3**Max credits per semester:** 3**Max credits per degree:** 3**Grading Option:** Graded with Option**Groups:** Human-Economic Geography

**GEOG 441 Geographies of Health****Crosslisted with:** GEOG 841**Description:** Exploration of political economies of health care, the geographic distribution of services, the impacts of location in both care utilization and access, emphasizing the importance of "place" in health outcomes.**Credit Hours:** 3**Max credits per semester:** 3**Max credits per degree:** 3**Grading Option:** Graded with Option**GEOG 444 Geo-demographic and Geographic Information Systems (GIS)****Crosslisted with:** GEOG 844**Description:** Geo-demographic and geographic information system (GIS) analysis, interpretation and mapping of geographical patterns of population size, population composition, and composition change. Theoretical and applied investigation of geo-demographic issues involving marketing research, public facilities planning, public health provision, and small-area population change forecasting. GIS use of TIGER and small-area census data.**Credit Hours:** 3**Max credits per semester:** 3**Max credits per degree:** 3**Grading Option:** Graded with Option**Groups:** Human-Economic Geography**GEOG 447 Political Geography****Crosslisted with:** GEOG 847**Description:** Importance of factors of a physical, economic, and human character in political development at local to global scales; international geopolitical aspects of environment, territoriality, core areas, capitals, and boundaries; national geographical patterns of voting, representation, public administration and public policy.**Credit Hours:** 3**Max credits per semester:** 3**Max credits per degree:** 3**Grading Option:** Graded with Option**Groups:** Human-Economic Geography**GEOG 448 Pro-seminar in International Relations I****Crosslisted with:** ECON 466, POLS 466, POLS 866, AECN 467, ANTH 479, ANTH 879, ECON 866, GEOG 848, HIST 479, HIST 879, SOCI 466, SOCI 866**Prerequisites:** Senior standing and permission.**Notes:** Open to students with an interest in international relations.**Description:** Topic varies.**Credit Hours:** 3**Max credits per semester:** 3**Max credits per degree:** 3**Grading Option:** Graded with Option**Groups:** Comp Intrntnl & Reg Develpmnt Human-Economic Geography  
Variable group based on topic Integrative Courses, Research International Relations&Compar**GEOG 450 Climate and Society****Crosslisted with:** AGRO 450, METR 450, NRES 452, AGRO 850, GEOG 850, METR 850, NRES 852**Prerequisites:** Junior standing or above.**Notes:** Offered spring semester of even-numbered calendar years.**Description:** Impact of climate and extreme climatic events on society and societal responses to those events. Global in scope and interdisciplinary.**Credit Hours:** 3**Max credits per semester:** 3**Max credits per degree:** 3**Grading Option:** Graded with Option**Offered:** SPRING**Groups:** Physical Geography**GEOG 461 Geospatial Approaches in Digital Humanities and Social Sciences****Crosslisted with:** ANTH 461, ANTH 861, CLAS 461, CLAS 861, GEOG 861, HIST 461, HIST 861**Description:** Study of geographic concepts and critical analysis of applications of Geographic Information Systems (GIS) in humanities and social sciences and application of geospatial tools for humanities and social science research; learn how to collect, manage, analyze, and visualize spatial data for real-world projects**Credit Hours:** 3**Max credits per semester:** 3**Max credits per degree:** 3**Grading Option:** Graded with Option**Groups:** Techniques**GEOG 467 Great Plains Field Pedology****Crosslisted with:** AGRO 477, NRES 477, SOIL 477, GEOG 867, NRES 877**Prerequisites:** AGRO/SOIL 153.**Description:** Spatial relationship of soil properties on various parts of landscape typical of the Plains, causal factors, and predictions of such relationships on other landscapes. Grouping these properties into classes, naming the classes, and the taxonomy that results from this grouping. Application of a taxonomy to a real situation through making a field soil survey in a region representative of the Plains border, predicting land use response of various mapped units as it affects the ecosystem, and evaluating the effectiveness of the taxonomic system used in the region surveyed.**Credit Hours:** 4**Max credits per semester:** 4**Max credits per degree:** 4**Grading Option:** Graded with Option**Groups:** Physical Geography**GEOG 469 Bio-Atmospheric Instrumentation****Crosslisted with:** AGRO 469, HORT 407, METR 469, MSYM 469, NRES 469, AGRO 869, GEOG 869, HORT 807, METR 869, MSYM 869, NRES 869**Prerequisites:** Junior standing; MATH 106; 4 hrs physics; physical or biological science major.**Description:** Discussion and practical application of principles and practices of measuring meteorological and related variables near the earth's surface including temperature, humidity, precipitation, pressure, radiation and wind. Performance characteristics of sensors and modern data collection methods are discussed and evaluated.**Credit Hours:** 3**Max credits per semester:** 3**Max credits per degree:** 3**Grading Option:** Graded with Option**Groups:** Physical Geography

**GEOG 478 Pro-seminar in Latin American Studies**

**Crosslisted with:** ANTH 478, HIST 478, LAMS 478, POLS 478, SOCI 478, MODL 478, EDPS 478, ANTH 878, GEOG 878, HIST 878, POLS 878, SOCI 878, MODL 878, EDPS 878

**Prerequisites:** Junior standing and permission.

**Notes:** Topical seminar required for all Latin American Studies majors.

**Description:** An interdisciplinary analysis of topical issues in Latin American Studies.

**Credit Hours:** 3

**Max credits per semester:** 3

**Max credits per degree:** 6

**Grading Option:** Graded with Option

**Groups:** International Relations&Compar Lat Am,Asian,Mid East,Afr Hist Regional Geography Integrative Courses, Research

**GEOG 483 Cognitive Processes in Map Comprehension and Use**

**Crosslisted with:** GEOG 883

**Prerequisites:** GEOG 317 and 417/817.

**Description:** How cognitive processes help individuals to comprehend the spatial circumstances or arenas they confront when carrying out their daily activities. Awareness of space, spatial knowing, formation of cognitive maps, importance of spatial images in negotiation of surroundings, and the relationship of cognitive maps to orientation and wayfinding.

**Credit Hours:** 3

**Max credits per semester:** 3

**Max credits per degree:** 3

**Grading Option:** Graded with Option

**Groups:** Techniques

**GEOG 484 Water Resources Seminar**

**Crosslisted with:** AGRO 484, GEOL 484, NRES 484, WATS 484, NRES 884, AGRO 884, GEOG 884, GEOL 884, WATS 884

**Prerequisites:** Junior or above standing

**Description:** Seminar on current water resources research and issues in Nebraska and the region.

**Credit Hours:** 1

**Max credits per semester:** 1

**Max credits per degree:** 1

**Grading Option:** Graded with Option

**GEOG 491 Geography Field Tour**

**Crosslisted with:** GEOG 891, NRES 491

**Description:** Group educational tours to specific sites that illustrate aspects of physical and cultural geography. Off-campus travel required.

**Credit Hours:** 2-3

**Min credits per semester:** 2

**Max credits per semester:** 3

**Max credits per degree:** 6

**Grading Option:** Graded

**Groups:** Physical Geography

**GEOG 497 Internship in Geography**

**Crosslisted with:** GEOG 897

**Prerequisites:** Permission.

**Description:** Applying geographic training with on-the-job learning.

**Credit Hours:** 1-6

**Min credits per semester:** 1

**Max credits per semester:** 6

**Max credits per degree:** 6

**Grading Option:** Graded with Option

**GEOG 498 Advanced Special Problems**

**Crosslisted with:** GEOG 898

**Notes:** Topic varies, see course description or registration guide.

**Credit Hours:** 1-24

**Min credits per semester:** 1

**Max credits per semester:** 24

**Max credits per degree:** 24

**Grading Option:** Graded with Option

**PLEASE NOTE**

This document represents a sample 4-year plan for degree completion with this major. Actual course selection and sequence may vary and should be discussed individually with your college or department academic advisor. Advisors also can help you plan other experiences to enrich your undergraduate education such as internships, education abroad, undergraduate research, learning communities, and service learning and community-based learning.

## Geography (B.A.) Career Information

*The following represents a sample of the internships, jobs and graduate school programs that current students and recent graduates have reported.*

**Transferable Skills**

- Confidently navigate complex, ambiguous projects and environments
- Define problems and identifying causes
- Conduct and present research to large and small groups
- Examine and address social problems, and implement creative solutions
- Analyze and explain data
- Collaborate with a team to develop solutions
- Contextualize political, social, and historical events
- Examine problems from multiple perspectives
- Gain global perspective and high levels of intercultural awareness
- Understand the connection between people, places, and communities

**Jobs of Recent Graduates**

- Geographer, United States CE, Engineer Research & Development - Alexandria VA
- GIS Technician, GIS Workshop - Lincoln NE
- Archeological Technician, Midwest Archeological Center National Park Service - Lincoln NE
- Space and Missile Officer, United States Air Force - Vandenberg AFB CA
- Project Scientist, Albred Benesch & Company - Lincoln NE
- Intelligence Analyst, BAE Systems - McLean VA
- Police Officer, Omaha Police Dept - Omaha NE
- Geospatial Technician, Terra2 Geospatial Consultants - Omaha NE
- Peace Corps Volunteer, Peace Corps - Washington DC
- Agricultural Statistician, USDA NASS - Lincoln NE
- Marketing Coordinator, Engineering Technologies, Inc. - Lincoln NE
- GIS/CAD Technician, Lincoln Electric System - Lincoln NE
- Drafter, Booz Allen Hamilton - Omaha NE

- Integrated Resource Technician, National Park Service - International Falls MN
- GIS Specialist, Nebraska Dept of Natural Resources - Lincoln NE

### **Internships**

- Integrated Management Technical Assistant, Nebraska Dept of Natural Resources - Lincoln NE
- GIS Intern, HDR - Lincoln NE
- NHD GIS Intern, Nebraska Dept of Natural Resources - Lincoln NE