

GEOGRAPHY (GEOG)

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

Format: LEC

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

Format: LEC

Offered: FALL

Prerequisite for: SCIL 300

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

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

Format: LEC

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

Format: LEC

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

Format: LEC

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

Format: LEC

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

Format: LEC

ACE: ACE 6 Social Science ACE 9 Global/Diversity

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

Format: LEC

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

Format: LEC

Prerequisite for: HORT 265; HORT 267

ACE: ACE 7 Arts ACE 9 Global/Diversity

Groups: Human-Economic Geography

GEOG 217 Mapping Science in the 21st Century

Description: Introduction to modern mapping sciences. Interpret and use both traditional and digital maps. Fundamentals of thematic mapping, topographic map analysis, interpretation of aerial and satellite imagery, principles of geographic information systems (GIS), fundamentals of the global positioning (GPS), and mapping on the Internet.

Credit Hours: 3

Max credits per semester: 3

Max credits per degree: 3

Format: LEC

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

Format: LEC

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

Format: LEC

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

Format: LEC

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

Format: LEC

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

Format: LEC

ACE: ACE 5 Humanities ACE 6 Social Science

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

Format: LEC

Groups: Physical Geography

GEOG 312 Introduction to Geospatial Information Sciences

Crosslisted with: NRES 312

Prerequisites: Junior standing; basic computer skills (spreadsheets, word processors, data and file management).

Description: Introduction to the theory and applications of geospatial information technology. Remote sensing, GPS data collection, GIS data types, editing GIS data, and spatial data analysis with emphasis on applications to natural resources using a problem-based learning format.

Credit Hours: 3

Max credits per semester: 3

Max credits per degree: 3

Format: LEC

Groups: Techniques

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

Format: LEC

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

Format: LEC

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

Format: LEC

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

Format: LEC

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

Format: LEC

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

Format: LEC

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

Format: LEC

ACE: ACE 9 Global/Diversity ACE 5 Humanities

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

Format: LEC

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

Format: LEC

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

Format: LEC

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

Format: IND

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

Format: LEC

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

Format: LEC

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**Format:** LEC**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**Format:** LEC**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**Format:** LEC**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**Format:** LEC**Prerequisite for:** GEOG 422, GEOG 822; GEOG 432, GEOG 832; GEOG 922, NRES 922**Groups:** Techniques**GEOG 414 Quantitative Methods in Geography****Crosslisted with:** GEOG 814**Prerequisites:** STAT 218 or 380 and 6 hrs of geography.**Description:** Introduction to quantitative techniques utilized in geographic research. Fundamental statistical and mathematical techniques used in analyzing spatial relationships examined.**Credit Hours:** 3**Max credits per semester:** 3**Max credits per degree:** 3**Format:** LEC**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**Format:** LEC**Prerequisite for:** GEOG 915**Groups:** Techniques**GEOG 417 Cartography II: Electronic Atlas Design and Production****Crosslisted with:** GEOG 817**Prerequisites:** GEOG 317**Description:** Computer-map design and production for the purpose of assembling an environmental electronic atlas, using advanced computer hardware and software. Extensive discussions and demonstrations on content, design, and methods used in computer mapping.**Credit Hours:** 3**Max credits per semester:** 3**Max credits per degree:** 3**Format:** LEC**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**Format:** LEC**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**Format:** LEC**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**Format:** LEC**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**Format:** LEC**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**Format:** LEC**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**Format:** LEC**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**Format:** LEC**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**Format:** LEC**Groups:** Human-Economic Geography**GEOG 432 GIS Programming for Advanced Spatial Analysis and Modeling****Crosslisted with:** GEOG 832**Prerequisites:** GEOG/NRES 412/812.**Notes:** 18 hours of GIS practice may be substituted for prerequisite by permission.**Description:** Techniques for Geoprocessing script programming to customize geographic information systems (GIS), utilize GIS tools, and implement application-specific spatial analysis, modeling algorithms and procedures.**Credit Hours:** 4**Max credits per semester:** 4**Max credits per degree:** 4**Format:** LEC

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**Format:** LEC**Groups:** Human-Economic Geography**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**Format:** LEC**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**Format:** LEC**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**Format:** LEC**Groups:** International Relations&Compar Integrative Courses, Research Variable group based on topic Comp Intrntnl & Reg Develpmnt Human-Economic Geography**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**Format:** LEC**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**Format:** LEC**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**Format:** LEC**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**Format:** LEC**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

Format: LEC

Groups: Lat Am, Asian, Middle East Hist International Relations & Comparative Integrative Courses, Research Regional Geography

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

Format: LEC

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

Format: LEC

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

Format: FLD

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

Format: FLD

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

Format: LEC