

# GEOGRAPHY (GEOG)

## **GEOG 101 – Physical Geography I: The Atmosphere 4 credit hours**

This course is an introduction to physical geography with an emphasis on the atmosphere and vegetation of the Earth, including solar energy, seasons, the processes of weather and climate, the hydrologic cycle, regional and global climate change, ecosystem functions, and patterns of plant distribution on the physical landscape. The course also considers human impacts on the atmosphere, the oceans, and the land. Three (3) hours of lecture and two (2) hours of lab each week.

## **GEOG 102 – Physical Geography II: The Lithosphere 4 credit hours**

This course is an introduction to physical geography with an emphasis on the geologic framework of the earth and the various atmospheric/gradational processes which interact to produce the physical landscape. The course also considers weathering, erosional and depositional processes and the landforms produced by running water, glacial ice, wind and waves as well as to the effects of human interaction with these processes. Three (3) hours of lecture and two (2) hours of lab each week.

## **GEOG 103 – The Dynamic Planet: Hazards in the Environment 3 credit hours**

This course investigates natural hazards associated with atmospheric, hydrologic, and geologic processes and their impacts on human society. Topics include periodic natural processes that create hazards to human activity, human perceptions of natural hazards, hazard avoidance, disaster prevention, and social mechanisms for coping with natural disasters.

## **GEOG 104 – World Regional Geography 3 credit hours**

This course is an introduction to the world's major regions, using a systematic analysis of physical and cultural phenomena. The aim is to explore the globe: its biophysical environments, and more importantly the patterns of cultural organization that give character to place. By the end of the course, students should be able to locate almost any country in the world, and have a basic understanding of its physical and population characteristics, economic development, agriculture, environmental issues, and predominant religious, ethnic, linguistic, and political divisions.

## **GEOG 106 – Human Geography 3 credit hours**

This introductory course examines the interrelationships between humans, their different cultures, and the natural world. The focus of the course will be on the processes, both natural and cultural, that cause the spatial distribution of humans (where they are and are not) as well as their particular activities on the Earth's surface. These processes include, but are not limited to, the geography of culture, population, language, religion, rural and urban change, plus economic, political, and social imprints.

## **GEOG 126 – First Year Seminar 1 credit hour**

The First-Year Seminar provides students with a multidisciplinary experience in which they approach an issue or problem from the perspective of three different academic differences. The First-Year Seminar will consist of three 1-credit hour courses taken as co-requisites in a single semester. The successful completion of all three courses satisfies the General Studies LOPER 1 course requirement. Students may take the First-Year Seminar in any discipline, irrespective of their major or minor. Students admitted as readmit students or transfer students who transfer 18 or more hours of General Studies credit to UNK are exempt from taking a LOPER 1 course.

## **GEOG 201 – Earth Science 4 credit hours**

Inquiry activities are used to teach basic concepts of meteorology, geology, and astronomy. Emphasis is placed on process and critical thinking skills as well as on environmental issues.

## **GEOG 206 – Geography of the United States and Canada 3 credit hours**

This course focuses on the study of physical, economic, political, historical, and cultural processes within the United States and Canada. Approximately fifteen distinct regions are identified for examination, based on individual natural and social characteristics.

## **GEOG 207 – Physical Geology 3 credit hours**

An introductory geology course which studies internal/tectonic earth processes, plate tectonics, mountain building, the geologic elements of landscape formation and the underlying rocks and structures. Included in the course are studies of earth history; earthquakes, volcanoes, geologic natural hazards, a survey of minerals and rocks and economic geologic resources.

## **GEOG 209 – Meteorology 3 credit hours**

The course considers the basic principles of weather including a study of the atmosphere's origin, composition, circulation patterns, energy budget and its role in the hydrologic cycle. Topics include: instruments for observation, precipitation process, wave cyclones, jet streams, weather forecasting, weather modification and applications of meteorology to air pollution, agriculture and aviation.

Prerequisite: MATH 102 or permission of instructor Enrollment not allowed in GEOG 209 if PHYS 209 has been completed.

## **GEOG 256 – Geology Field Study 1 credit hour**

A four-day field study with travel to the front range of the Colorado Rockies. Centers on the observation of a variety of geologic as well as geographic and ecologic phenomena.

## **GEOG 300 – Map Investigation 3 credit hours**

A comprehensive introduction to map usage. Aspects to be covered will include: types of maps, map reading and interpretation, and where to acquire maps. This course is designed for students of all disciplines who are interested in maps or would find a knowledge of maps useful in their careers.

## **GEOG 301 – Geography of Soils 3 credit hours**

An introductory analysis of various aspects of soil science. Topics will include: soil formation, morphology, classification, distributional patterns, and agricultural aspects of soil science.

Prerequisite: GEOG 102 or GEOG 207

## **GEOG 305 – Environmental Conservation 3 credit hours**

This course introduces students to a variety of real-world environmental conservation practices. Cases are examined from around the world at local, national and global scales. Topics include ecosystem services valuation, river restoration, habitat protection and removing pollutants from the environment.

## **GEOG 306 – Geomorphology 3 credit hours**

Systematic analysis of the processes interacting on the surface of the earth which produce the variety of landforms and structures of the landscape. Emphasis is placed on the interpretation of landforms through the analysis of topographic maps and associated materials.

Prerequisite: GEOG 102 or GEOG 207

**GEOG 309 – Climatology 3 credit hours**

Topics will include: Bioclimatology, agricultural and urban climatology, climatic change and modification, and a comparative analysis of climatic classification schemes. Designed for students wishing to acquire a greater understanding of the relationships of the climate to human occupancy patterns and the natural environment.

Prerequisite: GEOG 101

**GEOG 321 – Economic Geography 3 credit hours**

The course is an examination of the geographic elements of economic activity. The course explores the classical geographic models and theories of economic behavior, the factors that influence the location of primary (raw materials), secondary (manufacturing) and tertiary (consumption) activities, and influence of globalization of the world economy locational dynamics and decision-making.

Prerequisite: GEOG 104 or GEOG 106

**GEOG 322 – Urban Geography 3 credit hours**

Urban Geography examines cities and metropolitan areas of the past, present, and future. Spatial structures of urban settlements in North America and elsewhere are studied both theoretically and descriptively.

Prerequisite: Junior or senior standing or permission of instructor

**GEOG 323 – Political Geography 3 credit hours**

Political geography looks at the spatial implications of the political process and the impact these policies and processes have on a local, regional, national, or international scale. The rights of individuals form the building blocks of a democratic society. These rights are manifested across space as decisions are made by governments at all levels on behalf of those individuals. This course examines how these decisions are played on a geographical stage through the exploration of topics such as: territoriality, voting and representation, geopolitics, international relations, and the geography of governmental systems.

**GEOG 340 – Developing Nations 3 credit hours**

This course investigates the causes of underdevelopment and contemporary development issues at the global, regional, national, and local levels. Emphasis is placed on the how (process) and why (explanation) of development. Other processes studied include the making of the third world, agrarian change, urbanization, industrialization, and development policy.

Prerequisite: GEOG 104 or GEOG 106

**GEOG 341 – Geography of Latin America 3 credit hours**

This course is an analysis of the physical and cultural geographic environment of Mexico, Central America, the West Indies and South America.

Prerequisite: GEOG 104 or GEOG 106

**GEOG 345 – Geography of Europe 3 credit hours**

This course is an analysis and interpretation of the physical and cultural landscapes of Europe with attention given to political and international issues.

Prerequisite: GEOG 104 or GEOG 106

**GEOG 347 – Geography of Africa 3 credit hours**

This course is a regional examination of the continent in respect to its physical, social, economic and political diversity.

Prerequisite: GEOG 104 or GEOG 106

**GEOG 348 – Geography of Asia 3 credit hours**

This course focuses on the subjects of culture area, cultural diffusion, cultural ecology, cultural integration, and cultural landscape as they apply to the geography of Asia.

Prerequisite: GEOG 104 or GEOG 106

**GEOG 350 – International Tourism 3 credit hours**

A spatial analysis of international tourism in both the developed and underdeveloped world. Emphasis will be placed on the evolution of international tourism, its present character, and its future. Primary consideration will be given to the environmental, cultural, economic, and social impact of tourism.

Prerequisite: GEOG 104 or permission of instructor

**GEOG 400 – Water Resources 3 credit hours**

This course is an overview of issues relating to water resources with an emphasis on the United States. Some of the topics will include: the hydrologic cycle, global status of water resources, water conflicts, droughts and floods, irrigation efficiency, water quality, applications of satellite data, precision agriculture, water resources management, and the impact of climate change on water resources.

Prerequisite: Junior standing

**GEOG 401 – Urban and Regional Planning 3 credit hours**

A study of the structure of the urban physical setting relating to industrial, commercial, and residential land use and the factors and trends affecting their spatial relationships.

**GEOG 409 – Cartography 3 credit hours**

This course is designed to develop skills in the conception, design, and construction of thematic maps. Included will be a brief introduction to data acquisition and manipulation. Primarily for the geography major, cartography may be a useful course for certain others as well. Approximately 1 hour of lecture and 5 hours of lab per week.

Additional Course Fee Required

**GEOG 410 – Geographical Techniques and Thought 3 credit hours**

This course is one of the culminating courses in the Geography major. It focuses on the philosophy, goals, and research of geography as a discipline. The course includes an exploration of the literature of the discipline, research methodology and practice and formalization of written and oral presentations. A portion of the course will be left open to cover areas of geography not available in other courses.

Prerequisite: Junior standing

**GEOG 412 – Environmental Planning 3 credit hours**

An applied physical geography course considering the integration of human and physical processes in the area of land planning, land science, and landscape design. A portion of the course will involve on-site study of selected local examples. On-site visitations may occur at other than regular class times.

Prerequisite: Junior standing

**GEOG 415 – Internship 1-6 credit hours**

The internship provides upper level Geography majors and minors the opportunity to work in a professional environment in which they can apply their knowledge and skills. Students must secure the permission of their academic advisor or department chair before entering into any internship.

Department Consent Required

Total Credits Allowed: 6.00

**GEOG 416 – Applications of Geographic Information Systems 3 credit hours**

This is an applied course focusing on selected topic(s) in geography and their GIS application. Students will work quasi-independently throughout the semester in demonstrating their understanding of, and ability to perform the 'GIS Process' through objective formulation, data identification and acquisition, database creation, manipulation/analysis and presentation of findings by applying them to a real-world spatial problem.

Prerequisite: GEOG 315 or GEOG 316 or permission of instructor  
Additional Course Fee Required

**GEOG 417 – GIScience Principles and Concepts 4 credit hours**

This is an introductory course in GIScience emphasizing the concepts, basic theory, spatial problem solving, and principles of GIScience using both raster and vector data models. It is intended as a foundational course for those who are seeking to major/minor in spatial analysis or work in the field of GIScience. Students should possess basic computer skills.

Prerequisite: Junior or senior standing or permission of instructor  
Additional Course Fee Required

**GEOG 418 – Working with GIScience and Spatial Analysis 3 credit hours**

This is an introductory course in GIScience emphasizing a practical understanding of essential GIScience and spatial analysis functionality and how they are applied to real-world problem solving across a variety of disciplines. Students will develop a working knowledge of leading GIScience software and the associated GIScience methods to enable them to apply basic spatial analysis skills to their respective area of study. Students should have basic computer skills.

Prerequisite: Junior or senior standing or permission of instructor  
Additional Course Fee Required

**GEOG 419 – Remote Sensing of the Environment 3 credit hours**

This course focuses on basic concepts of image formation that are required to understand any remotely sensed or satellite data. Techniques to analyze satellite data using Erdas Imagine software will be discussed and practiced. Students will learn about commonly used satellite data used for monitoring various natural resources. They will also have an opportunity to conduct a small remote sensing project.

Prerequisite: Junior or senior standing or permission of instructor  
Additional Course Fee Required

**GEOG 440 – Special Topics in Regional Geography 1-3 credit hours**

Designed for a penetrating analysis of spatial distribution patterns of physical and cultural phenomena of selected world regions. The course will involve seminar presentations based upon library research.

Total Credits Allowed: 6.00

Prerequisite: GEOG 104 or GEOG 106 or permission of instructor

**GEOG 441 – Special Topics in Human Geography 3 credit hours**

Advanced, in-depth studies of various aspects of Human Geography.

Total Credits Allowed: 6.00

Prerequisite: GEOG 104 or GEOG 106

**GEOG 442 – Special Topics in Physical Geography 3 credit hours**

Advanced, in-depth studies of various aspects of Physical Geography.

Total Credits Allowed: 6.00

Prerequisite: GEOG 101 or GEOG 102

**GEOG 443 – Special Topics in GIS, Spatial Analysis and Remote Sensing 3-4 credit hours**

This course looks at a specific methodology, application area, or related geographic subfield of Geographic Information Systems (GIS), Spatial Analysis (SA) and/or Remote Sensing.

Department Consent Required

Total Credits Allowed: 4.00

Prerequisite: At least junior standing and permission of the department  
Additional Course Fee Required

**GEOG 450 – Senior Geography Project 3 credit hours**

A guided review and critical evaluation of current research in geography which provide the student the opportunity to learn the procedures of problem identification, data gathering, data manipulation, as well as written and oral presentation of research results. Emphasis will be placed on the effective communication of geographic ideas. Students are advised to contact their Geography faculty advisor during the semester immediately preceding registration for this course.

Prerequisite: Junior standing

**GEOG 456 – Field Study 1-4 credit hours**

An extended field study/travel opportunity to selected regions. Depending on the region selected, students will be able to study, among other, the regional physical geography, environment and geology, cultural and historic elements, and contemporary geographic elements.

Total Credits Allowed: 4.00

**GEOG 458 – Great Plains Studies 1-3 credit hours**

Offers the opportunity to reflect on life through the literature and other lore of the Great Plains. Through a different subject focus each offering, the course integrates literary, historical, and paleontological investigations around issues affecting the plains, with a special focus on prairie.

Total Credits Allowed: 3.00

**GEOG 499 – Independent Study 1-3 credit hours**

Independent investigation of a selected problem in geography under the direction of any Geography faculty member. Requires written report and oral presentation. Permission of department chairman required to enroll.

Total Credits Allowed: 15.00