

GEOGRAPHY (GEOG)

GEOG 800P – 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.

GEOG 809P – 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.

GEOG 810P – Geographical Techniques and Thought 3 credit hours

This course deals with the philosophy, goals, research and teaching methods of geography. Included will be an introduction to the literature of the discipline.

Prerequisite: At least two Geography courses or graduate status

GEOG 816P – Applications of GIScience 3 credit hours

This is an applied course focusing on selected topics in geography and their GIS applications. 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.

GEOG 817P – 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 GIS.

GEOG 818P – Working with GIScience and Spatial Analysis 3 credit hours

This is an introductory course in GIS emphasizing a practical understanding of essential GIS 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 GIS software and the associated GIS methods to enable them to apply basic spatial analysis skills to their respective area of study.

GEOG 819P – 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.

GEOG 840P – Seminar 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.

Total Credits Allowed: 3.00

Prerequisite: GEOG 104 or GEOG 106 or permission of instructor

GEOG 841P – Selected Topics in Cultural Geography 3 credit hours

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

Prerequisite: GEOG 104 and GEOG 106 or permission of instructor

GEOG 856P – Field Study 1-4 credit hours

A two to three week field study through selected sites in the Southwestern states. Includes study of geologic, geographic, archeological, cultural, and environmental phenomena in a variety of diverse regions.

Total Credits Allowed: 4.00

GEOG 858P – Great Plains Studies 1-3 credit hours

Great Plains Studies 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. May be offered independently or, as the Prairie Institute, offered interdisciplinarily as 1 credit each in English, History, and Geography (with which it is cross-listed). Credit for the Institute requires reading and writing assignments completed outside the contact hours of the Institute. Repeatable for credit.

Total Credits Allowed: 3.00

GEOG 890 – Directed Research 1-3 credit hours

Independent original research of a selected topic in geography under the direction of a geography graduate faculty member.

Total Credits Allowed: 3.00

GEOG 898 – Directed Readings 1-3 credit hours

Independent readings on advanced geography topics. Readings to be selected and directed by a geography graduate faculty member.

Total Credits Allowed: 3.00

GEOG 899P – Independent Study 1-3 credit hours

Independent investigation of a selected problem in geography or earth science; under the direction of any geography faculty member. Permission of department chair required to enroll.

Total Credits Allowed: 3.00