

GEOGRAPHY (GEOG)

GEOG 501 Research Methods 3 Credit Hour(s)

Geographic Research Methods highlights research methods commonly utilized in the field of geography. Topics covered include research questions and hypotheses formulation, research project development, quantitative research design, and qualitative research design.

Offered: Online

GEOG 502 Introduction to Geographic Information Systems (GIS) 3 Credit Hour(s)

This course will focus on teaching students how to think spatially, interpret maps, and creatively use geospatial technologies to answer questions and solve real world problems utilizing geospatial information systems, global positioning systems, and ArcGIS software.

Offered: Online

GEOG 503 Cartography and Geographic Visualization 3 Credit Hour(s)

Online Prerequisite: GEOG 502

This course explores the theoretical and practical role of cartography and geovisualization in the communication of spatial data (photogrammetry, topographic).

Offered: Online

GEOG 505 Quantitative Analysis 3 Credit Hour(s)

In this non-calculus based quantitative course, students will utilize descriptive and inferential statistical analysis among other quantitative methods for analysis of data related to geographical sciences.

Offered: Online

GEOG 506 Spatial Statistics 3 Credit Hour(s)

Online Prerequisite: GEOG 502

This course considers topics in spatial statistics and provides the necessary background to investigate geographical data.

Offered: Online

GEOG 507 Analysis and Modeling 3 Credit Hour(s)

Online Prerequisite: GEOG 502

This course examines concepts and methods in quantitative analysis and modeling of spatial data to explore human-environmental systems.

Offered: Online

GEOG 510 Human Geography 3 Credit Hour(s)

In this course students will systematically explore humanity's use of the earth with an emphasis on the spatial organization of human economic, social, political, and perceptual environments.

Offered: Online

GEOG 520 Historical Geography 3 Credit Hour(s)

How geography has influenced history and the development of cultures, ideas, people groups, resources, and countries.

Offered: Online

GEOG 541 Geography and Urban Planning 3 Credit Hour(s)

This course focuses on the nexus between geographical concepts and the application of these in urban planning.

Offered: Online

GEOG 597 Special Topics 3 Credit Hour(s)

Offered: Online

GEOG 610 Demography and Populations 3 Credit Hour(s)

Online Prerequisite: GEOG 501 or GEOG 505

Demography and Populations highlights the basic methods and models used by geographers to study the behavior of human populations. This course examines the sociological, geographical, historical, political, and economic influences of fertility, mortality, and migration on population change.

Offered: Online

GEOG 620 Economic Geography 3 Credit Hour(s)

Economic Geography provides insight into the linkage between geography and the economy. Topics covered include resource management, uneven development, commodity chains, technology and agglomeration, labor, consumption, and economic culture.

Offered: Online

GEOG 630 Transport Geography 3 Credit Hour(s)

This course highlights the major systems used to move people, goods, and information through a spatial geography lens. The course covers the major transport modes throughout history and focuses on modern concepts of transport including networks, terminals, environmental impacts, and e-commerce.

Offered: Online

GEOG 631 GIS for Transportation and Logistics 3 Credit Hour(s)

Online Prerequisite: GEOG 502

This course examines the principles and applications of geographic information technologies and spatial data within transportation and logistical contexts.

Offered: Online

GEOG 640 Remote Sensing 3 Credit Hour(s)

Online Prerequisite: GEOG 502

This course explores the nature of imaging the earth's surface from space or from airborne vehicles. It covers the fundamental nature of remote sensing and the platforms and sensor types used. It also provides an in-depth treatment of the computational algorithms employed in image understanding, ranging from the earliest historically important techniques to more recent approaches based on deep learning.

Offered: Online

GEOG 641 GIS for Urban Planning 3 Credit Hour(s)

Online Prerequisite: GEOG 502

This course applies GIS technology and principles in addressing contextual concerns for urban planning.

Offered: Online

GEOG 642 GIS for Disaster Management 3 Credit Hour(s)

Online Prerequisite: GEOG 502

This course is the application of GIS and remote sensing in mapping the extent and severity of natural hazards, and for assessing vulnerability to natural hazards for effective disaster management. This includes the mapping and assessment of zones vulnerable to flooding, fires, wind, volcanic, earthquake, or other naturally occurring disasters.

Offered: Online

GEOG 643 GIS for Environmental Sciences 3 Credit Hour(s)

Online Prerequisite: GEOG 502

This course explores concepts, techniques, and methodologies for designing and implementing spatial databases.

Offered: Online

GEOG 650 GIS Programming and Automation 3 Credit Hour(s)

Online Prerequisite: GEOG 502

This course considers the concepts of programming for geospatial data management and the automation of spatial analysis for research and production purposes.

Offered: Online

GEOG 660 Advanced Topics in GIS and Remote Sensing 3 Credit Hour(s)

Online Prerequisite: GEOG 502

This course assesses the application of more advanced methodologies using GIS and remote sensing technologies (such as satellite, radar, LIDAR, thermal and drone imagery).

Offered: Online

GEOG 680 Military Geography 3 Credit Hour(s)

This course synthesizes both the natural science and social science aspects of geography primarily designed to explore the various geopolitical components of military preparation and activities.

Offered: Online

GEOG 695 Directed Research in Geography 3 Credit Hour(s)

Directed Research in Geography

Offered: Online

GEOG 697 Special Topics in Geography 3 Credit Hour(s)

Special Topics in Geography.

Offered: Online

GEOG 699 Internship in Geography 3 Credit Hour(s)

Internship of 180 hours in a field/role related to Geographic Information Systems or Geography.

Offered: Online