

GEOGRAPHY (GEOG)

GEOG 103 Our Dynamic Planet 3 Hours

Introduction to Earth's dynamic systems and processes and how their spatial dimensions affect people and the environment. This includes the atmosphere, hydrosphere, and lithosphere, and the interconnectedness of Earth's systems. Students are encouraged to think about the interdisciplinary nature of geoscience from examples emphasized throughout the course. **Colonnade/Statewide General Education Code E-NS | NS**

Equivalent(s): GEOL 103

Recent Term(s) Offered: winter 2022; spring 2022; summer 2022; fall 2022; winter 2023; spring 2023; summer 2023; fall 2023; spring 2024; summer 2024; fall 2024

GEOG 110 World Regional Geography 3 Hours

A general survey of the political, social, and ecological systems of the world. The course is concerned with the complexity and diversity of world peoples and cultures. **Colonnade/Statewide General Education Code E-SB | SB**

Recent Term(s) Offered: winter 2022; spring 2022; summer 2022; fall 2022; spring 2023; summer 2023; fall 2023; spring 2024; fall 2024

GEOG 175 University Experience-EEAS 2 Hours

Transition to university experience. Topics include study skills, critical thinking skills, library education, exploration of majors and careers, degree programs, campus resources, and personal development. Special attention is given to educational requirements, careers and resources in the geosciences. Note: For beginning college freshmen or transfer students with fewer than 24 semester hours of credit.

Restriction(s): Students with a semester level of Junior, Sophomore or Senior may **not** enroll.

Recent Term(s) Offered: fall 2022; fall 2023; fall 2024

GEOG 200 Latin American Society: Past and Present 3 Hours

A broad interdisciplinary introduction to the study of Latin America, emphasizing its regions, peoples, and cultures. **Colonnade/Statewide General Education Code K-SY**

Prerequisite(s): 21 hours of Foundations and Explorations Courses, or junior status

Equivalent(s): ANTH 200, SPAN 200, PS 200, HIST 200

Recent Term(s) Offered: fall 2022; fall 2023

GEOG 210 Environment and Ecological Policy 3 Hours

A survey of the geography, history, and current conditions of environmental policy and regulation development, particularly in the United States, with an emphasis on humans as an integral component of the natural environment.

Recent Term(s) Offered: fall 2023

GEOG 225 Visualizing Geography 3 Hours

Students will use data visualizations, interactive and static maps, digital tools, photographs, and illustrations to explain the diversity of human-environmental interactions influencing society, political systems, natural resources, and development across space and time, from local communities to our increasingly interconnected world. **Colonnade/Statewide General Education Code K-SY**

Prerequisite(s): 21 hours of Foundations and Explorations Courses, or junior status

Recent Term(s) Offered: None

GEOG 226 Our Dangerous Planet 3 Hours

Introduction to how normal Earth processes concentrate their energies to create devastating impacts to humans and the built environment, with emphasis on survival techniques. **Colonnade/Statewide General Education Code K-SY**

Prerequisite(s): 21 hours of Foundations and Explorations Courses, or junior status

Recent Term(s) Offered: spring 2022; fall 2022; spring 2023; summer 2023; fall 2023; spring 2024; fall 2024

GEOG 227 Our Vulnerable Planet 3 Hours

Explore how anthropogenic processes such as climate change, pollution, urban sprawl, deforestation, and desertification impact the people on Earth and its ecosystems. Does not count toward the ESGS major.

Colonnade/Statewide General Education Code K-SY

Prerequisite(s): 21 hours of Foundations and Explorations Courses, or junior status

Recent Term(s) Offered: winter 2022; spring 2022

GEOG 275 Applied Independent Research 1-3 Hours (repeatable max of 6 hrs)

Restricted to freshmen, sophomores, and Gatton Academy students. Supervised research independent study or internship with faculty, research center, lab, government, community, or private sector. May be repeated for a maximum of 6 credit hours.

Recent Term(s) Offered: spring 2022; spring 2023; fall 2023; spring 2024; fall 2024

GEOG 280 Environmental Science and Sustainability 4 Hours

A general understanding of how the environment functions, the complexity of human-environmental interactions, and the application of geoscience in solving environmental problems. Lab component provides practical experiences associated with the theories outlined in the course content.. **Colonnade/Statewide General Education Code E-SL, E-NS | NS**

Recent Term(s) Offered: spring 2022; summer 2022; fall 2022; spring 2023; fall 2023; spring 2024; fall 2024

GEOG 295 Introduction to Research Techniques 3 Hours

This course will introduce basic environmental, sustainability, and geographical research methods and techniques, provide exposure to lab and field environments, and focus on methods for data analysis. The main components will include interdisciplinary methods and techniques of data collection, processing and analysis of data, synthesizing and communicating methods and datasets, professional ethics, and/or other research-oriented topics. Field trips and application-based exercises may be required.

Recent Term(s) Offered: fall 2024

GEOG 300 Writing in the Geosciences 3 Hours

Students conduct investigations into writing, reading, and research conventions in the geosciences and receive advanced instruction in planning, drafting, arranging, revising, and editing geoscience-specific essays and research projects. **Colonnade/Statewide General Education Code F-W2 | WC**

Prerequisite(s): ENG 100 and GEOG 110 or (GEOG 103 or GEOL 103 or GEOL 111 or METR 121)

Recent Term(s) Offered: spring 2022; fall 2022; spring 2023; fall 2023; spring 2024; fall 2024

GEOG 310 Global Hydrology 3 Hours

An introduction to descriptive and quantitative hydrology. The hydrologic cycle, precipitation, evaporation, and transpiration will be covered under descriptive hydrology. Hydrographs, runoff relations, ground water, and storage routing will be covered under quantitative hydrology. Consideration is given to use and management of water as a resource.

Prerequisite(s): (GEOL 111 or GEOG 103 or GEOL 103)

Equivalent(s): GEOL 310

Recent Term(s) Offered: None

GEOG 328 Elements of Biogeography 3 Hours

An examination of the spatial interaction and distribution of global biomes. This course examines, through examples at a variety of spatial and ecological scales, the development of human-induced and naturally-occurring biogeographical changes.

Recent Term(s) Offered: spring 2022

GEOG 330 Introduction to Cultural Geography 3 Hours

An overview of core concepts in cultural geography based on five major themes: region, mobility, globalization, nature-culture, and cultural landscape. Field trips required. **Colonnade/Statewide General Education Code K-SC**

Prerequisite(s): 21 hours of Foundations and Explorations Courses, or junior status

Recent Term(s) Offered: spring 2022; summer 2022; fall 2022; spring 2023; summer 2023; fall 2023; spring 2024; summer 2024; fall 2024

GEOG 344 Environmental Ethics 3 Hours

Examination of how environmental ethics and philosophy determine the use and alteration of the natural environment by humans. Analysis of human responsibility towards protecting the environment, environmental decision-making, sustainable development, and respect for indigenous cultures.

Prerequisite(s): GEOG 280

Recent Term(s) Offered: spring 2024

GEOG 350 Sustainable Economic Development 3 Hours

This course will examine the modern role of sustainability methodologies and models to the functional interrelationships among economic and business activities in consumption, production, marketing and exchange of goods and services. Students may engage in sustainable economic research and field experiences during the course with an emphasis on innovation through sustainability. **Colonnade/Statewide General Education Code SB**

Recent Term(s) Offered: None

GEOG 352 Geography of Kentucky 3 Hours

No course description is available

Recent Term(s) Offered: spring 2022; summer 2022; fall 2022; spring 2023; summer 2023; fall 2023; spring 2024; summer 2024; fall 2024

GEOG 360 Geography of North America 3 Hours

Analysis of selected problems related to natural conditions, land use, settlement patterns, and regional structure of the United States and Canada. **Colonnade/Statewide General Education Code SB**

Recent Term(s) Offered: spring 2022; summer 2022; fall 2022; spring 2023; summer 2023; fall 2023; spring 2024; summer 2024; fall 2024

GEOG 364 Geography of Europe 3 Hours

A geographic analysis of Europe. Aspects of regional integration, with a focus on the European Community, and problems of economic growth in disadvantaged regions.

Recent Term(s) Offered: summer 2023

GEOG 378 Food, Culture, and Environment 3 Hours

Exploration of geographical patterns of agricultural production and cuisine through the intersection of environment, technology and culture. Field trips required. Students will share the cost of several meals.

Colonnade/Statewide General Education Code K-LG

Prerequisite(s): 21 hours of Foundations and Explorations Courses, or junior status

Recent Term(s) Offered: None

GEOG 380 Global Sustainability 3 Hours

An introduction to the major themes and scientific principles of sustainability, with an emphasis on developing critical thinking skills.

Colonnade/Statewide General Education Code K-LG

Prerequisite(s): (GEOG 280 21 hours of Foundations and Explorations Courses, or junior status and (GEOG 280 with a minimum grade of C or GEOG 103 or GEOL 103)

Recent Term(s) Offered: spring 2023; spring 2024

GEOG 385 Climate, Resources, & Society 3 Hours

Discussion of global climate change from a societal and resources perspective; particularly how humans affect global climate change through population size, natural resource use, policy implementation, personal behavior, and societal norms, and vice versa. **Colonnade/Statewide General Education Code K-SC**

Prerequisite(s): 21 hours of Foundations and Explorations Courses, or junior status and (GEOG 103 or GEOG 110 or GEOG 280)

Equivalent(s): EDU 385

Recent Term(s) Offered: summer 2023

GEOG 386 Geography of Potent Potables: Brewing, Distilling, and Wine Making 3 Hours

Students explore the geographies of alcoholic beverages, including the patterns of production, distribution, and consumption of beer, distilled spirits, and wine, and associated cultural and environmental impacts. Breweries, wineries, and distilleries are important elements of many diverse cultural and economic landscapes and reflect local geographies and global influences. The role of location is explored as it relates to such topics as access to raw materials, terroir, the rise of craft breweries and distilleries, sustainability, and cultural attitudes toward the production and consumption of alcoholic beverages. **Colonnade/Statewide General Education Code K-LG**

Prerequisite(s): 21 hours of Foundations and Explorations Courses, or junior status

Recent Term(s) Offered: spring 2022; spring 2023; spring 2024

GEOG 391 Geoscience Data Analysis 4 Hours

Statistical concepts and methods emphasizing their applications in a spatial context. Statistical description and hypothesis testing. Visualization analysis of spatial patterns and relationships. Note: Special permission of instructor may be required.

Prerequisite(s): (MATH 183 or MATH 136) and GISC 316

Recent Term(s) Offered: spring 2022; fall 2022; spring 2023; spring 2024

GEOG 420 Geomorphology 3 Hours (repeatable max of 3 hrs)

Systematic study of the processes that shape and modify Earth's landforms and landscapes in a variety of spatial and temporal scales. Coupling between climatic, biologic, tectonic, and human influences on landscape changes is examined.

Prerequisite(s): (GEOL 111 or GEOG 103 or GEOL 103)

Equivalent(s): GEOL 420

Recent Term(s) Offered: None

GEOG 425 Political Geography 3 Hours

A study of the political system as a spatial phenomenon from pre-literate forms and socio-political integration to the nation-state and other modern forms of political unification. Examples from local, metropolitan-regional, national, and international levels. Note: Permission of instructor required.
Recent Term(s) Offered: None

GEOG 427 Water Resource Management 3 Hours

Examines the use, management, and conservation of water resources. Discusses environmental, economic, political, and social implications of water usage, as well as emerging trends in water availability, pollution, regulation, and technology.

Prerequisite(s): GEOG 103 or GEOL 103

Recent Term(s) Offered: fall 2023

GEOG 430 Topics in Cultural Geography 3 Hours

Examines the concept of culture as it relates to the geographic landscape. Topics include the built environment, symbolic landscapes, representation of place in film, literature, photography, music, subaltern geographies, landscapes, and cultures of work and place-situated identity. Course provides an overview of research methods and themes in cultural geography. Field trip and field research required.

Prerequisite(s): GEOG 330

Recent Term(s) Offered: None

GEOG 452 Applied Geoscience Field Experiences 1-6 Hours
(repeatable max of 12 hrs)

Applied geoscience experiences in a variety of field-based settings, including, but not limited to, Study Abroad and Study Away programs, field camps, and extended fieldtrips to national or international settings.

Colonnade/Statewide General Education Code K-LG

Prerequisite(s): 21 hours of Foundations and Explorations Courses, or junior status

Recent Term(s) Offered: summer 2023; summer 2024

GEOG 455 Global Climate Change 3 Hours

Explores the science behind global climate change, including how models, observations, and proxies are used to understand and predict past and future climate, international perspectives on global climate change, and mitigation strategies put forth by the Intergovernmental Panel on Climate Change. Note: Permission of instructor may be required.

Prerequisite(s): GEOG 280 or METR 322 with a minimum grade of C or GEOL 301 with a minimum grade of C or permission of instructor

Recent Term(s) Offered: fall 2022; fall 2024

GEOG 459 Advanced Hydrology 3 Hours

Builds upon the principles of descriptive and quantitative hydrology using a geologic- and calculus-based approach to understanding the Earth's hydrologic cycle. Includes components of atmospheric, surface, and ground waters and the principles of fluid dynamics that govern the physical and chemical processes that affect water and its behavior in the natural world.

Prerequisite(s): MATH 136 with a minimum grade of C and (GEOG 310 or GEOL 310) or (GEOG 420 or GEOL 420)

Recent Term(s) Offered: None

GEOG 461 Karst Environments 3 Hours

Provides a fundamental understanding of karst, focusing on the processes, landforms, and evolution of karst landscapes over time, with an emphasis on the characterization, distribution, and function of various karst environments. Field trips and field-based exercises are required. Note: Permission of instructor may be required.

Prerequisite(s): (GEOG 310 or GEOL 310) or GEOG 420 or permission of instructor

Recent Term(s) Offered: spring 2023

GEOG 465 Geography of East Asia 3 Hours

Analysis of selected contemporary geographic issues in East Asia.

Emphasis is on a synthesis of various geographic factors and phenomena, including physical, cultural, political, social, and economic systems.

Prerequisite(s): GEOG 110

Recent Term(s) Offered: fall 2022

GEOG 471 Technological Applications in Natural Resource Management 3 Hours

Examines the application of technology to address current resource management challenges and ensure the efficient utilization of natural resources. Discussions may address, but are not limited to, timber, fisheries, oil and gas, and wildlife management. Note: Permission of instructor may be required. **Colonnade/Statewide General Education Code SB**

Prerequisite(s): GEOG 280 and GISC 316

Recent Term(s) Offered: spring 2024

GEOG 474 Applied Environmental Planning 3 Hours

Analysis and application of advanced topics and results of recent research in environmental and general land use planning. Broad examination of mitigation, remediation, and land use planning challenges from an applied perspective as they relate to problem-solving scenarios in sustainable development. Note: Permission of instructor may be required.

Prerequisite(s): GEOG 280

Recent Term(s) Offered: fall 2022

GEOG 475 Selected Topics in Environment, Geography, and Sustainability 1-3 Hours

Special topics in applied or basic environmental, geographic, sustainability, or geoscience topics. Note: Permission of instructor may be required.

Recent Term(s) Offered: spring 2022; summer 2022; fall 2022; fall 2023; fall 2024

GEOG 480 Sustainable Cities 3 Hours

This course explores the consequences of urban development and the essentials of sustainable urbanism. Topics include environmental and human costs of urbanization, landscape change, mobility, and urban responses to climate change. **Colonnade/Statewide General Education Code SB**

Recent Term(s) Offered: fall 2022; fall 2023; fall 2024

GEOG 481 Sustainable Tourism 3 Hours

An applied and critical exploration of sustainable tourism with an emphasis on the sustainability methodologies and models that are employed by the tourism industry, as well as the environmental, social, and economic outcomes and consequence that are related to tourism activities. Sustainable tourism will be examined at a variety of geographic scales and in diverse environmental and cultural contexts. Students may engage in sustainable tourism research and field experiences during the course.

Recent Term(s) Offered: None

GEOG 486 Seminar in Environmental Science and Sustainability 1-3 Hours (repeatable max of 6 hrs)

Guided seminar-style course focused on current environmental and sustainability issues from an applied perspective. Students will discuss/debate environmental science and sustainability topics and lead discussion through examination of published literature, reflection, and having expert professionals and scientists in their respective fields provide experiential context for the issues being discussed. Career pathways will be discussed using examples from the discipline.

Recent Term(s) Offered: None

GEOG 487 Environmental Management and Law 3 Hours

An introductory course on environmental management and law. Environmental Law is comprised of a vast body of legislation and common law, and management and law dominate all aspects of society. It is important to understand that law isn't designed to determine what is 'right or moral,' but rather to enforce what is expedient for society's optimal functioning. This course will include a thorough examination of major legislative, administrative, and judicial management approaches to addressing current environmental conditions related, but not limited to, natural resource consumption and air, water, and hazardous pollutants, in the United States and abroad.

Recent Term(s) Offered: None

GEOG 489 Alternatives in Sustainability 3 Hours (repeatable max of 6 hrs)

Addresses aspects of sustainability theory and practice, including problem-solving and decision-making techniques and critical analyses of prominent sustainability plans. Content focuses on a single topic within the sustainability discipline for the entirety of the course.

Prerequisite(s): GEOG 280

Recent Term(s) Offered: None

GEOG 492 Advanced Geospatial Analytics 3 Hours

Applying advanced spatial analytical techniques in GIS environment. Quantitative analysis in Geosciences is emphasized. Note: Permission of instructor may be required.

Prerequisite(s): GEOG 391 with a minimum grade of C and GISC 317 with a minimum grade of C

Recent Term(s) Offered: spring 2022

GEOG 495 Applied Research, Independent Study, or Internship 1-9 Hours (repeatable max of 12 hrs)

Supervised research, independent study, or internship with faculty, research center, lab, government, community, or private sector. May be repeated for a maximum of 12 credit hours in the major, with a maximum of 6 credit hours permitted in minor programs.

Recent Term(s) Offered: spring 2022; summer 2022; fall 2022; spring 2023; summer 2023; fall 2023; spring 2024; summer 2024; fall 2024

GEOG 499 Professional Preparation 1 Hour

Professional career or graduate school preparation, resume writing, college-to-career transition, professional ethics, graduate school application and requirements, written senior assessment, and selected seminar topics. Outside speakers from industry and academia will be included.

Restriction(s): Students with a semester level of Academy Junior, Academy Senior, Freshman or Sophomore may **not** enroll.

Recent Term(s) Offered: spring 2023; spring 2024