

# GEOGRAPHY (GEOG)

Subject-area course lists indicate courses currently active for offering at the University of Louisville. Not all courses are scheduled in any given academic term. For class offerings in a specific semester, refer to the Schedule of Classes (<http://htmlaccess.louisville.edu/classSchedule/setupSearchClassSchedule.cfm>).

500-level courses generally are included in both the undergraduate- and graduate-level course listings; however, specific course/section offerings may vary between semesters. Students are responsible for ensuring that they enroll in courses that are applicable to their particular academic programs.

## Course Fees

Some courses may carry fees beyond the standard tuition costs to cover additional support or materials. Program-, subject- and course-specific fee information can be found on the Office of the Bursar website (<http://louisville.edu/bursar/tuitionfee/>).

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### GEOG 500. Globalization Seminar 3 Units

**Prerequisite(s):** GEOG 300 or permission of instructor.

**Description:** A discussion-based course that focuses on current events, global economies, and cultural and environmental issues resulting from globalization.

For class offerings for a specific term, refer to the Schedule of Classes (<http://htmlaccess.louisville.edu/classSchedule/setupSearchClassSchedule.cfm>)

### GEOG 510. Urbanism in the Global South: Cities and Space 3 Units

**Term Typically Offered:** Spring Only

**Description:** This course is a reading-based seminar. We learn about processes and practices within the Latin American and African city from a spatial, cultural, economic and political perspective.

**Note:** Cross-listed with LALS 510 and UPA 652.

For class offerings for a specific term, refer to the Schedule of Classes (<http://htmlaccess.louisville.edu/classSchedule/setupSearchClassSchedule.cfm>)

### GEOG 520. Geography and Nutrition Among African and African-American Populations 3 Units

**Prerequisite(s):** Consent of instructor.

**Description:** Comparison of geographical conditions, food culture, technology and socioeconomic factors among Africans and African-Americans affecting health and nutrition.

**Note:** Previously cross-listed with PAS 560.

For class offerings for a specific term, refer to the Schedule of Classes (<http://htmlaccess.louisville.edu/classSchedule/setupSearchClassSchedule.cfm>)

### GEOG 521. Medical Geography 3 Units

**Prerequisite(s):** Faculty consent.

**Description:** Introduction to concepts, methods and tools used to investigate geographic aspects of health and disease. Application of concepts and methods through analysis of health, population and environmental data.

For class offerings for a specific term, refer to the Schedule of Classes (<http://htmlaccess.louisville.edu/classSchedule/setupSearchClassSchedule.cfm>)

### GEOG 522. GIS and Public Health 3 Units

**Term Typically Offered:** Occasionally Offered

**Prerequisite(s):** Consent of instructor.

**Description:** Application of tools and methods of analysis in geographic information systems (GIS) to public health. Use of ArcGIS software to manage and analyze health, census and spatial data.

For class offerings for a specific term, refer to the Schedule of Classes (<http://htmlaccess.louisville.edu/classSchedule/setupSearchClassSchedule.cfm>)

### GEOG 524. Food and Race 3 Units

**Description:** This course will serve as a critical analysis of the intersection between race and food/agriculture. Topics covered include: 1) production, preparation and consumption patterns; 2) food production during slavery and sharecropping; 3) modern day agricultural labor; 4) food and health; 5) food and borders; and 6) food and national identity.

**Note:** Cross-listed with PAS 605.

For class offerings for a specific term, refer to the Schedule of Classes (<http://htmlaccess.louisville.edu/classSchedule/setupSearchClassSchedule.cfm>)

### GEOG 525. Earth Observation and Sustainability: Our Human Planet 3 Units

**Term Typically Offered:** Spring Odd Years

**Description:** This course will facilitate student understanding of the United Nations Sustainable Development Goals in a spatially-explicit manner by introducing how Earth Observation data is being used to monitor and measure the SDG indicators.

For class offerings for a specific term, refer to the Schedule of Classes (<http://htmlaccess.louisville.edu/classSchedule/setupSearchClassSchedule.cfm>)

### GEOG 528. Planning, History and Issues 3 Units

**Prerequisite(s):** GEOG 328.

**Description:** The history of planning and contemporary issues with an emphasis on role of planning, zoning and law.

For class offerings for a specific term, refer to the Schedule of Classes (<http://htmlaccess.louisville.edu/classSchedule/setupSearchClassSchedule.cfm>)

### GEOG 529. Geography of Urban Issues 3 Units

**Term Typically Offered:** Fall Odd Years

**Prerequisite(s):** GEOG 328, GEOG 558 or comparable Urban Geography and GIS course.

**Description:** Advanced urban geography course with unique geographic perspective for integration of socioeconomic problems in America's metropolitan areas.

For class offerings for a specific term, refer to the Schedule of Classes (<http://htmlaccess.louisville.edu/classSchedule/setupSearchClassSchedule.cfm>)

### GEOG 530. Transportation Geography 3 Units

**Term Typically Offered:** Fall Odd Years

**Prerequisite(s):** GEOG 200 or consent of instructor.

**Description:** An analysis of distribution and transportation systems as functional entities capable of introducing and reacting to change within the economic region.

For class offerings for a specific term, refer to the Schedule of Classes (<http://htmlaccess.louisville.edu/classSchedule/setupSearchClassSchedule.cfm>)

<p><b>GEOG 531. GIS &amp; Urban Demographic Analysis</b> <span style="float: right;"><b>3 Units</b></span>  <b>Term Typically Offered:</b> Spring Only  <b>Prerequisite(s):</b> GIS knowledge or concurrent tutorial.  <b>Description:</b> Demographic analysis through the use of GIS technology. Emphasis placed on metropolitan area characteristics including population change, segregation, ethnic settlement, social and economic stratification and commuting.                      For class offerings for a specific term, refer to the Schedule of Classes (<a href="http://htmlaccess.louisville.edu/classSchedule/setupSearchClassSchedule.cfm">http://htmlaccess.louisville.edu/classSchedule/setupSearchClassSchedule.cfm</a>)</p>	<p><b>GEOG 548. Special Topics in Urban Analysis Applications in GIS</b> <span style="float: right;"><b>3 Units</b></span>  <b>Prerequisite(s):</b> GEOG 357 or GEOG 558.  <b>Description:</b> Introduction to the application of GIS by local governments, non-profit agencies and other urban-related groups.  <b>Note:</b> May be repeated if topics vary.</p> <p>For class offerings for a specific term, refer to the Schedule of Classes (<a href="http://htmlaccess.louisville.edu/classSchedule/setupSearchClassSchedule.cfm">http://htmlaccess.louisville.edu/classSchedule/setupSearchClassSchedule.cfm</a>)</p>
<p><b>GEOG 535. GIS and Retail Site Analysis</b> <span style="float: right;"><b>3 Units</b></span>  <b>Term Typically Offered:</b> Fall Only  <b>Prerequisite(s):</b> GIS knowledge or concurrent tutorial.  <b>Description:</b> Retail site analysis through use of GIS technology. Emphasis placed on market demand and supply characteristics. Physical site analysis, demographics, and competitive environment will be examined.                      For class offerings for a specific term, refer to the Schedule of Classes (<a href="http://htmlaccess.louisville.edu/classSchedule/setupSearchClassSchedule.cfm">http://htmlaccess.louisville.edu/classSchedule/setupSearchClassSchedule.cfm</a>)</p>	<p><b>GEOG 549. Special Topics in Environmental Analysis Applications in GIS</b> <span style="float: right;"><b>3 Units</b></span>  <b>Description:</b> Introduction to the application of GIS to environmental problem solving.  <b>Note:</b> May be repeated if topics vary.</p> <p>For class offerings for a specific term, refer to the Schedule of Classes (<a href="http://htmlaccess.louisville.edu/classSchedule/setupSearchClassSchedule.cfm">http://htmlaccess.louisville.edu/classSchedule/setupSearchClassSchedule.cfm</a>)</p>
<p><b>GEOG 536. Sustainable Transportation</b> <span style="float: right;"><b>3 Units</b></span>  <b>Term Typically Offered:</b> Fall Even Years  <b>Prerequisite(s):</b> GEOG 200 or permission of instructor.  <b>Description:</b> The course looks into the problems of developing sustainable transportation systems. We will examine the environmental and human problems associated with transportation; including climate change, air quality, consumption of non-renewable resources, safety, congestion and social equity. We will also explore possible solutions to these problems, including pricing, planning, policy, technology and education.                      For class offerings for a specific term, refer to the Schedule of Classes (<a href="http://htmlaccess.louisville.edu/classSchedule/setupSearchClassSchedule.cfm">http://htmlaccess.louisville.edu/classSchedule/setupSearchClassSchedule.cfm</a>)</p>	<p><b>GEOG 555. Remote Sensing</b> <span style="float: right;"><b>3 Units</b></span>  <b>Term Typically Offered:</b> Fall Only  <b>Description:</b> This course provides an introduction to the theory and application of remote sensing data with weekly lab reports for hands-on-experience in the acquisition and utilization of remotely-sensed data in geographical/environmental research. This course prepares for GEOG 556. Prior completion of GEOS 200, GEOS 350, or GEOS 301, or PHYS 111 or equivalent is recommended, but not required.                      For class offerings for a specific term, refer to the Schedule of Classes (<a href="http://htmlaccess.louisville.edu/classSchedule/setupSearchClassSchedule.cfm">http://htmlaccess.louisville.edu/classSchedule/setupSearchClassSchedule.cfm</a>)</p>
<p><b>GEOG 540. Geography and Human-Environment Interactions</b> <span style="float: right;"><b>3 Units</b></span>  <b>Description:</b> The study of interactions between humans and the environment is inherently interdisciplinary and multi-scaler, two of the hallmarks of contemporary geographic research. Students taking this course will be exposed to the theoretical underpinnings of both social and ecological aspects of research. Through in-class discussions of both seminal and contemporary peer-reviewed literature, students will be expected to engage in an interdisciplinary exploration of how studies of human-environment interactions have evolved from disciplinary roots into the large, complex and transdisciplinary projects commonly funded today and expected in the future.                      For class offerings for a specific term, refer to the Schedule of Classes (<a href="http://htmlaccess.louisville.edu/classSchedule/setupSearchClassSchedule.cfm">http://htmlaccess.louisville.edu/classSchedule/setupSearchClassSchedule.cfm</a>)</p>	<p><b>GEOG 556. Advanced Remote Sensing</b> <span style="float: right;"><b>3 Units</b></span>  <b>Prerequisite(s):</b> GEOG 555 or consent of instructor.  <b>Description:</b> Application of advanced techniques involved in the collection of digital imagery data from aircraft and spacecraft instruments.                      For class offerings for a specific term, refer to the Schedule of Classes (<a href="http://htmlaccess.louisville.edu/classSchedule/setupSearchClassSchedule.cfm">http://htmlaccess.louisville.edu/classSchedule/setupSearchClassSchedule.cfm</a>)</p>
<p><b>GEOG 545. Unmanned Aerial Systems and Geospatial Applications</b> <span style="float: right;"><b>3 Units</b></span>  <b>Term Typically Offered:</b> Spring Odd Years  <b>Description:</b> This course introduces unmanned aerial system (UAS) technology, application and the underlying principles of remote sensing and photogrammetry that inform the utilization of UAS data in geographical/environmental research.                      For class offerings for a specific term, refer to the Schedule of Classes (<a href="http://htmlaccess.louisville.edu/classSchedule/setupSearchClassSchedule.cfm">http://htmlaccess.louisville.edu/classSchedule/setupSearchClassSchedule.cfm</a>)</p>	<p><b>GEOG 558. Introduction to Geographic Information Systems</b> <span style="float: right;"><b>3 Units</b></span>  <b>Term Typically Offered:</b> Occasionally Offered  <b>Description:</b> Introduction to geographic information systems using ArcGIS software, management of relational databases, and manipulation and graphical output of digital geo-spatial data.  <b>Note:</b> May not be taken for credit if credit has been earned in GEOG 357 or GEOG 557.</p> <p>For class offerings for a specific term, refer to the Schedule of Classes (<a href="http://htmlaccess.louisville.edu/classSchedule/setupSearchClassSchedule.cfm">http://htmlaccess.louisville.edu/classSchedule/setupSearchClassSchedule.cfm</a>)</p>
<p><b>GEOG 559. Advanced Geographic Information Systems</b> <span style="float: right;"><b>3 Units</b></span>  <b>Prerequisite(s):</b> GEOG 558.  <b>Description:</b> Application of advanced GIS concepts to real-world projects. An emphasis will be placed on the development of a digital spatial database.  <b>Note:</b> Graduate students must arrange for an additional project for graduate credit.</p> <p>For class offerings for a specific term, refer to the Schedule of Classes (<a href="http://htmlaccess.louisville.edu/classSchedule/setupSearchClassSchedule.cfm">http://htmlaccess.louisville.edu/classSchedule/setupSearchClassSchedule.cfm</a>)</p>	<p><b>GEOG 557. Introduction to Geographic Information Systems</b> <span style="float: right;"><b>3 Units</b></span>  <b>Prerequisite(s):</b> GEOG 557 or consent of instructor.  <b>Description:</b> Introduction to geographic information systems using ArcGIS software, management of relational databases, and manipulation and graphical output of digital geo-spatial data.  <b>Note:</b> May not be taken for credit if credit has been earned in GEOG 357 or GEOG 557.</p> <p>For class offerings for a specific term, refer to the Schedule of Classes (<a href="http://htmlaccess.louisville.edu/classSchedule/setupSearchClassSchedule.cfm">http://htmlaccess.louisville.edu/classSchedule/setupSearchClassSchedule.cfm</a>)</p>

<p><b>GEOG 561. Urban Environmental Quality</b> <span style="float: right;"><b>3 Units</b></span>  <b>Prerequisite(s):</b> Consent of instructor.  <b>Description:</b> A study of environmental aspects of urban areas and analysis of inter- and intra-city variations in environmental quality. For class offerings for a specific term, refer to the Schedule of Classes (<a href="http://htmlaccess.louisville.edu/classSchedule/setupSearchClassSchedule.cfm">http://htmlaccess.louisville.edu/classSchedule/setupSearchClassSchedule.cfm</a>)</p>	<p><b>GEOG 628. Planning History and Issues</b> <span style="float: right;"><b>3 Units</b></span>  <b>Prerequisite(s):</b> Consent of instructor.  <b>Description:</b> The history of planning and contemporary issues with an emphasis on roles of planners, zoning and law.  <b>Note:</b> Cross-listed with PLAN 600.</p> <p>For class offerings for a specific term, refer to the Schedule of Classes (<a href="http://htmlaccess.louisville.edu/classSchedule/setupSearchClassSchedule.cfm">http://htmlaccess.louisville.edu/classSchedule/setupSearchClassSchedule.cfm</a>)</p>
<p><b>GEOG 583. Spatial and Non-Spatial Database Management</b> <span style="float: right;"><b>3 Units</b></span>  <b>Term Typically Offered:</b> Occasionally Offered  <b>Prerequisite(s):</b> GEOG 357 or GEOG 558.  <b>Description:</b> Provides students with "hands-on" experience in development, management and integration of spatial and non-spatial databases, using GIS and database management software. For class offerings for a specific term, refer to the Schedule of Classes (<a href="http://htmlaccess.louisville.edu/classSchedule/setupSearchClassSchedule.cfm">http://htmlaccess.louisville.edu/classSchedule/setupSearchClassSchedule.cfm</a>)</p>	<p><b>GEOG 631. Urban Demography</b> <span style="float: right;"><b>3 Units</b></span>  <b>Prerequisite(s):</b> Graduate standing.  <b>Description:</b> Spatial analysis of the distribution, characteristics, growth, and change of the population of a metropolitan area. For class offerings for a specific term, refer to the Schedule of Classes (<a href="http://htmlaccess.louisville.edu/classSchedule/setupSearchClassSchedule.cfm">http://htmlaccess.louisville.edu/classSchedule/setupSearchClassSchedule.cfm</a>)</p>
<p><b>GEOG 590. Special Topics</b> <span style="float: right;"><b>3 Units</b></span>  <b>Description:</b> Investigation of topics not offered in regular courses. Topic will be announced in Schedule of Courses.  <b>Note:</b> Offered as needed.  <b>Note:</b> May be repeated for different topics up to a limit of 12 hours.</p> <p>For class offerings for a specific term, refer to the Schedule of Classes (<a href="http://htmlaccess.louisville.edu/classSchedule/setupSearchClassSchedule.cfm">http://htmlaccess.louisville.edu/classSchedule/setupSearchClassSchedule.cfm</a>)</p>	<p><b>GEOG 635. Real Estate Market Analysis</b> <span style="float: right;"><b>3 Units</b></span>  <b>Prerequisite(s):</b> GEOG 327 or Urban Economics or consent of the instructor.  <b>Description:</b> Covers concepts, methodologies and analytical tools used in urban real estate market analysis, with a particular emphasis on site selection using GIS applications.  <b>Note:</b> Cross-listed with PLAN 614.</p> <p>For class offerings for a specific term, refer to the Schedule of Classes (<a href="http://htmlaccess.louisville.edu/classSchedule/setupSearchClassSchedule.cfm">http://htmlaccess.louisville.edu/classSchedule/setupSearchClassSchedule.cfm</a>)</p>
<p><b>GEOG 599. Directed Readings in Geography</b> <span style="float: right;"><b>1-4 Units</b></span>  <b>Prerequisite(s):</b> Advanced courses in geography or related fields; permission of major department.  <b>Description:</b> Supervised readings centered around a specific region or topical field for advanced work. For class offerings for a specific term, refer to the Schedule of Classes (<a href="http://htmlaccess.louisville.edu/classSchedule/setupSearchClassSchedule.cfm">http://htmlaccess.louisville.edu/classSchedule/setupSearchClassSchedule.cfm</a>)</p>	<p><b>GEOG 640. Approaches &amp; Methods in Applied Geography</b> <span style="float: right;"><b>3 Units</b></span>  <b>Description:</b> Examination of concepts and methods used by applied geographers. For class offerings for a specific term, refer to the Schedule of Classes (<a href="http://htmlaccess.louisville.edu/classSchedule/setupSearchClassSchedule.cfm">http://htmlaccess.louisville.edu/classSchedule/setupSearchClassSchedule.cfm</a>)</p>
<p><b>GEOG 600. History and Philosophy of Geography</b> <span style="float: right;"><b>3 Units</b></span>  <b>Description:</b> An explanation of the history of geographic thought and the paradigms that have shaped geography since the late nineteenth century. For class offerings for a specific term, refer to the Schedule of Classes (<a href="http://htmlaccess.louisville.edu/classSchedule/setupSearchClassSchedule.cfm">http://htmlaccess.louisville.edu/classSchedule/setupSearchClassSchedule.cfm</a>)</p>	<p><b>GEOG 641. Research Design and Proposal Development in Applied Geography</b> <span style="float: right;"><b>3 Units</b></span>  <b>Prerequisite(s):</b> GEOG 600, GEOG 656, GEOG 660.  <b>Description:</b> Provides students with the background needed to design a research study and develop a research proposal and culminates in development of thesis proposal. For class offerings for a specific term, refer to the Schedule of Classes (<a href="http://htmlaccess.louisville.edu/classSchedule/setupSearchClassSchedule.cfm">http://htmlaccess.louisville.edu/classSchedule/setupSearchClassSchedule.cfm</a>)</p>
<p><b>GEOG 620. Geography &amp; Nutrition Among African and African-American Populations</b> <span style="float: right;"><b>3 Units</b></span>  <b>Description:</b> An in-depth examination of the nutritional status of Africans, African Americans and persons of African descent. The course will focus on comparison of epidemiological transition, political economy of nutrition, politics of food welfare programs, food aid, over-nutrition (obesity), under-nutrition and dietary-related diseases among African Americans, Africans and persons including blacks in the Diaspora.  <b>Note:</b> Cross-listed with PAS 660.</p> <p>For class offerings for a specific term, refer to the Schedule of Classes (<a href="http://htmlaccess.louisville.edu/classSchedule/setupSearchClassSchedule.cfm">http://htmlaccess.louisville.edu/classSchedule/setupSearchClassSchedule.cfm</a>)</p>	<p><b>GEOG 656. Advanced Spatial Statistics in Applied Geography</b> <span style="float: right;"><b>3 Units</b></span>  <b>Prerequisite(s):</b> Statistics course.  <b>Description:</b> The analysis of spatial patterns and processes through the use of spatially-based statistics.  <b>Note:</b> Cross-listed with PLAN 615.</p> <p>For class offerings for a specific term, refer to the Schedule of Classes (<a href="http://htmlaccess.louisville.edu/classSchedule/setupSearchClassSchedule.cfm">http://htmlaccess.louisville.edu/classSchedule/setupSearchClassSchedule.cfm</a>)</p>
	<p><b>GEOG 660. Qualitative Methods in Applied Geography</b> <span style="float: right;"><b>3 Units</b></span>  <b>Description:</b> An examination of the philosophical underpinnings of the qualitative approach with practical experience in conducting qualitative research. For class offerings for a specific term, refer to the Schedule of Classes (<a href="http://htmlaccess.louisville.edu/classSchedule/setupSearchClassSchedule.cfm">http://htmlaccess.louisville.edu/classSchedule/setupSearchClassSchedule.cfm</a>)</p>

**GEOG 685. Introduction to Programming for GIS and Spatial Data**

**Analysis for Graduate Students** **3 Units**

**Description:** There are two primary goals for this course. First, students will learn introductory computer programming concepts and features. Students will deconstruct examples from a variety of programming and scripting languages (primarily Python, R, VBA, and IDL), learning how to identify common logic, flow control and syntactic features. Students will learn the purpose of these structures and how to start using the programming and scripting environments of common statistics, geographic information systems (GIS) and remote sensing (RS) platforms.

For class offerings for a specific term, refer to the Schedule of Classes (<http://htmlaccess.louisville.edu/classSchedule/setupSearchClassSchedule.cfm>)

**GEOG 690. Special Topics** **1-3 Units**

**Description:** Investigation of topics not offered in regular courses. Topic will be announced in Schedule of Courses. Offered as needed.

**Note:** May be repeated for different topics up to a limit of 12 hours.

For class offerings for a specific term, refer to the Schedule of Classes (<http://htmlaccess.louisville.edu/classSchedule/setupSearchClassSchedule.cfm>)

**GEOG 691. Research and Independent Study** **1-5 Units**

For class offerings for a specific term, refer to the Schedule of Classes (<http://htmlaccess.louisville.edu/classSchedule/setupSearchClassSchedule.cfm>)

**GEOG 698. Thesis** **1-6 Units**

**Prerequisite(s):** Permission of instructor.

**Description:** Reading, research, and writing of thesis under the supervision of a faculty member.

For class offerings for a specific term, refer to the Schedule of Classes (<http://htmlaccess.louisville.edu/classSchedule/setupSearchClassSchedule.cfm>)