

# Geography

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## College of Arts & Sciences

The Department of Geography offers both M.A. and Ph.D. programs. Emphasis is placed on theoretical and conceptual training in the student's chosen field of interest. A variety of philosophical and methodological approaches are encouraged. The primary objective of the graduate program is to prepare students for research-oriented careers in universities, government, and industry. Emphasis in graduate seminars is on developing the background and skills necessary for original contributions to geographic knowledge. The Department is known for high quality research and graduate education in human and physical geography. In accordance with our strategic plan, and funded in part through our RCTF designation, we have also recently focused, on building a research cluster in Earth Surface Systems as well as a program in critical cartography/GIS., Program strengths include close faculty/student interaction, flexibility in designing an appropriate plan of study, and research training in seminar environments. Emphasis at both the M.A. and Ph.D. levels is placed on theoretical and methodological training and is closely integrated with both breadth and depth in substantive literatures. Student research also is empirically rich, with data regularly acquired through off-campus fieldwork. Members of the faculty are committed to assisting students in disseminating their research through publications in professional journals and presentations at conferences, and in obtaining external funding. Graduate students also gain valuable experience as instructors in undergraduate courses. Rounding out graduate students' experiences is their active participation in departmental governance and service on departmental committees.

Faculty and student research in the Department focuses on interrelated thematic clusters. Research seminars are organized around topics relevant to these clusters. The thematic content of seminars varies in accordance with the current interests of graduate students and faculty. The research clusters we presently feature are:

- **Cultural and Social Geographies:** Interpretation and analysis of cultural landscapes and the built environment; space and representation; the political economy of landscape production; racialized landscapes; historical geographies of settlement; questions of space and power relating to race, class, gender and their intersection; historic preservation; US roadscapes; regional imagery; popular culture; community, identity and belonging; diasporic identities; Islamic/Muslim cultural practices in the Middle East, Europe, and the United States; health care, disease, and society; the geography of aging and the life course; poverty and social policy; human behavior in space and time; spatial structure of social networks.
- **Critical Mapping and GIS:** Social implications of geospatial technologies; critical GIS/cartography; histories of cartography and GIS; public participation GIS, and community-based GIS; volunteered geographic information and neogeographies; mapping 2.0 and the geoweb; spatialities of user-generated content; geographies of the Internet; digital/spatial humanities. Much research in this area is organized through the New Mappings Collaboratory.
- **Development Studies:** Policies and practices of development; political economy perspectives on development; anti-development and postcolonial theory; household survival strategies; environmental management and sustainable development.
- **Economic Geography:** The political economy of urban and regional economic change; globalization, and in particular global finance: information and telecommunications, especially the economic geography of the internet; resource extractive industries; uneven development and spatial inequalities; multinational corporations, foreign direct investment, global production and commodity chains; economic clusters; alternative economies (including Islamic banking); the geography of labor

and employment; labor migration and migrant labor; theorizing the social character of economic phenomena.

- Political Ecology: On the human geography side: critical theories of nature, complexity and resilience; sustainability, the politics of environmental management and conservation policy; mega-engineering projects; environment and resource extraction; human-nonhuman relations; trade, markets, and environment; fair trade networks. Physical geographic approaches address issues related to: human influences on fluvial and soil geomorphic processes, weathering, and biogeographic patterns; bioclimatology and human climate change; urban weather modification; hydrology; earth surface systems modeling; remote sensing and geospatial applications.
- Geomorphology: Fluvial geomorphology, surface hydrology, and river science; soil geomorphology and pedology; rock weathering; cultural geomorphology; fluvial-karst interactions; applied geomorphology; stone conservation and preservation; complexity and nonlinearity in geosciences; coastal geomorphology and ecology (particularly in dunes and salt marshes); spatial variability of soils and landforms; landscape evolution.
- Biogeomorphology: Reciprocal interactions between geomorphological and biological processes; coevolution of ecosystems, soils, and landforms; soils and landforms as extended composite phenotypes and products of ecological engineering; biological weathering; bioturbation; vegetation-landform interactions in salt marshes and coastal dunes; fluvial biogeomorphology; forest biogeomorphology.
- Biogeography and Landscape Ecology: Bioclimatology; ecosystem responses to climate and environmental change; evolutionary theory; landscape phenology; species distribution modeling; ecological engineering and niche construction; quantitative landscape ecology; biophysical remote sensing; disturbance; coastal and forest ecosystems; scale and scaling theory.
- Political Geography: Questions of states, territory, and law; citizenship, faith and belonging; migration and immigration; transnationalism; post-colonial and imperial geographies; Islamist politics; feminist geopolitics; political economy of environmental movements; political economy of globalization discourses and practices; the surveillant state; geographical intelligence; urban governance; the politics of urban and regional development.
- Social Theory: Theories of human spatiality; marxist, neo-marxist, and post-marxist theory; postmodernism and poststructuralism; social ontology; practice theory; continental philosophy, feminist theory; queer theory; identity theory; race theory; geographic thought and society; geography and psychoanalysis; science and technology studies; topology; posthumanism.
- Urban Geography: The local politics of urban development; urban social fragmentation; the politics of sprawl and urban planning; urban property markets; citizenship and public space; urban space and identities relating to 'race', gender, class, and migrants and immigrants; urban historical geography; urban landscapes; racialized landscapes; historical preservation labor migration; informal employment; urban economic development.

Faculty members have regional expertise in South and Southeast Asia, Japan, the Himalayas, Mexico, the Caribbean, Central and Eastern Europe, the Middle East (particularly Turkey), the Central Asian republics, Western Europe, Canada, East Africa (Tanzania), and the U.S. (particularly the Southeast).

In addition, students have access to faculty with expertise in a variety of methodological areas including field methods; qualitative research methodologies (such as interviews; focus groups; critical ethnography; experiential methods; textual and visual methods and deconstruction) quantitative methods (especially multivariate statistics, spatial statistics, and simulation modelling; as well as GIS and remote sensing methods (such as LIDAR, participatory GIS; digital image processing; and crowd-sourced data collection).

### **Admission Requirements**

In addition to the basic graduate school requirements (see the Graduate School for application procedures), the following materials should be sent by e-mail to the Department of Geography (details of

the application procedure can be found on our Departmental website):

- Three letters of reference from persons who can evaluate your potential for success in our graduate program
- Statement of your goals and objectives in which you discuss your areas of scholarly interest, any research directions you may wish to pursue, and how your interests and goals fit with the University of Kentucky's graduate program in Geography (about two pages, double-spaced)
- A curriculum vitae (if available)
- 1 official or unofficial copy of all transcripts from prior universities or other institutions

Once all these materials have arrived in the Department of Geography, the application is reviewed by the faculty members on the Department's Graduate Committee. The committee's evaluation does not place emphasis on any one element of the application rather the combination of elements must convince the Graduate Committee members that the applicant has great potential for success in our program.

The Department welcomes students with undergraduate concentrations in related fields. In some cases students without an academic background in Geography may be required to complete additional course work so as to gain appropriate foundational knowledge.

There is no official deadline for applications. However, applicants are encouraged to submit all application material before January 15th to ensure consideration for admission for the following fall semester. Admission decisions are made on a rolling basis, but decisions about financial aid usually take place in March and April.

### **Degree Requirements**

Applicants for the Ph.D. in geography must conform to the general requirements of the Graduate School as set forth in the first part of this Bulletin. Requirements in the Ph.D. program consist of 1) core courses (GEO 600, 705 or other advanced methods course, 702) in the theory and methodology of geography; 2) seminars, independent study and directed research in one of the research foci noted above or in cognate disciplines; 4) a written and oral qualifying examination in theory, methodology, and the student's selected topical focus; and 5) a dissertation based on original research. A program designed to meet the professional academic goals of each doctoral candidate is outlined in consultation with the Director of Graduate Studies and the candidate's Advisory Committee.

Applicants for the M.A. degree in geography follow a broadly based program which consists of: 1) required courses (GEO 600 and 702); 2) elective courses in geography and cognate disciplines according to the student's academic goals and career objectives; and 3) the completion of a master's thesis (Plan A). The non-thesis Ph.D.-preparatory program (Plan B) consists of: 1) required courses (GEO 600, 700 or other advanced methods course, 702); 2) elective courses in geography and cognate disciplines according to the student's academic goals and career objectives; 3) a written examination; 4) a publication-quality research paper; and 5) an oral examination. The Plan A option requires 24 credit hours, the Plan B, 30 credit hours.

## Course Descriptions

### GEO 505 PRACTICUM IN CARTOGRAPHY. (3)

Experience credit in which a small number of advanced students work under the direct supervision of the faculty or staff cartographer and in conjunction with other faculty members on departmental and contracted projects. May be repeated to a maximum of six hours. Prereq: GEO 305 and GEO 506 and consent of instructor.

### GEO 506 INTRODUCTION TO COMPUTER CARTOGRAPHY. (3)

A basic introduction to computer-assisted cartography. Emphasis on basic computer graphics literacy and automated techniques for spatial data acquisition, storage, processing, and output. Introduction to current mainframe, workstation, and desktop mapping programs. Prereq: GEO 305 or permission of instructor.

### GEO 509 WORKSHOP IN GEOSPATIAL TECHNOLOGIES. (3)

This course focuses on the development of applied GIS skills and follows a participatory workshop model with intensive, hands-on collaboration with community partners. The course covers a full range of collaborative GIS: working with team members and project partners to identify project goals, acquiring and preparing spatial data for GIS analyses, communicating with clients to assess progress, managing spatial data, and producing necessary maps and analyses. Prereq: GEO 309 or GEO 609 or consent of instructor.

### GEO 530 BIOGEOGRAPHY AND CONSERVATION. (3)

An introduction to the geographic patterning of biological diversity, exploring its origins, dynamics, and present trends. Examines the interplay among physical conditions, ecological interactions, evolutionary processes, and the historical movements of organisms and land masses as they have combined to affect the distribution of species, with particular attention to the application of biogeographic knowledge to current problems of species loss and conservation. Prereq: Two semesters of introductory biology or physical geography, or consent of the instructor. (Same as BIO 530.)

### GEO 531 LANDSCAPE ECOLOGY. (3)

This course explores the field of landscape ecology – the causes, development, importance of ecological processes, and the interactions of dynamic processes over broad spatial scales that can serve as foundation for decision-making and problem solving. Prereq: Six hours of physical geography or biology.

### GEO 544 HUMAN POPULATION DYNAMICS. (3)

The study of human population distributions, densities, and growth patterns through analyses of the processes of fertility, mortality and mobility. Topical coverage includes the environmental, social, political, economic, and behavioral impacts on personal action and population change. Emphasis is placed on historic and contemporary meanings and influences of population diversity, with special attention given to issues of gender, race, and class.

### GEO 546 TOURISM AND RECREATION GEOGRAPHY. (3)

Tourism is the world's fastest-growing economic sector, creating and transforming places, regions and broader geographies of travel, movement, and investment. The course will examine concepts, models, and theories in the study of tourism and recreation. Selected themes include major travel flows and patterns; economic, environmental, and socio-cultural impacts; mass vs. "new" (e.g., eco-tourism, adventure tourism, extreme tourism) types of tourism; heritage tourism; marketing; place boosterism; tourism and recreation planning; and the politics of tourism. Local, national, and international examples in both developed and developing countries are discussed. Prereq: GEO 152, 172, 455, or consent of instructor.

**GEO 550 SUSTAINABLE RESOURCE DEVELOPMENT AND ENVIRONMENTAL MANAGEMENT. (3)**  
A study of the theories and strategies for environmental management and sustainable development of resources. Topics covered include contemporary environmental degradation and resource use problems, political economy of resource use and environmental change, design and management of sustainable resource development, impact of sustainable development on gender issues and poverty, and environmental accounting. Prereq: GEO 130 or GEO 210 or consent of instructor.

**GEO 551 JAPANESE MULTINATIONAL CORPORATIONS. (3)**  
A study of the giant Japanese multinational corporations in the world economy and their impact on development and environment of selected countries. Topics include: geographical organization of multinational corporate system; their locational decisions; affect of multinationals policies on the environment; and local economy. Prereq: Consent of instructor. (Same as JPN 551.)

**GEO 560 INDEPENDENT WORK IN GEOGRAPHY. (3)**  
Individualized study and/or research intended to provide opportunities for students to explore topics in more depth than is offered in existing courses, or to address topics not covered in existing courses. Students work with a faculty supervisor in defining a specific area of study, appropriate learning objectives, and suitable evaluation criteria. Course format may range from critical reading of selected literatures to innovative research projects. Students should identify and consult with faculty supervisor well in advance of registration for this course. Prereq: Restricted to Geography majors with GPA of 3.0 or above in the department.

**GEO 565 TOPICS IN GEOGRAPHY. (3)**  
Discussion, readings, and papers focusing on relevant topics in geography directed by a staff member having specific competence for the topics under study. Current research developments in particular geographic subfields will be stressed. May be repeated under different subtitles to a maximum of six credits. Prereq: Consent of instructor.

**GEO 570 LANDSCAPE ECOLOGY FOR NATURAL RESOURCES. (3)**  
Principles of landscape ecology and their applications to contemporary ecological issues. Students will learn and apply the tool of geographic information system (GIS) and spatial analysis to problems in natural resource ecology, management, and conservation. Course covers the following topics: principles of landscape ecology (e.g., patch, mosaic, and scale), quantification of landscape patterns, formation and dynamics of landscape patterns, role of disturbance, landscape models and their application

**GEO 707 DEVELOPMENT OF GEOGRAPHIC THOUGHT. (3)**  
An analytical review of the evolution of geographic thought, in terms of concepts, methodologies and scholars, emphasizing the basic literature through a series of topics.

**GEO 708 GEOGRAPHIC INFORMATION SYSTEMS RESEARCH METHODOLOGIES. (3)**  
Following a brief overview of GIS, remote sensing, GPS, and other relevant information technologies as information collection, presentation, and analytical aids, this course will consider current developments of geographic information technologies. These include, but are not limited to, field GIS, public participation GIS, participatory information technology, collaborative environments, and spatial decision-making. Discussion of these developments will be complemented by a rigorous examination of theoretical and methodological issues. Prereq: GEO 409G or its equivalent, or consent of instructor.

**GEO 709 ADVANCED GISCIENCE. (3)**  
This course explores advanced applications and topics within GIScience including data mining, scripting, point pattern analysis, data



interpolation, geospatial modeling and network analysis and the methodological, epistemological and ontological issues with the classification requirements and analytical capabilities of GIScience. Prereq: GEO 609 or consent of instructor.

**GEO 711 CULTURAL STUDIES AND GEOGRAPHY (Subtitle required). (3)**

Seminar in cultural studies and geography, including, for example, interpretation and analysis of the built environment; space and representation; the political economy of landscape production; regional imagery; media studies; popular culture; the social construction of community; historic preservation; recreation, tourism and society. May be repeated to a maximum of nine credits under different subtitles.

**GEO 712 DEVELOPMENT STUDIES AND GEOGRAPHY (Subtitle required). (3)**

Seminar in selected topics in the policies, practices, and processes of development, including, for example, political economy perspectives on development; anti-development and postcolonial theory; economic restructuring and transition economies; gender and development; the relations between development and migration, transportation and tourism; environmental management and sustainable development. May be repeated to a maximum of nine credits under different subtitles.

**GEO 713 ECONOMIC GEOGRAPHY: (Subtitle required). (3)**

A seminar in economic geography, including, for example, global, regional, and local economic restructuring, global financial systems; foreign direct investment and trade; geography of multinational corporations; geography of labor; spaces of production and spaces of consumption; gender and economic space; space-time convergence; information and communications. May be repeated to a maximum of nine credits under different subtitles.

**GEO 714 POLITICAL GEOGRAPHY: (Subtitle required). (3)**

A seminar in political geography, including, for example, electoral systems; state theory; post-Cold War democratization; the geography of revolutionary change; critical geopolitics; political economy of environmental movements; political economy of globalization discourses and practices. May be repeated to a maximum of nine credits under different subtitles.

**GEO 715 GEOGRAPHY AND SOCIAL THEORY (Subtitle required). (3)**

Seminar in geography and social theory, including, for example, theories of human spatiality; marxist, neo-marxist, and post-marxist theory; postmodernism and poststructuralism; feminist theory; actor network theory; identity theory; geographic thought and society; technology and society. May be repeated to a maximum of nine credits under different subtitles.

**GEO 717 URBAN GEOGRAPHY (Subtitle required). (3)**

Seminar in urban geography, including, for example, urban morphology; urban systems; the local state; urban social fragmentation; conflicts over urban growth and development; urban transportation planning; urban historical geography; gender and urban space; race and urban space; urban landscapes. May be repeated to a maximum of nine credits under different subtitles. Prereq: Consent of instructor.

**GEO 718 TOPICAL SEMINAR IN GEOGRAPHY OF ENVIRONMENT AND RESOURCES (Subtitle required). (3)**

Study of selected topics on agriculture resource allocation, resource conflict, public land policy, natural hazards, environmental management, energy and biogeography. May be repeated to a maximum of nine credits under different subtitles. Prereq: Consent of instructor.

**GEO 719 GEOSPATIAL TECHNOLOGIES (Subtitle required). (3)**

A seminar in the social construction of geospatial technologies and the implications of their use. Topics

may include crowd-sourcing, privacy and surveillance, open source software, code/space, censorship and control, copyright and locative media usage. May be repeated to a maximum of nine credits under different subtitles.

**GEO 721 TOPICAL SEMINAR IN PHYSICAL GEOGRAPHY (Subtitle required). (3)**

Examination of selected topics in geomorphology, hydrology, pedology, biogeography, climatology, and earth system science. May be repeated to a maximum of nine credits under different subtitles. Prereq: Consent of instructor.

**GEO 722 SOCIAL GEOGRAPHY (Subtitle required). (3)**

Seminar in social geography, including, for example, race and gender, feminist geography, health care, disease and society; the geography of AIDS; the geography of aging and the life course; poverty and social policy; human behavior in space and time; population and migration studies; spatial structure of social networks; transportation of disadvantaged groups. May be repeated to a maximum of nine credits under different subtitles. Prereq: Consent of instructor.

**GEO 731 EARTH SURFACE SYSTEMS. (3)**

A treatment of earth surface systems from the perspective of complex systems theory. The course takes a holistic viewpoint, emphasizing interactions between the atmo-, litho-, hydro-, and biospheres and the manifestations of those signatures in soils, landforms, and ecosystems. Prereq: Consent of instructor.

**GEO 740 RESEARCH INTERNSHIP (Subtitle required). (1-6)**

To provide students with course credit for faculty supervised internships with governmental and non-governmental organizations. May be repeated to a maximum of nine credits.

**GEO 741 TEACHING PRACTICUM. (1)**

Introduction to teaching, with particular focus on pedagogical issues in geography courses. Intended to provide students with background sufficient to enable them to assume full responsibility for university and college level courses.

**GEO 742 PREPARING FUTURE FACULTY IN GEOGRAPHY. (1)**

Introduction to the professoriate, with particular focus on geography within the academy. Intended to provide students with background sufficient to assume responsibility as new faculty members in universities and colleges.

**GEO 743 RESEARCH PROPOSALS AND GRANT WRITING. (1)**

Introduction to basic geographic research proposal design standards, with particular emphasis on the requirements of granting agencies.

**GEO 748 MASTER'S THESIS RESEARCH. (0)**

Half-time to full-time work on thesis. May be repeated to a maximum of six semesters. Prereq: All course work toward the degree must be completed.

**GEO 749 DISSERTATION RESEARCH. (0)**

Half-time to full-time work on dissertation. May be repeated to a maximum of six semesters. Prereq: Registration for two full-time semesters of 769 residence credit following the successful completion of the qualifying exams.

**GEO 767 DISSERTATION RESIDENCY CREDIT. (2)**

Residency credit for dissertation research after the qualifying examination. Students may register for this course in the semester of the

qualifying examination. A minimum of two semesters are required as well as continuous enrollment (Fall and Spring) until the dissertation is completed and defended.

**GEO 768 RESIDENCE CREDIT FOR THE MASTER'S DEGREE. (1-6)**

May be repeated to a maximum of 12 hours.

**GEO 769 RESIDENCE CREDIT FOR THE DOCTOR'S DEGREE. (0-12)**

May be repeated indefinitely.

**GEO 772 SPECIAL RESEARCH PROBLEMS IN GEOGRAPHY. (1-6)**

Open to doctoral candidates who have the necessary training and ability to conduct research on a selected problem. May be repeated to a maximum of 12 credits. Prereq: Approval of the director of graduate studies.