

# ***Undergraduate Handbook***

## **Department of Geography University of Kentucky**

(Revised: April 2003)

<http://www.uky.edu/ArtsSciences/Geography/>

### ***IF***

***If you are interested in the Earth as the home of human beings and how we appraise, occupy, use and misuse it --***

***If you are curious about where things are on the Earth, why they are in those locations, and what are the consequences of their being where they are --***

***If you like to investigate places and areas -- what they are like, how they became that way, and how they function in relation to other places or areas --***

***If you love to observe landscapes -- their composition and character and how people perceive and change them --***

***If you like to pore over maps, or devise new ones, as keys to all of the above --***

***You are a Geographer, born or made!***

***Enter these halls  
and  
Study! Learn! Enjoy!***

Clarence W. Olmstead  
University of Wisconsin-Madison

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## INTRODUCTION

**W**elcome to Geography; welcome to the discipline, and to the Department and its people here at the University of Kentucky. As you first read through the materials that follow, you will be setting forth on a journey that will change your life. The interests and expertise you develop over the next several years could very well dictate the direction and success of your career after graduation. More important, we hope, is that Geography will broaden your knowledge of the world and its many elements, from physical landscapes and climates, to social, political, and economic systems, to cultures and individual perspectives and behaviors. We hope that Geography will deepen your understanding of these many areas, and especially of the complex interrelations between them. We also hope that Geography will help you appreciate the role that *YOU* have in this world, as an active participant in the human race and as an informed student within a discipline that can certainly “make a difference.”

This *Handbook* is intended to serve as an aid to undergraduate majors and minors presently in Geography as well as prospective geography majors and minors. The *Handbook* addresses

issues and answers questions specifically related to this department. Although a brief section is included about university and college requirements, students should consult the most recent *University of Kentucky Bulletin* and *Degree Programs: College of Arts and Sciences* ([http://www.as.uky.edu/Admin/a-z\\_listing.aspx](http://www.as.uky.edu/Admin/a-z_listing.aspx)) for a detailed description of requirements. Important features of this *Handbook* include career opportunities, requirements for the major, requirements for the minor, information about undergraduate course offerings, departmental facilities and activities, and brief biographical sketches of the faculty. We encourage you to carefully review this Handbook, and to keep it on file. Above all, we invite you to talk with anyone and everyone in the Department.

## ***Geography Defined***

Geography is, for the lay-person, quite easy to define. You will discover this as you spread the news of your major, and friends and relatives ask you to name capitals, countries, major rivers, or mountains. Watch *Jeopardy!* some evening, and consider the content of items under any "Geography" category. Or consider the *Trivial Pursuit* cards for "Geography." For most people geography is the knowledge of places and specifically their locations. Indeed, this might come close to defining geography as a *word*, and there is no question that this sort of knowledge is valuable.

**Geography as a discipline**, however, defies such simple definition. It has been suggested that the discipline seeks to answer three basic questions: (1) Where are things? (and things can include virtually anything) (2) Why are these things where they are? (3) What are the implications of the first two questions? We might conclude from these questions that geography is the description and explanation of locations and distributions, with the goal of assessing the broader impacts of these locations and distributions. The work of some geographers might actually correspond to such a view. Yet this definition is quite limiting, and it does little to convey the true nature and excitement of our discipline.

You will find, during your studies with us, that geography has many faces and moods. Its purview ranges from the individual—person, thing, process, or even idea—to institutions, societies, and regions, to global systems. Geographers can be anywhere, and can study essentially anything using the intellectual and technical tools of our trade. We invite *YOU* to define geography!!

## **CAREER OPPORTUNITIES AND GEOGRAPHY**

### ***Occupational Outlook and Major Career Options***

Perhaps the single most frequently asked question of geographers is, "*What can you do with Geography?*" Many careers are available to people trained as geographers and, furthermore, the occupational outlook in most areas of our profession continues to be good. During the 1980s, the United States Department of Labor stated that, "Employment of geographers is expected to grow about as fast as the average for all occupations...." During the 1990s, however, there was explosive growth in job opportunities favoring geographic training. The emergence of Geographic Information Systems (GIS), for example, and their application within a host of professions from planning to marketing, has provided immediate employment for geographers. The movement to incorporate geographic standards in K-12 education offers an ever increasing potential for employment as the true nature and value of geography become more universally understood.

The four major traditional career areas for geographers are: business, government, planning, and teaching. Each of these career options offers a wide variety of opportunities, and an individual's study program should be geared toward his or her specific interests. A student interested in urban geography, for example, could be an adviser to a local urban or regional planning agency, provide location analyses on new housing projects for a federal government agency, or be a consultant on zoning changes in cities, or eventually hold a teaching position in a university. An economic geographer might be employed by a business or consulting firm to determine the best location for a new industry or for a new fast food restaurant, by a bank to assist in developing optimal investment strategies on the international market, or by an international agency to help plan a new road system in a developing country. Political geographers might work in planning, civil service, foreign service, politics, union organization and activism, or television broadcasting. A physical geographer might work in areas including meteorology, water resource analysis, soil conservation, extension services, and forestry. Cultural geographers may work in libraries as map curators and archivists. Cartographers and those specializing in geographic techniques might work for planning agencies, private businesses, a variety of consulting firms, and the U.S. government in a host of civil service and military/defense positions. In all of these tasks, geographers merge their training in cartography and other techniques with their topical and regional expertise in order to develop solutions to the problems at hand. In short, there are many different interesting and exciting job opportunities available for geographers. Some career opportunities may ultimately necessitate a graduate-level degree, and consultation with your adviser is helpful in determining whether or not pursuing an advanced degree is appropriate.

Examples of jobs that students with bachelor's degrees in geography from the University of Kentucky are working in, or have worked in, include: zoning enforcement officer (Boone Co., KY), urban planner (Lexington, KY, Nashville, TN, and Houston, TX), state transportation planner (Frankfort, KY), cartographic technician (Rand McNally), social studies teachers (Lexington, Georgetown, Louisville and Winchester areas), cartographers/cartographic technicians for Intergraph (Louisville), Plangraphics (Frankfort), Defense Mapping Agency (Louisville and Washington, D.C.), Photo Science and GRW Engineering (Lexington), National Oceanic and Atmospheric Administration (Washington, D.C.), GIS specialists (Bluegrass Area Development District, Kentucky Fish and Wildlife, Boston Market marketing), oil companies (Houston, TX, Tulsa, OK), surveying and engineering companies (Chicago and Lexington), environmental consulting (Lexington), U.S. Bureau of the Census, and the Army and Navy. An increasing number of majors have gone on to complete graduate degrees either at UK or at other universities nationwide, and many have found geography to be a valuable springboard for law school.

*Careers in Geography*, a publication of the Association of American Geographers, lists the following job titles held by geographers and places of employment for geographers.

**Representative Job Titles**

Agricultural Geographer	Department Stores	Division of Personnel & Mgmt.
Aerial Photo Interpreter	Engineering Companies	Bureau of Reclamation
Cartographer	Graphic Design	National Park Service
Cartographic Draftsman	Marketing & Research	U.S. Geological Survey
Cartographer-Geographer	Motor Companies	Department of Justice
Cartographer-Illustrator	Newspapers	Department of State
Climatologist	Oil Companies	Office of Geographer
Community Development Specialist	Publishers	Department of Transportation
Demographer	Railroad Companies	Energy Research & Dev. Agency
Earth Scientist	Research Laboratories	Environmental Protection Agency
Ecologist	Travel Consultants	Library of Congress
Editorial Assistant	Urban Planners	Congressional Resrch Service
	Utility Companies	Geography & Map Division
	Wholesale Grocers	National Academy of Sciences

Geographic Analyst  
 Geographic Attache'  
 Geographic Engineer  
 Geographer-Planner  
 Industrial Development Specialist  
 Industrial Developer  
 Intelligence Analyst  
 International Economist  
 Land Economist  
 Land Use Planner  
 Librarian  
 Map Analyst  
 Map Curator  
 Map Editor  
 Map Librarian  
 Market Analyst  
 Political Analyst  
 Regional Planner  
 Research Analyst  
 Research Coordinator  
 Research Geographer  
 Recreational Resource Planner  
 Resource Economist  
 Site Researcher  
 Soil Conservationist  
 Soil Geographer  
 Teacher  
 Transportation Planner  
 Urban Planner

**Places of Employment**

**Private Business(General)**

Aircraft Companies  
 Airlines  
 Architects  
 Computer Systems

**International Organizations**

Int'l.Bank for Reconstruction & Development. (World Bank)  
 Organization of American States  
 United Nations

**U.S. Government**

ACTION  
 Agency for International Development  
 Central Intelligence Agency  
 Department of Agriculture  
 Foreign Agriculture Service.  
 Forest Service  
 Soil Conservation Service  
 Department of Commerce  
 Bureau of the Census  
 National Oceanic and Atmospheric Administration  
 Department of Defense  
 Defense Intelligence Agcy.  
 Defense Mapping Agency  
 Aerospace Center (DMA)  
 Hydrographic Center (DMA)  
 Topographic Center (DMA)  
 Department of the Air Force  
 U.S. Army Engineer  
 Topographic Laboratory  
 U.S. Army Research & Development  
 Office of Naval Research  
 National Security Agency  
 Department of Health, Education, & Welfare  
 Department of Housing & Urban Development  
 Department of the Interior  
 Bureau of Indian Affairs  
 Bureau of Land Management  
 Bureau of Mines

National Aeronautics & Space Administration  
 Natn'l Archives & Records Svc.  
 National Science Foundation  
 Smithsonian Institution  
 U.S.Information Agency  
 U.S. Postal Service

**State & Local Government**

**State**

Geological Survey  
 Forest Service  
 Dept. of Public Works  
 Dept. of Commerce  
 Planning Agency  
 Highway Department  
 Transportation Dept.  
 Health Dept.  
 Chamber of Commerce  
 Economic Development Agency  
 Business & Industrial Development

**County**

Natural Resource Center  
 Public Works

**City**

Urban League  
 Public Health Service  
 Chamber of Commerce  
 Science Museum  
 Dept. of Housing & Community Development  
 Planning Agency  
 Metro. Area Transportation  
 Dept. of Urban Renewal  
 Public Libraries  
**Regional**  
 Airport  
 Planning Agency

For further information on career opportunities in geography go to the homepage of the Association of American Geographers at: <http://www.aag.org/>

**Careers in Physical Geography**

**P**hysical geography at Kentucky emphasizes the integrated use of the earth's land, water, biological, and atmospheric realms. It is an ideal program for students who seek careers in:

1. an integrated, field-oriented approach to natural science;
2. the fields of environmental science, management, and policy;
3. fields that integrates the natural and social sciences.

There are three voluntary physical geography curriculum tracks for students emphasizing geomorphology and earth science; biogeography and landscape ecology; and geoinformatics (geographic information systems, or GIS, remote sensing, and mapping sciences).

**Standing Out in the Job Market**

**E**mployment opportunities for students of geography are truly unlimited. The previous section demonstrates just some of the potential. There **IS** a career for you, regardless of your particular interests in the discipline. You should be aware, however, that few

jobs explicitly advertise for “Geography Majors.” Don’t let this reality discourage you. The more you know about geography, and the better you understand the discipline, the easier it will be to move into a rewarding career.

This section is included to help you prepare for life after college. It offers suggestions on how to improve personal marketability and gain confidence in the marketplace. Employers must sift through scores of resumes in search of appropriate individuals to fill positions. Therefore, some items that follow are suggested as a way to make you “stand out” above the crowd, and to demonstrate areas where geography can provide a tremendous advantage. These are NOT requirements for the major and, depending on your interests, not all suggestions may apply to you.

***GPA is increasingly important.*** It wasn’t that long ago when having a college diploma provided enough clout to gain employment. Times change. Societies change. And a college education is now almost common-place. A grade point average is now a common first indicator of adequacy in the job market. The moral of this story is that you should not neglect your studies. If you are concerned about your GPA, feel free to talk with your advisor or the Director of Undergraduate Studies.

***Extracurricular activities can be a plus.*** A student’s GPA is important, but potential employers also look for the ability to balance academics with other organized activities. Participation in departmental committees, the undergraduate Geographical Society, university student organizations, or community affairs can demonstrate attractive abilities to work well in groups and to assume effective leadership positions. Besides the career benefits, such participation allows you to build strong friendships and better enjoy your time at the university.

***International Experience.*** Americans are, in general, not well traveled. Students who have any sort of international interests should certainly consider opportunities to **study abroad**. Besides an immediate impact on job applications, international experiences allow students to live what they have learned through exposure to different physical landscapes, social and political systems, and cultures. Find out how to make this a part of your curriculum by talking with a departmental advisor, and contacting the *U.K. Office of International Affairs, and Study Abroad Programs and Services* <<http://www.uky.edu/IntlAffairs/abroad/index.htm>>, located in Bradley Hall.

***Foreign Language.*** If you hope to work in, or be involved with, countries outside of the United States, then foreign language skills may certainly be a plus. Besides the “traditional” languages of French, German, or Spanish, the university offers training in Italian, Russian, Japanese, Chinese, and Arabic. Contact the *U.K. Office of International Affairs* <<http://www.uky.edu/IntlAffairs/welcome.htm>> for information on such groups.

***On-the-Job Experience.*** There is no doubt that applied training is beneficial in the job search. Besides the careful selection of part-time employment while in school, you might also consider internship credit through GEO 480, or through the *U.K. Office of Experiential Education* (206 Mathews Building) <[http://www.uky.edu/UExt/experiential\\_education.html#TOP](http://www.uky.edu/UExt/experiential_education.html#TOP)>.

Furthermore, opportunities often emerge for students to work with faculty members on research projects. Such experiences are especially good for graduate school preparation.

***UK’s Career Center*** (<http://www.uky.edu/CareerCenter/smenu.html>). The Career Center, located in the Stuckert Building at 408 Rose Street, provides students with many opportunities to enhance their potential employment. On-campus interviews, individual career advising, resume

critiques, career fairs, job search workshops, and videotaped practice interviews are some of the services offered.

## **UNDERGRADUATE PROGRAM IN GEOGRAPHY AT THE UNIVERSITY OF KENTUCKY**

The Department of Geography was established at the University of Kentucky in 1944, and shortly thereafter Dr. Joseph R. Schwendeman was appointed as the first Head, a position which he held until his retirement in 1967. Since its establishment, the Department has seen many changes in response to a rapidly changing discipline. It has now risen to national prominence, being identified as one of the best geography departments, and among the most productive in terms of faculty research and publication.

Despite its highly respected position within the university and the broader national system of higher education, the Department has never lost its commitment to quality undergraduate education. Students have opportunities for formal class contact with *all* faculty members, there is essentially an 'open-door' policy in terms of undergraduate advising, and the faculty, along with both graduate and undergraduate students, have worked hard to develop a program that provides the flexibility and rigor necessary to help students be competitive in pursuing their future careers.

### ***Summary of University and College Requirements***

To complete an undergraduate program a student must satisfy University, College of Arts and Sciences, and Department of Geography requirements. Students should consult the *College and University Checklist* for requirements outside of the department (see page 31). To be awarded a baccalaureate degree (in geography a student can earn a Bachelor of Arts or a Bachelor of Science degree) each student must complete 120 semester hours of courses acceptable to the College (physical education one-hour service courses are not accepted). At least 90 of these hours must be in Arts and Sciences courses and 36 hours must be in geography (see below). Also, a student must have at least a 2.0 (on a 4 point scale) grade point standing to graduate. Students pursuing a B.A. or a B.S. degree in geography should ensure that they fulfill the University Studies Program requirements; including Basic Skills (including a foreign language), Inference and Communicative Skills, Disciplinary Requirements, Cross-Disciplinary and Cross-Cultural Requirements, Breadth of Study, and Depth of Study requirements; all College extensions to USP; and the Departmental requirements. Students are ***strongly*** encouraged to meet with the Director of Undergraduate Studies or another departmental advisor for assistance in choosing USP and College courses appropriate to the student's program. A sample USP/College Requirement Checklist can be found at the end of this handbook to help you in planning. Suggested programs of study for specific interests or career paths within geography are available from geography advisors.

### ***Geography Major Requirements***

Geography has adopted a 'flexible curriculum' approach in structuring degree requirements through the adoption of a three-track system for majors. The curriculum emphasizes development of solid intellectual foundations in the discipline, while selection of a "track" promotes opportunities to tailor coursework around personal interests, areas of expertise, and career aspirations. *Students should work closely with their advisor in planning a program, and*

should discuss their progress, semester course scheduling, and post-baccalaureate plans with their faculty advisor. Two worksheets are supplied at the end of this handbook to assist in planning.

By the beginning of the final year of study, students are required to complete a Major Requirements Plan with the assistance of an advisor. This Plan sheet, which lists all courses to be used in fulfilling major requirements, must be filed with the College of Arts and Sciences. If the Plan Sheet needs to be changed after submission, you MUST see the Director of Undergraduate Studies for a letter of approval.

Finally, all graduating seniors should schedule an exit interview with the Director of Undergraduate Studies during their final semester. The interview is necessary to conduct a final “audit” of departmental requirements, to provide assistance in career planning, and to gather feedback about the undergraduate experience.

**All** majors must complete 18 credit hours in Premajor and Professional requirements, which provide the basic thematic, regional, and technical foundations of the discipline.

<b><u>Premajor Requirements</u></b> (9 hours)	<b>Hours</b>
GEO 130 Earth’s Physical Environment.....	3
GEO 172 Human Geography .....	3
GEO 200 Concepts & Methods in Geography.....	3

<b><u>Professional Requirements</u></b> (9 hours)	<b>Hours</b>
GEO 300 Geographic Research .....	3
GEO 305 Elements of Cartography .....	3
GEO 310 Quantitative Techniques in Geography .....	3
GEO 499 Senior Research Seminar .....	3

### **Breadth Requirements** (6 hours)

All majors must take at least one regional course and one thematic course in geography numbered at the 300 level or above.

### **Core Requirements** (minimum of 12 hours)

Majors will work with an advisor in selecting additional courses from within geography numbered at the 200 level or above. Required and recommended core courses are included below for each track. Eligible students may include Independent Work (GEO 560) and Internship experience (GEO 480) for no more than six of these core hours.

### **Related Area Requirements** (minimum of 15 hours)

Majors will work with an advisor in selecting courses numbered at the sophomore level or above from other disciplines; recommended related area courses are recommended below for each track.

## **Geography Major Concentrations (Tracks)**

### **Track 1. Earth Environmental Systems (EES) (Physical Geography)**

**Background.** This concentration emphasizes the earth’s physical environment, including soils and

landscapes; fluvial and other hydrologic systems; weather and climate; and vegetation and animal life. Emphasis is on (a) the pattern of spatial variation these regimes exhibit; (b) the physical processes that underpin their historical and spatial development; and (c) the interactions between these regimes and human activity. Topical areas reflecting physical-human interactions include identification and analysis of pollution, mitigation of natural hazards, and the outcomes of environmental management strategies.

**Careers and Marketable Skills.** The theoretical background, analytic, and applied skills developed in this concentration are much in demand as interest in environmental change and the impact of human activities on the physical environment increases. These skills are much in demand at the local, state, national, and international levels.

**Analytical Skills** developed in this concentration include:

- Field techniques
- Map reading, orientation, and analysis
- Digital spatial data collection, storage, and analysis
- Laboratory analysis

**Career Opportunities:** Both public and private sectors hire EES students in the following fields:

- Natural resource mapping and inventory, including soils, vegetation, geology, and land use
- Hydrology, wetland delineation and management, and water resources
- Environmental impact assessment
- Natural resource management (parks and conservation, agriculture, forestry, mining and minerals)
- Erosion and sedimentation assessment and control
- Soil, water, and biological conservation
- Natural hazard assessment, response, and mitigation

**Requirements:** The Department strongly recommends that students in the Earth Environmental Systems Concentration complete all requirements leading to a **Bachelor of Science** in Geography. The student must complete University, College, and Departmental requirements in mathematics and science leading to the BS Degree. The student must take the courses that satisfy the pre-major, professional, and interdisciplinary requirements in addition to the Concentration's core requirements.

**B.S. Requirements:** Whereas there are a number of differences in the requirements for the B.S. and B.A. Degrees, the major difference is that students seeking the B.S. Degree are required to complete 60 credit hours in the "physical, biological, and/or mathematical sciences." Students seeking the B.A. Degree must insure that 90 of their credit hours are in A&S courses (see pp. 87-88 of the latest *University Bulletin*). Geography majors seeking a concentration in EES are strongly encouraged to complete the following:

- Mathematics: MA 113, MA 114 or MA 123, MA 132
- Statistics: STA 291 recommended by Department
- Department recommends MA 322 (matrix algebra) or MA 152 (finite mathematics)
- Natural Science: CHE 105, 107 and PHY 231, 241
- Department recommends BIO 150, 152 for students interested in biogeography or landscape ecology
- Department recommends GLY 101, 111 and GLY 102, 112 for students interested in geomorphology and earth surface processes

### **Concentration Core Requirements (select 12 credits)**

- GEO 210\* Pollution, Hazards & Environmental Management

- GEO 251 Weather and Climate
- GEO 351 Physical Landscapes
- GEO 441G\* Fluvial Forms and Processes

\*Or other Physical Geography, GIS, Remote Sensing, Computer Cartography courses (see below)

### **Recommended Additional Courses (select 9 credits)**

- GEO 406G Field Studies
- GEO 415 Map Interpretation
- GEO 506 Introduction to Computer Cartography
- GEO 507 Remote Sensing in Geography
- GEO 509 Applications of Geographic Information Systems
- GEO 530 Biogeography and Conservation
- GEO 550 Sustainable Resource Development and Environmental Management

(Note: at least one regional course is required, e.g., GEO 320, GEO 324, GEO 328)

**Related Area Courses (minimum of 15 hours):** Any courses (must be 200-level or above) in Geology, Biology, Chemistry, Physics, or Forestry, or as approved by advisor.

## **Track 2. Human Geography (HG)**

**Background.** Human Geography focuses on the identification, description, and analysis of: (a) human spatial behavior and cognition; (b) social, economic, and political processes as they are manifest locally and globally; and (c) the cultural impress of human activity on the landscape. Within these areas, students can focus on the socio-psychological aspects of space and place, including cultural differences in ways of knowing the world. They will learn about the processes that produce local-to-global distinctiveness in key problem areas including: poverty, injustice, and hunger; illness, disability, and disease; patriarchy, racism, and homophobia; and unequal access to natural resources, education, health, and safety. Students will also find an opportunity to learn how human practices and broader processes affect both our natural and built environments. Finally, students will learn practical tools to contribute to better world through their research, or professional participation in civil society, the private sector, or government agencies. The HG Track permits students to specialize in a particular region of interest, including East, South, Southwest (Middle East), and Southeast Asia, Europe, the Caribbean, and the United States, especially Appalachia and the South.

**Professional Skills and Career Opportunities.** Theoretically and methodologically, the HG Track focuses upon the conceptual knowledge necessary to understand and evaluate the spatial dimensions of human activities and processes. Students who want to concentrate on a particular region will develop a regional knowledge base together with a focus on a systematic area such as economic development, tourism, population dynamics, or medical geography. Students who opt for this track will be provided with a package of professional skills that are currently in demand in private business, public service employers including planning agencies, and non-governmental organizations.

**Analytical Skills** developed in the HG Track include:

- Analysis of an issue in abstract, theoretical terms; being able to account for and assess different ways of understanding the world
- Collecting and analyzing survey and/or participant observation data
- Collecting and analyzing survey and census data as it pertains, for example, to the evaluation of economic markets, demographic patterns, or access to social services
- Interpreting and analyzing historic and contemporary landscapes
- Participatory field research in local organizations

**Career Opportunities** Public service agencies (local and state government, US government agencies,

international organizations) and private organizations (firms specializing in consulting, international business, marketing, and research) are potential employers for HG students. So too are non-governmental organizations involved in issues of civil society including civil rights, fair housing, anti-globalization coalitions, and HIV/AIDS. Some examples of employment opportunities include:

- Market research
- Socio-economic planning (urban, regional, land use)
- Recreational tourism studies/planning
- Conservation management
- Historic preservation
- Education
- Transportation planning
- Disease surveillance and health planning
- Population studies
- Intelligence analyst
- International area studies

**Requirements:** The HG student must complete all University, College and Department requirements for either the BA or BS degree. In addition, the student must complete the Department's Geography Major requirements. Beyond these requirements, the HG student, with the advice and consent of a faculty advisor, can select from a number of courses offered within the Department and other Departments, corresponding to a particular focus in HG.

#### **Concentration Core Requirements (select 9 credits)**

- GEO 240 Geography and Gender
- GEO 256 Behavior in Space and Time
- GEO 260 Third World Development
- GEO 285 Introduction to Planning
- GEO 409G Geographic Information Systems and Science: Fundamentals
- GEO 455 Economic Geography
- GEO 460 Urban Geography
- GEO 465 Special Topics in Human Geography
- GEO 475G Medical Geography
- GEO 490G American Landscapes
- GEO 542 Political Geography
- GEO 544 Human Population Dynamics
- GEO 545 Transportation Geography
- GEO 546 Tourism and Recreation Geography
- GEO 547 Geography of Information and Communications
- GEO 550 Sustainable Resource Development and Environmental Management
- GEO 585 Aging and Environment

**Recommended Additional Courses** Regional courses (from among GEO 320, GEO 324, GEO 326, GEO 328, GEO 329, GEO 330, GEO 332, GEO 333, GEO 334, GEO 336, GEO 365)\*

- GEO 415 Map Interpretation
- GEO 420G Urban and Regional Planning
- GEO 480 Internship in Geography
- GEO 505 Practicum in Cartography
- GEO 506 Introduction to Computer Cartography
- GEO 507 Remote Sensing in Geography
- GEO 509 Applications of Geographic Information Systems

\*At least one regional course is required.

**Related Area Courses (minimum of 15 hours):** Any courses (must be 200-level or above) that relate logically to the student's career interests such as those in Anthropology, Sociology, Economics, History, Latin American Studies, Political Science, Women's Studies, Social Theory, African American Studies, Psychology, or as approved by advisor.

### **Track 3: Geographic Information Techniques (GIT)**

**Background.** The Geographic Information Techniques Concentration is concerned with all aspects of geographical information/data, including identification of data sources, collection, storage/retrieval, manipulation, analysis, and visualization. The GIT Concentration encompasses geographical information science (GIS), cartography, remote sensing, and spatial analysis.

**Careers and Marketable Skills.** The GIT Concentration introduces the student to the theory/concept of geographic information science. In addition, the student will learn the practical application of GIS theory in the development and implementation of graphical analysis and display, remote sensing and image interpretation, digital processing, map design and computer mapping. These skills and experience will provide the GIT student with numerous job opportunities in a variety of sectors both public and private.

**Analytical Skills** developed in the GIT Concentration include:

- GIS computer software (data entry/editing, spatial analysis, map development and display)
- Map design and construction
- Air photo interpretation
- Applications of GIS
- Remote sensing technique and application in land-use mapping
- Workshop and desktop mapping

**Career Opportunities:** The career opportunities for the GIT student are many and varied in both the public and private sectors at the local, state, national and international levels. A sample list of the types of opportunities includes the following:

- Remote sensing and aerial surveys
- Land use and natural resources data acquisition, survey and mapping
- Socio-economic surveys/analysis
- Urban planning
- Disease surveillance
- Environmental assessment, reclamation, protection, and management
- Economic development
- Employment in GIS companies

**Requirements:** The GIT Concentration student must satisfy all University, College, and Department requirements for either the BA or BS Degree. Beyond this, the student must select the following courses in order to complete the GIT Concentration.

#### **Concentration Core Requirements (minimum of 12 credits)**

- GEO 309 Digital Geographic Data: Sources, Characteristics, Problems, and Uses
- GEO 409G Geographic Information Systems and Science: Fundamentals
- GEO 415 Map Interpretation
- GEO 480 Internship in Geography
- GEO 505 Practicum in Cartography
- GEO 506 Introduction to Computer Cartography
- GEO 507 Remote Sensing in Geography

- GEO 508 Geographic Interpretation of Aerial Photography

### **Recommended Additional Courses**

- GEO 210 Pollution, Hazards, and Environmental Management
- GEO 285 Introduction to Planning
- GEO 351 Physical Landscapes
- GEO 420G Urban and Regional Planning
- GEO 441G Fluvial Forms and Processes
- GEO 455 Economic Geography
- GEO 460 Urban Geography
- GEO 475G Medical Geography
- GEO 530 Biogeography and Conservation
- GEO 544 Human Population Dynamics
- GEO 545 Transportation Geography
- GEO 550 Sustainable Resource Development and Environmental Management
- GEO 560 Independent Work in Geography\*
- GEO 565 Topics in Geography\*

\*Consent of advisor required. (Note: at least one regional course is required, e.g., GEO 320, GEO 324, GEO 328)

**Related Area Courses (minimum of 15 hours):** Must include one course in mathematics or computer science or statistics. Examples include the following:

- CE 106 Computer Graphics and Communication
- CE 211 Surveying
- CS 115 Introduction to Computer Programming
- ENS 200 Introduction to Environmental Studies
- FOR 200 Map Reading and Photogrammetry
- FOR 300 Forest Measurements
- JOU 330 Web Publishing and Design
- LIS 601 Information Sources and Services
- MA 322 Matrix Algebra and its Applications
- STA 291 Statistical Method

### ***Geography Minor Requirements***

The minor in geography requires a minimum of 21 hours taken within the department. Students must complete courses as follows:

1. GEO 130; GEO 172; GEO 152 OR GEO 160 (9 hrs)
2. GEO 300 OR GEO 305 OR GEO 310 (3 hrs)
3. Nine additional hours at the 200 level or above

All geography minors should work closely with a departmental advisor in coordinating geography with the chosen major or majors.

### ***Tips for Successfully Negotiating the Major/Minor***

**Meet with your advisor or the Director of Undergraduate Studies (DUS).** The DUS will explain the program, answer any questions, and assign you to a departmental advisor.

p **Formally declare the Major/Minor.** You can declare a major, or change your major to Geography, in the College of Arts and Sciences Advising Center, 257 Patterson Office Tower. It is important to do this as soon as possible so that the department receives regular updates of your transcripts.

p **Meet with your departmental advisor on a regular basis.** We are here to help, and really want to get to know you! Above all, *be prepared* when you meet with your advisor to preregister.

p **Use the APEX degree audit system to monitor your progress and keep track of degree requirements.** Careful planning and record keeping will help you avoid many of the problems that keep seniors from graduating on time.

p **Become involved!!** The Department offers many opportunities for learning outside of the classroom, from guest lectures and workshops to a wide range of social activities to membership in the department's Kentucky Geographical Society. There is no better way to enrich your undergraduate experience.

### ***Undergraduate Course Offerings***

Following is the list of courses offered by the Department of Geography, with descriptions corresponding to the *University of Kentucky Bulletin* (<http://www.uky.edu/Registrar/Bulletin.htm>). Students review these descriptions when planning a schedule. Keep in mind, however, that many descriptions are intentionally written to provide flexibility in instruction and learning opportunities. Students should, therefore, contact the instructor if additional information or detail is needed. Students should also be aware that many upper-division courses may be offered only infrequently; an advisor, the Director of Undergraduate Studies, or the Department Chair should be consulted when planning schedules for more than two semesters in advance.

**GEO 130 EARTH'S PHYSICAL ENVIRONMENT** (3 credits) A course exploring the fundamental characteristics of earth's physical environment. Emphasis is placed on identifying interrelationships between atmospheric processes involving energy, pressure, and moisture, weather and climate, and terrestrial processes of vegetative biomes, soils, and landscape formation and change. Fulfills elementary certification requirements in education, and USP cross-disciplinary requirement.

**GEO 152 REGIONAL GEOGRAPHY OF THE WORLD** (3 credits) A geographical study of the world by regions with a focus on the world's physical and human landscapes. Emphasis on how regions are connected to each other. Also how each region is affected by, and affects, global issues such as economic restructuring, food production, and environmental change, will be examined. Fulfills elementary certification requirement for Education and USP disciplinary social science requirement.

**GEO 160 LANDS AND PEOPLES OF THE NON-WESTERN WORLD** (3 credits) The geographic study of the conceptual and historical definition of regions of the world as "Non-Western." Global patterns of social, cultural, economic, and political difference between the West and Non-West as well as the processes key to the making of the Non-Western world (such as colonialism and imperialism) are discussed. In addition, selected current issues of significance to peoples in the Non-Western world, such as sustainable development, environment, human rights, and gender relations, are considered. Fulfills USP Cross-Cultural requirement.

**GEO 172 HUMAN GEOGRAPHY** (3 credits)

A study of the spatial distributions of significant elements of human occupation of the earth's surface, including basic concepts of diffusion, population, migration, settlement forms, land utilization, impact of technology on human

occupance of the earth. (Fulfills elementary certification requirement for Education and University Studies requirement.)

**GEO 210 POLLUTION, HAZARDS, AND ENVIRONMENTAL MANAGEMENT** (3 credits)

An introduction to environmental systems such as weather and climate, vegetation, land forms and soils, and how the quality of these systems is modified by human use. Resource issues discussed include: atmospheric pollution and global warming; groundwater, flooding, and flood plain management; volcanic activity and earthquakes; and biospheric processes associated with deforestation and lake eutrophication. Case studies based upon important environmental problems illustrate how human activity and environmental systems interrelate. Fulfills USP Cross-Disciplinary requirement.

**GEO 222 CITIES OF THE WORLD** (3 credits)

Focuses on the historical development, contemporary character, and alternative futures of cities in both developing and developed regions. The spatial, social, economic, and political processes of major world cities are studied and contemporary urban problems are discussed. Fulfills USP disciplinary social science requirement.

**GEO 240 GEOGRAPHY AND GENDER** (3 credits) Adopts a geographic approach to the study of gender relations. The role of space and place in shaping the diversity of gender relations throughout the world will be considered. Through case studies the importance of gender relations in understanding a variety of issues will be stressed. Such issues include: the design and use of urban and rural environments; "Third World" development; regional economic restructuring; changing political geographies; and, migration.

**GEO 241 PHYSICAL LANDSCAPES** (3 credits)

Examination of the impact of landforms on man and man on landforms at local and global scales. Topics discussed include how humans modify the earth's surface through agriculture, mining, urbanization, and highway construction; the impacts of natural hazards (droughts, hurricanes, floods, earthquakes, etc.) on human activities; cultural variations in the use and perception of land as a resource; landscape aesthetics, and preservation of physical landscapes. Prereq: GEO 130, or GLY 101 or 140, or consent of instructor.

**GEO 251 WEATHER AND CLIMATE** (3 credits)

A survey of the atmospheric controls associated with local, regional, and global weather and climate variability. Includes fundamental coverage of the physics and chemistry of energy, gases, pressure and moisture, with a goal of promoting understanding of general weather analysis and forecasting, severe storms, atmospheric pollution, descriptive climatology, and global climate change. Prereq: GEO 130 or consent of instructor.

**GEO 256 BEHAVIOR IN SPACE AND TIME** (3 credits) An examination of how space and time are organized and how space and time influence human behavior. Included will be notions of territoriality, life-space and the meaning of space at the personal and social level. The course will explore implications of these concepts for understanding individual and group behavior in everyday life as well as important social issues.

**GEO 260 THIRD WORLD DEVELOPMENT**

(3 credits) The course focuses on characteristics of developing countries as well as solution strategies to development problems and conditions. Cultural distinctions, traditions, and institutions are recognized as keys to development condition and progress. Selected theories show how cultural variations in language and religion may be used to explain development. Numerous case studies are discussed, including Indonesia, China, India, Brazil, Kenya, and Zimbabwe.

**GEO 285 INTRODUCTION TO PLANNING**

(3 credits) An introduction to the history, purpose, and objectives of planning with an emphasis on urban and regional planning, planning processes, techniques, and legislation.

**GEO 300 GEOGRAPHIC RESEARCH** (3 credits)

Introduces students to past and contemporary geographic concepts and methods through a survey of different paradigms or schools of thought. Includes the historical development of geographic thought, as well as examples of research carried out within these paradigms. Focuses on the relationship between different research methods and the paradigmatic and disciplinary structures that influence them. Prereq: GEO 130, 152, 160, or 172.

**GEO 305 ELEMENTS OF CARTOGRAPHY**

(3 credits) Fundamental training in map drafting, compilation, symbolization, scales, projections, and map

reproduction, including emphasis on the conceptual planning and designing of maps and graphs as a medium for communication.

**GEO 309 DIGITAL GEOGRAPHIC DATA: SOURCES, CHARACTERISTICS, PROBLEMS, AND USES** (3 credits)

Introduction to Geographic Information Systems and Science. This course introduces students to the use of geographic information systems and their basic principles. Topics addressed include data collection, processing and output. Students will learn about types of geographic information and data; sources, constraints, and uses; browsing and analyzing geographic information on the world wide web; collection of spatial data using global positioning systems (GPS) and other technologies.

**GEO 310 QUANTITATIVE TECHNIQUES IN GEOGRAPHY** (3 credits) The application of spatial techniques geographers use to collect, sample, map, and analyze data in human and physical geography. Students will be introduced to automated data processing.

**GEO 320 GEOGRAPHY OF THE UNITED STATES AND CANADA** (3 credits) A systematic review of the physical context, economic, historic, and cultural diversity that distinguish U.S. and Canadian regions. Topical emphasis on the geographic aspects of regional problems. Prereq: GEO 130 or 152 or 172, or consent of instructor.

**GEO 321 LAND, PEOPLE, AND DEVELOPMENT IN APPALACHIA** (3 credits) Major themes revolve around regional diversity and regional development. Major topics examined include physical environmental context, historical development, and economic and population geography. The study region includes the upland areas between southern New York State and central Alabama. Prereq: GEO 130, 152, or 172, or consent of instructor.

**GEO 322 GEOGRAPHY OF KENTUCKY**

(3 credits) An examination of the cultural, economic, political, and environmental diversity of Kentucky. In addition to studying the state's historical evolution, emphasis will be placed on contemporary problems facing the state. Kentucky's regional, national, and international contexts are discussed. Prereq: GEO 130, 152, 160, or 172.

**GEO 324 GEOGRAPHY OF CENTRAL AND SOUTH AMERICA AND THE CARIBBEAN**

(3 credits) A study of the diversity of physical environments and human societies. The various historical geographies (pre-Columbian and after) of the region are presented as essential to an understanding of contemporary geographical patterns and processes in transport, agriculture, industry and mining, urbanization, and population. Throughout the course case-studies are presented and students are guided as they develop their own case studies. Prereq: GEO 152, 160, or 172.

**GEO 326 GEOGRAPHY OF EUROPE** (3 credits)

This course explores the physical, cultural, and political geography of the European continent. Diversity of populations and physical landscapes is stressed. The geographic context for current events that are changing the face of Europe are presented. Prereq: GEO 152 or 172.

**GEO 328 GEOGRAPHY OF THE MIDDLE EAST AND NORTH AFRICA** (3 credits) A comprehensive regional overview, emphasizing cultural adaptation to desert environments. The interrelationships among religions, cultures, and the physical environment will be examined, along with the region's position and influence in the global system. Prereq: GEO 152, GEO 160, GEO 172, or consent of instructor.

**GEO 329 GEOGRAPHY OF THE FORMER SOVIET UNION** (3 credits) A study of this region's diverse physical and human landscapes, emphasizing the historical and contemporary interlinkages between the various states. Contemporary problems of the post-Soviet era (such as environmental degradation, economic and regional restructuring, or the international position of the region) will be studied from a geographical perspective. Prereq: GEO 152, 160, or 172.

**GEO 330 GEOGRAPHY OF SOUTH ASIA**

(3 credits) A study of the human, economic, and environmental aspects of India, Pakistan, Bangladesh, Himalayan Nepal and Bhutan, and Sri Lanka. Topics include basic physical and cultural regionalisms, land use and population problems, and patterns of economic development involving urbanization, resources, and industrialization. Prereq: GEO 152 or 160 or 172.

**GEO 332 GEOGRAPHY OF SOUTHEAST ASIA**

(3 credits) A study of the cultural, economic, and political patterns and processes in mainland and insular Southeast Asia. Major themes examined are how the region's diverse physical geography, uneven natural resource base, cultural diversity, and colonial heritage provide a background to understanding contemporary development. Prereq: GEO 152 or 160 or 172.

### **GEO 333 GEOGRAPHY OF EAST ASIA**

(3 credits) Provides an understanding of the life and landscapes in East Asian nations, with special focus on China and Japan. Emphasis is placed on contemporary issues of sustainable development, environmental management, minority groups, human rights and gender relations. Prereq: GEO 152, 160, or 172, or consent of instructor.

**GEO 334 ENVIRONMENT, SOCIETY AND ECONOMY OF JAPAN** (3 credits) This course examines some of the major aspects of the society, culture, and economy of Japan. It discusses Japan's human and natural environments; natural hazards and disasters; cultural history and geography; economic and technological developments, their prospects and potentials; challenges to the management of environment and its resources; and Japan's role in the global economy. (Same as JPN 334)

**GEO 336 GEOGRAPHY OF SUB-SAHARAN AFRICA** (3 credits) This course focuses on the cultural and environmental geographies of the subcontinent, rural landscapes and cultures and environmental problems, the historical geography of precolonial and colonial Africa, and the social geography of contemporary economic development. Prereq: GEO 130 and GEO 152, 160, or 172.

### **GEO 365 SPECIAL TOPICS IN REGIONAL GEOGRAPHY: [Subtitle required]** (3 credits)

Offers coverage of world regions not usually covered in other geography courses, or in-depth examinations of specific subregions. Topics covered include: elements of climate and physical landscapes; political and economic systems and their historical development and dynamics; social and cultural processes and landscapes. May be repeated for a maximum of 6 credit hours under different subtitles. Prereq: Any 100-level geography course or consent of instructor.

### **GEO 406G FIELD STUDIES: [Subtitle required]**

(1-9 credits) Field-based, regionally specific study of selected topics in cultural, environmental, political, social, urban, or economic geography. May be repeated to a maximum of 18 credits with change in field site. Prereq: Consent of instructor.

### **GEO 409G GEOGRAPHIC INFORMATION SYSTEMS AND SCIENCE: FUNDAMENTALS**

(3 credits) Investigation of geographic information systems (GIS) and science (GIScience), including theory and applications areas. A major portion of the course will be based on use of a current widely-used GIS software system. Considered will be aspects of geographic data entry and editing, spatial analysis, and map development and display. Relationship of GIS to the Global Positioning System (GPS) and satellite generated data will be addressed. Prereq: Other GIS course, instructor permission, or graduate standing.

### **GEO 415 MAP INTERPRETATION** (3 credits)

An introduction to reading and interpreting maps. Special attention given to the study of physical and cultural geography as portrayed on large scale topographic maps. Emphasis on the relationship between the environmental setting and human activities, surveys and boundaries, transportation, urban and rural settlement and land use, and place names. Prereq: GEO 130 or 172 or consent of instructor.

**GEO 420G URBAN AND REGIONAL PLANNING** (3 credits) An analysis of urban and regional planning with emphasis on the contemporary urban and regional planning activities. Prereq: GEO 285 or consent of instructor.

**GEO 430G PHYSICAL GEOGRAPHY FOR TEACHERS** (3 credits) The basic content of this course is quite similar to GEO 130 Earth's Physical Environment, with emphasis on atmospheric processes of weather and climate, and terrestrial processes of landscape formation and alteration. The human element, in terms of impacts on the environment and the converse impact through pollution and natural hazards, presents a common theme throughout the class. The primary focus in this course, however, is in developing effective teaching techniques for levels K-12 by fostering an understanding of material, a knowledge of resource materials, and experience in applying physical geography to situations outside the classroom. Open to senior education majors and practicing instructors. Lecture, ten hours per week for four weeks.

**GEO 441G FLUVIAL FORMS AND PROCESSES** (3 credits) An examination of erosion, deposition, and sediment transport processes associated with flowing water, landforms associated with fluvial processes, and landscape

evolution in areas dominated by fluvial dissection and deposition. Prereq: GEO 241 or GLY 341.

**GEO 452G WORLD GEOGRAPHY FOR TEACHERS** (3 credits) Approaches to teaching geographic themes and concepts within the context of the world's major regions and countries in grade levels K-12. Addresses those issues and problems that affect world regions in the context of the following broad themes: location, place, movement, regions, and human-environment interactions. Among those topics discussed are the use and importance of maps and related resource materials in instruction, presentation of themes at different grade levels, and identification and utilization of a broad range of reference materials for student and teacher use. Lecture, ten hours per week for four weeks.

**GEO 455 ECONOMIC GEOGRAPHY** (3 credits) An examination of the geography of the capitalist global economy as it has developed unevenly. Emphasis will be placed on contemporary issues (such as industrial restructuring), and specific regions (such as Kentucky). Competing theories (classical, neoclassical, and marxian) aimed at explaining these patterns and processes are discussed and applied. Prereq: GEO 152, 160, or 172.

**GEO 460 URBAN GEOGRAPHY** (3 credits)

Examines the relationship between urbanization and the larger social and economic contexts within which city growth occurs. Surveys a range of theoretical perspectives on the internal socio-economic structure and built environment of cities, including the contributions by Chicago School, neoclassical, marxist, and postmodern theorists. Emphasis also placed on relevant environmental, social, and political problems of cities. Primary focus is on North American cities, but includes cross-cultural comparisons. Prereq: GEO 152, 160, 172, or 222, or consent of instructor.

**GEO 465 SPECIAL TOPICS IN HUMAN GEOGRAPHY: [Subtitle required]** (3 credits)

Offers coverage of issues and themes not covered in other geography courses, or in-depth examinations of specific issues and themes. Topics covered will commonly address emerging national and global issues of both general and scholarly interest. May be repeated for a maximum of 6 credit hours under different subtitles. Prereq: Any 100-level geography course or consent of instructor.

**GEO 475G MEDICAL GEOGRAPHY** (3 credits) An examination of the basic principles of the two major traditions of medical geography: disease ecology and medical care. Examined are the etiology, diffusion, and distribution of selected major diseases. Issues pertaining to the spatial-temporal distribution, accessibility and utilization of medical care resources are presented. Prereq: GEO 172 or consent of instructor.

**GEO 480 INTERNSHIP IN GEOGRAPHY** (3 credits) Provides supervised professional experience in public and private sector positions, and is intended to introduce students to the skills and working environments of careers in geography. Students should consult with a geography faculty member in advance of registering for this class. Prereq: Junior or senior standing in the major.

**GEO 490G AMERICAN LANDSCAPES** (3 credits) A review and analysis of America's vernacular landscapes. Topics include: the history of settlement by Europeans, Africans, and others; evolving political allegiances; and the expansion of agricultural and industrial technologies in the context of diverse physical environments. The role of political philosophy in landscape development and historic preservation will be highlighted. Prereq: GEO 172 or consent of instructor. (Same as ARC 589)

**GEO 505 PRACTICUM IN CARTOGRAPHY**

(3 credits) 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 405G; or GEO 506.

**GEO 506 INTRODUCTION TO COMPUTER CARTOGRAPHY** (3 credits) 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 workstation and desktop mapping programs. Prereq: GEO 305 or consent of instructor.

**GEO 508 GEOGRAPHIC INTERPRETATION OF AERIAL PHOTOGRAPHY** (3 credits) Aerial photography is commonly used as a means of collecting information and enhancing the analysis of the earth's landscapes. This course provides the technical background necessary to use aerial photography in a research setting and includes the application of the techniques in specialized fields, including agriculture, forestry, geology, and urban studies. Prereq:

GEO 305 or equivalent, or consent of instructor.

**GEO 509 APPLICATIONS OF GEOGRAPHIC INFORMATION SYSTEMS** (3 credits)

An extension of GEO 409G, this course covers GISs in greater detail. Material common to GISs will be covered in lecture, and students choose between becoming familiar with several GISs or making intensive use of one or two systems. Actual data will be used and actual spatial issues or problems will be addressed. The student will be responsible for data procurement and input, analysis design, and output production, including maps. Prereq: An introductory GIS course (e.g., GEO 409G) or consent of instructor.

**GEO 542 POLITICAL GEOGRAPHY** (3 credits) This course examines how space and political activities are related. Major topics will include: history of political geographic thought; geopolitics; nationalism and identity; the territorial state; regionalism; conflicts; borders and frontiers, and electoral geography, at a range of scales.

**GEO 544 HUMAN POPULATION DYNAMICS** (3 credits) 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 545 TRANSPORTATION GEOGRAPHY** (3 credits) This course addresses concepts critical to understanding transport systems. Economic, social and political as well as spatial perspectives to transport matters are emphasized. Problems, issues and trends facing the sector in both the developed and developing world along with appropriate responses are paramount. Topics include the bases and impact of transport, communications, mass transit, Third World cities, regional development, shipping, railway policies, and the dynamics of airline survival. Prereq: GEO 455 or consent of instructor.

**GEO 546 TOURISM AND RECREATION GEOGRAPHY** (3 credits) 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 credits) 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 560 INDEPENDENT WORK IN GEOGRAPHY** (3 credits) 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 [Subtitle required]** (3 credits) Discussion, readings, and paper 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 to a maximum of 6 credits under different subtitles. Prereq: consent of instructor.

**GEO 585 AGING AND THE ENVIRONMENT**

(3 credits) Explores the elderly person's changing experience of environment. Physiological, psychological and social changes are related to adjustment within urban and rural community environments, special housing for the elderly, and long-term care environments. Prereq: Graduate or advanced undergraduate standing and consent of instructor. (Same as FAM 585)

## ***University and Departmental Facilities***

Students with interests in geographic techniques (including GIS and computer cartography) will gain experience with and have access to a range of equipment housed in the Department's Center for Cartography and Geographic Information located in Miller Hall. The Center consists of the Gyula Pauer Cartographic Information Laboratory, the Cartography and Geographic Information Laboratory, and the Geographic Information Systems Laboratory.

The Gyula Pauer Cartographic Information Lab is located in Suite #5 and supports the production of publication quality four color and black and white maps and other graphics using Macintosh computers as well as various input and output devices. A "teaching lab" has eight Macintosh iMac computers where students learn to produce publication quality thematic maps employing the latest versions of popular graphics software. Typically, students input data employing a flatbed scanner, "heads-up" digitize the resultant raster image, apply a variety of cartographic illustration techniques, and output the finished graphics file to a color laser printer, color plotter, or a high resolution gray scale laser printer. Advanced students work on more robust (high end) Macintosh computers with large screen monitors and assist the Director of the Cartography Lab with contracted or "commissioned" projects. All of the computers are networked or linked to other campus resources via 100Mb fiber optic Ethernet connections and are part of the UK Computer network.

The Cartography and Geographic Information Laboratory in Room #3 consists of six Gateway Pentium III PCs running, primarily, Microsoft Windows NT 2000 OS. Three of these machines are accessible to undergraduate students for their course research needs. This lab has four light tables for traditional cartographic production as well as a color laser printer, E-size color plotter, legal sized color flatbed scanner, and a 35mm color slide scanner. A variety of graphics and office software is available. The computers in this lab are more powerful than those in the Geographic Information Systems Laboratory as students typically process larger graphics files here.

The Geographic Information Systems Laboratory is located in Room #4 and consists of six Gateway Pentium III PCs running Microsoft Windows NT 2000 OS. Graduate students conduct research and course work in geographic techniques in this lab. All of the computers in this lab have software served off a dedicated data server administered by the College of Arts and Sciences.

The department's students and faculty have access to the campus Convex Exemplar supercomputer for course work and research. The cartography program and the University's computer facility are closely interrelated. In addition to a host of statistical software packages on the mainframe computer, the University facility supports several microcomputer laboratories on campus. Undergraduates are encouraged to take advantage of these laboratories; information about their locations and operating hours may be obtained by contacting the Computing Center in McVey Hall and W.T. Young Library.

The university library system is the largest in the state. More than 2 million volumes and 24,000 periodicals and serials are available in the main W.T. Young Library or in one of fourteen branch libraries <<http://www.uky.edu/Libraries/>>. The geography holdings, including journals, are substantial. Among the more important items is a collection of the personal papers of Ellen Churchill Semple, an internationally respected geographer from Louisville who was President of

the Association of American Geographers (AAG) in 1921. The branch libraries of special interest to geographers include agriculture, architecture, mathematics, business and economics, medicine, engineering, and geology. The university is a regional repository for federal government publications and many of these documents are housed in the Government Publications Department. The Map Library in Margaret I. King houses a substantial map and aerial photograph collection including a large collection of old and rare maps. To augment faculty interest in Appalachia, the university Appalachian Studies Center and the W.T. Young Library curate a large collection of Appalachian materials.

Faculty members are involved in the activities of a number of professional associations, including the Association of American Geographers, the Southeast Division of the AAG, and the National Council for Geographic Education. Annually faculty and graduate students present papers at meetings of the above associations, of the Kentucky Academy of Sciences, and at meetings of scholars interested in Appalachia, Asian studies, regional science, regional development, cultural geography, medical geography, gerontology, social geography, political geography, geomorphology, pedology, hydrology, geographical information science, and cartography. Undergraduates commonly participate in these meetings, and students are encouraged to work with faculty on research projects and in presenting research findings at professional meetings.

### ***Departmental Activities***

Like any other academic department, Geography comes equipped with a fair share of committees. These committees include: Personnel Committee; Undergraduate Committee; Laboratory Advisory Committee; Semple Day, Awards, and Colloquium Committee; and External Relations Committee. The Undergraduate Committee examines matters pertaining to the undergraduate program, including curriculum and policy matters. The Director of Undergraduate Studies is a member of the committee. Undergraduate participation in this committee is especially encouraged, and participation in other committees and indeed all matters pertaining to the undergraduate program is necessary and vital for the program to be successful. Each year the Undergraduate Committee considers a number of topics that we hope will improve the program and enhance communication between undergraduate majors and minors, as well as between students and faculty.

The department periodically publishes a *Newsletter* that is available in published form and posted on the departmental web page. It contains information about past and forthcoming meetings, awards, publications, and news about alumni and former faculty. Undergraduates too should play a role in its publication, and interested individuals should contact the DUS or department chairperson.

Throughout the academic year the department hosts a number of colloquia and seminars led by members of the department faculty, graduate students, or by well-known visiting scholars from other institutions. You are invited to attend, and participate in, each of these activities. Dates, places, and times are posted regularly on department bulletin boards on the 14th floor of Patterson Office Tower.

Our major social event is the annual Ellen Churchill Semple Day, which is held in the spring semester (usually in April). Ms. Semple, a native of Louisville, Kentucky, is the state's best known geographer. She lived from 1863 to 1932 during which time she published widely and in 1921

was the first woman president of the Association of American Geographers. The day's activities include a presentation by a well-known scholar who is invited to be our guest speaker for an afternoon colloquium. An evening banquet is the culmination of the day's activities, and provides an opportunity to recognize outstanding achievement through the presentation of awards and formal initiation of members to Gamma Theta Upsilon, the international geographical honor society. Since this event showcases the accomplishments of our undergraduates, we strongly encourage all majors to attend.

The Department of Geography hosts an **8-week Summer Program in Oaxaca, Mexico** which is designed to take a small group of students to Mexico and give them valuable insights into environment, culture and the problematics of development. Course credit is earned while students analyze the problems facing this area, visit groups and interview people that have started to develop their own solutions to these problems. For further details go to: [www.uky.edu/ArtsSciences/Geography/Mexico/program.htm](http://www.uky.edu/ArtsSciences/Geography/Mexico/program.htm)

The Department of Geography also hosts a **Summer Field Seminar in Japan**. The field seminar provides a unique opportunity for students to conduct field studies and research on a variety of critical issues facing Japan's environment, culture and economy. Students participating in the Summer Field Seminar Program will register in two University of Kentucky three-credit courses.

Under faculty guidance each student will carry out a field-based research project from a variety of topics such as urban development, agricultural problems, migration, high-tech industries, environmental problems and natural hazards. Each student carries out a field-based research project culminating in a final written report. Students in the past have selected topics from fields such as urban development, land-use policy, migration, high-tech industries, environmental problems, westernization, impacts of automobiles, and natural hazards. For further details go to: [www.uwplatt.edu/~geography/japan](http://www.uwplatt.edu/~geography/japan)

### ***Undergraduate Social and Professional Activities***

*The University of Kentucky Geographic Society.* This society is an organization for undergraduate majors and minors that was founded in 1983. The purpose of the Society is to provide a social and academic meeting ground for students with common goals and interests. Each year the undergraduates elect officers for the Society, and members generally have monthly meetings and sponsor a number of social activities during the academic year. In the past they have sponsored field trips, guest speakers, spaghetti and pizza dinners, travel to national and regional professional meetings, study groups for exam week, and advising groups that tutor other students enrolled in geography classes. Society membership is an excellent way to develop one's professional interests as well as make friends. All majors are strongly urged to join the group and participate in its organized activities. The Director of Undergraduate Studies, or another designated faculty member, serves as the Society advisor.

*Gamma Theta Upsilon.* Gamma Theta Upsilon (GTU) is an International Geographical Honor Society that recognizes high academic achievement by geography undergraduates, graduates, and faculty. Established in 1931, this society has grown to include over 200 college and university chapters and over 50,000 members worldwide. The Sigma Chapter of the University of Kentucky was chartered in 1948, and the number of qualified undergraduate initiates has grown dramatically in recent years. Eligible students will be contacted by Professor John Watkins, who is the Sigma Chapter's Faculty Sponsor.

**Professional Organizations.** Undergraduate Majors are strongly urged to begin developing their professional interests early on. This would include joining an appropriate professional organization such as the Association of American Geographers (AAG), and the Southeastern Division of the Association of American Geographers (SEDAAG). Special student membership rates are available for nearly all professional organizations. For example, the membership cost for SEDAAG is only \$7.00, for which you receive the *Southeastern Geographer*, a regional scholarly research journal, a newsletter, and eligibility to participate in student honors sessions at the annual meeting. Many organizations, such as the AAG, sponsor several student award competitions and also provide career opportunity services at their annual meetings, where students can schedule interviews with potential employers.

**Personal Libraries.** "A few good books can go a long way...." We're not sure who originally said this, but it certainly holds true for undergraduate studies in geography. Although the campus' library system has a very good collection of books in the field, it is to the student's advantage to build a personal library, which will provide immediate information for tests, assignments, and research. We strongly recommend that you keep the textbooks used for classes meeting the department's premajor and major requirements (GEO 130, 152, 160, 172, 300, 305, 310) as well as books/readings used in other upper-division geography classes or 'related area' classes.

## **Honors and Awards**

Each year the Geography Department recognizes outstanding student achievement through awards given to majors. The awards announcement has become a traditional part of our annual Ellen Churchill Semple Day celebration each spring semester. You will notice that some awards require completion of special projects that therefore involve some planning if you wish to be considered. In addition to those listed below, the College of Arts and Sciences and the University sponsor numerous awards and scholarships. We suggest that you contact the Dean's Office for a list, and consult the section on awards in the University Bulletin.

### **Departmental Awards**

#### 1. The Joseph A. Schwendeman Award (named for the Department's first Chairperson)

**Requirements:** *Student must be a declared geography major with at least 60 hours of undergraduate course work and 18 hours in geography course credits. This award will be presented to the student with the highest grade point average for overall coursework as determined by Arts and Sciences or Registrar's records. In case of a tie, the award will go the student with the highest GPA in geography courses. The student's name will be engraved on a special plaque that is displayed in the departmental office.*

#### 2. Gyula Pauer Cartography Project Award (named for the Department's first Cartography Lab Director)

**Requirements:** *Student must be a declared geography major with at least 60 hours of undergraduate course work. Students who wish to be considered for this award should assemble a portfolio of maps prepared in conjunction with GEO 305, 405, 505, and/or 506, and appropriate internships or independent study courses they have taken. Each spring term, the Awards committee posts an announcement of the year's award competition with a deadline for submission of materials some time in late March. Students will be asked to submit a written statement outlining the circumstances in which the maps were prepared and personal biographical information. This award may not be given each*

year. Rather, the quality of work submitted is the principal criterion used in making the award. This means overall quality, indications of technical maturity, and an indication of potential as a professional. This recognition will include a cash award.

### 3. Ellen Churchill Semple Award for Outstanding Undergraduate Student Research Paper

*Requirements:* Student must be a declared geography major with at least 60 hours of undergraduate course work. Research papers prepared for geography courses or presented at regional or national professional meetings are eligible for consideration. The quality of the research problem and the writing and presentation of findings are the principal criteria used in making the award. This includes originality and relevance of the work, professional potential as indicated by the project, and letters of reference. Students should submit three copies of their paper, a statement of career goals and objectives, and letters of recommendation from at least two faculty members. As with the Cartography Project Award, a submission deadline in the spring semester will be posted, and the award may be given only when the quality of submitted materials is exceptional. This recognition includes a cash award.

### 4. Withington Human/Cultural Geography Award (Sponsored by Dr. William A. Withington, Professor Emeritus, University of Kentucky)

*Requirements:* This award, which may be awarded at each of the Bachelors, Masters, and Doctoral levels, recognizes outstanding student writing in topics following the traditional cultural/behavioral theme in geography. A submission deadline will be posted in the spring, and all students should contact the Director of Undergraduate Studies for guidelines. This recognition includes a cash award.

### 5. Thomas M. Geoghegan Award (Sponsored by the UK Geographical Society in memory of former undergraduate major Tommy Geoghegan)

*Requirements:* This award recognizes exceptional dedication and spirit to undergraduate studies in geography. Candidates are in their sophomore or junior year, and selection is made by the UK Geographical Society and the department's Awards Committee.

### 6. Departmental Honors (this award is given by Arts & Sciences at the discretion of the department)

*Requirements:* Candidates should be graduating seniors with GPAs of 3.5 or higher, both overall and within the department. Students should express their interest with graduating with Honors in a short letter to the Director of Undergraduate Studies before the last semester of course work begins. The department would like to recognize several students for Honors each year.

## **Nondepartmental Awards**

### 1. AAG Specialty Group Undergraduate Paper Awards.

There are 39 formal Specialty Groups within the Association of American Geographers that support interests ranging from Africa and Aging to Transportation and Urban. Many of these Groups sponsor student award competitions each year. Details on these Specialty Group Awards are provided in the AAG Newsletter. Students may also contact a faculty member in the department for additional information.

## 2. GTU Robert G. Buzzard Scholarship.

*Gamma Theta Upsilon provides this annual scholarship, in the amount of \$500, for superior scholars in geography. The Buzzard Scholarship is for undergraduate seniors who have been accepted to, and will be enrolled in a graduate program in geography. All active GTU members are eligible. Contact Professor John Watkins for information.*

## 3. GTU Benjamin F. Richason III Scholarship.

*Gamma Theta Upsilon provides this annual scholarship, in the amount of \$500, for undergraduate juniors and seniors having either career or graduate school aspirations in geography. The Richason Scholarship is based on service to GTU and the local chapter's department and noteworthy academic performance. All active GTU members are eligible. Contact Professor John Watkins for information.*

## **Department Faculty**

The geography faculty at the University of Kentucky includes 21 full time members and two teaching staff, including the Director of the Cartographic Laboratory, four geography faculty jointly appointed between the department and other units, and four adjunct faculty. Individual teaching and research emphases are on human and physical geography.

All faculty members in the department are available as undergraduate advisors, and students should feel free to contact any of them for assistance. A current list, including professional interests and contact information, is available via the departmental web site: (<http://www.uky.edu/AS/Geography/People/Faculty/>).

## **IS GRADUATE SCHOOL FOR ME?**

Those students who have done exceptionally well at the undergraduate level and whose goals include careers where additional course work is required will want to seriously consider entering graduate school. Employment in planning, government, and teaching, for example, are careers where a Master's, or possibly a Doctorate degree, are desirable or even necessary.

The Department of Geography at the University of Kentucky offers both the Master's (M.A.) and Ph.D. degrees. Minimum requirements for admission to the Master's program include an

undergraduate grade-point average of 3.0 (on a 4.0 scale), scores on the verbal and quantitative sections of the Graduate Record Examination, a written statement of professional goals, and three letters of reference. While obviously it is beneficial for a student to have majored or minored in geography, students who have other, but related majors will be considered for admission to the Master's program. Students will usually need at least four semesters to complete a Master's degree. The doctorate requires at least four years of full-time study beyond the baccalaureate. Further questions about admission requirements and degree programs should be directed to the department's Director of Graduate Studies.

In 2001, there were approximately 162 colleges and universities in the United States and Canada that offered the master's degree in geography, of which 85 offered the Ph.D. degree (62 Ph.D.-granting departments in the U.S. and 23 in Canada). The most recent edition of *Guide to Graduate Departments of Geography in the United States and Canada*, published by the Association of American Geographers (<http://www.aag.org/>) will be of interest to any student considering graduate school. A copy of this guide is available in the departmental office. Also of interest in finding out about different graduate schools will be the following website: <http://www.unc.edu/depts/geog/depts/northam-map.html>.

Students are strongly encouraged to talk with a departmental advisor or the DUS about graduate studies. From such people you can gain information about other graduate programs, application procedures, and deadlines. Begin planning early (early fall of the year before you hope to begin) if you are interested.

## USEFUL ADDRESSES

Department of Geography  
University of Kentucky  
1457 Patterson Office Tower  
Lexington, KY 40506-0027

*Department Chairman (Karl Raitz) (859) 257-6948*  
*Director of Graduate Studies (Richard Schein) (859) 257-2119*  
*Director of Undergraduate Studies (Jonathan Phillips) (859) 257-6950*  
*Departmental Office (859) 257-2931*

Undergraduate Admissions	Registrar's Office	Advising Center, A&S
University of Kentucky	University of Kentucky	University of Kentucky
100 Funkhouser Bldg	11 Funkhouser Building	257 Patterson Office Tower

Lexington, KY 40506  
(859) 257-2000

Lexington, KY 40506  
(859) 257-3161

Lexington, KY 40506  
(859) 257-8712

Career Center  
University of Kentucky  
Stuckert Bldg.  
Lexington, KY 40506  
(859) 257-2746

Association of American Geographers  
1710 Sixteenth Street, N.W.  
Washington, DC 20009  
(202) 234-1450  
<http://www.aag.org/>

***Be sure to visit our department's home page on the World Wide Web!!***

**<http://www.uky.edu/ArtsSciences/Geography/>**

**For appropriate forms go to:**

**<http://www.uky.edu/AS/Students/forms/pccrindex.html>**