

# ***DEPARTMENT OF GEOGRAPHY AND PLANNING***

## Faculty

### *Distinguished Service Professors*

John S. Pipkin, Ph.D. (Collins Fellow)  
Northwestern University

### *Professors*

Ray Bromley, Ph.D.  
Cambridge University  
Thomas L. Daniels, Ph.D.  
Oregon State University  
Floyd M. Henderson, Ph.D.  
University of Kansas  
Christopher J. Smith, Ph.D.  
University of Michigan  
Roger W. Stump, Ph.D.  
University of Kansas

### *Associate Professors*

Andrei Lapenis, Ph.D.  
State Hydrological Institute, Saint Petersburg  
James E. Mower, Ph.D.  
State University of New York at Buffalo  
Kwadwo A. Sarfoh, Ph.D.  
University of Cincinnati

### *Assistant Professors*

Youqin Huang, Ph.D.  
University of California, Los Angeles  
Catherine T. Lawson, Ph.D.  
Portland State University

*Adjuncts (estimated): 5*

*Teaching Assistants (estimated): 9.5*

The Department of Geography and Planning offers programs leading to the B.A., M.A., and M.R.P. degrees, a combined B.A./M.A. program, and an Undergraduate/Graduate Certificate in Geographic Information Systems and Spatial Analysis. Undergraduate students can major or minor in geography and the department also offers a major and minor in urban studies and planning. Geographers study the characteristics of space, location and place in the broader context of how people interact with both physical and human environments. Geography can be classified as both a natural science and a social science as it examines people and their environment and serves as a bridge between the physical and cultural worlds. Planning is a discipline and professional practice that deals with the form, organization, and orderly development of cities, suburbs, and rural areas.

Teaching and research in the department emphasize urban, social, physical, and cultural geography; city and regional planning; urban design; remote sensing; cartography and geographic information systems; environmental studies; climatology; computer and statistical models; area (regional) studies; urban and regional planning methods; economic development; small town and rural land-use planning. Members of the faculty have strong international links with China, Russia, Australia, and various countries in Africa, Latin America and Western Europe.

## Careers

The undergraduate programs provide background suitable for entry into a wide variety of business, educational and government occupations, as well for graduate or professional study in geography, planning, business, public administration, forestry, landscape architecture and other environmentally oriented programs. Career possibilities include: cartographers, remote sensing, and geographic information systems (G.I.S.) specialists; location and market area analysts; urban, regional, economic, and transportation planners; environmental scientists; international development specialists; urban design professionals; industrial and real estate developers; soil scientists; marketing and distribution managers; journalists; and travel and recreation specialists.

## Degree Requirements for the Major in Geography

General Program B.A.: A minimum of 36 credits, including, A Gog 101N; 102G or 102M; A Mat 108 (or an approved equivalent); A Gog 496; one course from A Gog 290, 293 or 385; and 20–21 credits of elective course work in Geography which must include: (1) a minimum of 9 credits at or above the 300 level; and (2) at least one course from the following: A Gog 160, (or 160G) 225 (or 225Z), 250, 270, 350, 354, (or 354Z) 356, and 365 (or 365Z).

## Honors Program

The department's honors program in geography is intended to recognize the academic excellence of its best students, to give them the opportunity to work more closely with the faculty, and to enhance their understanding of geographical theory and research.

Students may apply for admission to the program during their junior year or at the beginning of their senior year. To gain admission, students must have formally declared a major in geography and completed at least 12 credits of course work in the department. In addition, at the time of admission students must have an overall grade point average of at least 3.25, and of 3.50 in geography.

Students must complete a minimum of 48 credits, as follows:

A minimum of 42 credits in geography, including:

15–16 credits of required course work, including A Gog 101N, 102G or 102M, 396, 400 and one course from A Gog 290, 293 and 385.

6 credits of Senior Honors Thesis, A Gog 499A and 499B. During this two-semester sequence, the student will prepare an honors thesis based on original library and/or field research, under the supervision of a member of the department. Any faculty member knowledgeable in the topic may supervise an honors thesis. A written proposal describing the project must be approved by the adviser and the departmental Honors Committee by the beginning of the student's senior year. The thesis will be submitted for formal evaluation in the spring semester of the student's senior year, and must be approved by both the adviser and the Honors Committee.

20–21 credits of elective course work in geography which must include a) a minimum of 12 credits at or above the 300 level and b) at least one course of a regional nature from the following: A Gog 160M (or 160G), 225 (or 225Z) 250, 270, 350, 354, (or 354Z) 356, and 365 (or 365Z).

A minimum of 6 credits of foreign language or of an appropriate research skill, such as computing, statistics, or social research methodology as approved by the adviser and the Honors Committee.

If this requirement is met using a foreign language, the student must complete one year of college-level study of the language or achieve placement beyond the first year of that language.

For a research skill other than a foreign language, the student must complete 6 credits of relevant course work outside the department.

The departmental Honors Committee will review each student's progress at the end of each semester. Students whose work has not been satisfactory will be warned and, if warranted, dismissed from the program. Unsatisfactory work in a semester would include failing to maintain a satisfactory grade point average, having unjustified incomplete grades, or failing to make satisfactory progress toward completion of the honors program requirements. Upon completion of all honors program requirements with a grade point average of 3.50 in geography and 3.25 overall, students will be recommended by the Honors Committee for graduation with Honors in Geography.

## Combined B.A./M.A. Program

The combined B.A./M.A. program in geography provides an opportunity for students of recognized academic ability and educational maturity to fulfill integrated requirements of undergraduate and master's degree programs from the beginning of their junior year. A carefully designed program can permit a student to earn the B.A. and M.A. degrees within nine semesters.

The combined program requires a minimum of 138 credits, of which at least 30 must be graduate credits. In qualifying for the B.A., students must meet all University and college requirements, including the requirements of the undergraduate major described previously, the minor requirement, the minimum 90-credit liberal arts and sciences requirement, the general education requirements, and residency requirements. In qualifying for the M.A., students must meet all University and college requirements as outlined in the Graduate Bulletin, including completion of a minimum of 30 graduate credits and any other conditions such as a research seminar, thesis, comprehensive examination, professional experience, and residency requirements. Up to 12 graduate credits may be applied simultaneously to both the B.A. and M.A. programs.

Students are considered as undergraduates until completion of 120 graduation credits and satisfactory completion of all B.A. requirements. Upon meeting B.A. requirements, students are automatically considered as graduate students.

Students may be admitted to the combined degree program at the beginning of their junior year, or after the successful completion of 56 credits, but no later than the accumulation of 100 credits. A cumulative grade point average of 3.20 or higher and three supportive letters of recommendation from faculty are required for consideration. Students will be admitted upon the recommendation of the Graduate Admissions Committee of the department.

## Undergraduate Certificate Program in Geographic Information Systems and Spatial Analysis

This certificate program provides undergraduates with professional and technical training in geographic information systems (GIS) and associated techniques of spatial analysis. Geographic information systems are computer-based systems for storage, analysis, and display of spatial data. The disciplines of cartography, remote sensing and computer graphics are closely linked to the study of GIS. In conjunction with GIS, methods of spatial analysis may be used to study a wide range of problems, including resource management, land management for agriculture and forestry, urban planning, land use mapping, market area analysis, urban social analysis and a host of other applications.

The certificate requires 20 credit hours of undergraduate course work:

20 credits of core course work, including A Gog 290, 385, 414, 485, 496, and A Mat 108 (or an approved equivalent).

## Faculty-Initiated Interdisciplinary Major with a Concentration in Urban Studies and Planning

The Urban Studies and Planning Major is designed for students interested in a liberal arts education focusing on urban and suburban environments, and on urban, community and neighborhood development. The program of study mixes conventional classes with fieldwork and computer-based learning, and it requires considerable awareness of international, multicultural and policy issues. Students with training in Urban Studies and Planning may enter careers in housing and community development, real estate, local and state government, local economic development, or local planning. They can pursue further study in graduate or professional schools to specialize in city and regional planning, public policy, real estate, architecture, or landscape architecture.

General Program B.A.: A minimum of 36 credits including:

18-19 credits of required core courses: A Gog 125M, 225 or 225Z (formerly 120 or 120Z) A Pln 220 and any three from: A Gog 220, A Gog 321M/A Eas 321M/ A Lcs 321M, A Gog 324, A Gog 328/A Pln 328/A Wss 328, A Gog 330/A Pln 330, A Gog 480, A Pln 315Z, A Pln 320Z

Four planning courses at the 400 or 500 level. Registration in 500-level courses is limited to seniors who obtain the permission of the program director and of the course instructor.

Two courses in one cognate discipline: Anthropology (A Ant 119N, 334, 372 or 372Z), or Economics (A Eco 341 or 341Z, and 456Z), or Education (E Edu 427, and either 400 or 401), or History (A His 303Z, 317 or 317Z, 318 or 318Z), or Political Science (R Pos 321/R Pub 321, R Pos 323, R Pos 424), or Sociology (A Soc 373 and 375).

## Geography Courses

### **A Gog 101N Introduction to the Physical Environment (3)**

Introduction to the three main fields of physical geography (climatology, biogeography, and geomorphology) from an integrated earth systems viewpoint. The major world climate, vegetation, soil and landform regions are treated as process-response systems whose physical patterns and interrelationships, causes, and significance are examined. Includes assessments of the role of human impacts for global and regional change. [NS]

### **A Gog 102M Place, Space, and Landscape (3)**

Introduction to the main fields of human geography, (including population, cultural, economic, urban, and political geography), focusing on the disciplinary themes of place, space and landscape. The themes are applied at a variety of scales, from local to global. A Gog 102G is a writing intensive version of A Gog 102M; only one may be taken for credit. [GC SS]

### **A Gog 102G Place, Space, and Landscape (4)**

A Gog 102G is a writing intensive version of A Gog 102M; only one may be taken for credit. [GC SS WI]

### **A Gog 125M The American City (3)**

Reviews social, economic, political and physical characteristics of American cities resulting from key events (e.g. industrial development, European immigration, suburbanization, the Civil Rights Movement). Examines the relationship between these events and current urban issues. Specific topics include: de-industrialization, women in the workforce, homelessness, poverty, environmental degradation, health care, and AIDS. Considers the influence of race, ethnicity, class and gender factors on the character of cities. [DP US\*]

### **A Gog 160M (= A Eac 160M) China: People and Places in the Land of One Billion (3)**

An introductory course dealing with the human and physical geography of China. After a brief survey of China's historical geography and development, the course focuses on post-liberation China and the urban, economic, social, and demographic problems associated with modernization. A Gog 160Z & A Eac 160Z are writing intensive versions of A Gog 160 & A Eac 160; only one of the four courses may be taken for credit. [IL OD SS]

### **A Gog 160G (= A Eac 160G) China: People and Places in the Land of One Billion (3)**

A Gog 160G & A Eac 160G are writing intensive versions of A Gog 160 & A Eac 160; only one of the four courses may be taken for credit. [OD IL SS WI]

**A Gog 180 (= A Eas 180) Asian America (3)**

This course examines the history of the Asian experience in the United States (especially that of the Chinese, Japanese, Korean, and Southeast Asian communities). Topics include immigration, legal status, the transformation of Asian-American communities, their relationship with their native lands, and Asian-American self-representation in literature and film. [DP US\*]

**A Gog 201 (= A Geo 201) Environmental Analysis (3)**

Uses laboratory work and local field excursions to give students “hands-on” experience in physical geography and environmental sciences. Focuses on human impacts on the environment and on problems of environmental contamination. Prerequisite or corequisite: A Gog 101N. [NS]

**A Gog 220M Introductory Urban Geography (3)**

Introductory survey of findings and theory of urban geography, which deals with the form and function of cities. Major themes include: history of urban form; spatial structure of modern urban systems; and the internal structure of the city, emphasizing social and economic patterns. [SS]

**A Gog 225 (formerly A Gog 120) World Cities (3)**

Introduction to the geography of cities around the world and to the role of cities in the world system. Covers: origins and spread of urbanism in different cultural settings; levels of urbanization in space and time; urban form and land-use; rural-urban interaction; city systems and megacities; distinctive features of contemporary American cities. A Gog 225Z is the writing intensive version of A Gog 225; only one of the two courses may be taken for credit. [GC]

**A Gog 225Z (formerly A Gog 120Z) World Cities (4)**

A Gog 225Z is the writing intensive version of A Gog 225; only one of the two courses may be taken for credit. [GC WI]

**A Gog 240 Patterns of American Immigration (3)**

This course provides a survey of immigration to the United States, focusing on key characteristics of immigrant groups and their cultures, in relation to both their places of origin and their destinations in this country. [DP US\*]

**A Gog 250 (= A Lcs 250) Geography of Latin America (3)**

An introduction to the geographical diversity of Latin America, reviewing the Continent’s physical features, natural resources, societies, economies and politics, and relating them to its history and cultural traditions. Particular attention will be given to rural and urban living conditions, social and regional inequalities, population distribution, internal and international migration, and socioeconomic development issues. A Gog 250Z & A Lcs 250Z are writing intensive versions of A Gog 250 & A Lcs 250; only one of the four courses may be taken for credit. May not be offered in 2003-2004.

**A Gog 250Z (= A Lcs 250Z) Geography of Latin America (4)**

A Gog 250Z & A Lcs 250Z are writing intensive versions of A Gog 250 & A Lcs 250; only one of the four courses may be taken for credit. May not be offered in 2003-2004. [WI]

**A Gog 270 (= A Aas 270) Geography of Africa (3)**

Geographic analysis of the continent of Africa. The diversity of the African continent will be stressed by examining its physical environment, resources, social, cultural, economic, and political systems. Emphasis upon the demographic as well as spatial planning aspects of geography. Only one of A Gog 270 & A Aas 270 may be taken for credit.

**A Gog 290 Introduction to Cartography (4)**

An introductory course in the theory and techniques of map production. Reviews and discusses the elements of cartographic theory including the relationships between human perception and map symbology. Students will produce a series of hand-drafted maps over the duration of the course.

**A Gog 293 Use and Interpretation of Aerial Photographs (3)**

Interpretation and examination of air photos for geographic investigations. Topics include the development of the evaluation of photo keys, thematic mapping, and analysis of landscape elements. May not be offered in 2003-2004.

**A Gog 304 Climatology (3)**

Survey of the fundamentals of climate system. Particular attention is paid to the explanation rather than the description of atmospheric and oceanic processes. Emphasis is given to the application of concepts of environmental physics to selected natural objects: terrestrial planets, the World Ocean, continents, cities, vegetation, animals and humans. Energy balance study at different temporal and spatial scales is used as a methodological tool to provide a better understanding of such concepts as the “greenhouse” effect, climate sensitivity, photosynthesis, the metabolism of animals, survival of humans in different climates, etc. Work on the Internet with remote weather stations and climate related resources is a part of the course project. Prerequisite(s): A Gog 101N or A Atm 103 or permission of instructor. [NS]

**A Gog 310N (= A Bio 311N and U Uni 310N) World Food Crisis (3)**

Interdisciplinary approach to understanding world food problems through analyses of social, political, economic, nutritional, agricultural, and environmental aspects of world hunger. Faculty from several departments in the sciences, humanities, and social and behavioral sciences present views from various disciplines. A Gog 310N, A Bio 311N, and U Uni 310N are equivalent courses; only one of the three courses may be taken for credit. Prerequisite(s): junior or senior class standing or permission of instructor.

**A Gog 317 (= A Geo 317) Geomorphology (3)**

A systematic introduction to the study of landforms and the processes that shape them. Laboratory work and field trips are part of the course. Prerequisite(s): A Gog 101N; A Geo 100N or 100F or 105N; or permission of instructor. May not be offered in 2003-2004.

**A Gog 321M (= A Lcs 321M and A Eas 321M) Exploring the Multicultural City (3)**

This course will explore the human dimensions and implications of ethnic diversity in the United States, focusing on New York City. The course utilizes a variety of methods to introduce students to the multicultural city, beginning in the classroom but ending with fieldwork in a specific New York neighborhood. A Gog 321M is equivalent in content to A Lcs 321M and A Eas 321M; only one of the three courses may be taken for credit. Prerequisite(s): A Gog 102M or 102G or 120Z or 125M or 160M or 160G or 220M, or 240. May not be offered in 2003-2004. [OD SS]

**A Gog 324 The City on Computer (3)**

An introduction to the use of geographic technology in studying urban features and patterns. The course provides a conceptual bridge between introductory courses in urban geography and specialized courses in geographic techniques. Students will acquire familiarity with relevant software, data sources and methods of analysis through regular computing laboratory assignments. Prerequisite(s): any two of the following: A Gog 125M, 220M, 225/225Z, A Pln 220M.

**A Gog 328 (= A Pln 328 and A Wss 328) Gender, Space, and Place(3)**

Power relations and categories of social difference are reflected by dramatic inequalities in local environments, and in the quantity and quality of available space. This course examines, through the lenses of feminist geography and planning, how space is invested with social meaning. It discusses how the built environment affects and reflects relations of gender, sexuality and ethnicity, and considers how these social classifications produce “geographies of difference.” Gender is also related to nationalism, colonialism, “geographic skills,” and feminist research methodologies. Prerequisite(s): A Gog 125 or A Pln 220 or permission of instructor. May not be offered in 2003-2004.

**A Gog 330 (=A Pln 330) Principles of Environmental Management (3)**

Examines issues and problems arising from the interactions between humans and their physical environment. Explores the degradation of environmental systems resulting from human use and modification, as well as the impact of environmental processes on human systems. The policy options for dealing with environmental issues and problems are investigated. Prerequisite(s): A Gog 101N and either A Gog 201 or A Pln 220; or permission of instructor. [OD]

**A Gog 344 World Populations: Past, Present and Future (3)**

Geographical perspectives on human populations. Uses the main organizing ideas of geography to understand the past, present and future distribution of population. Prerequisite(s): junior or senior class standing, or permission of instructor. [OD]

**A Gog 345 Economic Geography (3)**

Examines the spatial patterns of economic activity, including agriculture, manufacturing retail and wholesale trade, transportation, and the service sector. Location theory, models and empirical case studies are used to assess the spatial processes “explaining” the distribution patterns of economic activity. Economic development strategies at the state and regional levels are also investigated.

**A Gog 350 (= A Eac 350) Urban Development in China (3)**

Provides a comprehensive understanding of urban development in China. Reviews the history of urban development in China and examines the demographic, social, economic, and cultural dimensions of the urbanization process. Analyzes the emerging urban land and housing markets, and the changing urban landscape.

**A Gog 354 (= A Lcs 354) Environment & Development (3)**

A survey of international development issues, focusing on the impact of economic growth, population growth, and increased consumption of natural resources on global and local environments. This course focuses primarily on the poorer countries of the world, and particularly on tropical environments. It discusses issues of deforestation, desertification, and increased vulnerability to man-made and natural hazards. Prerequisite(s): A Gog 101N or 102M or 102G, , or permission of instructor.

**A Gog 356 Geography of the United States (3)**

A systematic treatment of the physical, economic and cultural geography of the United States; selected regional problems of land utilization and of geographic adjustments. Prerequisite(s): junior or senior class standing, or permission of instructor. May not be offered in 2003-2004. [US\*]

**A Gog 365 Geography of Europe (3)**

Overview of the physical and human geography of Europe considered as a whole, followed by a more intensive discussion of selected topics on the Mediterranean countries, the British Isles, France, Germany, and the countries of east-central Europe from Scandinavia to the Balkans. Cultural, political, and economic issues will be emphasized, with analysis of contemporary matters in their historical context. A Gog 365Z is the writing intensive version of A Gog 365; only one may be taken for credit. Prerequisite(s): junior or senior class standing or permission of instructor. May not be offered in 2003-2004.

**A Gog 365Z Geography of Europe (3)**

A Gog 365Z is the writing intensive version of A Gog 365; only one may be taken for credit. Prerequisite(s): junior or senior class standing or permission of instructor. May not be offered in 2003-2004. [WI]

**A Gog 385 Introduction to Remote Sensing of Environment (4)**

Introduction to the concepts and interdisciplinary applications of remote sensing. The basic principles of theory and practice are presented for earth resource management. Photographic and nonphotographic sensors are examined. Visual and digital image analysis techniques are introduced. Students will interpret color infrared, multispectral, radar, and other sensor imagery for a variety of purposes. Prerequisite(s): junior or senior class standing, or permission of instructor.

**A Gog 390 Intermediate Cartography (3)**

Techniques of reproduction graphics with emphasis on map planning and construction. Utilization of half-tone, color-key, and other production processes as models of cartographic expression. Prerequisite(s): A Gog290. May not be offered in 2003-2004.

**A Gog 404 Topics in Physical Geography (1-4)**

In-depth examination of a significant topic in Physical Geography. May be repeated up to a limit of 9 credits when topics differ. Prerequisite(s): A Gog101N or permission of instructor.

**A Gog 405 Topics in Human Geography (1-4)**

In-depth examination of a significant topic in Human Geography. May be repeated up to a limit of 9 credits when topics differ. Prerequisite(s): A Gog102M or 102G or permission of instructor.

**A Gog 406 Topics in Geographic Information Systems (1-4)**

In-depth examination of a significant topic in Geographic Information Systems (cartography, GIS, remote sensing, global positioning, etc.) May be repeated up to a limit of 9 credits when topics differ. Prerequisite(s): A Gog290 for cartography topics; A Gog 496/A Pln 456 for GIS topics; A Gog 385 for remote sensing topics; or permission of instructor.

**A Gog 414 Computer Mapping (3)**

Introduces the student to the fundamental techniques and applications of automated map production. Lectures include discussions of algorithm and program development as well as existing software packages. Students will also be introduced to current problems and research in automated map production. Covers a wide range of topics including but not limited to automated drafting, computer generated projections, coordinate systems and transformations, data structures and discussions of algorithms for specific applications. Prerequisite(s): A Gog 290 or permission of instructor.

**A Gog 417 Geography Internships (3-6)**

Work in cartography, remote sensing, environmental, or other offices to gain preprofessional experience in applied geography. Carried out under the joint supervision of faculty and the host office. **Internships are open only to qualified juniors and seniors who have an overall grade point average of 2.50 or higher.** Prerequisite(s): permission of instructor. S/U graded.

**A Gog 431 Climatic Change (3)**

The evolution of the global climate is explained through the analysis of feedback loops between different components of the climate system; atmosphere, oceans, living organisms, the carbon cycle, volcanic activity and changes in solar luminosity. Emphasis is placed on the study of climate sensitivity to global factors, and application of this knowledge to the forecast of future human-produced climatic changes. Prerequisite(s): A Gog 101N or A Atm 103 or permission of instructor.

**A Gog 440 Political Geography (3)**

Examines the spatial character of political processes at the local, national and global scales. Major themes include: territory, identity and the state; localism, regionalism and separatism; colonialism and decolonization; geopolitics; and, internal and international political conflicts.

**A Gog 442Z Cultural Geography (3)**

Examination of current concepts and research in cultural geography through a detailed survey of one of its regional or thematic subfields. Examples of the latter include: the cultural geography of North America, the cultural landscape, the geography of religion. May be repeated once for credit. Prerequisite(s): A Gog102G or 102M or permission of instructor. [WI]

**A Gog 447 Geography of Development and Underdevelopment (3)**

An analytical survey of "Third World" development theories and the development strategies they inspire. Topics covered include traditional concepts of natural and human resources identification and use, geographic diffusion, modernization, and economic growth, as well as challenges to the prevailing ideas and practices such as dependency, sustainable development, and community empowerment. Prerequisite(s): junior or senior standing, or permission of instructor. May not be offered in 2003-2004.

**A Gog 450 Independent Study in Geography (1-6)**

The student will work independently on a directed reading, field survey, or individual research project in geography. A member of the faculty will authorize and advise the project, which will be dimensioned in proportion to the number of credits being taken. The student will submit a final report for assessment. May be repeated for credit to a total of 6 credits. Prerequisite(s): 9 credits in Geography, Junior or Senior class standing and permission of instructor.

**A Gog 470Z (= A Eac 470Z) China After Deng Xiaoping (3)**

This course examines some of the issues associated with modernization and economic development in Post-Deng Xiaoping China. The course focuses on the era of economic reform associated with Deng, and is particularly concerned with the social, spatial and political ramifications of China's entry into the global economy. Prerequisite(s): any of the following: A Eac 170, or A Gog 102G/M or A Gog 160/160Z or A Gog 220M. [WI]

**A Gog 479 Fundamentals of Applied Global Positioning Systems (GPS) (3)**

This course introduces students to the fundamentals of Global positioning system technology as applied to the geosciences. Topics include background and history, signal structure, resolution, accuracy, data collection techniques, basic geodesy, projections and data, and applications. Field work and lab exercises complement lecture material.

**A Gog 480 Advanced Urban Geography (3)**

Explores some of the theoretical debates and empirical research conducted by geographers and planners interested in the contemporary city. Adopts a political/economy approach to the investigation of social problems currently pervasive in the capitalist city, including: inner city poverty and the underclass, homelessness, gender-related issues, racial segregation; and crime problems. Prerequisite(s): A Gog 102G or 102M or A Gog 210 or A Gog 220M. May not be offered in 2003-2004.

**A Gog 485 Advanced Remote Sensing of Environment (3)**

A variety of remote sensing applications and techniques are discussed with reference to geography, planning, and related disciplines. Natural resource classification systems, mapping strategies, and data collection steps are analyzed through empirical exercises. Fundamental concepts of digital image analysis including theory, processing, enhancement, and information extraction are given particular attention. Prerequisite(s): A Gog 385.

**A Gog 495 (= A Pln 455) Introductory MapInfo (1)**

Provides students who have, or are developing, a knowledge of Geographic Information Systems (GIS) fundamentals, and who have, or are developing, a knowledge of ArcView software, with a comparable knowledge of MapInfo software. Enables students to use and apply MapInfo to the solution of a wide range of data management, cartographic and public policy programs.

**A Gog 496 (= A Pln 456) Geographic Information Systems (3)**

Introduction to the structure, design, and application of data base management systems designed to accept large volumes of spatial data derived from various sources. The student will learn how to efficiently store, retrieve, manipulate, analyze, and display these data according to a variety of user-defined specifications. Prerequisite(s): Familiarity with maps and coordinate systems.

**A Gog 498 GIS Management (3)**

This course provides students with the fundamentals of GIS diffusion theory, organizational theory and management, GIS implementation, spatial data sharing and trends in national data structures. Lectures are complemented by case studies chosen by the student to test ideas discussed in class. Prerequisite(s): A Gog 496 or A Pln 456. May not be offered in 2003-2004.

**A Gog 499A & B Senior Honors Thesis (3,3)**

Preparation of an honors thesis under the direction of a member of the Department of Geography and Planning. The student must submit a formal proposal describing the project, and the final thesis must be approved by both the adviser and the Honor's Committee. Prerequisite(s): admission to the honors program.

## Planning Courses

Planning is a broad function of the public and private sectors directed at guiding urban and regional development, analyzing physical, social, economic, and environmental issues, and preparing policy alternatives. Many planners work in the public sector, evaluating problems and suggesting solutions in the domains of transportation, housing, economic and community development, urban design, neighborhood revitalization, environmental issues, and policy analysis. Others work in the private and nonprofit sectors, serving as consultants, researchers, real estate developers, community development promoters, and specialists in local economic development. The department administers an interdisciplinary undergraduate minor program in urban studies and planning, and offers undergraduate courses in planning. These courses provide students with insights on urban and regional development from a broad, liberal arts viewpoint, as well as providing

background and tools for further study and the professional practice of planning.

**A Pln 220M Introductory Urban Planning (3)**

Introduces the basic concepts and techniques of urban planning and provides an overview of planning history. Covers land use, transportation, environment, urban design, economic development and social issues. Explores the connections between planning and politics, economic restructuring, social change, and competing ideologies of urban form. [SS]

**A Pln 315Z State and Regional Planning (3)**

Reviews the theory and practice of state and regional planning in the United States, evaluating a range of contemporary examples. Covers metropolitan regional planning, river basin planning, regional water resource management, state planning and growth management, and environmental impact assessment. Prerequisite(s): A Pln 220M.

**A Pln 320 International Urban Planning (3)**

Provides a general introduction to urban planning as it is practiced in various countries around the world. For each of the countries covered there will be a discussion of the changing context of urbanization and economic development within which contemporary urban planning has emerged. A Pln 320Z is the writing intensive version of A Pln 320; only one of the two courses may be taken for credit. Prerequisite(s): Either A Gog 220M or A Pln 220M or permission of instructor. [GC OD]

**A Pln 320Z International Urban Planning (3)**

A Pln 320Z is the writing intensive version of A Pln 320; only one of the two courses may be taken for credit. Prerequisite(s): junior or senior class standing, or permission of instructor. [GC OD WI]

**A Pln 328 (= A Gog 328 and A Wss 328) Gender, Space and Place (3)**

Power relations and categories of social difference are reflected by dramatic inequalities in local environments, and in the quantity and quality of available space. This course examines, through the lenses of feminist geography and planning, how space is invested with social meaning. It discusses how the built environment affects and reflects relations of gender, sexuality and ethnicity, and considers how these social classifications produce "geographies of difference." Gender is also related to nationalism, colonialism, "geographic skills," and feminist research methodologies. Prerequisite(s): A Gog 125 or A Pln 220 or permission of instructor. May not be offered in 2003-2004.

**A Pln 330 (=A Gog 330) Principles of Environmental Management (3)**

Examines issues and problems arising from the interactions between humans and their physical environment. Explores the degradation of environmental systems resulting from human use and modification, as well as the impact of environmental processes on human systems. The policy options for dealing with environmental issues and problems are investigated. Prerequisite(s): A Gog 101N and either A Gog 201 or A Pln 220; or permission of instructor. May not be offered in 2003-2004. [OD]

**A Pln 420 Introduction to Real Estate Development (3)**

A general introduction to real estate development as an important element in the urban economy and as a field of urban planning activity. Covers legal, economic, and financial perspectives. Emphasis is placed on market analysis and mortgage finance for residential real estate. Prerequisite(s): A Pln 220M, or permission of instructor.

**A Pln 425 Community Development and Neighborhood Planning (3)**

Examines housing needs of households in urban areas. Assesses the relationship between housing and other major challenges to urban households (e.g. poverty, unemployment, infant mortality and neighborhood decline). Considers both traditional and more innovative strategies that seek to address housing needs. Prerequisite(s): A Gog 125M or A Pln 220M.

**A Pln 426 Community Development and Neighborhood Planning Workshop (1-4)**

Provides students an opportunity to obtain "real world" experience assisting a local community or neighborhood group. Students work under supervision on both team and individual projects that address specific needs of communities (e.g. housing, education, public safety, transportation, health) in the Capital District. Prerequisite(s): A Pln 425. May not be offered in 2003-2004.

**A Pln 430 Environmental Planning (3)**

Explores the theory and practice of environmental planning and examines larger issues of human use, exploitation, and protection of the landscape. Draws from the practice of landscape architecture and community planning and outlines the principles of environmentally-based land-use planning. Prerequisite(s): A Pln 220M or permission of instructor.

**A Pln 432 Parks, Preservation, and Heritage Planning (3)**

Explains the rise of heritage planning as a unifying theme to link environmental, land-use, and community planning. Integrates parks, greenways, historic preservation, and cultural resources as means to develop and preserve the distinctive character of local communities, to foster local pride, and to promote tourism. Discusses the origins, organization and management of heritage programs, and the special problems of heritage planning for minority groups and bygone cultures. Prerequisite(s): A Pln 220M, or permission of instructor.

**A Pln 436 Landscape Planning (3)**

Explores the theory and practice of large-scale landscape planning and examines issues of human use, exploitation, and protection of the landscape. Draws from the practice of landscape architecture and community planning and outlines the principles of environmentally-based land-use planning. Prerequisite(s): junior or senior class standing, and A Pln 220M and A Gog 101N, or equivalent courses. May not be offered in 2003-2004.

**A Pln 437 Landscape Planning Workshop (3-4)**

Creation of a landscape plan for a local or regional agency or nonprofit. Plan will balance protection of the natural and cultural environment with the need for human uses of the landscape including community growth and development. Draws from the practice of landscape architecture and community planning, and includes field research, community consultation, report writing and mapping. Students serve as team members in the preparation of the plan. Prerequisite(s): junior or senior class standing, A Pln 220M and Gog 101N or equivalents, and GIS (A Gog 496/A Pln 456 or proficient ArcView or MapInfo user skills). May not be offered in 2003-2004.

**A Pln 443 Transportation History and Policy (3)**

Examines the history of transportation systems and policy in the United States. Emphasis on understanding the political and social forces that influence decision-making at the federal, state, and local levels. The roles of corporate investment, and of citizen interests and participation are examined. Prerequisite(s): A Pln 220M or permission of the instructor.

**A Pln 449 Bicycle and Pedestrian Transportation Planning (3)**

Covers planning, design, implementation and management of systems of non-motorized transportation, particularly the 'human-powered' modes of bicycling and walking. Involves students in the design of bikeways, walkways, intersections and parking facilities, and in the evaluation of alternative transportation technologies. Prerequisite(s): A Pln 220M or permission of instructor.

**A Pln 451 Introductory Computer Aided Design (1)**

Provides an introduction to Computer Aided Design and Drafting (CADD), enabling students to understand the basic principles of CADD and to use CADD software.

**A Pln 452 (formerly A Pln 450) CADD in Planning (3)**

Applies the concepts and theories underlying Computer Aided Design and Drafting (CADD) to site planning, urban design and land-use mapping, including 2D concept diagrams, site plan detail and 3D perspectives. Also reviews rendering, 4D applications, visualization, and CADD management.

**A Pln 455 (A Gog 495) Introductory MapInfo (1)**

Provides students who have, or are developing, a knowledge of Geographic Information Systems (GIS) fundamentals, and who have, or are developing, a knowledge of ArcView software, with a comparable knowledge of MapInfo software. Enables students to use and apply MapInfo to the solution of a wide range of data management, cartographic and public policy programs.

**A Pln 456 (= A Gog 496) Geographic Information Systems (3)**

Introduction to the structure, design, and application of data base management systems designed to accept large volumes of spatial data derived from various sources. The student will learn how to efficiently store, retrieve, manipulate, analyze, and display these data according to a variety of user-defined specifications. Prerequisite(s): familiarity with maps and coordinate systems.

**A Pln 474 Site Planning (2)**

Introduction to the theory, rationale and practice of site planning. Traces the design process from program to construction detailing and specification. The review and regulatory context are considered. Ramifications of design choices are explored including effects on ambiance, perception of space and form, human comfort, function of materials, and effects on costs. Prerequisite(s): A Pln 220M or permission of instructor. May not be offered in 2003-2004.

**A Pln 475 Urban Design (3)**

Introduction to the theory, rationale and practice of urban design. Covers design and layout criteria, regulation and review, and case studies of the urban design process. Prerequisite(s): A Pln 220M or permission of instructor.

**A Pln 476 Urban Design and Site Planning Workshop (1-4)**

Involves students in supervised team projects doing practical urban design and/or site planning work. Through investigation, fieldwork and discussion, student groups prepare proposals for the design and layout of a specific site or axis. Prerequisite(s): A Pln 220M.

**A Pln 485 Topics in Planning (1-4)**

Selected topics in specific sub-fields of planning. Topics will be indicated in the course schedule and in departmental announcements. May be repeated once for credit. Prerequisite(s): A Pln 220M and junior or senior class standing.

**A Pln 490A & B Planning Internship (3, 3)**

Provides students with practical work experience in the general field of urban and regional planning. Internship placements are typically with federal, state, or local government agencies, consultancy firms, community development corporations, or private, voluntary or political action groups specializing in a specific sub-field relating to planning. Supervisor's reference and final report required. **Internships are open only to qualified juniors and seniors who have an overall grade point average of 2.50 or higher.** Prerequisite(s): A Pln 220M and permission of instructor. *S/U* graded.

**A Pln 497 Independent Study in Planning (2-4)**

Provides an opportunity for students with a strong interest in a specific topic or sub-field in urban and regional planning to do directed reading, independent study or research with faculty supervision. May be repeated once, but not for more than a total of 6 credit hours. Prerequisite(s): A Pln 220M and junior or senior class standing.