Appalachian State University
Department of Geography and Planning
Undergraduate Program Brochure
2009-2010

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GEOGRAPHY: FIND YOUR PLACE

You want to understand the world. Why not start with a river, a city, a mountain, a road, and follow it to the ends of the earth? Geography asks the big questions—How? Why? What if?—and lets you answer them with advanced technology and a solid knowledge of the world in which you live.

- Manage natural and urban environments
- Analyze the evolving relationship between people and places
- Plan transportation routes
- Investigate sustainable land use worldwide
- Create Geographic Management Systems for industries and government agencies
- Help understand and restore natural ecosystems
- Geographers make a difference!

The world is changing rapidly. Where people once focused on their neighborhood, their town, their country, they are now adopting a more global perspective. They are learning that the earth’s resources are not limitless and that the impact of human beings on the environment is far greater than had been anticipated as little as a decade ago.

The Job Market Is Hot. More geographers than ever before are employed in exciting jobs, using skills in cultural, regional and physical geography as well as modern technologies that have revolutionized the workplace. Geographers use satellite images, Geographic Information Systems (GIS), Global Positioning Systems (GPS), and remotely sensed data, both in the field and in their offices and laboratories. Interactive, real-time geographic technologies and database systems will increasingly power both commerce and government in the years ahead.

All levels of government hire geographers. They may work for local and state economic development or planning offices, conduct research in recreation and park use, or map land use from satellite images. Many geographers at the federal level work for the National Imagery and Mapping Agency, the Environment Protection Agency, the Central Intelligence Agency, the U.S. Geological Survey, and the Department of State.

Private Sector Firms need geographers who can develop and apply geographic ideas and technologies to complex real world systems. Geographers also conduct marketing studies, plan transportation routes, understand international markets, and determine environmental risks associated with site locations. From transportation agencies to electric utility companies, and from forestry to telecommunications, real-time mobile interactive geographic technologies and databases are emerging as the backbone of large-scale operations management systems for industries with distributed assets and mobile workforces.

Education needs K-12 teachers with solid geography backgrounds, since all states have recently introduced higher standards for geography instruction. At the college level, exciting new courses attract large numbers of students, and the demand for faculty with regional specialties or theoretical and research capabilities is strong.

Adapted from “Careers in geography” a brochure put out by the Association of American Geographers
Planning, also called urban planning or city and regional planning, is a dynamic profession that works to improve the welfare of people and their communities by creating more convenient, equitable, healthful, efficient, and attractive places for present and future generations. Planning helps community members envision the direction their community will grow and will help them find the right balance of new development and essential services, protection of the environment, and innovation change.

**Is Planning for you?**
- Are you interested in positive social, economic, environmental, and physical change?
- Do you want to work with people from various backgrounds to develop a better community?
- Do you like to communicate with others about ideas, programs, and plans?
- Are you challenged by complex problems, and excited about being part of a cooperative process to devise solutions to those problems?
- Do you think about the future—about what could be, rather than what is?

A degree in Community and Regional Planning prepare students for careers that involve developing comprehensive plans and programs for use of land and physical facilities of local jurisdictions, such as towns, cities, counties, and metropolitan areas. Planners develop long- and short-term plans to use land for the growth and revitalization of urban, suburban, and rural communities, while helping officials make decisions concerning social, economic, and environmental problems. In large organizations, planners usually specialize in a single area, such as transportation, demography, housing, historic preservation, urban design, environmental and regulatory issues, or economic development. In small organizations, planners do various kinds of planning.

**U.S. News & World Report’s Best Careers 2009** identifies urban and regional planning as one of the top thirty careers in the U.S. based on job outlook, training, satisfactions, prestige, and pay. (www.usnews.com)

**Planning Careers:**
- Community Development
- Land Use & Code Enforcement
- Transportation Planning
- Urban Design
- Housing
- Environmental/Natural Resource Planning
- Economic Development
- Planning Management/Finance
- Historic Preservation
- Community Activism Empowerment

Department of Geography and Planning
Date Founded: 1966
Graduate Program Founded: 1968
Degrees Offered: B. A. in Geography, B. S. in Geography (concentrations in general geography and geographic information systems), B. S. in Community and Regional Planning, M. A. in Geography with liberal arts option (thesis or applied).
Undergraduate Degrees Granted (7/1/08—6/30/09): 28 in Geography and 7 in Planning =35 total
Minors Granted: Geography 10 and 36 in Planning =46 total
Students in Residence: 118 Majors, 36 Masters in Boone, 8 Masters in Asheville.
Department Chair: Dr. James Young
Department Office Manager: Kathy Brown

For Further Information write to:
Sydney Dehus, Department of Geography and Planning, Appalachian State University, Boone, North Carolina 28608. Telephone (828)262-3000. Fax (828)262-3067.
Email: dehusst@appstate.edu . Website  http://www.geo.appstate.edu/

Programs and Research Facilities:
The Department occupies the second and third floors of a modern science facility and contains three computer laboratories for work in computer cartography, GIS, and image processing. The laboratories have microcomputers networked to each other and to the campus mainframe cluster; appropriate peripherals include digitizers, printers, and plotters. The Department presently houses maps, atlases, journals, and periodicals in a map library.

Academic Plan, Admission Requirements, and Financial Aid: Semester system. SAT Scores are required. Financial aid is available through the university. University-wide and departmental scholarships are also available to highly qualified students in geography and planning.

Undergraduate Faculty: Chris Badurek, Robert Brown, Jana Carp, Jeff Colby, Richard Crepeau, Gabrielle Katz, Michael Mayfield, Terence Milstead, Baker Perry, Art Rex, Kathleen Schroeder, Peter Soulé, J. Rosie Tighe, Saskia van de Gevel, Roger Winsor, James Young.
The major objectives of the department of Geography and Planning are to:

1. Promote the understanding of the spatial dimensions of human behavior within the physical and cultural systems of the earth and the role of planning in achieving improvement in those systems.

2. Offer a well-balanced curriculum which will aid students in finding productive places in society.

3. Maintain a faculty and staff dedicated to teaching, scientific research, and community and regional service.

All majors in the Department of Geography and Planning require a minimum of 122 semester hours for the degree. A minor is required for the Bachelor of Arts degree. In addition to the core curriculum, major and minor requirements, electives must be taken to meet the total required minimum hours. Two semester hours of free electives OUTSIDE the major discipline are required.

**Bachelor of Arts degree in Geography (242A)** requires GHY 1010 and GHY 1020 or GHY 1040 as prerequisites. The degree consists of 42 semester hours of geography and planning above the 1999 level. Required courses include GHY 2310, GHY 2812, GHY 3800, GHY 4830, plus PLN 2410; and 27 s.h. of geography electives including 3s.h. each from geographic methods, physical geography, human geography, and regional geography, plus 15 s.h. of geography electives which must include a minimum of 9 s.h. in 3000 or 4000 level geography courses; a maximum of 6 s.h. in 3000 or 4000 level planning courses may be applied to the geographic electives. An appropriate foreign language is also required. A candidate for the Bachelor of Arts degree may count NOT more than a total of 40 hours above core curriculum requirements in geography.

**Bachelor of Science degree in Community and Regional Planning (218A)** requires GHY 1010 and GHY 1020 or GHY 1040 as prerequisites. The degree consists of a minimum of 59 semester hours. Required courses include GHY 2310, GHY 3310; PLN 2410, PLN 2812, PLN 3431, PLN 3730, PLN 3800, PLN 4700, PLN 4830, and PLN 4900 (6 s.h.); plus 21 s.h. of approved interdisciplinary and elective courses.

**Bachelor of Science degree in Geography (241*)** required GHY 1010 and GHY 1020 or GHY 1040 as prerequisites. Required courses include GHY 2310, GHY 2812, GHY 3800, GHY 4830, and PLN 2410. **One of the following concentrations is also required:**

1. **General Geography concentration (241C)** requires 27 semester hours of geography electives including 3 s.h. each from geographic methods, physical geography, human geography, and regional geography. The additional 15 s.h. of geographic electives must include a minimum of 9 s.h. in 3000 or 4000 level geography courses; a maximum of 6 s.h. in 3000 or 4000 level planning courses may be applied to the geographic electives. In addition, the student must take 5-6 s.h. of approved courses in statistics and/or computer applications and a minimum of 15 s.h. in approved ancillary courses.
2. **Geographic Information Systems (GIS) concentration (241D)** requires an additional 21 semester hours of courses including GHY 3310, GHY 3812, GHY 4810, GHY 4812, GHY 4814, and GHY 4900 (6 s.h.). Students take 24 s.h. geography electives including 3 s.h. each from physical geography, human geography, and regional geography. The additional 15 s.h. of geographic electives must include a minimum of 9 s.h. in 3000 or 4000 level geography courses; a maximum of 6 s.h. in 3000 or 4000 level planning courses may be applied to the geographic electives. In addition, the student must take 3 s.h. of approved courses in computer applications.

**Minor in Community and Regional Planning (218)** consists of 20 semester hours including PLN 2410, PLN 3431, and PLN 3730, and nine hours chosen from among the non-planning courses listed as required or electives within the major of the planning program or other appropriate courses selected with the approval of the advisor of the planning program.

**Minor in Geography (242)** consists of 18 semester hours, including any geography courses used as core curriculum requirements and at least three hours in regional courses.

**Undergraduate Certificate in Geographic Information Systems (GIS) (140A)** The undergraduate certificate in Geographic Information Systems (GIS) requires the following 12 semester hours: GHY 2812, GHY 3812, GHY 4812, and GHY 4814. (A cumulative GPA of 2.5 or higher in those four courses is required for the undergraduate certificate.) If a student has proficiency in one of the required courses, and is exempted by the geography advisor, one of the following courses may be substituted to satisfy the course requirements for the GIS undergraduate certificate: GHY 2310, GHY 3310, GHY 3820, GHY 4810, or GHY 4900.

**Honors Program in Geography** The Department of Geography and Planning offers honors courses on all undergraduate levels, which are open to students who have distinguished themselves. Honors courses carry full credit toward the majors in geography and planning, or for non-majors full elective credit. Subject to the recommendations of the departmental honors committee, a student will be considered for graduation with “honors in geography” upon successful completion of at least one semester of honors work in a designated freshman/sophomore level honors course (GHY 1510, GHY 1515, and PLN 2510); one junior level honors course (GHY 3510) which may be taken twice; earning repetitive credit; and the Senior Honors Thesis (GHY 4510). Those students meeting these requirements with the grade of “A” will be considered for graduation with “highest honors in geography.”

**Graduate Program:** The Department of Geography and Planning offers a Master of Arts degree in Geography. Persons interested in this degree program are requested to consult the *Graduate Bulletin* for further information or go to our website www.geo.appstate.edu
**Bachelor of Science degree in Environmental Science (121A)**

In addition to the discipline-specific degrees offered by the department, an interdisciplinary Bachelor of Science degree in Environmental Science provides a broad and rigorous curriculum in the natural sciences. Students completing this degree will be prepared to enter environmental science positions in industry, business, or government as well as pursue post-graduate studies in various areas of environmental science.

The Bachelor of Science degree in Environmental Science consists of 123 semester hours, including 44 semester hours of core curriculum requirements. 74 semester hours in the major and cognate disciplines are required, which includes the following: the science core (BIO 1100, BIO 2000, or BIO 2001, GLY 1101, GLY 2250, PHY 1150, PHY 1151, CHE 1101 and CHE 1110, CHE 1120, CHE 2101 and CHE 2203, MAT 1110, MAT 1120, and STT 2810); completion of BIO 3302, CHE 2550, GLY 4630, PHY 3140, GHY 3820, and PLN 4460; completion of 12 s.h. from at least two of the following categories: a) Chemistry (CHE 2210, CHE 2211, CHE 3301, CHE 3303, CHE 3560, CHE 3561, and CHE 4620), b) Geophysical Sciences (GHY 3310, GLY 3150, GLY 3333, GLY 3530-3549, GLY 3800, GLY 4705, GLY 3160 or PHY 3160, PHY 3150, PHY 3230, PHY 3850, PHY 3851, PHY 4020, PHY 4330, PHY 4730), or c) Biology (BIO 3304, BIO 3310, BIO 3320, BIO 3530-3549, BIO 4555, BIO 4571, and up to two organismal biology courses from the following list: BIO 4451, BIO 4552, BIO 4556, BIO 4557, BIO 4558, BIO 4559, BIO 4560, BIO 4567); three s.h. of science electives; and the environmental science capstone course, ENV 4100.

Contact Dr. Roy Sidle in Geology for advising information regarding the Environmental Science Degree: sidlerc@appstate.edu
GHY 1010. Introduction to Physical Geography. (3). F.S. GEN ED: Local to Global Perspective (Theme: "Sustainability and Global Change"). A comprehensive study of our physical earth emphasizing the distributional patterns and inter-relatedness of its land, soils, natural vegetation and habitat, and weather and climate. Examinations of environmental issues including hazardous wastes, acid rains, floods, droughts, deforestation and air pollution. (Core Social Sciences)

GHY 1011. Global Climate Change (4). F.S. GEN ED: Science Inquiry Perspective (Theme: "Global Environmental Change"). This course provides a scientific examination of global climate change, including the physical patterns within the atmosphere, climate change due to both natural and anthropogenic forcing mechanisms, and projections of future change at various spatial scales. Students will employ the scientific method in a series of field-based experiments to answer problems and address issues that complement the lecture material and focus on aspects of global climate change. Lecture three hours, laboratory two hours. (Science Inq-Global Env Change)

GHY 1012. Global Change of the Biosphere. (4). F.S. GEN ED: Science Inquiry Perspective (Theme: "Global Environmental Change"). An introduction to the patterns, dynamics, and causes of change in the biosphere. Students will examine the fundamental geographic determinants of biodiversity patterns and the natural and human factors that drive biotic change, including climate change, land cover change, and biological invasions. Students will use the scientific methods in hands-on laboratory activities to investigate causal relationships between global change processes and biome shifts, species migration, extinction, and loss of biodiversity. Lecture three hours, laboratory two hours. (Science Inq-Global Env Change)

GHY 1020. World Regional Geography. (3). F.S. The study of our contemporary world divided into the regions of North America, Central and South America, Africa, the Middle East, Europe, the Russian Realm, and South East, and Southeast Asia. Examination of global issues including population problems, technology and cultural change, rural versus urban development, resource exportation and international trade, political identity and international conflict. (Core Social Sciences, Core Multi Cultural Designator, Loc to Global-Region in Global, Loc to Global-Global Resources)

GHY 1040. Introduction to Human Geography. (3). F. This course examines the spatial patterns of human society. By focusing on the description and analysis of the spatial dimensions of human language, economy, religion and government, this course is a celebration of human diversity. Lectures, readings, films, slides, writing exercises, map quizzes and class discussions will help the student to understand and appreciate the geography of the human mosaic. (Core Social Sciences, Core Multi Cultural Designator, Hist & Soc-Cultural Diversity)

GHY 2310. Cartographic Design and Analysis. (3). F.S. An introduction to the relevance of maps, techniques of map interpretation, and map construction. Students will develop a knowledge of basic computer operations, cartographic communication theory, map use, data selection and processing, map design, and computerized map production techniques. Lecture two hours, laboratory two hours. (NUMERICAL DATA; COMPUTER) (ND Prerequisite: passing the math placement test or successful completion of MAT 0010). (Core Computer Designator, Core Computer Data Designator)

GHY 2500. Independent Study. (1-4). F.S.

GHY 2812. Geospatial Data and Technology. (3). F.S. An introduction to geospatial data and technology used by geographers, planners, and others. This includes the collection, management and output of geospatial data. Topics include computing fundamentals, Geographic Information Systems (GIS), Global Positional System (GPS), remote sensing, and database management systems. Lecture two hours, laboratory two hours. (Same as PLN 2812) (NUMERICAL DATA; COMPUTER) (ND Prerequisite: passing the math placement test or successful completion of MAT 0010). (Core Computer Designator, Core Computer Data Designator)

GHY 3000: Communicating Geographic Information (3) F.S. GEN ED: Junior Writing. This course introduces students to writing styles in geography and provides practice with written and oral communications skills in a variety of academic and professional contexts. Students will critically evaluate geographic writing and oral presentations, use writing as a means of enhancing clarity of thought and depth of knowledge in geography, and communicate effectively in academic and professional settings. (GEN ED, writing in the major, Core Writing Designator)
GHY 3011. Europe and the Russian Realm. (3). S. A study of this region’s contemporary geographic condition. Emphasis on resource development, superregional cooperation, environmental problems, industrial shifts, marketing and international trade, relations with the United States, and the potential for internal and international political stress. (*Core Multi Cultural Designator, Core Writing Designator*)

GHY 3012. U. S. and Canada. (3) S. A survey of the physical, demographic, economic, and political patterns in the United States and Canada, with a focus on the characteristics of regions. Students will examine historical and contemporary factors contributing to the geographic diversity and interdependence of the two countries. (*Core Writing Designator*)

GHY 3013. North Carolina. (3). F;S. The study of contemporary conditions and problems of land and people in a southern state. Topics include: economic development and potential for change, population mobility, urbanization and the impact of development in rural and environmentally fragile areas, regional impact of changing life styles, national and international interdependence. Recommended for future North Carolina teachers, public administrators, and business leaders.

GHY 3014. Geography of Latin America. (3). F. This course stresses the diversity of physical environments, cultural traditions, and economic activities within Latin America and places special emphasis on the unique approaches that geographers bring to the study of this region. This course develops understanding of spatial patterns in Latin America through current readings, class discussions, lectures, slides, and videos. (*Core Multi Cultural Designator*)

GHY 3015. Geography of Asia. (3). F. An introductory survey of the region. Emphasis is placed on the geographical patterns and the similarities and differences in physical and cultural environments, population growth, mobility and urbanization; natural resource location and exploitation; economic growth and international linkages; the environmental implications of development; and political stability and change. (*Core Multi Cultural Designator, Core Writing Designator*)

GHY 3100. Weather and Climate. (3). S. This course focuses on the basic principles, elements, and controls of meteorology and climatology. The primary objectives are to familiarize the student with major components of the earth’s atmosphere, to enhance the student’s understanding of the spatial distribution of meteorological elements; and to demonstrate the interactions between human activities and atmospheric elements. Prerequisite: GHY 1010 or permission of the instructor.

GHY 3110. Vegetation, Soils, and Landforms. (3). F. A systematic analysis of the spatial characteristics of vegetation, soils, and landforms especially as they interact in the North American realm. Consideration is given to the processes affecting the ecosystem and their relation to people’s activities. Lecture two hours, laboratory two hours. Several extensive field trips are taken. Prerequisite: GHY 1010 or permission of the instructor.

GHY 3110. Geography of Biodiversity. (3). S. The study of past and present geographic patterns of biodiversity. The course focuses on the living environment, emphasizing the physical and ecological conditions and processes that influence the distributions of organisms, communities, and ecosystems. Topics include past climates and continental configurations, dispersal and invasion, patterns of speciation and extinction, biodiversity, and application of biogeographic concepts of environmental conservation.

GHY 3140. Mountain Geography. (3). On Demand. This course explores the physical and human dimensions of mountain environments. Specific topics include: global change in mountain environments, mountain meteorology, mountain hazards, glacial processes, mountain peoples and cultures, health and health care, human adaptation to mountains, and sustainable mountain development. Case studies drawn from mountain regions around the world, especially the Appalachians, the Andes, and Himalayas, with regional emphasis varying by the instructor.

GHY 3200. Geographic Perspectives on Human Behavior. (3). S. An approach to understanding the ways in which people perceive, behave in and structure their geographical environment. The course emphasizes variations in spatial behavior such as the uses of personal spaces and social territories, choosing locations for social activities, migration, and diffusion of ideas and innovations across geographical space and regional organization. Solutions to contemporary problems are stressed.
GHY 3210. Economic Geography. (3).S. The geographic analysis of world economic systems, regions and patterns, as affected by interrelationships between both human and physical variables. Emphasis will be equally divided between theoretical and real-world patterns. Specific subjects of study include agriculture, manufacturing, services, transportation, urban/rural relationships, international markets and trade, and cultural differences in economic patterns. Recommended for business majors and required for geography majors. Prerequisite: One introductory course in either Geography or Economics. (Core Multi Cultural Designator, Core Writing Designator)

GHY 3310. Environmental Remote Sensing. (3).S. An introduction to remote sensing technologies used for environmental and geographic analysis. Topics include aerial photo interpretation, satellite sensors, analysis of satellite imagery, thermal and radar sensors, and applications of remote sensing technology for vegetation, hydrology, landform, settlement, and economic development studies. Lecture two hours, laboratory two hours.

GHY 3320. Environmental Issues of Appalachia. (3).F. This course offers a systematic study of the physical and cultural setting of Appalachia. Topics include weather and climate, landforms, soils, vegetation, population, settlement and resource use. Emphasis is placed on various interactions between people and their environment (e.g. air and water pollution, accelerated erosion, landslides). Field trips will be taken. (Core Speaking Designator)

GHY 3500. Independent Study. (1-4).F:S.

GHY 3520. Instructional Assistance. (1).F:S. A supervised experience in the instructional process on the university level through direct participation in a classroom situation. Graded on an S/U basis. Prerequisite: junior or senior standing. May be repeated for a total credit of three semester hours.


GHY 3800. Introduction to Quantitative Methods. (3).F:S. This course will introduce students to a suite of statistical methods used to address research and applied problems in the fields of geography and planning. The course will include discussions of geographical data, sampling techniques, probability theory, parametric/non-parametric techniques in hypothesis testing, and introductory spatial statistics. Classes will address conceptual and theoretical aspects of each technique in conjunction with manual and software-based analyses of geographic data. (Same as PLN 3800.) (Numerical Data; Computer) (ND Prerequisite: passing the math placement test or successful completion of MAT 0010.) (Core Computer Designator, Core Numerical Data Designator)

GHY 3812. Introduction to GIS. (3).F:S. The course covers principles of geographic information science and applied practice with geographic information systems (GIS). Emphasis will be on the primary functions of GIS use, map design, and spatial analysis relevant to social and environmental issues through laboratory exercises and projects. Lecture two hours, laboratory two hours. Prerequisites: GHY 2310 and GHY 2812 or permission of the instructor. (Numerical Data; Computer) (ND Prerequisite: passing the math placement test or successful completion of MAT 0010.) (Core Computer Designator, Core Numerical Data Designator)

GHY 3820. GIS for the Environmental and Social Sciences. (3).F. The application of geographic information science (GIS) to the environmental and social sciences. Topics include geospatial data, coordinate systems, cartographic design, remote sensing, and spatial analysis. Lab exercises complement classroom lecture and discussion. An independent project will allow students to apply GIS concepts and skills to a research topic in their discipline. (Core Computer Designator)

GHY 4200. Urban Geography. (3).F. Spatial organization of human activity focusing on the evolution and organization of city systems, the internal structure of urban areas, and urban problems, policies and planning with emphasis on problem solving and field work. The course is applied in nature and recommended for majors in social studies, business, and planning.
GHY 4230. Political Geography. (3). On Demand. Spatial aspects of territoriality, boundaries, voting patterns, governmental programs, formation of political units, political development and integration, and environmental policy.

GHY 4240. Transportation Geography and Planning. (3).F. This course examines the link between land use and the way people travel. Students will have the opportunity to study metropolitan evolution, historical trends in transportation, and the combined effect of the two. Additional study explores the many facets of travel (foot, bike, transit, automobile) and specific land use planning practices that attempt to offer more choices for transportation and land use. (Same as PLN 4240.) (Dual-listed with GHY 5812.) (Core Computer Designator, Core Numerical Data Designator)

GHY 4240. Transportation Geography and Planning. (3).F. This course examines the link between land use and the way people travel. Students will have the opportunity to study metropolitan evolution, historical trends in transportation, and the combined effect of the two. Additional study explores the many facets of travel (foot, bike, transit, automobile) and specific land use planning practices that attempt to offer more choices for transportation and land use. (Same as PLN 4240.) (Dual-listed with GHY 5812.) (Core Computer Designator, Core Numerical Data Designator)

GHY 4530-4549. Selected Topics. (1-4). On Demand

GHY 4620. Synoptic and Regional Climatology. (3).F. Alternate Years. This course focuses on atmospheric controls and processes at the synoptic scale. Basic meteorological elements and concepts such as jet streams, long-range forecasting, cyclogenesis, and vorticity are discussed. Local and regional climatic patterns and anomalies are examined with respect to the dynamics of the large-scale circulation features of the atmosphere. Prerequisite: GHY 3100 or permission of the instructor. (Dual-listed with GHY 5620.)

GHY 4810. Digital Image Processing. (3).F. Course focuses on acquisition of digital images, image processing, image enhancement techniques for interpretation, and applications of remote sensing technology. Lecture two hours, laboratory two hours. Prerequisite: GHY 2812, GHY 3310 or permission of the instructor. (NUMERICAL DATA; COMPUTER) (ND Prerequisite: passing the math placement test or successful completion of MAT 0010.) (Dual-listed with GHY 5810.) (Core Computer Designator, Core Numerical Data Designator)

GHY 4812. Advanced GIS. (3).F.S. GIS is a wide-ranging topic encompassing five distinct functions within a total system context. These functions are: 1) data input, 2) data storage, 3) data management, 4) data manipulation and analysis, and 5) data output. Emphasis will be placed on the applications frequently found in geography and planning. This course is project-oriented to give the student maximum experience in each of the functions of a GIS and to allow the student to associate technical areas of GIS with real-world scenarios. Lecture two hours, laboratory two hours. Prerequisites: GHY 3812 or equivalent experience required. (NUMERICAL DATA; COMPUTER) (ND Prerequisite: passing the math placement test or successful completion of MAT 0010.) (Dual-listed with GHY 5814.) (Core Computer Designator, Core Numerical Data Designator)

GHY 4814. Principals in GeoComputation. (3).S. GeoComputation is spatial analysis with or without a geographical information system (GIS). The increasing power of computational environments enables the creation of new methods for analyzing geographic data. This course will include principles of GeoComputations, GIS programming, and linking GIS with environmental models. Lecture two hours, laboratory two hours. Prerequisite: GHY 3812 or permission of the instructor. (Dual-listed with GHY 5814.)

GHY 4820. Geographical Hydrology. (3).S. The study of the occurrence and movement of water on the earth, with a focus on applications of surface hydrology. Water movement through the hydrologic cycle, flood analysis, and water use/water policy are emphasized. Prerequisites: GHY 1010, GHY 3100, GHY 3110 or with permission of the instructor. (Dual-listed with GHY 5820.)

GHY 4830. Senior Seminar. (3).F.S. GEN ED: Capstone Experience. This course provides a capstone experience, bringing together a variety of geography and planning skills, abilities and knowledge. It integrates academic concepts with real-world experience and helps the student advance from the undergraduate academic environment to a geography career and/or to graduate study. (Same as PLN 4830.) (Cores Speaking Designator, Core Writing Designator, Gen Ed Capstone Experience)

GHY 4900. Internship in Geography and Planning. (3-12).F.S. The internship emphasizes field work in the areas of locational analysis, environment assessment and impact, and/or land use planning and is conducted jointly with an appropriate public or private agency. The type of internship, location of field experience and sponsoring agency must be satisfactory to the student and to the department. A research paper is required. Graded on an S/U basis.
PLN 2410. Town, City, and Regional Planning. (3).F:S. Introduction to the principles, philosophies, processes, and theories of planning. Emphasis is placed on planning approaches to the solution of contemporary regional, urban, and environmental problems. Students may choose to participate in field trips. (Core Social Sciences, Core Cross Disciplinary Design)

PLN 2500. Independent Study. (1-4).F:S.

PLN 2812. Geospatial Data and Technology. (3).F:S. An introduction to geospatial data and technology used by geographers, planners, and others. This includes the collection, management and output of geospatial data. Topics include computing fundamentals, Geographic Information Systems (GIS), Global Positional System (GPS), remote sensing, and database management systems. Lecture two hours, laboratory two hours. (Same as GHY 2812.) (ND Prerequisite: passing the math placement test or successful completion of MAT 0010.) (Core Numerical Data Designator, Core Computer Designator)

PLN 3431. Planning Techniques. (3).F:S. GEN ED: Writing in the Major. The students gains insight into the research phase of the planning process, becomes acquainted with a variety of planning applications and has opportunities to develop skills and abilities relating to the preparation of planning studies and community plans. Students may participate in field trips. Lecture two hours, laboratory six hours. (ND Prerequisite: passing the math placement test or successful completion of MAT 0010.) (Core Computer Designator, Core Speaking Designator, Core Writing Designator, Gen Ed: Writing in the Major)

PLN 3500. Independent Study. (1-4).F:S.

PLN 3520. Instructional Assistance. (1).F:S. A supervised experience in the instructional process on the university level through direct participation in a classroom situation. Graded on an S/U basis. Prerequisite: junior or senior standing. May be repeated for a total credit of three semester hours.

PLN 3530-3549. Selected Topics. (1-4). On Demand.

PLN 3730 Land Use Regulations. (3).F:S. The study of zoning, subdivision, and other land use controls with particular reference to North Carolina applications. Also includes the role of planners in the implementation phase of the planning process, planning ethics, public meetings, and the legal framework of land use controls.

PLN 3800. Introduction to Quantitative Methods. (3).F:S. This course will introduce students to a suite of statistical methods used to address research and applied problems in the fields of geography and planning. The course will include discussions of geographical data, sampling techniques, probability theory, parametric/non-parametric techniques in hypothesis testing, and introductory spatial statistics. Classes will address conceptual and theoretical aspects of each technique in conjunction with manual and software-based analyses of geographic data. (Same as GHY 3800.) (ND Prerequisite: passing the math placement test or successful completion of MAT 0010.) (Core Numerical Data Designator, Core Computer Designator)

PLN 4240. Transportation Geography and Planning. (3).F. This course examines the link between land use and the way people travel. Students will have the opportunity to study metropolitan evolution, historical trends in transportation, and the combined effect of the two. Additional study explores the many facets of travel (foot, bike, transit, automobile) and specific land use planning practices that attempt to offer more choices for transportation and land use. (Same as GHY 4240.)

PLN 4425. Task-Oriented Group Facilitation Methods. (3).S. Develop leadership and group facilitation skills through hands-on instruction that demonstrates how to conduct focused conversations, lead workshops, and accomplish action planning. Application opportunities use these skills include community development, organizational planning, education, government, and other occasions when people want to actively participate in the creation of their own futures. (Same as COM 4425.) (Core Speaking Designator)

PLN 4450. Planning for Sustainable Communities. (3).S. This course familiarizes students with the opportunities and challenges of sustainable development in the context of community experience and civic life in the U.S. Emphasis is placed on linking collective behaviors; the social, ecological, and economic impacts of those behaviors; and strategies for increasing sustainability at the community scale. (Dual-listed with PLN 5450.)
PLN 4460. Environmental Policy and Planning. (3).S.
This course familiarizes students with the philosophical, legal, and institutional foundations of environmental policy and planning in the United States. Students will have the opportunity to study policies and planning tools for federal, state, and local agencies. (Dual-listed with PLN 5460.)

PLN 4470. Community Development. (3).F. This course introduces students to conventional and alternative approaches to community development. Students will have the opportunity to study aims and strategies employed by community development professional, activists, and community members in urban and rural settings. Topics for reading and discussion include: poverty and race, affordable housing, economic revitalization, environmental justice, and public participation in planning. (Dual-listed with PLN 5470.)

PLN 4530-4549. Selected Topics. (1-4). On Demand.

PLN 4700. Project Management. (3).S. Simulated experiences involving complex procedures and methods pertinent to planning projects. The student will have opportunities to develop and utilize various project management skills and abilities, to include preparation of a community development proposal for external funding. Open to geography, planning, political science, real estate and leisure studies majors; others by permission of the instructor. Lecture two hours, laboratory two hours. (Core Speaking Designator, Core Writing Designator) (Dual-listed with PLN 5700.)

PLN 4830. Senior Seminar. (3).F.S. GEN ED: Capstone Experience. This course provides a capstone experience, bringing together a variety of planning and geography skills, abilities and knowledge. It integrates academic concepts with real-world experience and helps the student advance from the undergraduate academic environment to a planning career and/or to graduate study. (Same as GHY 4830.) (Core Speaking Designator, Core Writing Designator, Gen Ed: Capstone Experience)

PLN 4900. Internship in Geography and Planning. (3-12).F.S. The internship emphasizes field work in the areas of locational analysis, environmental assessment and impact, and/or land use planning and is conducted jointly with an appropriate public or private agency. The type of internship, location of field experience, and sponsoring agency must be satisfactory to the student and to the department. A research paper is required. Graded on an S/U basis.
Courses of Instruction in Geography, Planning, and Environmental Science (GHY, PLN, ENV)

This catalog reflects fall and spring semester offerings. Check with the Online Course offerings for the Spring or Fall to see if it is offered, sometimes courses are added to a semester and not listed in the current catalogue. Go to www.summerschool.appstate.edu for courses offered in summer terms. (For an explanation of the prefixes used in the following courses, see the listing of Course Prefixes.)

GHY 1510. Freshman Honors Physical Geography. (3).F. A comprehensive study of our physical earth emphasizing the distributional patterns and inter-relatedness of its land, soils, natural vegetation and habitat, and weather and climate. Examinations of environmental issues including hazardous waste, acid rain, floods, droughts, deforestation, and air and water pollution. (CORE: SOCIAL SCIENCES) Enrollment by invitation or prior honors standing. For enrollees, this course will substitute for GHY 1010.

GHY 1515. Freshman Honors World Regional Geography. (3).S. The study of our contemporary world as defined by its major regions. Examination of major global issues including population problems, technology and cultural change, rural versus urban development, local/global development tendencies, political integrity, and internal/international conflict. (MULTI-CULTURAL) (CORE: SOCIAL SCIENCES). Enrollment by invitation or prior honors standing. For enrollees, this course will substitute for GHY 1020.

GHY 3510. Advanced Honors Seminar in Geography. (3).S. Seminar on selected geographic topics. Enrollment by invitation of the Department or by application. Barring repetitive content, qualified students may repeat course once. For enrollees, this course may substitute for the appropriate Geography elective.

GHY 4510. Senior Honors Thesis. (1-4).F;S. Independent study and research for an end product, the senior thesis; directed by a member of the geography department, supported by two additional faculty/readers, in all constituting the thesis committee. Prerequisite: completion of an approved honors sequence, including GHY 3510. Enrollment by qualified applicants only. For enrollees, this course may substitute for a Geography and Planning free elective or other course as agreed upon by Geography and Planning Honors Advisor.

PLANNING

PLN 2510. Sophomore Honors Town, City, and Regional Planning. (3).F;S. This course provides an introduction to community and regional planning both as method, and as a topic of theoretical inquiry. Discussions include the planning process; social, political, economic, legal, and administrative perspectives related to planning; the relationship between planning and interactions of human occupants with the physical environment; and processes, concepts and theories that help to interpret cultural and physical patterns on the landscape. An important part of this course describes how planning as a discipline helps to build a variety of cross-disciplinary bridges that address contemporary urban and regional problems and issues in America. Field trips are expected. (CORE: SOCIAL SCIENCES). Enrollment by invitation or prior honors standing. For enrollees, this course will substitute for PLN 2410.
The GIS and Image Processing Lab

The Geographic Information Systems (GIS) Laboratory is located in the Department of Geography and Planning and managed by a full-time lab supervisor. The lab consists of two classrooms, one room for regular student use and a second room for teaching. The labs contain a variety of Dell computers running Windows XP in a network environment, one large-format digitizer, one color and one black and white laser printer, two scanners, and a large-format plotter. The main software packages for geographic analysis and map production include ArcGIS 9.x, Erdas Imagine 9.x, and CorelDraw.

Research Labs

Two research labs are also located in the Department and provide undergraduate and graduate students the opportunity to work with faculty on research projects. The labs contain several high-end workstations for data processing, and a web server. A large-format plotter is available for printing maps and posters.

Other available equipment includes several handheld Garmin GPS units used for student education and two Trimble GPS units for faculty and student research. The Geography and Planning Department also manages the SDE database, which houses most spatial and digital data for Watauga and surrounding counties.

Our Map Library is located on the 3rd Floor of Rankin Science West—Room 325

The library houses maps of world, continental, regional and individual nations. The Map Library is useful for obtaining information and visuals for study in many fields, whether it is business, history, political science, geology, or communications.

Maps are available for use, just stop by our main office or see our Map Librarian assistant during their scheduled hours.
STUDENT ORGANIZATIONS

Professional/Student Organizations

Appalachian Geographical Society www.geo.appstate.edu/students/AGS.htm

Association of American Geographers www.aag.org

Gamma Theta Upsilon www.gammathetaupsilon.org

Student Planners Association www.geo.appstate.edu/students/planning.htm

AGS and Student Planning for the Middle Fork Trail

AGS Clean Up

Geography and Planning Award Recipients
GHY 3140. MOUNTAIN GEOGRAPHY. This course explores the physical and human dimensions of mountain environments. Specific topics include: global change in mountain environments, mountain meteorology, mountain hazards, glacial processes, mountain peoples and cultures, health and health care, human adaptation to mountains, and sustainable mountain development. Case studies are drawn from mountain regions around the world, especially the Appalachians, Andes, and Himalayas, with regional emphasis varying by the instructor. See Dr. Mike Mayfield, and Dr. Baker Perry for information regarding scheduled trips during December break and again in May.


Reforestation/ carbon sequestration project in Costa Rica, January 2009

Field mapping in the Garhwal Himalaya, May 2007

Field study at Cotopaxi, Ecuador, May 2008
## HUMAN GEOGRAPHY PROFESSORS & INSTRUCTORS

| Dr. Rob Brown       | Misty Mayfield  |
| Dr. Kathleen Schroeder | Dr. Roger Winsor |
| Dr. James Young    |                  |

## PHYSICAL GEOGRAPHY PROFESSORS & INSTRUCTORS

| Dr. Gabrielle Katz         | Dr. Mike Mayfield       |
| Dr. Baker Perry            | Dr. Pete Soule’         |
| Dr. Saskia van de Gevel    |                          |

## GIS SCIENCE PROFESSORS & INSTRUCTORS

| Dr. Chris Badurek         | Andi Cochran             |
| Dr. Jeff Colby             | Art Rex                  |

## PLANNING PROFESSORS & INSTRUCTORS

| Dr. Jana Carp              | Dr. Rich Crepeau         |
| Dr. Terence Milstead       | Dr. J. Rosie Tighe       |
Chris Badurek  E-mail: badurekca@appstate.edu

Education: Ph. D., University at Buffalo, State University of New York, 2005
Position: Assistant Professor
Research Interests: GIS, geographic information science, spatial social science.

Dr. Badurek’s areas of expertise are the development of geographic information systems (GIS) and spatial databases, particularly for social science applications. His most recent research, focuses on developing analytical tools for examining patterns of change in crime in São Paulo, Brazil. Previously, he worked on applied interdisciplinary GIS projects involving regional community policing in Buffalo and a USAID project on developing land information systems and spatial data infrastructure in Guatemala. He is also interested in developing tools to assist other social and environmental scientists with using and integrating spatial information technologies.

Currently teaching: Intro to GIS, GIS Management, GIS for Social and Environmental Sciences, Physical Geography, World Regional Geography, Cartographic Design and Analysis, Advanced Honors Seminar: Geographic Thought and Methods.

Recent Publications


Robert N. Brown  
E-mail: brownrn@appstate.edu

Education: Ph.D. Louisiana State University, 2001  
Position: Associate Professor  
Research Interests: Cultural geography, American South, migration, and ethnography

Dr. Brown received his Ph.D. in geography in 2001 from the Department of Geography and Anthropology at Louisiana State University. His interests include the American South, the geography of the New Deal, historical geography, and ethnographic methods. Rob's recent work appears in Southeastern Geographer and Focus on Geography. He teaches courses in Graduate Research Methods, North Carolina, World Regional Geography, Qualitative Methods, and Human Geography.

Recent Publications
Faculty Profiles

Jana Carp

Education: Ph.D., University of Illinois at Chicago, 1999

Position: Assistant Professor

Research Interests:

Urban planning, place-making, production of space theory, sustainable development, community development, public participation and collaborative methods.

In addition to teaching, Dr. Carp is broadly interested in community-based responses to evidence of unsustainability. She studies the social and experiential dimensions of ecological restoration projects and collaborations, looking to understand the significance of “place” as both social and ecological, the balance of mental and sensory knowledge, the role of science, and diverse expressions of meaning. Currently she is working on two projects: 1) associating the slow movement (e.g., Slow Cities, Slow Food, Slow Science) with resilience theory (complex adaptive social-ecological systems) and 2) investigating advantages and disadvantages of face-to-face and on-line methods used to support collaborative decision-making processes involving environmental disputes.

Past projects with students include the Kraut Creek Project (images and unofficial map; see also the students’ report at www.mountainkeepers.org).

Recent Publications:


- Jana Carp. "Wit, Style, and Substance: How Planners Shape Public Participation." Journal of Planning Education and Research 23:3 (Spring 2004). This article was the 5th most downloaded article of all Sage Publications' planning journals published in 2004.

Jeffrey D. Colby

E-mail: colbyj@appstate.edu

**Education:** Ph.D., University of Colorado, Boulder, 1995

**Position:** Associate Professor

**Research Interests:** GIS, remote sensing, watershed and environmental modeling, mountain environments.

Dr. Colby’s current research includes (1) the integration of geographic information science and technology with hydraulic models for mapping and modeling floods, and (2) remote sensing investigations regarding the anisotropic reflectance correction of multi-spectral imagery in mountainous terrain, and a nascent interest in the application of GIS and remote sensing for viticulture site suitability analysis and management. Publications for 2004-2005 include a book chapter regarding digital processing of remotely sensed images for geoscience investigations in mountain environments.

**Recent Publications:**


Jeffrey D. Colby

Recent Publications Continued:


Richard Crepeau                     E-mail: crepeaurj@appstate.edu

Education: Ph.D., University of California, Irvine, 1995
Position: Associate Professor
Research Interests: Urban and Regional Planning, Transportation Planning, Economic Development, Land Use Regulations

Dr. Crepeau has an avid interest in the interactions of land use and travel behavior. His research has involved the integration of landscape ecology into traditional travel demand models. In addition to this, he has been researching the history of planning regulation in colonial and early-republic North Carolina, specifically the city of Wilmington. Rich is also the Program Director of Economic Development for Appalachian’s Center for Economic Research and Policy Analysis which is the home of the Western North Carolina Economic Index. Currently, Rich is the chairman of the Boone Area Zoning Board of Adjustment.

Recent Publications:


Gabrielle Katz  

Education: Ph.D., University of Colorado, Boulder, 2001  
Position: Assistant Professor  
Research Interests: Biogeography, riparian ecosystems, fluvial hydrology and geomorphology, and conservation.

Dr. Katz is a biogeographer specializing in riparian ecosystems, ecological restoration, and non-native species distributions. As a geographer, my interdisciplinary research incorporates ideas and techniques from ecology, hydrology, and geomorphology in seeking to understand how human activities impact landscapes and plant communities. Much of my research focuses on the role of ground water and surface water hydrology in shaping riparian plant communities. For example, I have studied the effects of flood control (by a dam) on downstream riparian forests in the Great Plains. Current research examines the effects of groundwater pumping and hydrologic restoration on riparian ecosystems of the San Pedro River in southeastern Arizona, and investigates urban biogeography of dry washes in Tucson, Arizona. I am also advising graduate student research projects addressing the effects of stream restoration on riparian vegetation of headwater streams in northwestern North Carolina, and land use effects on rural biodiversity in northwestern North Carolina.

Undergraduate Teaching:  
Introduction to Physical Geography, Honors Physical Geography, Environmental Issues in Appalachia, Geography of Biodiversity, Senior Seminar.

Graduate Teaching:  
Research Themes & Methods in Geography, Biogeography & Ecosystem Management, Biogeography of Food & Agriculture.

Recent Publications:


Michael W. Mayfield  
E-mail: mayfldmw@appstate.edu

Education: Ph.D., Tennessee, 1984
Position: Professor
Research Interests: Global change, surface water hydrology, and geomorphology.

Dr. Mayfield teaches Introduction to Physical Geography; Vegetation, Soils and Landforms; Senior Seminar; Geographical Hydrology; and a graduate seminar in physical geography. In addition, Mike team-teaches filed courses in Costa Rica and the American West with faculty members in Biology.

Recent Publications:

Terence Milstead

Education: Ph.D., Florida State University, 2008
Position: Assistant Professor
Research Interests: Comparative cross-national urban planning research within the context of globalization.

Dr. Milstead has been involved in urban planning and community development for most of the last fifteen years. From 1993-1999, he worked as a Transportation Planner for the West Florida Regional Planning Council in Pensacola, and from 1999-2001 he served as a U.S. Peace Corps Volunteer in Eastern Europe (Bulgaria and Bosnia-Herzegovina), working in the areas of municipal and NGO development. Dr. Milstead next spent time living and working in China and has recently conducted urban research and professional work in Central America. From October 2006 to October 2007 he was a U.S. Fulbright Fellow in Vilnius, Lithuania, conducting housing research in that former Soviet (newly European) capital city.

Recent Publications:

Baker Perry  
E-mail: perrylb@appstate.edu

Education:  Ph.D., UNC-Chapel Hill, M.A., Appalachian State University, 1998
Position:  Assistant Professor
Research Interests:  Include synoptic climatology, orographic precipitation (particularly snowfall), and tropical glacier-climate interactions. Mountain regions serve to further define these broader topics, with specific interest in the Appalachians and Andes.

Dr. Perry is currently collaborating with Dr. Sandra Yuter (NCSU) and Dr. Douglas Miller (UNCA) to study snowfall patterns and processes in the southern Appalachian Mountains. We have installed a variety of meteorological sensors on Beech Mountain (5506’) and Poga Mountain (3740’) and received funding from the UNC General Administration to support intensive field activities during the 2007-2008 snow season, including weather balloon releases and snow particle microscopy. We presented preliminary results of the atmospheric influences on new snowfall density at the Eastern Snow Conference in May 2008. Laurence Lee (NWS) and Stephen Keighton (NWS) are also important partners in this ongoing research project. Along with Dr. Ryan Emanuel (Geology), Dr. Howie Neufeld (Biology), Dr. James Sherman (Physics and Astronomy), and Dr. Brett Taubman (Chemistry), Baker is a founding member of the Appalachian Atmospheric Interdisciplinary Research (AppalAIR) Program. Our mission is to improve understanding of atmospheric properties and processes and the associated impacts on terrestrial ecosystems and climates in the southern Appalachian Mountains. We currently have instrumentation on the Appalachian campus and on Grandfather Mountain.

During the past year he has taught Introduction to Physical Geography, World Regional Geography, Geography of Asia (GHY 3015), Environmental Remote Sensing (GHY 3310), Honors Mountain Weather and Climate (GHY 3510), and Honors Physical Geography.

Recent Publications:

Baker Perry

Recent Publications Continued:


Book Chapters:


Conference Proceedings:


Other Publications:


Art Rex  

**E-mail:** rexab@appstate.edu  

**Education:** M.A., Appalachian State University, 1980  

**Position:** Lecturer  

**Research Interests:** Computer cartography, geographic information systems, image processing, and physical geography.

Art Rex has been appointed as the first Director of Space Management and Planning at Appalachian since 2005. He will oversee and implement a campus-wide scheduling package (Series 25) and GIS that will analyze space utilization and optimization.

He will continue to direct several GIS projects at Appalachian. He has just completed a 3 year research grant in conjunction with UNC-Asheville and the USDA entitled Total Value Assessment Tool for Farmland: Geospatially Quantifying Market and Non-market Worth. This project includes undergraduate and/or graduate students giving them valuable and practical GIS experiences.

Art was instrumental in acquiring a GPS base-station located in the department. The base-station is a byproduct of the $64 million project to capture LIDAR data for more accurate floodplain mapping of the state. The base-station gives local GPS users the ability to correct their data. It is fully functional at this time, and has RTK capabilities, so take a look at [www.ncgs.state.nc.us](http://www.ncgs.state.nc.us).

On the weekends he continues to be involved with soccer service as the NCYSA vice president of state select, and coached the 1996 NC Olympic Development Women’s Team, in 2008 coached the W-League’s Carolina Dynamo, and continues to serve as a State & National instructional staff. He was inducted into the 2007 class of the Appalachian Athletics Hall of Fame and is also a member of the FoxChapel High School and Slippery Rock University Hall of Fame.

**Recent Publications:**


- **Rex, A.B.**. Watauga County Road Map. Appalachian State University Department of Geography and Planning, Boone, NC.
Kathleen A. Schroeder  E-mail: schroederk@appstate.edu

Education: Ph.D., Minnesota, 1995
Position: Associate Professor & Graduate Program Coordinator
Research Interests: World Regional Geography, Economic Geography, Geography of Latin America, Human Geography

Kathleen's research interests include global economic restructuring and issues of gender and development. She has spent a good deal of time in Latin America and particularly in Bolivia where she has conducted research since 1992. Dr. Schroeder has co-led study abroad courses in Bolivia and India and is currently involved in a research project that examines the impact that students have on the places that they visit.

Kathleen's favorite courses to teach include regional geography (World, Latin America and a graduate seminar) and economic geography. She coordinates the Graduate Program in Geography which is now available both on campus and at UNC-Asheville.

Recent Publications:


Peter A Soulé  
**Education:** Ph.D., Georgia, 1989  
**Position:** Professor  
**Research Interests:** Climatology, physical geography, natural hazards, and quantitative methods.

Pete's main area of research deals with aspects of vegetation change. In August 2009 he began work on a multi-year project funded by the National Science Foundation to determine if Douglas-fir and ponderosa pine forests of the Northern Rockies USA will grow faster under conditions of an increasingly CO2-rich atmosphere and a projected warmer and drier climate. This project will investigate the growth responses of these two co-occurring and economically important western USA conifers growing under natural conditions to changing environmental variables. In support of his tree-ring research, Pete operates the Department of Geography and Planning’s Dendroecology lab. Pete is currently sharing the lab with Dr. Saskia van de Gevel and any graduate students interested in pursuing tree-ring research.

Pete teaches Climate Change, Introduction to Physical Geography, Weather and Climate, Global Climates and Meteorology, and graduate courses in Natural Hazards and Quantitative Methods.

**Recent Publications:**


Recent Publications continued:

- **2005**  

- **2004**  

- **2004**  
J. Rosie Tighe  

E-mail: tighejr@appstate.edu  


Position: Lecturer

Research Interests

Dr. Tighe’s teaching and research focus on issues related to affordable housing, racial and class policies, and urban politics.

Courses: Town, City and Regional Planning; Land Use Regulation; Planning Techniques.

Recent Publications:


Saskia van de Gevel  
E-mail: gevelsv@appstate.edu

Education:  Ph.D., University of Tennessee, 2008

Position:  Lecturer

Research Interests: She is focused on forest disturbance ecology of the eastern deciduous forest and high-elevation mountain ecosystems in the northern Rocky Mountains. Three major research foci including: (1) examining long-term climate, fire, and forest disturbance trends in endangered whitebark pine ecosystems, (2) quantifying the influence of exotic species on eastern and western U.S. Forest communities, and (3) reconstructing land-use history patterns in the eastern deciduous forest on varying spatial scales.

My teaching philosophy emphasizes student learning through hands-on experience in the classroom and in the field, relating the excitement of scientific discovery, and encouraging students to engage in internships, study abroad programs, and experiencing other cultures. I am currently teaching:

- GHY 1010 (Introduction to Physical Geography)
- GHY/PLN 4830 (Senior Seminar)
- GHY 1012 (Global Change of the Biosphere)

Recent Publications:


Saskia van de Gevel

Recent Publications Continued:


Roger A. Winsor

Education: Ph.D., Illinois, 1975
Position: Professor
Research Interests: Historical (landscape assessment; agricultural land use; settling and settlement patterns; innovation, diffusion and evolution of agricultural systems and technology), social (social networks; restricted space; spatial alienation; gentrification), and second home development.

Dr. Winsor’s teaching load will include World Regional Geography (1020), Behavioral Geography (3200), and Urban Geography (4200). Recently, Dr. Winsor served as the committee chair for the following theses: “From These Hills: The Spatial Diffusion of Bluegrass Music Festivals 1965-1995” and “Interstate 77, the Hillbilly Highway?: A Case Study of Migration from McDowell County, West Virginia to the North Carolina Piedmont.”

Recent Publications:


- Dr. Winsor and Shannon Mann wrote an entry “Vacation Homes and Gentrification for the Encyclopedia of Appalachia”. The entry analyzed the number of homes in Ashe and Avery Counties to determine the percentage of second-homes based on county tax records.
James E. Young

Education: Ph.D., Minnesota, 1994

Position: Associate Professor and Chair of the Department

Research Interests: Cartography, production cartography, U.S. and Canada, Russia, and geographic education, children's use of maps, integrating geographic themes/concepts into ethnographic research.

Activities: Cartographic Editor for the Journal of Geography and consultant to the North Carolina Geographic Alliance

E-mail: youngje@appstate.edu
Ole Gade, Professor Emeritus, 2003


MA – Geography, Florida State U., 1963

PhD – Geography, Michigan State U., 1972

I would love to hear from alumni and students from my classes and programs at Appalachian since 1970.

Current Research Interests:

With my retirement I am pursuing research in arenas of newfound interest. As of spring, 2009 they include: 1. Historic cartography emphasizing the relevance of mapped information in the 400 years of history, 16th thru 19th C., of the Guyanas; 2. North Carolina land conservation movement with emphasis on recent years of rapid growth; and 3. open space recreation with a focus on leisure biking in North Carolina.

Selected Recent Presentations and Publications:


EMERITUS PROFILE

Neal G. Lineback, Professor Emeritus  E-mail: linebackng@appstate.edu
Ph.D. University of Tennessee, Knoxville  RSW Room 277

Interests: Geography in the News, water resources, production cartography, and physical geography

- Geography in the News is published online by www.Maps101.com in California, and is available in 87,500 classrooms around the world. The 1,000th weekly column will be published on July 31, 2009.

- Dr. Neal Lineback - EPA Projects


Global Change in Local Places

North Carolina Greenhouse Gas Inventory

Visit the website http://www.geo.appstate.edu/research.htm for the EPA Projects

Recent Publications:


**RECENT THESIS PAPERS**


August 2008. Hunter, Lauren A.  *Integrating GIS and Geosensors to Support Sustainable Agriculture in a North Carolina Mountain Vineyard.*  *Awarded Cratis D. Williams Thesis Award for 2008 is Science and Technology*


December 2006. Fannon, Brian R.  *The Buffalo Trail: Searching for Lost Landscapes through Historical Geography.*


**RECENT INTERNSHIP PAPERS**

December 2009, Austin Chamberlain

December 2009, Kyle Laird  *Initiating the Benchmarking Study of European Railway Operating Environments for the European Railway Agency*

December 2009, Yuri Potawasky

December 2009, James Scott  *GIS for Town Planning, Beech Mountain, North Carolina*

December 2009, Adam Spillman  *Employment at Lincoln Economic Development Association*

December 2009, Kevin White  *Protecting Public Lands: Encroachments Along the Blue Ridge Parkway*

August 2009, Daniel Griggs  *GIS Internship at Great Smokey Mountains National Park, Summer 2009.*


December 2007, Joseph Sloop.  *Small Town Planning in Yadkinville, NC.*

2009- **Ray Aull** received the G. Herbert Stout Undergraduate Award for Innovative Student Papers, NC Center for Geographic Information and Analysis (NCCGIA), awarded at NC GIS Conference, Raleigh, NC, February 2009.

2008—**Meagan Carroll** received a Undergraduate Scholarship Award, awarded at North Carolina Arc Users Group (NCAUG) Meeting, Carolina Beach, NC; September 2008.

2007 - **Justin Arnold** received an OSR research grant to purchase snow survey equipment,
2007 – **Lisa Redman** was awarded the Outstanding Planning Student Award from the NC Chapter of the American Planning Association.
2007 – **Mary Wise** was a student member of the Town of Boone Planning Commission.

2006 - **James G. Dobson** was awarded the 2006 G. Herbert Stout Student Award which is an award given by the North Carolina Geographic Information Coordinating Council (GICC) to recognize exemplary student GIS-related research.
2006- **Jessica Brannock** was awarded the Herbert Stout Student Award given by the NC Geographic Information Coordinating Council (GICC) to recognize exemplary undergraduate student GIS related research.
2006- **Christina DeStefano** was a student member of the Town of Boone Planning Commission
2006- **Lisa Redman** was the winner of NC Chapter of the American Planning Association paper/presentation competition in Hickory, NC
2006- **Stacy Yates** received Outstanding Planning Student Award from NC Chapter of the American Planning Association

2005- **Annie Bryant** was interviewed by the Watauga Democrat and the Winston-Salem Journal newspapers for her research on and photography of barns in Watauga County, NC. She photographed and documented 64 barns in the area

2003 - A map produced by Geography graduate students Lori Felix and Mark Andrews won third place in an international map competition by Environmental Systems Research Institute, Inc. (ESRI). The map, funded by the Blue Planet Publishing Company, was done under contract with Professor Art Rex, assisted by GIS Lab Supervisor, Wendy McGuire.
ASU GRADUATES
WHERE ARE THEY NOW?

GIS Specialist, Metropolitan Planning Commission; Knoxville, TN

Watershed Concepts, Charlotte, NC

Professor of Geography and Planning, Appalachian State University; Boone, NC

Cartographer, Trails Illustrated (National Geographic); Evergreen, CO

GIS Analyst for Wake County; Raleigh, NC

Systems Analyst, University of Texas; Austin, TX

Senior Geoscientist, NIMA; Fredericksburg, VA

GIS Modeler, Centers for Disease Control and Prevention (CDC); Atlanta, GA

GIS Manager for the Land Resources Information Service; Raleigh, NC

Director of the GIS Laboratory at CIAT; Cali, Colombia

GIS Design and Applications Developer, The Trust for Public Land; Santa Fe, NM

GIS and Database Specialist, United States National Park Service; San Francisco, CA

GIS Analyst, Power Engineers; Boise, Idaho

GIS Specialist, Lowes Hardware; N. Wilkesboro, NC

Environmental GIS Analyst, Spatial Dynamics; Boise, ID

Vice President, First Union; Walkertown, NC

Transportation Data Analyst for the Virginia Department of Transportation; Richmond, VA

President, Penstock Video Productions; Asheville, NC

Director of Planning N. Wilkesboro and Wilkesboro, NC

Director of Planning and Economic Development for the Region D Council of Governments; Boone, NC

Project Manager, ESRI; Charlotte, NC

Deputy Director of the Planning Commission; Spartanburg, SC

Director of Planning and Inspections, Watauga County

Town Manager; Elizabethtown, NC

Director of Planning; Burlington, NC

Program Manager, Appalachian Regional Commission; Washington, DC

Planner, Charlotte-Douglas International Airport; Charlotte, NC

Senior Planner, Atlanta Regional Commission; Atlanta, GA

Last updated 2009