

Table of Contents

Geography and Environmental Resources..... 1

Geography and Environmental Resources

The School of Earth Systems and Sustainability offers a program that leads to the Master of Science degree in Geography and Environmental Resources. It also houses an interdisciplinary Ph.D. in Environmental Resources and Policy.

Geography and Environmental Resources is the study of how humans modify, impact, adapt to, monitor, and manage the natural environment they inhabit. Geography students study the dynamic relationship between nature and society in the field and the computer laboratory as well as in the traditional classroom. Students choose among three concentrations, focusing on different aspects of geography and environmental resources: environmental sustainability, geographic information science (GIS), and climate and water resources.

Students take courses that give them a foundation in these dimensions of environmental resources through a core program, then develop a research focus. Students also develop the analytic and research skills appropriate to their research interest.

The graduate program stresses a problem-solving perspective, for which habits of critical analysis and dialogue are essential. Students take the initiative in designing and carrying out their programs with the guidance of an advisory committee and the program faculty. Geography maintains linkages with many other programs. Courses and faculty expertise in other program complement those in geography, and students are encouraged to take advantage of this. Each student's progress is assessed at regular intervals by the faculty, and the student is notified of the faculty's assessment. The student is expected to show continued progress in carrying out the program of study, and in developing habits of scholarship and professionalism.

This program requires a \$65 nonrefundable application fee that must be submitted with the application for Admissions to Graduate Study in Geography and Environmental Resources. Applicants must pay this fee by credit card when completing the online application. Questions regarding the program can be directed to geog@siu.edu.

Master of Science (M.S.) in Geography and Environmental Resources

Advisement

Students newly admitted to the M.S. in Geography and Environmental Resources degree program are advised by the graduate program director, with the assistance of program faculty. Students choose a permanent adviser at the end of the first semester in residence. The choice of permanent adviser and advisory committee is made in consultation with the graduate faculty, taking into consideration such matters as faculty expertise and faculty advisee loads.

Degree Requirements

To obtain the M.S. in Geography and Environmental Resources degree, the student shall:

1. Complete all degree requirements specified by the Graduate School, and explained under degree requirements, M.S. in Geography and Environmental Resources degree program in the *Graduate Catalog*. A total of 30 Graduate Credit Hours must be completed, with 50% of these hours at the 500 level or above.

2. Include as required courses the following: GEOG 500, Principles of Research, during the first fall semester in residence; GEOG 501, the following semester; GEOG 504, Spatial Analysis, or GEOG 512, Applied Geographic Statistics or equivalent, and one research seminar at the 500-level. GEOG 502, Geographic Information Systems is recommended depending on the student's background.
3. In consultation with an adviser, develop a program of study, identifying courses to be taken, research skills to be developed, deficiencies to be rectified. This shall be approved by the faculty. The program of study shall include a core of substantive courses in geography and environmental resources, as explained in the policy statement on core curriculum for master's degree students, available from the graduate program director. The program of study may include courses offered by other departments. The graduate faculty will meet to review and approve/disapprove the program of study of each M.S. in Geography and Environmental Resources degree student enrolled in GEOG 500. An approved program of study will be filed with the graduate program director as part of GEOG 500.
4. Develop a thesis or research paper proposal. The thesis or research paper proposal must be approved by the student's master's advisory committee before the student registers for GEOG 599, Thesis, or GEOG 593A-C, Research in Geography and Environmental Resources. A total of six credit hours of GEOG 599 may be awarded for a thesis at the discretion of the advisory committee upon final examination on the thesis (see #5 below). A total of three credit hours may be awarded for a research paper.
5. Submit a thesis or research paper to the advisory committee at least two weeks before the defense. A student who writes a thesis will be examined by the committee at a meeting that may be attended by other faculty and students. A research paper may be evaluated and approved by the advisory committee with or without public presentation.

Doctor of Philosophy (Ph.D.) in Environmental Resources and Policy

The central focus of the Ph.D. in Environmental Resources and Policy is advanced interdisciplinary training and research on geological, physical, biological, and social processes responsible for natural resource and environmental problems facing contemporary society. Additionally, the Ph.D. in Environmental Resources and Policy focuses on assessing public policy alternatives to address those problems and create new opportunities.

Within the broad and flexible Environmental Resources and Policy framework, a customized program is developed for each student, permitting him/her to conduct research in traditional and non-traditional earth science sub disciplines, under the direction of one or more Geology faculty members. Please see the Environmental Resources and Policy section of this catalog for detailed information and admission procedures.

For more information, see the catalog page for the program.

Certificate in GIS

The GIS post-baccalaureate certificate enables students to focus on advanced geospatial techniques and analytical skills. This certificate meets the needs of the expanding job opportunities for Masters' and Ph.D. students. Students must be admitted to an SIUC graduate program or the SIUC non-declared graduate program and maintain a 3.0 GPA in the certification courses. This certificate ensures that the students understand advanced mapping technologies; know how to combine individual models and functions in ArcGIS to carry out a complicated spatial analysis task; master advanced digital image processing and analysis technologies; and obtain competence in designing, developing, and managing spatial databases. Further, they will demonstrate an understanding of GIS's relationships with remote sensing, global positioning system (GPS), mathematics, statistics, and other sciences and obtain capacity in integrating multi-disciplinary methods for problem-solving. Finally, they will be competent in planning, developing, and implementing a complex GIS project. The program requires students to complete 18 credit hours of graduate level coursework from the following:

- GEOG 502: Geographic Information Systems (3 CH)
- GEOG 504: Spatial Analysis (3 CH)

- GEOG 506: Intro to Remote Sensing (3 CH)
- GEOG 508: Advanced Remote Sensing (3 CH)
- GEOG 520: Advanced GIS Studies (3 CH)
- GEOG 528: GIS Portfolio/GIS Capstone Project (3 CH)

Certificate in Sustainability

The Sustainability post-baccalaureate certificate enables students to expand their knowledge and understanding of the long-term sustainable use of the earth's resources, including water, land use and food systems, climate change, urban sustainability, and "green" energy. This certificate meets the needs of the expanding job opportunities in environmental sustainability. Students must be admitted to an SIUC graduate program or the SIUC non-declared graduate program and maintain a 3.0 GPA in the certification courses. The program requires students to complete 18 credit hours of graduate level coursework, as follows:

- GEOG 521: Urban Sustainability (3 CH)
- GEOG 524: Sustainable Development (3 CH)
- GEOG 536: Natural Hazards (3 CH)
- GEOG 539: Global Climate Change (3 CH)
- GEOG 570: Contemporary Issues in Environmental Studies (3 CH)

Plus, one of the following:

- GEOG 502: Geographic Information Systems (3 CH)
- GEOG 512: Applied Geographic Statistics (3 CH)

Geography and Environmental Resources Courses

GEOG419 - Enterprise GIS Planning 419-3 Enterprise GIS Planning and Implementation. Students will gain both theoretical and practical understanding of the design process of enterprise GIS; be able to assess the scope of a system and address data and technology requirements of that system; become exposed to a host of the state-of-the-art tools and concepts in enterprise GIS; and learn skills for hardware, software and computer networking issues. Students are expected to have a basic working knowledge of ArcGIS and ArcIMS. Prerequisite: GEOG 401 or consent. Lab fee: \$20.

GEOG430 - Environmental Systems Analysis 430-3 Environmental Systems Analysis. Exploration of the major environmental systems relevant to planning. Topics include concepts of systems and system behavior; basics of systems analysis and modeling environmental systems; environmental fluxes of energy and materials (e.g., hydrologic cycle, carbon cycle, energy budgets, erosion and sediment transport, role of biosphere in organizing fluxes); environmental variability.

GEOG452 - Environment & Population 452-3 Environment and Population. Introduction to population geography. Emphasis is on the relationships between population trends, resource use patterns and environmental impacts. Topics include methods and data used to describe and predict populations, theories of population and policy issues that relate to the interaction between population, quality of life and environmental quality. Prerequisite: GEOG 320 or consent of instructor.

GEOG454 - Environmental Movements 454-3 Conservation and Environmental Movements. Emphasizes the ways in which humans view and interact with the environment. Conservation literature and the works of influential environmentalists are studied. Specific theories and environmental movements which help to explain society's current perception and use of the environment are studied.

GEOG457 - American Environmental History 457-3 American Environmental History. (Same as HIST 457) An exploration of the attitudes toward and the interaction with the natural resource environment of North America by human settlers. Coverage from the Neolithic Revolution to the present.

GEOG458 - Applied GIS 458-3 Applied GIS. This course provides practical GIS applications and draws from special topics in data visualization and environmental applications. The topic on data visualization includes an overview of techniques for visualizing large-scale datasets and is inspired by concepts from information visualization. Topics in environmental applications consist of risk assessment, digital elevation model processing, and watershed delineation and hydrological modeling. Students taking this course will distinctively learn: (1) how to visualize geographic data; (2) how to use different environmental risk assessment methods; (3) how to assess, detect, and characterize environmental risks and potential threats; and (4) how to create meaningful visualization scenes to support environmental decision-making. Active learning experiences will be achieved through the use of classroom lectures, lab exercises, group tasks, and presentations. Prerequisite: GEOG 401 or GEOG 310I or consent of instructor. Lab fee: \$20.

GEOG471 - Environmental Impact Analysis 471-3 Environmental Impact Analysis. Techniques of assessing the impact of human activities on the environment, including weighting schemes, cost-benefit analysis, linear programming, ecological impact assessment. Emphasis is on placing NEPA and EIS writing in legal, economic, and environmental perspective.

GEOG481 - Coop Work Exp Geography 481-3 to 12 Cooperative Work Experience in Geography. Placement of advanced undergraduate or graduate student in private or public organization for one or more semesters in paid career-related position identified by student. Student gains professional experience, under faculty and on-site supervision. A report or professional poster on the work is required at the end of the semester. Three credit hours of either 480 or 481 may apply toward requirements for a Geography undergraduate major or graduate degree. Restricted to students majoring in Geography and Environmental Resources or minoring in Environmental Studies. Special approval needed from the department.

GEOG500 - Principles of Research 500-3 Principles of Research. This course teaches students the key components of graduate research: identify a research problem, determine research questions, structure a literature review, and develop research methods. Examples of geographic research are discussed and students work to identify independent research projects. The course culminates with students developing their own research proposals.

GEOG501 - Research Methods 501-3 Research Methods. Students enrolled in research methods will work directly with their faculty mentor to complete background research on methods of analysis required to complete proposed graduate work. Specific topics will depend on the mutual interests of the student and faculty member and may include qualitative and quantitative approaches to graduate-level research.

GEOG502 - Geographic Information Systems 502-3 Geographic Information Systems. This course will prepare students with comprehensive working knowledge and technical skills related to geographic information systems (GIS). It covers important topics in the context of GIScience, including coordinate systems and georeferencing, data structures (vectors and rasters), map principles and design, spatial analysis and modeling, GIS software, GPS, GIS data sources, and data uncertainty, which are critical to support the implementation of a GIS project. A series of GIS labs and a leadership role on a final class project will help equip students with necessary skills (e.g., mapping, spatial analysis, and geocoding) to fulfill the tasks of an entry-level GIS position. Students that have successfully passed GEOG 401 are not eligible to enroll in GEOG 502. Recommended: GEOG 310I or CE 263. Lab fee: \$20.

GEOG504 - Spatial Analysis 504-3 Spatial Analysis. This spatial analysis course is an introduction to statistical methods for geographers. The course provides an overview of the application of spatial statistical theories, concepts and approaches in the general context of the emerging fields of geographic information systems (GIS) and science (GISci). The main focus of this course is on how techniques for the analysis of spatial data can be effectively applied in a GIS environment, with a particular emphasis on the study of spatial patterns, distributions, and associations. Students that have successfully passed GEOG 404 are not eligible to enroll in GEOG 504. Prerequisite: GEOG 401 or GEOG 502 with a grade of C or higher, or consent of instructor. Lab fee: \$20.

GEOG506 - Intro to Remote Sensing 506-3 Introduction to Remote Sensing. This course is an introduction to the fundamentals of remote sensing and application to environmental management. In addition to the theoretical and applied approaches associated with the use and analysis of aerial photography and satellite imagery, this course provides an introduction of advanced satellite systems and their developments. These include how remote sensing data are acquired, displayed, analyzed and applied, and how information on our environment can be extracted from such data and integrated with

other spatial data. Students will be introduced to manual interpretation and digital image processing and analysis techniques of remotely sensed imagery. Students will have the opportunity to gain hands-on experience using image processing software. This course will help students with remotely sensed data acquisition, processing, analysis, and application through writing literature review essays and completing course projects. Students who successfully passed GEOG 406 are not eligible to enroll in GEOG 506. Lab fee: \$30.

GEOG508 - Advanced Remote Sensing 508-3 Advanced Remote Sensing. Advanced techniques in the analysis of remotely sensed data. Focus is placed on advanced digital image processing techniques and contemporary analysis and modelling approaches using state-of-the-art technology. This course will also emphasize integration of multidisciplinary approaches from mathematics, statistics, computer science, geographic information system (GIS), geography and environment to advance image analysis and application. Students will be expected to develop individual problem-driven projects that use the knowledge, tools, advanced techniques and skills developed in this course for solutions of real world problems. This course will enhance the ability of students to independently conduct remote sensing relevant research work through writing literature review essays and completing course projects. Students who have successfully passed GEOG 408 are not eligible to enroll in GEOG 508. Prerequisite: GEOG 406 or GEOG 506, with grade of C or higher, or consent of instructor. Lab fee: \$30.

GEOG512 - Applied Geographic Statistics 512-3 Applied Geographic Statistics. Introduction to basic statistical methods and skills related to the application of statistics to problems in geography. Lectures are supplemented with practical exercises to stress the applied nature of statistics in environmental decision making. Topics covered include descriptive statistics, time series, probability, point and interval estimation, hypothesis testing, correlation and regression, analysis of variance, and spatial statistics, as well as additional problems of interest to enrolled students. Students that have successfully passed GEOG 412 are not eligible to enroll in GEOG 512.

GEOG516 - Cartographic Design 516-3 Cartographic Design. Introduction to the concepts and principles of map design and automated cartographic techniques used to promote the understanding of a map as a powerful communication model. Examines techniques for the representation, manipulation, display, and presentation of spatial data using computer mapping techniques and graphics software. In addition, this course will provide an introduction of contemporary map-making and communication technologies and their applications for solutions of real world problems. Team based projects will address a geographic or environmental problem and produce professional maps. This course will help students to get insight of professional map-making and development of contemporary technologies through writing literature review essays and completing course projects. Students who successfully passed GEOG 416 are not eligible to enroll in GEOG 516. Prerequisites: GEOG 401 or GEOG 502, with grade of C or higher, or consent of instructor. Lab fee: \$20.

GEOG517 - GIS Programming 517-3 GIS Programming and Customization. GIS programming trains students in customizing GIS applications and streamlining spatial analysis by assembling functions provided by the underlying GIS platforms. This course is an introduction to programming and scripting for intermediate GIS users who need to automate the geoprocessing of GIS datasets. This course focuses the most popular commercial platform, ArcGIS ModelBuilder and Python Scripting for ArcGIS. Through this course, students will understand the object-oriented programming principles, master the advanced skills of building a complex work flow for GIS analysis, and develop customized geoprocessing programs to edit, manipulate and analyze spatial data using ArcPy and Python. Students will exhibit in-depth analytical procedures for addressing complex GIS problems and develop a detailed final project report. Students that have passed GEOG 417 are not eligible to enroll in GEOG 517. Prerequisite: GEOG 401 or GEOG 502, with grade of C or higher, or consent of instructor. Lab fee: \$20.

GEOG520 - Advanced GIS Studies 520-3 Advanced GIS Studies. This course focuses on advanced conceptual and technical issues underlying GIS, including GIS data modeling, geodatabase model and structure, analytical methods and procedures associated with geospatial modeling, and the latest developments in geospatial sciences. Laboratory assignments include the analysis of digital geographic information of physical and social phenomena, emphasizing the use of standard GIS software to illustrate techniques of geodatabase, map digitization, spatial data exploration, spatial analysis/modeling, and GIS-based decision support. Students will independently design, implement and present a GIS project that takes full advantage of the advanced GIS theories and techniques to solve spatial problems. Students

that have passed GEOG 420 are not eligible to enroll in GEOG 520. Prerequisite: GEOG 401 or GEOG 502, with grade of C or higher, or consent of instructor. Lab fee: \$20.

GEOG521 - Urban Sustainability 521-3 Urban Sustainability. Sustainability of urban areas is viewed from a geographical perspective to focus on the complex relationships among environmental, sociocultural, economic, and political phenomena. Students will develop professional expertise in identifying, analyzing and explaining selected urban problems and their sustainable solutions. Students who successfully passed GEOG 421 are not eligible to enroll in GEOG 521.

GEOG522 - Environ & Energy Economics 522-3 Environmental and Energy Economics. Economics of renewable and nonrenewable natural resources management and environmental policy. Topics covered include: static and dynamic efficiency, market efficiency and market failures (market power, externalities, and public goods), the economics of nonrenewable resource extraction, renewable resources management (with a focus on forests and water), mechanism design choices and their implementation in the real world, and the role of the private and public sectors in research and development. Students that have successfully passed GEOG 422 are not eligible to enroll in GEOG 522.

GEOG524 - Sustainable Development 524-3 Sustainable Development. Students will develop professional expertise to analyze human, economic, technological, environmental and political dimensions of sustainable development focusing on public and private sector institutions that manage renewable and non-renewable natural resources. Emphasis is sustainable development as applied to: (a) population, (b) energy and the atmosphere, and (c) agricultural impacts on soil and water resources. Students who have successfully passed GEOG 424 are not eligible to enroll in GEOG 524.

GEOG526 - US Environmental Policy 526-3 US Environmental Policy. This course investigates the US system of environmental regulation: the background of social and environmental movements that influence US policy and the agencies involved in US environmental regulation. Emphasis is on US regulations and US participation in global environmental policies. Overall, the focus is on spatial variations in environmental regulations; or the geography of environmental quality.

GEOG528 - GIS Portfolio/Capstone Project 528-3 GIS Portfolio/GIS Capstone Project. Independent development and implementation of a GIS research project for solution of a real world problem. The focus is placed on integration of multidisciplinary methods and multi-source spatially referenced and aspatial data. Submission of a project portfolio or a research paper with a poster is required for successful completion. Prerequisite: GEOG 401 or GEOG 502 and GEOG 406 or GEOG 506, with a grade of C or higher, or consent of instructor. Lab fee: \$20.

GEOG529 - Geog Local/Organic Food 529-3 Geography of Local and Organic Food. This course will cover key topics in local and organic food and farming. This includes: farmers' decision-making, consumer choices, policy/certification factors, economic/marketing variations, environmental conditions, dietary choices, local and regional marketing, cost of various food options, and organic agricultural productivity. Students who have successfully passed GEOG 429 are not eligible to enroll in GEOG 529.

GEOG531 - Climate Data and Analysis 531-3 Climate Data and Analysis. This course focuses on identifying, locating, and applying appropriate climate data sets (e.g., station observations, atmospheric reanalyses, and climate model output), techniques for obtaining and processing these data sets, and methods commonly used for applied climate analysis. Student-lead, applied research projects provide students with the opportunity to utilize a variety of data sets and analytical tools introduced during the semester. The curriculum is organized around current practical problems from a variety of disciplines and identifying and analyzing appropriate data sets to address them. Students will become familiar with a range of computational packages, including Excel, SPSS, and Matlab. Students should have a basic understanding of climatology and statistics prior to taking this class. Students that have successfully passed GEOG 431 are not eligible to enroll in GEOG 531.

GEOG533 - Adv Field Methods Geography 533-3 Advanced Field Methods in Geography. Quality graduate level geographic research depends on obtaining reliable data through an informed research design. Exploring both social and environmental processes, students will actively participate in developing and conducting research. Using the SIU Carbondale campus and surrounding region as a laboratory, lab exercises will include human geography, geomorphology, hydrology, climatology, spatial analysis, and biogeography. As a graduate level class, advanced analytical techniques will be presented and utilized

by the students. These techniques will include graduate level statistics and spatial analysis. Students who have successfully passed GEOG 433 are not eligible to enroll in GEOG 533. Lab fee: \$20.

GEOG534 - Water Resources Hydrology 534-3 Water Resources Hydrology. This course covers the major components of the hydrologic cycle with emphasis on surface water and fluvial (stream) processes. Students will gain a detailed understanding of the major hydrologic processes and develop substantial experience in collecting, compiling, and analyzing hydrologic data for use in water resource analysis and management. In addition, they will learn and demonstrate their proficiency in using advanced statistics and spatial analyses used in hydrologic research. Students that have successfully passed GEOG 434 are not eligible to enroll in GEOG 534.

GEOG536 - Natural Hazards 536-3 Natural Hazards. This course introduces students to the geophysical and human dimension of natural hazards and focuses on five main areas: 1) characterization of natural hazards; 2) human dimensions of natural hazards; 3) natural hazard risk assessment; 4) natural hazard mitigation planning; and 5) the use of geospatial tools and models used in risk assessments and mitigation planning activities. It is expected that graduate students will develop an advanced understanding of both geophysical and human dimensions of natural hazards. They will also learn and then demonstrate their proficiency in using advanced statistics and spatial analyses used in hazards research. Students who have successfully passed GEOG 436 are not eligible to enroll in GEOG 536.

GEOG539 - Global Climate Change 539-3 Global Climate Change. This course examines the major environmental, social and policy issues relevant to global climate change, including natural and anthropogenic causes, environmental pollution, land use/land cover change, extinction and biodiversity issues, and potential climate change-related impacts on human health. Students that have successfully passed GEOG 439 are not eligible to enroll in GEOG 539.

GEOG540 - Water Resources Management 540-3 Water Resources Management. This interdisciplinary graduate course is taught in a hybrid lecture/seminar style. Students review the physical science, biological science, and environmental policy which underpin water resource management. In addition, it is expected graduate students will develop an advanced understanding of human impacts on water resources and the role that water management plays in striking a sustainable balance between needs of humans and aquatic ecosystems. Graduate students will also be required to demonstrate their advanced understanding through in class presentations and development of interdisciplinary water resource research proposals. Students who have successfully passed GEOG 440 are not eligible to enroll in GEOG 540.

GEOG554 - Environmental Movements 554-3 Conservation and Environmental Movements. This course covers topics that include: environmental non-governmental organizations (ENGOs), human perceptions of the environment, theories of human interactions with nature, conservation literature, key environmentalists, historical environmental movements, societal perception of nature, and impacts of environmentalism on policy. Students who have successfully passed GEOG 454 are not eligible to enroll in GEOG 554.

GEOG556 - Geographic Visualization 556-3 Geographic Visualization. In addition to an overview of the theories, concepts and approaches of geographic visualization, this course will provide an introduction of advanced methods for information visualization, data quality assessment, and communication enhancement in the fields of exploratory data analysis (EDA), cartographic design, thematic mapping, web cartography, map animation, virtual environment, and multimedia applications. Students will learn the use of commercial software packages commonly used for graphic-based applications and complete the required hands-on exercises. However, the focus is put on integration of multidisciplinary methods for geographic visualization. Students will also learn about contemporary technologies through writing literature review essays and completing a course project. Students who have successfully passed GEOG 456 are not eligible to enroll in GEOG 556. Lab fee: \$30.

GEOG570 - Contemp Issues Env Studies 570-3 Contemporary Issues in Environmental Studies. Background, current, and future issues linking social responses to scientifically relevant environmental issues. Students learn about the multiple geographic, social and ecological factors that influence environmental citizenship and participation. Topics include conservation/preservation, green jobs, environmental non-governmental organizations, policy influences, and environmental education. Lectures, guest lectures and seminar style discussions. Students develop and demonstrate skills in problem

solving, communication, and professionalism. Students who have successfully passed GEOG 470 are not eligible to enroll in GEOG 570.

GEOG580 - Internship in Geography 580-2 to 6 Internship in Geography. Supervised field work in private or public organizations dealing with environmental management or GIS. A report or professional poster on the work is required at the end of the semester. Special approval needed from the department.

GEOG591 - Independent Studies 591-2 to 4 Independent Studies in Geography. Restricted to graduate standing.

GEOG593A - Research Environ Sustain 593A-2 to 24 (2 to 6 per semester) Research in Environmental Sustainability. Restricted to graduate standing.

GEOG593B - Research GIS 593B-2 to 24 (2 to 6 per semester) Research in Geographic Information Science. Prerequisite: GEOG 500 and GEOG 501. Restricted to graduate standing.

GEOG593C - Research Climate & Water 593C-2 to 24 (2 to 6 per semester) Research in Climate & Water Resources. Restricted to graduate standing.

GEOG596 - Field Course 596-2 to 4 Field Course. Restricted to graduate standing.

GEOG599 - Thesis 599-2 to 6 Thesis. Restricted to graduate standing.

GEOG601 - Continuing Enrollment 601-1 per semester Continuing Enrollment. For those graduate students who have not finished their degree programs and who are in the process of working on their thesis or research paper. The student must have completed the minimum thesis or research hours before being eligible to register for this course. Concurrent enrollment in any other course is not permitted. Graded S/U or DEF.

GEOG699 - Postdoctoral Research 699-1 Postdoctoral Research. Must be a Postdoctoral Fellow. Concurrent enrollment in any other course is not permitted.

Geography and Environmental Resources Faculty

Duram, Leslie A., Professor, Geography and Environmental Resources, Ph.D., University of Colorado, 1994; 1994. Environmental geography, local food systems, environmental public participation, campus sustainability.

Li, Ruopu, Associate Professor, Geography and Environmental Resources, Ph.D., University of Nebraska, 2012; 2015. GIS analysis and modeling, water resources modeling and management, energy geography, agricultural land use.

Remo, Jonathan, Associate Professor, Geography and Environmental Resources, Ph.D., Southern Illinois University, 2008; 2012. Fluvial geomorphology, flood hydrology, hydraulic modeling, disaster mitigation planning, disaster loss modeling.

Schoof, Justin, Professor and Director School of Earth Systems and Sustainability, Geography and Environmental Resources, Ph.D., Indiana University, 2004; 2006. Climate variability and change, synoptic climatology, statistical climatology, climate extremes.

Wang, Guangxing, Professor, Geography and Environmental Resources, Ph.D., University of Helsinki, 1996; 2007. Remote sensing, GIS, forest and city carbon modeling and mapping, spatial uncertainty analysis of remote sensing products.

Weinert, Julie, Associate Professor of Practice, Ph.D., The Ohio State University, 2008; 2005. Tourism geography, ecotourism, feminist geography, globalization, geography of development.

Emeriti Faculty

Baumann, Duane D., Professor, Emeritus, Ph.D., Clark University, 1968.

Dziegielewski, Benedykt, Professor, Emeritus, Ph.D., Southern Illinois University, 1983.

Horsley, Doc, Assistant Professor, Emeritus, Ph.D., Southern Illinois University, 1974.

Lieber, Stanley R., Professor, Emeritus, Ph.D., University of Iowa, 1974.

Sharpe, David M., Professor, Emeritus, Ph.D., Southern Illinois University, 1968.

Last updated: 04/08/2021

Southern Illinois University

Carbondale, IL 62901

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Catalog Year Statement:

Students starting their collegiate training during the period of time covered by this catalog (see bottom of this page) are subject to the curricular requirements as specified herein. The requirements herein will extend for a seven calendar-year period from the date of entry for baccalaureate programs and three years for associate programs. Should the University change the course requirements contained herein subsequently, students are assured that necessary adjustments will be made so that no additional time is required of them.