College:
Social Sciences and Professional Studies

Degree and Programs Offered:
Bachelor of Arts
Major - Geography
Minors - Geographic Information Systems, Geography
Certificate - Geographic Information Systems

Student Organizations/Clubs:
Parkside Geography Club

Career Possibilities:
Students who major in geography are well prepared for careers in many fields including environmental analysis and management, geographic information systems (GIS), community development, urban planning, and teaching. In addition, geography is a dynamic liberal arts major which combines cultural perspectives and analytical skills. Opportunities for employment are wide ranging. Employers understand that geography graduates possess a wide variety of professional abilities. Possible employers include mapping firms, environmental agencies, planning departments, site selection companies, marketing departments, school districts, emergency management agencies, nonprofit organizations, and defense agencies.

Department Overview
Geography is the study of the distribution, variation, and interrelation of the natural and cultural features of the Earth's surface. The UW-Parkside geography curriculum is designed to reflect the complexity of society and nature so that students will gain an understanding of the varied spatial factors which influence life in today's interconnected world. The Geography Department's mission is to extend geographic knowledge through exceptional educational programs, research projects, and service activities using advanced technology to train students and to solve problems. Geography's mission is important because aspects of place, area, location, and distribution are essential to resolving issues facing the region, the country and the world. Understanding global, national, and local patterns of economic activity, urban problems, cultural differences and environmental change is vital and emphasized within the department.

Students interested in geography have several options. Some students complete a general major in geography; many students include as part of their geography major one or more of the following:

- Concentration in Planning
- Concentration in Applied Environmental Geography
- Geographic Information Systems Minor*
- Certificate in Geographic Information Systems*

* Students cannot earn both the GIS minor and the Certificate in GIS.

The department also offers a Geography Minor.

Students wanting to combine geography with teaching licensure can pursue a geography major and early adolescence – adolescence (grades 6-12) licensure or broad field social studies licensure with a geography minor for teacher candidates. See the Institute of Professional Educator Development for more information.

Opportunities to assist in faculty research projects permit students to learn research tools used in geography and to apply concepts learned in the classroom. For example, students might learn how to take soil samples in the field, to analyze tree rings in the lab, to measure quality of life in segregated neighborhoods, or to use GIS for mapping, analysis, and decision making. In addition, students can gain service experiences through community-based learning projects.

PROGRAM LEVEL OUTCOMES
1. Knowledge: [global perspective and individual accountability] The goal is to educate students with fundamental geographic knowledge and concepts in the major areas of physical geography and human geography, while comprehending the interrelationships between the environment/nature and human activities.
2. Analytical and Technical Skills: [analytical skills; information technology competence] The goal is to train students to utilize several geographic tools: maps, statistics, field methods, geographic information systems, and global positioning systems.
3. Synthesize and Communicate: [critical thinking; literacy and oral communication] The goal is for students to develop critical thinking skills to conduct research and solve problems: review literature, collect data, apply methodology, and present the results.

Preparation for Graduate School
A major in geography provides excellent preparation for students seeking graduate study and degrees in geography, urban planning, environmental studies, international affairs, resource management, and other related fields.
Requirements for the Geography Major
(40-44 credits)

A. Core Courses (28 - 29 credits)

All geography majors are required to complete the following courses or their equivalents:

1. Required Core Courses (22 credits)
   GEOG 100 Physical Geography and the Environment .................4 cr
   GEOG 110 Intro to Geography-World Regions ..................3 cr
   GEOG 215 Economic Geography .....................................3 cr
   GEOG 250 Map Use and Analysis ....................................3 cr
   GEOG 300 Geographic Methods ......................................3 cr
   GEOG 350 Cartography and GIS .....................................3 cr
   GEOG 495 Senior Seminar ............................................3 cr

2. Choose One Human Geography Course (3 credits)
   GEOG 101 Geography of American Ethnicity & Race ...............3 cr
   GEOG 105 Contemporary Human Geography .....................3 cr
   GEOG 108 Culture and Environmental Sustainability ............3 cr

3. Choose One Advanced Physical Geography Course (3-4 credits)
   GEOG 324 Landforms and Environmental Processes ..................4 cr
   GEOG 326 Biogeography ..............................................3 cr
   GEOG 382 Soil Ecosystems and Resources .........................4 cr
   GEOG 384 Landscape Ecology ........................................3 cr
   GEOG 396 Field Methods in Geography ............................4 cr

B. Upper-level Major Courses (12-15 credits)

Choose one of the major completion options below:

1. General Geography Major (12 credits)
   The general major is designed to provide students a broad background in geography.

   Choose 12 credits of 300-level and above GEOG courses

   Note: When earning the GIS minor with the general geography major students cannot count GEOG 460 or one of GEOG 455, 460, 465, 491, 494* or 499* toward the major's required 12 credits of 300-level and above geography courses.

   * Must have substantial GIS content/project and be approved by the Department.

   In addition to earning a general geography major, students can choose to earn a concentration in planning, a concentration in applied environmental geography and a GIS minor or a certificate in GIS.

2. Concentration in Planning (12 credits)
   The concentration in planning is for geography majors interested in careers or graduate study in urban and regional planning, business planning, environmental planning, or related fields.

   a. Required Courses (6 credits)
      GEOG 360 Urban Geography ......................................3 cr
      GEOG 365 Geography in Land Use Planning ........3 cr

   b. Choose Two Courses (6 credits)
      GEOG 330 Population Geography .............................3 cr
      GEOG 340 Political Geography ................................3 cr
      GEOG 375 Geography of Transportation ....................3 cr
      GEOG 494 Internship in Geography* ........................3 cr

      * Note that GEOG 494 must be with an approved agency/organization or other suitable site in order to count for this concentration.

3. Concentration in Applied Environmental Geography (12-15 credits)
   This concentration allows geography majors to emphasize physical geography and environmental analysis through a combination of classroom, lab, and field experiences. A career in environmental management is one example of where this concentration could be used.

   Choose Four Courses (12-15 credits)
   GEOG 306 Natural Disasters and Society ......................3 cr
   GEOG 308 Conservation of Natural Resources ..................3 cr
   GEOG 324 Climate Change .........................................3 cr
   GEOG 326 Biogeography ............................................3 cr
   GEOG 382 Soil Ecosystems and Resources .....................4 cr
   GEOG 384 Landscape Ecology .....................................3 cr
   GEOG 396 Field Methods in Geography .......................4 cr
   GEOG 494 Internship in Geography* ..........................3 cr

      * Note that GEOG 494 must be with an approved agency/organization or other suitable site in order to count for this concentration.

Requirements for the Geographic Information Systems (GIS) Minor
(18 or 19 credits)

This minor allows students to gain additional knowledge and expertise in geographic information systems. Geographic information systems (GIS) are used to store, display, and analyze spatially referenced databases to help solve problems and to assist in decision making. GIS is increasingly important in a variety of applications like transportation planning, business logistics, and environmental impact analysis. This minor can be earned by completing the following or their equivalents.

A. Choose One Course (3-4 credits)
   GEOG 100 Physical Geography and the Environment ............4 cr
   GEOG 105 Contemporary Human Geography ....................3 cr
Requirements for the Certificate in Geographic Information Systems (GIS) (12 credits)

GIS are used to store, display, and analyze spatially referenced databases to help solve problems and to assist in decision making. This certificate can be earned by completing the following or their equivalents.

**A. Required Courses (9 credits)**
- GEOG 250 Map Use and Analysis (3 cr)
- GEOG 350 Cartography and GIS (3 cr)
- GEOG 460 Introduction to GIS Analysis (3 cr)

**B. Required Courses (3 credits)**
- GEOG 455 Remote Sensing (3 cr)
- GEOG 465 Advanced GIS Applications (3 cr)
- GEOG 491 Special Topics in GIS (3 cr)

**C. Choose Two Courses (6 credits)**
- GEOG 396 Field Methods in Geography (3 cr)
- GEOG 455 Remote Sensing (3 cr)
- GEOG 460 Introduction to GIS Analysis (3 cr)
- GEOG 465 Advanced GIS Applications (3 cr)
- GEOG 491 Special Topics in GIS (3 cr)
- GEOG 499 Independent Study (3 cr)

* Must have substantial GIS content/project and be approved by the Department.

Students cannot earn both the GIS minor and certificate.

**Geography Majors**

This certificate can be earned by completing the following or their equivalents.

**A. Required Course (4 credits)**
- GEOG 100 Physical Geography and the Environment (4 cr)

**B. Choose One Course (3 credits)**
- GEOG 101 Geography of American Ethnicity & Race (3 cr)
- GEOG 105 Contemporary Human Geography (3 cr)
- GEOG 108 Culture and Environmental Sustainability (3 cr)
- GEOG 110 Intro to Geography-World Regions (3 cr)

**C. Choose One Course (3 credits)**
- GEOG 215 Economic Geography (3 cr)
- GEOG 250 Map Use and Analysis (3 cr)

**D. Upper-level Courses (9 credits)**
Choose 9 credits of 300-level and above GEOG courses.

**Teacher Education Licensure in Geography**

Students interested in becoming teachers will need to complete an approved program pathway to a Wisconsin initial educator license. The approved pathway to this license is a structured collaboration between the geography department and the Institute of Professional Educator Development (IPED).

The requirements for teacher licensure are specific and therefore students must meet with the IPED Adviser to coordinate the major and teacher education curriculum. It is very important to contact the IPED adviser at 262-595-2180 or Molinaro D111 as soon as possible. Students are required to seek advising each semester from both the IPED Adviser and the geography department liaison to the teacher education program. Complete information about the teacher education program can be found on the IPED website at: http://www.uwp.edu/learn/departments/educatordevelopment/index.cfm
215 Economic Geography .................................................. 3 cr
Prereq: None. Freq: Spring.
Analysis of the factors which influence the spatial patterns of economic activities and economic variables. The geography of transportation systems, labor supplies, markets, trade, technology, and government regulations. Investigation of how geography affects economic processes and problems. Introductory course in geography recommended.

250 Map Use and Analysis ................................................. 3 cr
Prereq: None. Freq: Fall.
Interpretation, analysis, and function of topographic and thematic maps. Navigation and data collection using GPS. Compass use and orienteering. Map projections and coordinate systems. Measurement and pattern analysis using maps. Air photo interpretation. Hands-on experience using maps and GPS in both the classroom and the field.

290 Special Topics in Geography ..................................... 1-4 cr
Prereq: None. Freq: Occasionally.
Selected topics in geography will be examined.

300 Geographic Methods .................................................. 3 cr
Prereq: Junior standing and 9 credits in geography; or consent of instructor. Freq: Fall.
Introduction to geographic concepts, methods, and procedures. Applications of selected descriptive and inferential statistical methods to geographic problems. Hypothesis testing, correlation, and regression. Analysis of point patterns.

306 Natural Disasters and Society ...................................... 3 cr
Prereq: None. Freq: Occasionally.
Exploration of natural disasters and their impacts on humans. Topics include earthquakes, tsunamis, volcanoes, tornadoes, hurricanes, floods, asteroid and comet impacts. Disaster planning and mitigation. GIS applications in disaster management.

308 Conservation of Natural Resources ............................. 3 cr
Prereq: None. Freq: Summer.
Examination of significant environmental issues. Policies and problems in the use and management of natural resources. Energy alternatives, climate change, water resources issues, endangered species, and others. Selected topics taken from southeastern Wisconsin.

310 Geography of the United States and Canada ............... 3 cr
Prereq: None. Freq: Occasionally.
Covers the physical features, resources, people, settlement patterns, historical geography, land utilization and economic development of the United States and Canada. Particular emphasis on environmental issues, economic ties, and political relations.

315 Geography of Wisconsin .......................................... 3 cr
Prereq: None. Freq: Occasionally.
Describes Wisconsin’s characteristics and compares the state to the rest of the United States. Explores patterns of history, population, climate, topography, economic activity, transportation, culture, and recreation. Examines current and ongoing statewide issues from a geographic perspective.

320 Regional Geography ............................................... 3 cr
Prereq: None. Freq: Occasionally.
Explores the physical and cultural features of a selected region with emphasis on past and present spatial patterns. Included geographic viewpoints on current issues and problems within the region. May be taken for credit each time a different region is studied.

323 Climate Change ...................................................... 3 cr
Prereq: GEOG 100. Freq: Occasionally.
Investigates characteristics, processes, distribution, classification and geographical significance of Earth’s climates. Causes and consequences of climate change, especially its impacts on human populations.

324 Landforms and Environmental Processes .................. 4 cr
Prereq: GEOG 100 or GEOS 100. Freq: Occasionally.
Examines Earth’s landforms concerning their characteristics, processes, and distribution. Focuses on historical geology, tectonic events, rock formation, glaciations, river systems, soil development and consequences for humans. Includes field trip, lab applications, and aerial photo interpretation.

326 Biogeography .......................................................... 3 cr
Prereq: GEOG 100 or BIOS 100, 102 or 104. Freq: Spring.
Focuses on the distribution of biodiversity in space and time. Includes plant identification, ecological and evolutionary patterns, conservation, restoration ecology, palaeodynamics, and human impacts on species distributions. Includes field trips.

330 Population Geography ............................................ 3 cr
Prereq: A course in geography. Freq: Occasionally.
Geographic factors that influence patterns of human settlement and existence. Examines population distributions and growth as related to environmental and resource issues. Are there too many people on Earth? How do the demographics of the United States compare to other parts of the world? Includes case studies, applications, and methods of analysis.

340 Political Geography .................................................. 3 cr
Prereq: A course in geography. Freq: Occasionally.
Geographical explanation of the political organization of space and territory. Issues are explored at scales ranging from global to local. Globalization, nationalism, boundary problems, regional conflict, ethnic nationalism, and the local context for planning and policy are stressed.

350 Cartography and GIS .................................................. 3 cr
Prereq: GEOG 250 or consent of instructor. Freq: Spring.
Cartographic theory and methods. Role of maps in society. Introduction to GIS technology. Digital cartographic design and data processing using GIS. Also emphasizes history of cartography, quantitative and qualitative thematic mapping, and maps as both art and science.

360 Urban Geography ...................................................... 3 cr
Prereq: A course in geography. Freq: Fall.
Focuses on characteristics of urban regions. Analysis of the factors that determine urban development as well as patterns within urban areas. Transportation and housing issues. Ethnic neighborhoods and urban government. Urban planning models and practices are introduced to study urban problems like poverty, congestion, crime and infrastructure.

365 Geography in Land Use Planning ............................... 3 cr
Prereq: A course in geography. Freq: Spring.
A detailed examination of the forces and factors that shape contemporary land use patterns in the United States. The study of the concepts, theories, and tools of land use planning. How planning leads to more efficient, productive, and pleasant urban and rural environments. Uses selected case studies from southeastern Wisconsin and northern Illinois.

375 Geography of Transportation .................................... 3 cr
Prereq: A course in geography. Freq: Occasionally.
The significance of transportation within the modern world. Geographic analysis of transportation systems with emphasis on networks, costs, new technologies, commodity flows, traffic patterns, impacts on development, the different modes, and transportation problems. Transportation planning is included.

382 Soil Ecosystems and Resources ................................. 4 cr
Prereq: GEOG 100. Freq: Occasionally.
Understanding of soils as both natural bodies and as managed resources. Students learn how soil science fits into the broader topic of physical geography by exploring physical and chemical properties of soils, plant nutrition from soils, environmental impacts of climate, geomorphology, organisms on soils, and how soils are managed. Includes lab and field experience.

384 Landscape Ecology .................................................... 3 cr
Prereq: GEOG 100 or 326 or consent of instructor. Freq: Occasionally.
Focuses on how spatial structure affects ecosystem processes and biodiversity at the landscape level. Concepts include landscape scale, natural disturbances, animal movements, patch dynamics, design of nature reserves, and the wildland-urban interface.

390 Special Topics in Geography ...................................... 3 cr
Prereq: None. Freq: Occasionally.
Selected topics in geography will be examined.
Field Methods in Geography .................................................... 4 cr
Prereq: Consent of instructor. Freq: Fall.
Application of geographic concepts, scientific inquiry, methods, and tools in a hands-on field setting. Current focus is on understanding patterns of biodiversity in natural habitats, assessing native ecosystems as influenced by human activities, and designing sampling methods to quantify vegetation dynamics. Techniques can include taxonomy keys, dendrochronology, soil sampling, and spatial statistics. May be taken for credit each time a different focus or area is studied. Additional fees required. Field trips required.

Remote Sensing ................................................................... 3 cr
Prereq: GEOG 250 or 350 or consent of instructor. Freq: Occasionally.
Overview of remote-sensing systems (airborne and satellite). Principles of photographic and electromagnetic remote-sensing systems which detect, record, and measure distributions of natural and cultural phenomena. Interpretation of aerial and orbital imagery for urban planning and environmental research.

Introduction to GIS Analysis ............................................... 3 cr
Prereq: GEOG 250 or 350 or consent of instructor. Freq: Fall.
Introduction to spatial analysis using GIS technology. Data acquisition, integration, and editing. Spatial analysis of natural and cultural phenomena using both vector and raster data models. Application of GIS technologies to environmental management and urban planning. Field-based data collection using GPS. Focus on local community issues. Individual and group projects.

Advanced GIS Applications .................................................. 3 cr
Prereq: GEOG 460 or consent of instructor. Freq: Spring.

Special Topics in Geography ............................................... 1-3 cr
Prereq: Consent of instructor. Freq: Occasionally.
Selected topics in geography will be examined.

Special Topics in GIS .......................................................... 3 cr
Prereq: GEOG 350 or consent of instructor. Freq: Occasionally.
Examines selected topics and applications in Geographic Information Systems.

Internship in Geography ..................................................... 1-12 cr
Prereq: Junior standing, geography or related major; 2.75 GPA in geography courses, and consent of instructor. Freq: Fall, Spring, Summer.
Practical application of geographic concepts, methods, and technologies. By working in planning agencies, GIS departments, environmental organizations, other private or public units, students gain real-world experience. Enrollment dependent on availability of suitable placement. May be repeated for a maximum of 12 credits with up to 6 credits toward the major.

Senior Seminar ............................................................... 3 cr
Prereq: Senior standing, geography or related major. Freq: Fall, Spring.
Capstone course applying knowledge, concepts, and methods of geography. Includes completing a major research project and communicating the results.

Independent Study .......................................................... 1-3 cr
Prereq: Junior standing; 2.25 overall GPA, and consent of instructor. Freq: Fall, Spring, Summer.
Under instructor supervision, individual investigation of a topic related to geography. Maximum of 6 credits may be applied toward the major.

Graduate Courses

Field Methods in Geography ................................................ 4 cr
Prereq: Consent of instructor. Freq: Fall.
Extensive application of geographic concepts, scientific inquiry, methods, and tools in a hands-on field setting. Focus is on understanding patterns of biodiversity in natural habitats, assessing native ecosystems as influenced by human activities, and designing sampling methods to quantify vegetation dynamics. Techniques can include taxonomy keys, dendrochronology, soil sampling, and spatial statistics. May be taken for credit each time a different focus or area is studied. Additional fees required. Field trips required.

Special Topics in Geography ............................................. 1-4 cr
Prereq: None. Freq: Occasionally.
Advanced study on selected topics in geography.