

*Geographic Information Systems
Education and Research
for Students, Professionals,
and Wisconsin's Citizens*



University of Wisconsin - Stevens Point

*The GIS Center conducts and disseminates
Geographic Information Systems education and research
to foster a highly-skilled, multi-disciplinary GIS workforce and
to confront spatial challenges important to Wisconsin's citizens.*

Visit us on the web at www.uwsp.edu/GIS



University of Wisconsin-Stevens Point

**College of Letters & Science
Department of Geography & Geology**

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What is GIS?



Information about places, or geographic information, permeates our lives every day. The six o'clock news uses maps to exhibit today's headlines. Our children take a safe route to school. We plan our next vacation. A medical doctor identifies the source of West Nile virus. A 911 operator dispatches an ambulance and fire trucks to a fire. Name any activity, object or event, no matter how simple or complex, and you will find that they are connected to a geographic location. A commonly accepted estimate is that *80 percent* of all information has a spatial or place-based component.

With that much spatial information it is important to understand the tools available to manage it – **geographic information systems or GIS**. GIS uses computer hardware and software to collect, maintain, analyze, visualize, and communicate spatial information. Whether you are a private citizen, a government employee or a businessperson, GIS is fundamental to helping utilize information efficiently and effectively.

Why Study GIS?



Nationally and regionally, there is a pressing need for professionals educated in GIS and related spatial analysis techniques. Over 500,000 professionals in fields ranging from environmental assessment to retail trade analysis are asked to use GIS in their jobs, with 50,000 using GIS full-time. ***Employment numbers are growing nationally at a rate of 15% per year and are anticipated to accelerate (U.S. Department of Labor)***. The Wisconsin Land Information Association (WLIA) indicates that GIS is one of today's more pervasive high-growth employment sectors and sees a clear need for people with a solid education and robust skills in GIS.





The GIS Center offers several learning pathways tailored to fit the interests of traditional students, two-year associates, post-graduates, and professionals seeking to continue their education. Opportunities exist for students to earn academic credit applicable toward our certificate and degree programs. Students have the option to take additional courses for academic credit or non-credit to help meet their personal learning objectives.

Learning pathways include:

- One-year GIS Certificate Program (credit)
 - GIS Professional Certificate
 - GIS Focal Certificate(s)
- Continuing Education (credit or non-credit)
- ESRI Authorized Courses (non-credit, continuing education units available)
- Geographic Information Systems and Spatial Analysis Minor (credit)
- Geography & Geoscience Majors - Geographic Information Science and Cartographic Option and Environmental Analysis Option(credit)

GIS Center programs are multi-disciplinary and satisfy a wide variety of professional pursuits. Among other areas, our courses augment learners' abilities to:

- Address environmental resources and sustainability challenges
- Deliver efficient and effective emergency management solutions
- Develop sophisticated GIS programming and web workflows
- Provide decision-support for urban and regional planning
- Craft professional cartographic products

To declare a GIS certificate, minor, or major contact the Geography/Geology Department at 715-346-2629 or email geoggeol@uwsp.edu.

GIS Certificate Program



The 18-credit (1-year) certificate program embraces the need to expand the use of technology in Wisconsin by offering training accessible to both traditional and continuing education students. Students have the option to earn a Professional GIS Certificate or one of several focal area certificates. Certificates earned for academic credit will appear on the student's UWSP official transcripts. **To enroll, call or email the GIS Center at 715-346-2629 or geoggeol@uwsp.edu or visit www.uwsp.edu/conted/certificate/GIS.**

Professional GIS Certificate

The Professional GIS Certificate is designed for students that desire flexibility in selecting GIS coursework that fits their specific interest areas. All GIS courses are available to students enrolled in this certificate option.

CORE COURSES (8 credits + 1 practicum or internship credit)

Geography 279. Fundamentals of Geographic Information Systems. 2 cr. *
Geography 476/676. Geographic Information Systems I. 3 cr. *
Geography 479/679. Geographic Information Systems II. 3 cr.
Geography 480 or 485. Practicum or Internship. 1 cr.

ELECTIVE COURSES (9 credits)

Geography 276. Introduction to Cartography. 3 cr.
Geography 376. Statistical and Multimedia Cartography. 3 cr.
Geography 377. Remote Sensing I. 3 cr.
Geography 379/579. Remote Sensing II. 3 cr.
Geography 382/582. Dynamic Cartography. 3 cr.
Geography 386. Map Design and Production. 3 cr.
Geography 471/671. GIS Applications in Sustainability. 3 cr.
Geography 472/672. GIS Environmental Modeling and Management. 3 cr.
Geography 473/673. GIS Applications for Managing Working Lands. 3cr.
Geography 477/677. GIS Applications in Local Government. 3 cr.
Geography 481/681. GIS Database Design and Modeling. 3 cr.
Geography 482/682. GIS Programming and Customization. 3 cr.
Geography 483/683. GIS Applications in Emergency Management. 3 cr.
Geography 484/684. GIS Applications in Urban and Regional Planning. 3cr.
Geography 486/686. GIS and GPS Applications in Forestry Management. 3cr.
Geography 487/687. GIS Web Server Applications and Administration. 3 cr.
Geography 488/688. Mobile GIS Techniques. 3 cr.
Geography 779. Geographic Techniques for Educators and Professionals. 1-3 cr.



Focal GIS Certificates

Focal GIS Certificates are designed for students that desire to concentrate on GIS coursework suited to a particular professional field or application area. Focal certificates require completion of 18 credits - 8 core credits, 9 elective credits, and 1 credit (60 hours) of capstone experience.

CORE COURSES (8 credits + 1 practicum or internship credit)

Geography 279. Fundamentals of Geographic Information Systems. 2 cr. *
Geography 476/676. Geographic Information Systems I. 3 cr. *
Geography 479/679. Geographic Information Systems II. 3 cr.
Geography 480 or 485. Practicum or Internship. 1 cr.

ELECTIVE COURSES (9 credits)

GIS Certificate in Cartography

Geography 276. Introduction to Cartography. 3 cr.
Geography 376. Statistical and Multimedia Cartography. 3 cr.
Geography 382/582. Dynamic Cartography. 3 cr.
Geography 386. Map Design and Production. 3 cr.

GIS Certificate in Forestry

Geography 377. Remote Sensing I. 3 cr.
Geography 379/579. Remote Sensing II. 3 cr.
Geography 486/686. GIS and GPS Applications in Forestry Management. 3 cr.

GIS Certificate in Urban and Regional Planning

Geography 377. Remote Sensing I. 3 cr.
Geography 473/673. GIS Applications for Managing Working Lands. 3 cr.
Geography 477/677. GIS Applications in Local Government. 3 cr.
Geography 484/684. GIS Applications in Urban and Regional Planning. 3 cr.



** Students who have taken introductory GIS courses within the last five years are not required to re-take courses. Standard test-out policies and exam processing fees may apply.*



ELECTIVE COURSES (continued)

GIS Certificate in Programming and Web Development

Geography 481/681. GIS Database Design and Modeling. 3 cr.

Geography 482/682. GIS Programming and Customization. 3 cr.

Geography 487/687. GIS Web Server Applications and Administration. 3 cr.

GIS Certificate in Environmental Management

Geography 377. Remote Sensing I. 3 cr.

Geography 471/671. GIS Applications in Sustainability. 3 cr.

Geography 472/672. GIS Environmental Modeling & Management Techniques. 3 cr.

GIS Certificate in Emergency Management

Geography 377. Remote Sensing I. 3 cr.

Geography 483/683. GIS Applications in Emergency Management. 3 cr.

Geography 488/688. Mobile GIS Techniques. 3 cr.

Explore certificates at www.uwsp.edu/conted/certificate/GIS



Continuing Education in GIS



Enroll in Individual Courses

Students interested in continuing their education in GIS can enroll in individual courses to brush up on GIS fundamentals or augment their proficiency using GIS. Students who do not desire a GIS Certificate or academic credit can instead earn continuing education units (CEUs) and certificates of completion for individual courses. All GIS courses can be taken for credit or for non-credit.

Customized Workshops

In addition to our courses, the GIS Center offers workshops for both casual users and long-time GIS professionals. Check with GIS Center staff for a complete listing of current workshop offerings.

On-site Training

If your organization has specific needs or requires that courses be taught on-location, contact the GIS Center to help develop a training venue that suits you.

ESRI Authorized Courses



Instructor-Led ESRI Software Training (non-credit, CEUs available)

The GIS Center has instructors authorized to teach ESRI software courses. ESRI is a leader in the GIS market with a multifaceted program built around the ArcGIS software platform. ESRI shortcourses will prepare students to maximize the utility of ESRI software and its extensions. Students can take ESRI shortcourses at our UW-Stevens Point campus location, but instructors are ready to deliver ESRI shortcourses at your facility or a location near you.

Visit the GIS Center website to learn more about ESRI Courses

www.uwsp.edu/GIS

Register for ESRI courses at

www.uwsp.edu/conted/workshops/GIS/ESRI



Geographic Information Systems and Spatial Analysis Minor

The 22-credit minor (28-credits for students enrolled in the geographic information science and cartographic option of the geography major) covers the foundation of spatial analysis and geographic information systems, including cartography, statistical analysis, and hands-on exposure to cutting edge GIS technology. The minor complements programs in geography, geology, resource management, land use planning, wildlife, forestry, water, soils, biology and other fields reliant on spatial analysis.

REQUIRED COURSES

- Geography 276. Introduction to Cartography. 3 cr.
- Geography 279. Fundamentals of Geographic Information Systems. 2 cr.
- Geography 377. Remote Sensing I. 3 cr.
- Geography 379. Remote Sensing II. 3 cr.
- Geography 476. Geographic Information Systems I. 3 cr.
- Geography 479. Geographic Information Systems II. 3 cr.

APPLIED SPATIAL STATISTICS COURSE

- Geography 390. Applied Statistics in Geography. 3 cr. (OR)
- Wildlife 311. Quantitative Methods for Wildlife and Fisheries Resch/Mgt. 2 cr. (OR)
- Forestry 322. Forestry Mensuration. 3 cr. (OR) *Courses mutually agreed upon by the student's academic advisor and the Chair of the Geography/Geology Department.*

ELECTIVE COURSES (3 credits from the following list)

- | | | |
|---------------|---------------|-----------------------|
| Biology 306 | Geography 378 | Forestry 385 |
| Biology 321 | Geography 382 | Natural Resources 363 |
| Business 339 | Geography 480 | Natural Resources 385 |
| Economics 342 | Geography 485 | Soils 360 |
| Geography 344 | Geology 330 | Soils 365 |
| Geography 358 | Forestry 319 | Water/Geology 383 |
| Geography 370 | Forestry 320 | Wildlife 350/550 |
| Geography 372 | | |

(OR) *Courses mutually agreed upon by the student's academic advisor and the Chair of the Geography/Geology Department.*

Geography & GeoScience Majors



Geography explores the complex interactions and relationships among climate, elevation, soils, humans, flora, fauna, industries, governments, and many other objects, phenomenon, or events. Geography addresses how and why place matters. Geoscience relates to the study of Earth's processes involving rocks, minerals, soils, oceans, fresh water, and atmosphere. Geoscience explores how Earth's systems affect and are affected by human actions. Students pursuing a GIS Certificate will see significant course overlap with these majors and may consider additionally pursuing a BA or BS in Geography or Geoscience.

Geographic Information Science and Cartographic Option

The Geography Major - GIS and Cartographic Option is a 40-credit program designed for learners with a passion for managing geographic information and applying acquired spatial skills to solve societal problems, address new opportunities, and articulate place-based ideas and concepts. After completing the major, students will be able to provide GIS technical and decision-support for a wide-range of issue areas and professions.

Environmental Analysis Option

The Geoscience Major - Environmental Analysis Option is designed for students interested in careers related to land use planning, environmental consulting, geospatial analysis, climate change, Earth material extraction, geo-hazard assessment or natural resources positions with local, county, state, or federal government. Students could also pursue graduate degrees in geoscience related programs.



For more information contact the Geography/Geology Department at 715-346-2629 or geoggeol@uwsp.edu.



All GIS Center courses are available to all learners for academic credit or for continuing education. A variety of courses exist to suit your interests and a variety of course delivery options are available to suit your academic or professional needs.

Register for courses at www.uwsp.edu/conted/credit

GEOG 276. Introduction to Cartography: Map Conceptualization and Development. 3 cr. The map production process, including rationale, graphic structure, data collection and organization, map layout, and final production. 2 hrs lec, 3 hrs lab per wk. Prereq: So st.

GEOG 279. Fundamentals of Geographic Information Systems. 2 cr. Definition and components of GIS for resource management. Principles and structure of spatial data and cartographic modeling. Spatial data acquisition, manipulation, translation, aggregation, analysis, and presentation. Prereq: Any geography, CNR or environmental science course.

GEOG 376. Statistical and Multimedia Cartography. 3 cr. Statistical manipulation and symbolization of spatial data for map presentation. Acquire and handle quantitative data within a multimedia mapping environment. 2 hrs lec, 3 hrs lab per wk. Prereq: 276 or cons instr.

GEOG 377. Remote Sensing I. 3 cr. Characteristics of aerial photographs and digital imagery. Use remote sensing materials to conduct resource inventories, and land use evaluation, and landform analysis. 2 hrs lec, 2 hrs lab per wk. May not earn credit in both Geog 377 and Natural Resources 377.

GEOG 379/579. Remote Sensing II. 3 cr. Learn principles of remote sensor technology and apply them to inventory earth resources, detect and monitor pollution, and measure other environmental phenomena. Use visual analysis and computer-assisted digital imaging processing techniques to interpret various types of remote sensor imagery. 2 hrs. lec, 2 hrs. lab per wk. Possible field trip(s). Prereq: 377 or Natural Resources 377.

GEOG 382/582. Dynamic Cartography. 3 cr. Theory and practical applications of interactive mapping and hypermedia presentation. Survey of animated mapping, Web-based cartography, dynamic map displays and associated authoring tools within a multimedia environment. 2 hrs lec., 2 hrs lab per wk. Prereq: 276 or cons instr.



GEOG 386. Map Design and Production. 3 cr. How the graphic elements of a map affect its physical and perceived structure. Graphic communication, design principles, and map production skills. 2 hrs lec, 3 hrs lab per wk. Prereq: 276 or cons instr.

GEOG 471/671. GIS Applications in Sustainability. 3 cr. Geographic Information Systems (GIS) concepts and applications to support regional and community level sustainability initiatives. Examination of spatial analysis topics and practices including sustainability indicators, resource management, public participation, decision making and effective presentation. 2 hrs lecture, 2 hrs lab. Prereq: 279, 476/676, or cons instr.

GEOG 472/672. GIS Environmental Modeling and Management Techniques. 3 cr. Geographic Information Systems (GIS) modeling techniques for natural resource managers and environmental scientists. GIS algorithms for recreational management, conservation, habitat suitability, watershed delineation, environmental pollution, land use planning, and natural disasters. 2 hrs lecture, 2 hrs lab. Prereq: 476/676, 479/679, or cons instr. Rec: 377/577, 379/579.

GEOG 473/673. GIS Applications for Managing Working Lands and Operations. 3 cr. Practical application of using Geographic Information Systems (GIS) and data to effectively plan and manage agricultural working lands and operations. Analysis of local and regional agricultural patterns and trends, utilization of digital soil databases, assessment of community working lands for informing public policy, effective use of working land assets. 2 hrs lecture, 2 hrs lab. Prereq: 279, or cons instr.

GEOG 476/676. Geographic Information Systems I. 3 cr. Develop, use and maintain a geographic-based spatial information system (GIS) for resource management. Acquire and assess spatial data. Compare raster and vector data models. Computer-based geographic data handling, analysis, interpretation, and display. Cartographic and spatial modeling. 2 hrs lec., 2 hrs lab per wk. Prereq: Any geography, CNR, or environmental science course; Geog 279 recommended.



GEOG 477/677. GIS Applications in Local Government. 3 cr. Administration of land records and emergency management services using GIS technology. Fundamentals of GIS-based network and location analysis in relation to cadastral maps, zoning regulations, health services and emergency service infrastructure. 2 hrs lec., 2 hrs lab per wk. Prereq: 476 or cons instr.

GEOG 479/679. Geographic Information Systems II. 3 cr. Intermediate and advanced GIS techniques; integrate medium and large scale digital databases, use rectified aerial and satellite geographic base data. Principles and development of complex environmental and cultural spatial modeling, GIS programming concepts and applications. 2 hrs lec., 2 hrs lab per wk. Prereq: 476; 379 recommended.

GEOG 480. Internship in Geography. 1-12 cr. Supervised training program in geography in cooperation with public or private agencies. One credit is at least 60 hrs work. Credits and/or addl requirements set by instr before registration. May repeat once for 12 cr max. Prereq: Jr or sr st, 9 cr 300/400 geography courses, and cons intern director.

GEOG 481/681. GIS Database Design and Modeling. 3 cr. Effectively construct, integrate, design and implement geodatabases. Examine storage, cataloging, maintenance and use of geospatial data within practical applications. 2 hrs lec., 2 hrs lab per wk. Prereq: 476, 479 or cons instr.

GEOG 482/682. GIS Programming and Customization. 3 cr. Customize GIS software for extended functionality and utility of the import, query, and display of geospatial information. Use and survey GIS programming languages to develop spatial applications and geographic models. 2 hrs lec., 2 hrs lab per wk. Prereq: 476, 479 or cons instr.

GEOG 483/683. GIS Applications in Emergency Management. 3 cr. Public safety issues and Geographic Information Systems (GIS) – based response assessment and emergency management. GIS methodologies involving crime analysis, fire response strategies, search and rescue, networked operations, risk assessment, personnel deployment, 911 infrastructure, and homeland security issues. Field trip may be required. 2 hrs lecture, 2 hrs lab. Prereq: 279, 476/676 or cons instr.



GEOG 484/684. GIS Applications in Urban and Regional Planning. 3 cr. Use of Geographic Information Systems (GIS) software and associated techniques within the planning environment. Investigation of GIS techniques used for decision support systems, scenario planning, 3-D visualization, suitability analysis, geographic growth management, public participation and impact assessment for planners. 2hrs lecture, 2 hrs lab
Prereq: 476/676, 479/679, or cons instr. Rec: Geography 388/588, 477/677.

GEOG 485. Practicum in Geography. 1-3 cr. Practical experience in geography under faculty supervision. Proposed practicum requires cons chair. May repeat for 6 cr max. Prereq: Jr st, written cons instr.

GEOG 486/686. GIS and GPS Applications in Forestry Management. 3 cr. Design and implementation of silviculture spatial databases using geographic information systems (GIS) tools. Acquisition and capture of forestry data using global positioning systems (GPS) differential techniques. Use of GIS in forest stewardship assessment, tree stand management and recreational appraisal. Field trips are required. 2 hrs lecture, 2 hrs lab.
Prereq 279, 476/676, or cons instr.

GEOG 487/687. GIS Web Server Applications and Administration. 3 cr. Formulation and construction of web-based maps, spatial data and geoprocessing models. Examination of relevant properties, functionality, interoperability and geodata services. Basics of Geographic Information Systems (GIS) web server systems, installation and operations. 2hrs lecture, 2 hrs lab
Prereq: 476/676, 479/679, or cons instr. Rec: 481/482, 482/682.

GEOG 488/688. Mobile GIS Techniques. 3 cr. Principles and practical applications of using mobile Geographic Information Systems (GIS). Planning, creation, implementation of an integrated digital network within a public environment. Mobile project design, development, synchronization, maintenance, and deployment. Field trips may be required. 2 hrs lecture, 2 hrs lab. Prereq: 476/676, 479/679, or cons instr.

GEOG 779. Geographic Techniques for Educators and Professionals. 1-3 cr. Teachers/professionals examine, develop, and apply one or more spatial technique(s). Acquisition/assessment of spatial data, computer-based geographic data handling, aggregation, translation, analysis, interpretation and mapping of geographic information. Possible fieldtrip(s). Subtitle will designate topic.

Research Opportunities



GIS Center faculty and staff engage in research opportunities that help enrich the GIS curriculum and provide solutions to challenging spatial problems. GIS Center research also provides our students with life experiences only obtained by working on research problems first-hand.

Grindstone and Moose Lake Inventories and Land Conservation

Students engaged with GIS Center faculty and citizens from both lake communities to inventory ecological and aesthetic shoreline characteristics. Citizen participants applied GIS to develop lake inventories and prioritize shorelines for conservation.



GIS for Teachers



GIS Center faculty and students worked cooperatively to develop GIS coursework for the K-12 classroom using freely available data and software downloadable from the internet. This photo displays a UWSP student providing instruction on ArcExplorer - a free GIS.

GIS and Human Health



In cooperation with Ministry Health Care, the GIS Center has engaged in research to investigate the correlation between stage of breast cancer at initial diagnosis with the location of the patient. The powerful analytical capabilities of GIS have long linked personal health to location factors.

Faculty and Staff



Dr. Keith Rice, professor and GIS Center Director, has nearly 30 years of experience teaching cartography and GIS. His research interests are in Internet/GIS design, animated and dynamic map displays, desktop mapping, applied GIS, digital image processing, and map delivery systems. He is recipient of the UW Regents Teaching Excellence Award (2002), University of Wisconsin-Stevens Point Excellence in Teaching Award (1995, 2002), Letters and Science Distinguished Achievement Faculty Award (1996), Mentor Leader - Award (1996), and Chancellor's Grant Writing Award (1998).

Office Phone: 715-346-4454

Email: Keith.Rice@uwsp.edu



Eugene Martin, visiting instructor of GIScience, pursues research focused on the social and technical aspects of natural resources quantification and management. He founded a non-profit consulting firm servicing the GIS needs of conservation, community-development, and sustainability initiatives in the Pacific Northwest. He continues his interests in volunteered geographic information (VGI), GeoWeb, sustainability, and data quality, transfer and integration.

Office Phone: 715-346-2802

Email: Gene.Martin@uwsp.edu



Douglas Miskowiak, GIS education specialist, explores the democratizing influences of GIS to inform, educate, engage, and empower the public in community decision-making. He has worked with communities and citizens across Wisconsin applying GIS methodologies for innovative decision-making, public participation, plan development, assessment, implementation, and monitoring. In addition to community and natural resources planning, Douglas is exploring the utility of GIS for emergency management, investigating human health/land use relationships, and conducting business assessments.

Office Phone: 715-346-4789

Email: Doug.Miskowiak@uwsp.edu



Dr. Eric Larsen, associate professor, provides instruction on remote sensing, digital image processing, aerial photograph interpretation, and physical geography. Dr. Larsen has a long standing interest in the relationships among wolves, elk, and aspen in Yellowstone National Park. He also conducts research on the Southern Royal Albatross, understanding the predation patterns by the New Zealand Sea Lion and solving the problem of band injury.

Office Phone: 715-346-4098

Email: Eric.Larsen@uwsp.edu

GIS Center Support Team. The GIS Center is supported by a talented team of administrative and technical support specialists and student interns. They provide valuable assistance in curriculum development and dissemination, identifying innovative technical solutions to spatial problems, and implementing applied research projects. UWSP Continuing Education specialists provide essential administrative support for center distance learning and continuing education programs.

We look forward to hearing from you!

For general questions and customer service, please contact the GIS Center.

GIS Center Phone: 715-346-4788

Email: geoggeol@uwsp.edu

Fax: 715-346-3372

Web: www.uwsp.edu/GIS

U.S. Mail: GIS Center
University of Wisconsin-Stevens Point, Science B307A
2001 4th Avenue
Stevens Point, WI 54481

For course registration related questions contact UWSP Continuing Education.
Phone: 1-800-898-9472

Fax: 715-346-3504

Web: www.uwsp.edu/conted

U.S. Mail: UWSP Continuing Education
2100 Main Street
Stevens Point, WI 54481



The GIS Center is located on the University of Wisconsin - Stevens Point campus on the third floor of the Science Building, 2001 4th Avenue. The main office is located in B307-A. The Center provides students access to several high-tech computing laboratories and the latest software releases.

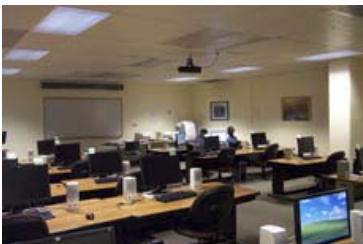
GIS/Remote Sensing Laboratory and Classroom



The GIS/Remote Sensing Laboratory and Classroom Complex is located in B-308 and B-312 and is used for GIS, cartography, and remote sensing analysis. The complex has 25 Pentium workstations with Quad Core, 2.83 GHz processors, 4 GB RAM, 12MB CACHE,

and Nvidia Quadro FX570 video cards. The lab is also equipped with two large format plotters, various printers, and a large format digital scanner.

Spatial Information Analysis Laboratory (SIAL)



The SIAL is a training lab dedicated to spatial data analysis using geographic information systems. The lab is equipped with 20 (Pentium IV, 3 GHz) workstations and various printers.



Computer Geographic Laboratory



This computer lab provides students access to specialized equipment to facilitate map production and geographic analysis. The lab has five workstations, various printers, digitizers, and flatbed scanner. The lab is located in B-346 Science Building.

Maurice E. Perret Map Center



The map center, located in B-304 of the Science Building is open to the university community and the public. During the academic year the map center is open on a regular basis. The map center is a depository for maps and charts of the U.S. Geological Survey and the National

Geospatial Intelligence Agency. For more information about the map center collections please visit www.uwsp.edu/geo/giscenter/Facilities.aspx.

Software

GIS Center workstations are equipped with a variety of software that include:

- ArcGIS and extensions
- Leica Erdas Imagine
- Macromedia Freehand MXa and Director
- SURFER 8.0
- MapViewer 7
- Adobe Illustrator, Flash, and Dreamweaver CS3
- Community Viz

Global Positioning Systems

Students have access to a variety of GPS equipment that include:

- Ashtech GPS basestation and software for differential positioning.
- Trimble GeoXT and Trimble Nomads with TerraSync software to collect field data.

Scholarships and Awards



The GIS Center and the Department of Geography and Geology have established awards to recognize students' achievements and excellence. Awards (cash and certificate) are presented to students at the department's annual spring banquet.

GIS Center Proficiency Award

Granted to a student graduating from the GIS Certificate Program who has demonstrated exceptional proficiency in applying geographic information systems.

Academic Honors Award

Granted to a graduating geography major who has earned the highest grade point average in departmental courses at UWSP.

Specht Cartography Award

Presented to a student submitting the most outstanding cartographic project or limited map portfolio, as determined by a faculty panel.

Gamma Theta Upsilon Award for Excellence in Geography

Presented by the Kappa Pi chapter of Gamma Theta Upsilon, a cash award and certificate is awarded for excellence in geography.

National Council for Geographic Education and the Association of American Geographers Award for Excellence of Scholarship

A certificate and cash award, presented by the National Council for Geographic Education and based on the recommendation of the department, is given to a senior geography major for excellence of scholarship.

Raymond and Ellen Specht Cartography Scholarship

The Department of Geography/Geology encourages qualified students to apply for the Raymond and Ellen Specht Cartography Scholarship, given to the department in memory of Raymond and Ellen Specht, former UWSP faculty.

Please see our website at www.uwsp.edu/geo/scholarships.aspx or contact GIS Center staff for more information about scholarships and awards.



UWSP Career Services

Information on careers and employment opportunities can be obtained through UWSP's Career Services Office (134 Main Building) or at www.uwsp.edu/career. UWSP Career Services helps students to:

- Explore major and career choices
- Prepare for the job search
- Pursue graduate school
- Locate opportunities for practical experience

GIS Center Career Services

In addition to services that UWSP Career Services provides, the GIS Center offers:

- More information about potential GIS careers and required skills
- Links to GIS industry job searches
- Jobs and internships posted to the GIS Center website
- Opportunity for GIS Center internships
- Student access to our website to post digital resumes and portfolios





Our alumni find success in the workplace. The following profiles represent some of the careers pursued by our graduates.

- John Armbruster (2003). GIS Associate, Michael Baker, Jr. Inc. Reno, Nevada.
- Melissa Kraemer Badtke (2002). GIS/Planning Specialist, East Central Regional Planning Commission. Menasha, Wisconsin.
- Rodney Bassler (1988). GIS Coordinator, North Dakota State Water Commission. Bismark, North Dakota.
- Brad Bastian (1997). GIS Coordinator/Land Information Officer, Outagamie County Planning Department. Appleton, Wisconsin.
- Luke Behling (2003). GIS Specialist, Outagamie County Planning Department. Appleton, Wisconsin.
- Jameson Belke (2002). Route Inventory GIS Specialist. Bureau of Land Management. Phoenix, Arizona.
- Jason Bitter (2001). Geospatial Analyst, GeoEye. St. Louis, Missouri.
- Norman Bushor (1992). GIS Analyst, Headwaters Resources. Tomahawk, Wisconsin.
- Jeff Cegielski (1998). Director of GIS Recruiting, Millennium Technical Contracting, Inc. Menomonee Falls, Wisconsin.
- Steven Cherek (2005). GIS Technician, Tippecanoe County Surveyor Office. Lafayette, Indiana
- Travis Clemens (2005). Geospatial Analyst, Continental Mapping. Madison, Wisconsin.
- Justin Conner (2001). GIS Specialist, Wood County Planning and Zoning Department. Wisconsin Rapids, Wisconsin.
- Philip Daley (2007). GIS Technician, TechniGraphics. Wooster, Ohio.
- Adam Derringer (2001). Manager of GIS Services, Mapping Specialists. Madison, Wisconsin.
- Dale Drayna (2000). Assistant Planner, City of Plainfield. Plainfield, Illinois.
- Jeff DuMez (1995). GIS Coordinator, Brown County Land Information Office. Green Bay, Wisconsin
- John DuMez (1991). Registered Land Surveyor, CompSite Surveying and Mapping. Hingham, Wisconsin.
- Sarah Ecke (2005). GIS Technician, Xcel Energy, Inc. Minneapolis, Minnesota.
- Mat Eddy (1996). Land Records Coordinator/Land Information Officer, Monroe County. Sparta, Wisconsin.
- Barbara [Tormohlen] Gibson (2002). GIS Coordinator/Land Information Officer, Vilas County Mapping Department. Eagle River, Wisconsin.
- Martin Goettl (2000). Land Information Director, Trempealeau County. Whitehall, Wisconsin.
- Andrew Gould (2005). Geospatial Analyst, Aero-Metric, Inc. Sheboygan, Wisconsin.
- Ian Grasshoff (2004). GIS Specialist/Land Information Officer, Waupaca County Land Information Office. Waupaca, Wisconsin.

Alumni Successes



- Matthew Guptail (2000). GIS/Planning Technician, North Central Regional Planning Commission. Wausau, Wisconsin.
- Matthew Halada (2001). Program and Planning Analyst, Department of Transportation, District 4. Wisconsin Rapids, Wisconsin.
- Mark Harris (1989). GIS Coordinator/Webmaster, City of Mequon. Mequon, Wisconsin.
- Gary Hetzer (1991). GIS Coordinator, Marathon County Planning Department. Wausau, Wisconsin.
- Dale Hewitt (2007). Survey Crew Chief, Rettler Corporation. Stevens Point, Wisconsin.
- Audrey Cox Jensen (2002). Addressing Coordinator, Lincoln County. Merrill, Wisconsin.
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