

# **Strategic Plan—2007-2012**

## **Department of Geography, Geology, and Planning Missouri State University**

**Adopted September 15, 2007**

### **Part I. Mission Statement**

The mission of the Department of Geography, Geology, and Planning is to develop educated persons who are prepared to make sound decisions involving public affairs issues related to science, society, and the environment in an increasingly technological world. The department strives to achieve this mission through excellence in a diverse array of teaching, research, and service activities.

The department provides a carefully designed and balanced suite of academic programs spanning the physical and social geosciences, including undergraduate majors in geography, geology, planning, geospatial science, and earth science education and a master's program in geospatial science in geography and geology. The department also supports the University's educational mission by providing seven different courses in support of the General Education program and a number of specialized courses in support of majors outside the department. The department takes pride in its long tradition of promoting student success by providing valuable learning experiences outside the classroom, including internships, undergraduate and graduate research projects, and numerous local, regional, and international field trips.

The department contributes significantly to the scholarly productivity of the University through an extensive array of research activities integral to the educational process, many with external funding. Departmental faculty and students are actively engaged in finding solutions for a variety of problems associated with planning for environmentally sustainable development in a region characterized by fragile karst geography and geology and vulnerable water resources. The department also plays an integral role in support of the University's public affairs mission through a number of educational outreach activities, many directly related to the unique physical, historical, and cultural setting of the Ozarks region.

## Part II. Strategic Analysis

### Strengths

- Department offers undergraduate majors in five distinct geoscience disciplines: geography, geology, planning, geospatial science, earth science education.
  - Planning program is fully accredited by Planning Accreditation Board (one of only fifteen fully accredited undergraduate planning programs in nation).
- Department offers Master of Science in Geospatial Science in Geography and Geology
  - Unique to our region
  - Provides students skills necessary to apply the principles and techniques of geospatial science to environmentally oriented problems in either geography or geology
- Department supports two quite separate Areas of Emphasis within the General Education Program with a total of seven courses
  - Natural World: GLG 110, GLG 171, GRY 135, GRY 142
  - Culture and Society: GRY 100, GRY 108, PLN 100
- Department provides a number of upper-division courses that support major programs outside the college, ranging from elementary education to entertainment management to global studies to international business.
- Faculty are dedicated to quality teaching and to student success.
  - Department provides numerous hands-on and field-related opportunities for students, including numerous class field trips plus three dedicated field courses (GLG 360, GLG 412, GRY 470).
  - Department provides numerous internship opportunities for students: City Utilities, City of Springfield, Greene County, MO-DNR, others.
  - Department provides numerous opportunities for students to travel to conferences and professional meetings.
- Faculty expertise in diverse array of specialties within the geoscience spectrum
  - Faculty provide expertise to community and region on many important areas: water resources and water quality, environmental problems associated with karst bedrock, community development, land use planning, tourism planning and development.
  - Center for Resource Planning and Management
  - Departmental leadership role with Ozarks Environmental and Water Resources Institute
- Faculty very active in research
  - Many GGP faculty members have earned international recognition for their research.
  - Most GGP faculty members involving Geospatial Science graduate students and/or GGP undergraduate majors in their research.
  - Over the past 2 calendar years:
    - 36 peer-reviewed scholarly journal articles and book chapters
    - 54 presentations at international, national, or regional professional meetings
    - 19 professional contract reports and scholarly guidebooks
    - over \$1,509,000 in external funding
- Graduates of all GGP programs are readily employable, many finding jobs with starting salaries exceeding the current salaries of their professors.
  - Prominent GGP graduates in federal, state, and local government as well as numerous industries nationwide
  - Graduates provide strong support through employment networking for recent graduates, financial support for departmental programs, and newly formed departmental Alumni Advisory Board.

## Weaknesses

- By nature, the geosciences cover a very diverse array of areas, and current GGP faculty members have interest and expertise in many of them. Nonetheless, there are some significant gaps in current departmental expertise:
  - The department is currently understaffed in the areas of human geography and tourism planning.
  - The pending retirement of Jim Miller will leave the department without expertise in paleontology, a critical area for the ongoing success of the geology program.
- Because of the very high proportion of laboratory-based instruction in many of the departments upper-division and graduate courses, student-credit-hour productivity of the department's ranked geography/geospatial science/planning faculty falls below the benchmark against which we are currently being measured (Delaware study)
- Unavailability of additional University-funded graduate teaching assistants (we've been "stuck" at nine for many years) limits the growth of the department's masters program and precludes the shift of additional General Education teaching responsibilities away from the ranked faculty.
- Lack of research and storage space severely limits expansion of research activities, particularly in geology.
- Department currently has a relatively small number of scholarship opportunities, none exclusively for geography, geospatial science, planning, or earth science education majors.

## Opportunities

- Identification by the University's Futures Task Force of "Environment and Water Resources" as one of eleven areas for increased University-wide research focus should provide increased visibility for the department's long established leadership role in this vital area.
  - University-wide reallocation of faculty lines and other resources in support of the futures initiatives could further increase the department's contributions in this vital area.
- Transfer of tenure-track line from geology to geography/geospatial science/planning (Miller retirement replacement) should allow strengthening of both geography and planning programs.
- OEWRI. This relatively new research center is already providing several new research assistantship opportunities for GGP graduate students and has the potential to significantly increase the research productivity of several GGP faculty.
- Recent increase in salary available for Geospatial Information Technician position should provide stability to that position and in turn enhance the productivity both of the CRPM and the GGP faculty.
- Pledge of matching contribution (to a total of \$20,000 through 12/31/2008) from Summerville Family Trust should enable Alumni Advisory Board to effectively pursue alumni support for GeoTrip Endowment.
- Name recognition of well respected emeritus faculty should enable department to pursue alumni support for additional endowed scholarships for GGP majors.
- Increased collaboration with area high schools and community colleges should increase opportunities to recruit additional majors.
- The offering of UMR's civil engineering program on the MSU campus should provide an increased audience for some upper-division geology courses and increased opportunities for research collaboration for some geology faculty.

## Threats

- The University's new cost-center budgeting model threatens to cannibalize the well established programs to provide personnel and space resources for newer programs within the college.
- The peer-review component of the University's new performance-based compensation system consumes an extraordinary amount of faculty time and effort and threatens faculty collegiality.
- The need for specialized expertise in a broad range of geoscience specialties can complicate hiring decisions which in turn can threaten faculty collegiality.
  - Transfer of tenure-track line from geology to geography/geospatial science/planning (Miller retirement replacement) will leave the geology program without tenure-track expertise in the critical area of paleontology.
- The continued growth of the community colleges has significantly reduced the traditional audience for some of the department's General Education courses and has in turn significantly reduced the pool of students from which the department has traditionally recruited majors.
- Continued deterioration of departmental operating budgets (in inflation adjusted dollars) makes it increasingly difficult to support quality academic programs.
  - Increasing transportation costs make it more difficult to continue to provide the field experiences that have traditionally been a hallmark of the department.
- OEWRI. This relatively new research center is structured and administered as a college-level entity, but to date most of the University resources provided for this center have come by reallocation of existing GGP departmental resources (office and lab space on third and first floors of Temple Hall, 50% reassignment of one GGP faculty member to serve as OEWRI Director).
  - The one "new" resource provided by the University in the formation of OEWRI is a single hard-money staff position (currently held by Marc Owen), and the CNAS Dean is now proposing to reallocate that position to support all research centers within CNAS.
- University's extremely low stipend for graduate teaching assistantships puts department's graduate program at competitive disadvantage with respect to comparable graduate programs at other institutions.

## Part III. Goals, Objectives, and Strategies

**GOAL 1. Maintain and enhance high-quality undergraduate programs in geography, geology, planning, geospatial science, and earth science education.**

**Objective 1.1.** Evaluate and update existing undergraduate programs in light of the evolution of the institution's student body and changing societal needs.

*Strategies:*

- Evaluate the quality of each program by assessing the graduating seniors on a yearly basis. Implement necessary changes to existing courses and program requirements as indicated to provide the best possible value-added learning experience for our students.
- Evaluate the relevance and currency of each program by surveying alumni and prospective employers at least once every five years. Develop new courses and implement changes to program requirements as indicated to maximize career placement opportunities for graduates.

**Objective 1.2.** Ensure the continued health, development, and full accreditation (where available) of all five existing undergraduate programs by maintaining at least the current level of faculty expertise available to each program.

*Strategy:*

- As departmental faculty retire, hire replacement faculty with areas of expertise selected specifically to maintain the necessary level of faculty expertise in each of the department's core areas while simultaneously, where possible, enhancing the department's disciplinary diversity.

**Objective 1.3.** Strengthen the Travel Geography option within the Geography program and the Tourism Planning and Development option within the Planning program.

*Strategy:*

- Use pending retirement in faculty line A815 (Miller) to hire tenure-track assistant professor of geography with primary expertise in cultural geography and tourism planning.

**Objective 1.4.** Strengthen the Geography B.A. program and the General Geography option within the Geography B.S. program.

*Strategy:*

- Use salary savings from future retirements to restore faculty line A820 (Skinner line; currently occupied by Instructor Janet Puhalla) to hire a tenure-track assistant professor of geography with primary expertise in human geography.

**Objective 1.5.** Strengthen the Geology program.

*Strategy:*

- Use salary savings from future retirements to restore faculty line A817 (Fagerlin line; currently occupied by Instructor John Lindberg; will be occupied in 2008/09 by paleontology instructor) to hire a tenure-track assistant professor of geology with primary expertise in paleontology.

**Objective 1.6.** Strengthen the undergraduate program in Geospatial Science.

*Strategy:*

- Work with Computer Services to secure adequate Distributed User Support personnel to maintain the increasingly complex array of servers and specialized software needed to keep this program up-to-date.

**Objective 1.7.** Strengthen the Land Surveying component of the undergraduate program in Geospatial Science.

*Strategy:*

- Explore the possibility of collaborating with other programs on campus (Mathematics, Industrial Management, Civil Engineering) to broaden the base of faculty expertise available to this program.

**GOAL 2. Enhance the department's existing graduate programs.**

**Objective 2.1.** Strengthen the Master's program in Geospatial Science in Geography and Geology.

*Strategies:*

- Add a new, third formal “track” in Human Geography and Planning.
- Form a Graduate Studies Committee—consisting of roughly equal numbers of geospatial scientists, physical geographers, human geographers/planners, and environmental geologists—to take an active role in overseeing the growth and evolution of this program.
- Evaluate the relevance and currency of the program by surveying alumni and prospective employers at least once every three years. Develop new courses and implement changes to program requirements as indicated.
- As members of the departmental graduate faculty retire, hire replacement faculty with areas of expertise selected specifically to maintain the necessary level of faculty expertise within the graduate program and, where possible, enhancing the department's disciplinary diversity.
- Work with Computer Services to secure adequate Distributed User Support personnel to maintain the increasingly complex array of servers and specialized software needed to keep this program up-to-date.
- Increase the number of university-supported graduate teaching assistants available to teach laboratory sections of the department's General Education courses, without decreasing the number of grant-supported graduate research assistants; increase the stipend for master's-level graduate assistants to be competitive with master's-level graduate programs at peer institutions.
- Continue and expand departmental seminars at which graduate students and faculty can present preliminary results of ongoing research.

**Objective 2.2.** Revitalize the Earth Science option in the Master of Science in Education program.

*Strategy:*

- Promote the use of GLG 613 in conjunction with existing undergraduate field geology courses (GLG 360 and GLG 412) to provide graduate-level geologic field experiences for in-service science teachers.
- Expand the offerings of graduate-level independent study projects available to in-service science teachers as GLG 655.

**GOAL 3. Increase recruitment and retention efforts to increase the total number of students graduating from the department.**

**Objective 3.1.** Increase efforts to recruit additional students into each of our undergraduate degree programs.

***Strategies:***

- Maintain an informative Academic Program Guide for each of our five undergraduate programs; update annually.
- Produce an attractive, informative brochure for each of our five undergraduate programs; update each on a three-year cycle.
- Continue to distribute recruitment questionnaire in all 100-level classes; send all relevant Academic Program Guides and brochures to each respondent on a timely basis.
- Continue to ensure that the department is represented, both in person and with all appropriate brochures, at each University-sponsored recruitment event (Majors Fair, Showcase, Career Day, College Fair, etc.).
- Continue to ensure the department is represented, both in person and with all appropriate brochures, at each CNAS-sponsored outreach event (Science Olympiad, Ozarks Regional Science and Engineering Fair; Junior Academy of Science).
- Continue to encourage departmental faculty members to mentor science fair projects for individual elementary and/or secondary school students.
- Maintain and enhance departmental web site with up-to-date information about each program; include a “request additional information” response form.
- Encourage each GGP faculty member to make a recruitment visit to at least one area high school or community college each semester.
- Develop departmental recruitment video that can be shown by GGP faculty members making school visits and can be accessed by prospective students via the department’s web site.
- Continue to respond promptly to each student who inquires about one of our programs, whether in person, by phone, by e-mail, or via our web questionnaire.
- Provide up-to-date recruitment materials to faculty teaching geography, geology, and earth science courses at area community colleges.
- Develop at least one scholarship for an incoming freshman expressing a desire to major in the department.

**Objective 3.2.** Promote undergraduate student success by increasing efforts to retain students in each of our undergraduate degree programs until graduation.

***Strategies:***

- Establish and publish a long-range plan for the sequencing of course offerings for each program.
- Maintain up-to-date e-mail distribution lists for declared majors in each departmental program; communicate regularly concerning departmental activities and supplemental educational opportunities.
- Continue to ensure that each declared major is assigned an appropriate advisor; encourage all departmental faculty to maintain current Master Advisor status.
- Develop at least one scholarship for majors in each of the department’s five undergraduate academic programs.

- Encourage increased student participation in (and faculty support for) existing departmental student organizations: Geology Club, MAPS, ASPRS. Revive MSU chapters of GTU, SGE, and Heart of the Ozarks Grotto.

**Objective 3.3.** Promote graduate student success by increasing efforts to recruit, retain, and graduate students in our Master of Science in Geospatial Science program.

*Strategies:*

- Produce an attractive, informative brochure for this program; update on a three-year cycle.
- Maintain and enhance a separate section of the departmental web site devoted specifically to the master's program; insure all posted information is up-to-date.
- Produce a recruitment poster with tear-off cards; distribute to all relevant undergraduate programs in the region.
- Respond promptly to each student who inquires about our master's program, whether in person, by phone, by e-mail.
- Work with the Graduate College to increase the number of graduate teaching assistantships and increase the value of the stipend.
- Encourage GGP faculty to secure additional external funding for graduate research assistantships.
- Expand availability of undergraduate research opportunities to encourage departmental undergraduate majors to consider entering department's graduate program via the accelerated master's option.
- Establish and publish a long-range plan for the sequencing of graduate course offerings.
- Centralize advisement of first-year graduate students.
- Maintain an up-to-date e-mail distribution list for all graduate students; communicate regularly concerning departmental activities and supplemental educational opportunities.

**GOAL 4. Encourage and facilitate research/scholarly productivity.**

*Strategies:*

- Encourage faculty to seek external grant funding to support research and graduate assistantships; continue to return 100% of indirect funds recovered by department to PI.
- Continue to subsidize faculty travel to conferences and professional meetings from departmental operations budget.
- Facilitate scholarly productivity of faculty by accommodating class scheduling preferences as much as possible, while still maintaining appropriate instructional quality.
- Enforce a maximum 9-hour teaching load for non-tenured tenure-track faculty.
- Continue to move tenured faculty who are productive in research/scholarly activity toward the 9-hour teaching load.
- Establish and implement a consistent policy for assigning equivalent teaching load to those faculty members who mentor graduate students.
- Encourage faculty to involve undergraduate students in research and scholarly activities.
- Continue to advocate for increased departmental space on campus so that each faculty member actively involved in research will have adequate dedicated research space.

## **GOAL 5. Extend and strengthen department's professional service and outreach activities.**

### *Strategies:*

- Encourage increased participation by both faculty and students in applied research and professional service through the department's Center for Resource Planning and Management and the Ozarks Environmental and Water Resources Institute; continue to request space necessary to adequately house these research centers on the main MSU campus.
- Encourage increased participation by both faculty and students in applied research and professional service through local and regional environmental organizations such as the James River Basin Partnership, the Watershed Committee of the Ozarks, the Natural History Museum of the Ozarks, and the Missouri Speleological Survey.
- Encourage increased participation by both faculty and students in professional organizations such as the American Association of Geographers, American Planning Association, Geological Society of America, American Society for Photogrammetry and Remote Sensing, American Water Resources Association, Missouri Academy of Sciences, and Association of Missouri Geologists.
- Encourage both faculty and students to give presentations to local civic organizations.
- Expand the on-line series of MSU Geoscience Factsheets about environmental and geoscience topics of interest to the general public.
- Explore opportunities for additional student internship opportunities with local and area businesses and governmental agencies.

## **GOAL 6. Develop and implement consistent departmental policies and operating procedures to foster a sense of shared governance and collegiality within the department.**

**Objective 6.1.** Formally establish positions within the departmental faculty to coordinate/direct each of the major disciplinary components of the departmental curriculum. Compensate each coordinator/director with reassignment of teaching load commensurate with duties.

### *Strategies:*

- Maintain the position of Director of Graduate Studies to direct and oversee the operation of the existing Master's program in Geospatial Science. This assignment carries the equivalent of 3 hours of teaching load per semester.
- Maintain the position of Coordinator of Geography Programs to direct and oversee the operation of the department's undergraduate programs in geography and geospatial science. This assignment carries the equivalent of 3 hours of teaching load per academic year.
- Maintain the position of Coordinator of Geology Programs to direct and oversee the operation of the department's undergraduate programs in geology and earth science education. This assignment carries the equivalent of 3 hours of teaching load per academic year.
- Maintain the position of Director of the Planning Program to direct and oversee the operation of the department's undergraduate program in planning. This assignment carries the equivalent of 3 hours of teaching load per academic year.

[Note—The Department Head will serve as the coordinator/director for the programs in his/her academic discipline, so the above list is describing only three individuals in addition to the Department Head.]

**Objective 6.2.** Establish and follow consistent policies with respect to recruitment and retention of faculty.

*Strategies:*

- Revise departmental policies for faculty re-appointment, promotion, and tenure with clearly defined expectations in the areas of teaching, research, and service. Re-evaluate these policies every three years, as required by the Faculty Handbook.
- Formalize departmental policy for mentoring untenured ranked faculty; develop and implement parallel policy for mentoring non-ranked and per-course faculty.
- Hire new faculty at the highest possible salaries, even if this causes salary compression and/or inversion within the department.
- Aggressively pursue equity salary increases for faculty members whose salaries have become noncompetitive due to changes in market conditions as evidenced by more recent hires with the department and/or college.

**Objective 6.3.** Establish and follow consistent procedures to foster effective intra-departmental communication.

*Strategies:*

- Have at least one formal meeting of the full departmental faculty each month at a regularly scheduled time.
- Have at least one formal meeting of each disciplinary sub-group of the faculty (geography/geospatial science, geology/earth science education, planning) each semester.
- Department Head will provide timely information via e-mail, and solicit feedback, concerning day-to-day departmental issues, including summaries of each meeting of the CNAS department heads and the Academic Administrators Assembly.
- Departmental representative to each body of the faculty governance system (Faculty Senate, College Council, Graduate Council, PEU, CGEIP) will report to the departmental faculty via e-mail any activities of that body which may be relevant to the department.

**GOAL 7. More effectively inform alumni of departmental accomplishments and activities and solicit their advice and support in the growth and development of the department.**

*Strategies:*

- Maintain and strengthen alumni advisory councils, both for the department as a whole and for each of the department's primary academic disciplines; meet at least once per year to solicit advice and support for the evolution of the department and its programs.
- Expand design and scope and resume annual distribution of our departmental alumni newsletter GeoNews; feature accomplishments of departmental faculty, students, and alumni.
- Increase number and frequency of articles concerning accomplishments of departmental faculty, students, and alumni submitted to the University's alumni newsletter.
- Host at least one off-campus social event each year for the entire department; invite alumni and retired faculty.