

Department of Geography Academic Plan III Themes and Action Items October 9, 2008

Societies worldwide are experiencing increasing demands by their citizens for improvements in their quality of life. Efforts to respond positively to these demands affect the Earth's resource base at the local, regional, and global scales. **The discipline of Geography is at the center of the society-environment nexus, and is therefore well-positioned to understand and help resolve both societal demands and the resulting impacts upon the Earth's natural environment and resources.** The current teaching and research strengths of the Department of Geography include the interdisciplinary themes of human-environment interactions, physical geography, planning, and geospatial modeling and visualization. Geography further has strong ties in these core areas of focus to other departments and units on and off the University of Wyoming campus (e.g. WyGIS, ENR, PiE, ESS, NCAR, SMTC, etc.). The Department of Geography provides:

- Fundamental and advanced courses in natural science, natural resource management, and geographic information science supporting ENR, SER, SMTC, ESS and PiE
- Expertise for cooperative research in natural science, natural resource management and geographic information science supporting WyGIS, ENR and PiE.
- Strength in multi-scale analysis of problems addressing the human-environment interface supporting American Studies, International Studies and American Indian Studies.

The Department of Geography intends to rebuild its strength in its existing programmatic emphases during the next planning period. The areas of focus include the development of faculty clusters in Environment and Society Interactions and GIScience, the enhancement of our undergraduate teaching function, the expansion of our graduate program, and growth in the research visibility and productivity of the department.

There is a long-standing "rule of thumb" in the discipline of geography that departments with Masters degree programs should have no less than eight faculty to remain capable of supporting both their undergraduate and graduate students. This rule of thumb is most appropriate to highly focused programs, with greater numbers of faculty needed for topically broader programs. The Department of Geography at Wyoming has historically had between 8 and 10 full-time tenure-track faculty. We will begin the 2008-09 AY with five tenured or tenure-track faculty (Baker, Gribb, Prager, Shinker and Webster). Dr. Deb Paulson, currently on a .75 appointment, will be on a leave of absence during the 2008-09 AY and intends to return to her departmental duties in August 2009. Secondly, Dr. Carl Legleiter will join the Department in the Fall of 2009. Thus, we will have 6.75 faculty lines dedicated to the Department's operations for Fall 2009, significantly below our traditional numbers. Notably, while the Department of Geography does have an overarching programmatic theme focusing upon environment and natural resource issues, we have historically endeavored to offer a broad and well-rounded undergraduate and graduate curriculum. To support these efforts the Department believes it is necessary to have 9 or 10 dedicated faculty lines.

The Department has two options in terms of the planning process for the next planning period. First, we can begin the process of discontinuing traditional departmental instructional emphases. At present we have five undergraduate concentrations, too many for a faculty of five or even seven. Arguably discontinuing one or two of these emphases would bring our undergraduate instructional obligations better in line with our faculty resources. Due to limited

advising slots for incoming MA students, we have already reduced the rate at which graduate students are being admitted. For Fall 2008 we admitted only about one-third of our nearly two-dozen applicants (8 of 22 applications).

A second and preferred approach is to pursue additional dedicated faculty lines for the Department over the next few years. While we hold no illusions about the level of competition for faculty lines during the UP-III period, the faculty collectively agrees we should pursue faculty lines to rebuild and add to our existing and former strengths. As such, our discussions about planning for the coming decade are predicated upon being successful in the CPM process. For example, we fully recognize we will be unable to increase the size and quality of our graduate program (AI 2) without adding faculty resources.

Action Items

Geography Action Item 1. Faculty size (AI 1). The Department will endeavor to rebuild its tenure line faculty numbers to their historical average of 9 to 10. In the past planning cycle the Department was successful in developing a faculty cluster in physical geography (biogeography, climatology and geomorphology). In this planning cycle we will emphasize the development of faculty clusters in GIScience, and Environment and Society Interactions. These hires will be defined in such a manner to support the Department's dominant focus upon environmental concerns and issues including natural resource use. Thus, we hope to rebuild our program to its historical strength while emphasizing GIScience (spatial analysis, visualization, dynamics and uncertainty) and Environment and Society (planning, sustainable community development, environment and society). These hires will allow the Department to better serve our 80-90 undergraduate majors (AI 2), increase the size and improve the quality of our graduate program (AI 3), to build stronger collaborative research relationships both on (e.g., SENR) and off campus (e.g., NCAR) (AI 4), to provide the instruction needed for a Certificate in GIScience (AI 6), to create a well-rounded Certificate in Planning (AI 7), and to build towards the creation of a Ph.D. program in Geography at the University of Wyoming (AI 8).

Geography Action Item 2. Enhance the undergraduate educational experience (AI 2). Central to this action item will be efforts to increase undergraduate field experiences, and to modernize our physical geography teaching laboratory to include state of the art facilities and equipment. Such improvements will particularly add to the educational experience of students enrolling in GEOG. 1010, Introduction to Physical Geography. GEOG. 1010 is included in the USP as an earth science option for the natural sciences component and registers approximately 250 undergraduates each year. We further believe that improved access to cutting edge technology will aid the Department to increase its number of majors. When permitted, the Department will seek additional "Fee Book" assessments to increase the number and quality of the fieldwork experiences for our undergraduate students. The Department will also consider creating a capstone course as an element of our student learning assessment efforts. Our success in this effort is in large part predicated on increased faculty resources. Finally, we hope to expand our natural science course offerings in support of the curriculums in ENR, SER and SMTC

Geography Action Item 3. Increase the size and quality of the graduate program (AI 3). There are currently less than 15 active Masters degree students in the Department's graduate

program. This past year the Department admitted only 8 MA students for Fall 2008 though we received 22 applications. Many of these applications were declined because we have insufficient faculty to serve as the advisor for incoming students. We believe we should double the number of students in our graduate program to create the critical mass necessary for a dynamic and high quality program. Towards this end, we will seek to increase the number of MA students funded through extramural grants as research assistants, and to pursue increases in the technological resources needed to attract outstanding students. We will also endeavor to double the number of currently funded GA lines from five to ten. The Department is further committed to increase our new MA student recruiting efforts, improve the quality of mentoring of the students in the program, and to implement our recently adopted graduate student assessment goals. Progress on this Action Item is clearly dependent upon our success in the CPM allocation system, and ability to secure additional funding options for incoming graduate students.

Geography Action Item 4. Improve faculty research productivity (AI 4). The Department will endeavor to continue to increase the research productivity of its faculty to be judged in terms of published items including refereed journal articles, book chapters and books. Towards that end, we will seek:

a) to develop a more formalized system of mentoring for probationary faculty. The purpose for this initiative is to improve the likelihood that probationary faculty successfully navigate the tenure and promotion process.

Responsibility: all faculty; initial discussions over structure between chair and probationary faculty.

b) to increase the quantity of extramural funding to support faculty research. Faculty will be encouraged to include graduate student funding opportunities in all appropriate grant submissions.

Responsibility: all faculty.

c) to better plan for the provision and regular replacement of faculty office equipment such as computers and printers to insure that outdated equipment does not impede faculty productivity. We will endeavor to provide all faculty members with both desk top and lap top computers, and to replace them at regular intervals (e.g., every four years).

Responsibility: chair.

d) to increase the pool of available travel funds to insure faculty can regularly attend professional meetings to present the products of their research efforts. Regular attendance at professional meeting improves faculty currency, facilitates collaborative relationships, promotes the Department and University, and serves to increase graduate student applications through increased faculty visibility.

Responsibility: chair.

e) to increase access to, and use of, technological resources including GIS, remote sensing, GPS, and visualization technologies.

Responsibility: all faculty through both on-campus and extramural funding.

f) an expansion of critical journals and books in the library supporting faculty research efforts.

Responsibility: all faculty through regular requests for critical resources.

g) to expand and strengthen collaborative relationships both on and off the UW campus such as the National Center for Atmospheric Research (NCAR) to facilitate the publication of substantive research. Multiple preliminary meetings have already been held with NCAR

involving Dr. Shinker, Dr. Prager and Mr. Hamerlinck. Thematically our relationship will most likely pertain to climate and water resources, visualization themes and technologies, society-environment interactions, scientific literacy and regional modeling.

Responsibility: faculty with appropriate research interests

h) to provide support for the creation of the Institute for Global Affairs (IGA). Geographers have traditionally made substantial contributions to scholarship pertaining to international affairs and issues. The IGA will “facilitate research on international public policy, social, cultural, and economic issues, among others.”

Responsibility: faculty with appropriate research interests.

Geography Action Item 5. Support for the Roy J. Shlemon Center for Quaternary Studies (AI 5).

The Department will support the ongoing effort to build and strengthen the Roy J. Shlemon Center for Quaternary Studies. It is expected that faculty with significant expertise in quaternary studies will contribute to the activities of the Center. The Department will examine the benefits of reinvigorating the interdisciplinary undergraduate minor in Paleoenvironmental Studies, historically housed in the Department of Geography. Research projects emanating from the Center for Quaternary Studies may provide opportunities for students pursuing this minor to become involved in field projects pertaining to environmental change and natural resources.

Geography Action Item 6. Implement a certificate program in GIScience (AI 6). In the last planning cycle the Department included the creation of a certificate program in GIScience among its action items. Action on this item was soon thereafter tabled due to a lack of faculty resources. More recently the Department has determined that any certification effort should be properly developed in conjunction with the Wyoming Geographic Information Science Center (WyGISC). In October, 2008, a GIS Technician Certificate will be initiated and managed by WyGISC. Following the initiation of this certificate, the Department and WyGISC will consider the overall structure and intent of the certification program to determine if there is sufficient demand for other certificate models to serve the broader GIS and GIScience community. In addition to the technician certificate we will also consider an Academic Certificate which focuses upon on-campus students, a Professional Certificate in support of advanced continuing education, and a focused and accredited certificate program in the emerging discipline of geospatial intelligence with the review process being conducted by the United States Geospatial Intelligence Foundation (USGIF.org). The purpose for our reassessment of this action item is to determine which structure best serves the needs of our potential clientele. Implementation of any additional certificate programs will proceed after the Department has identified sufficient demand and the most appropriate structure for the program.

Geography Action Item 7. Implement a certificate program in planning (AI 7). In the last planning cycle the Department included the creation of a certificate in planning among its action items. Action on this item was subsequently tabled due to concerns pertaining to inadequate facilities. Because A&S 320 has now been upgraded, the Department will again pursue the implementation of this action item. We believe the education of planning professionals is critical to the future of the state of Wyoming and Mountain West region. Underscoring this view was Governor Freudenthal’s January 2008 conference entitled “Building the Wyoming We Want” which stressed the importance of planning to Wyoming’s future.

Geography Action Item 8. Assess the potential for the development of a focused Ph.D. program in Geography (AI 8). Nationally, the discipline of geography has experienced tremendous growth during the past decade in terms of new departments, new graduate programs and employment opportunities for their graduates. The Department of Geography will conduct a feasibility study for a program centering upon its strengths in physical geography, the society-environment nexus, and GIScience. Such a program would not only draw upon the Department's strengths but also those in WyGIS and potentially the School of Environment and Natural Resources.

The feasibility study will be multifaceted, focusing upon a number of critical issues. First, what is the appropriate focus for such a program given departmental expertise? Second, is there sufficient student and market demand to support such a program? Third, what would be required to support such a program in terms of faculty positions and graduate student funding lines? Fourth, what resources exist on campus that might contribute to the viability of such a program? Fifth, what changes in the Department's existing curriculum would be needed to support such a program? Finally, what modifications in the Department's current facilities would be necessary to support such a program? This feasibility study will be initiated in the Fall of 2009 to be concluded in approximately 18 months. If the feasibility study concludes it is appropriate to proceed, the Department will prepare a formal proposal in consultation with the college and university administration.

Status of 2004-09 Action Items

- AI 1, Research Cluster in Physical Geography: completed.
- AI 2, Integration with ENR, PiE and ESS: significant progress, ongoing.
- AI 3, Change name to Department of Geography: completed.
- AI 4, Minor in GIScience: completed.
- AI 5, Certificate in GIScience: deferred to APIII.
- AI 6, Major in GIScience: Tabled due to staffing limitations.
- AI 7, Certificate in Planning: deferred to APIII.
- AI 8, GIScience Curriculum Revision: significant progress, ongoing.
- AI 9, General Curriculum Revision: significant progress, ongoing.
- AI 10, Additions and Deletions in Curriculum: significant progress, ongoing.
- AI 11, Develop Assessment Program: significant progress, ongoing.
- AI 12, Planning for Retirements: significant effort, but limited success.
- AI 13, Emphasize International Programs and Recruitment: limited progress, ongoing.

Schedule for 2009-14 Action Items

- AI 1, Faculty Size: entire planning period.
- AI 2, Enhancing Undergraduate Program: entire planning period.
- AI 3, Increase Size and Quality of Graduate Program: entire planning period.
- AI 4, Increase Research Productivity: entire planning period.
- AI 5, Support for Quaternary Research Center: entire planning period.
- AI 6, Certificate in GIScience: to be implemented during the 2009-10 AY.
- AI 7, Certificate in Planning: to be implemented during the 2009-10 AY.
- AI 8, Assess Potential for a Ph.D. Program: assessment to be completed in spring 2010.