

UNIVERSITY OF NEW MEXICO

**DEPARTMENT OF
GEOGRAPHY**

**PROGRAM REVIEW
2008**

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Executive Summary and Strategic Priorities

The Geography Department is going through a period of rebuilding with a refocused program based on GIScience and human/environmental interaction. Both areas contribute to the needs of the university and provide a specialization at the center of the discipline of geography. In order to successfully obtain our rebuilding goals, the department has developed both a strategic plan and an implementation plan. Those plans are included in this document. The department has also developed a set of strategic priorities needed to implement the plans. Those priorities are as follows:

- 1. Expand tenure track faculty to support expanded degree programs and concentrations in GIScience and human/environmental interaction.** The department will have five tenure track faculty members by fall 2008. In order to develop the GIScience program, two additional tenure track faculty members who can contribute to this aspect of our program (7 total), are needed. This immediate need can be met by: 1. Converting the current lecturer position to a tenure track position and advertising it; and 2. Hiring a senior faculty member who can serve as department chair and EDAC director. Longer term needs required to offer a Ph.D. can be met with two or three additional positions bringing the department to nine or ten faculty members. (See III. e. i.)
- 2. Provide leadership in the coordination and integration of GIScience education and research across campus.** At the graduate level this will include a Certificate in GIScience. At the undergraduate level it will include a Minor in GIScience and a refocusing of the current geography BS degree. (See III. b.)
- 3. Expand and update laboratory facilities to support the department's role in GIScience education and in service courses.** Facilities in Bandelier East could be remodeled to create two additional GIScience laboratories while maintaining the current classroom and office space. (See III. d. i. & ii.)
- 4. Expand administrative and technical staff.** The department only has one staff member, a departmental administrator, and no dedicated systems administrator. With increases in grant activity, expansion of GIScience labs, and other program building activities the department will need a lab technician/systems administrator and a part-time person for grants administration. (See III. d. ii.)
- 5. Develop a stable source of equipment funding to support the increased role in GIScience education and service courses.** Expansion of lab facilities and teaching will put pressure on limited departmental resources. (See III. d. ii.)
- 6. Increase TA positions to better support the department's strong focus on learning assessment.** Physical geography lab and lecture need to be linked. Expansion of GIScience curriculum to the campus community will require additional lab sections. (See III. d. ii.)
- 7. Lay the ground for the future addition of a Ph.D. program in geography.**

I. Geography at the University of New Mexico

The Department of Geography at the University of New Mexico is undergoing a substantial transition. In 2006 three outside reviewers visited the department and made suggestions on our future direction. Their reports are included in the supporting materials. On the basis of their recommendations the department was allowed to hire new faculty members as replacements for retirements. A more extended departmental history is included in the supporting materials.

In the 2000/2001 academic year the department was at seven faculty members and had a growing number of undergraduate majors (47) and graduate students (26). A graduate program review was conducted that year which was generally favorable. The report is found in the supporting documents. In spite of the favorable report an acting Dean attempted to dismantle the department. Although the attempt failed the department lost three faculty members. Many students left the program or failed to enter it because of persistent rumors of the department's demise. A large part-time faculty budget was used to fill the gap. The first few years were difficult for the department with only four tenure track faculty members, but the department has recovered with 47 majors in 2007 (Fall) and 10 MS degrees granted in the 2006/07 academic year.

The recent retirement of two of those faculty members and a change in the Dean's office has allowed the department to rejuvenate. The department will be at six faculty members at the end of this year. Only two of them will have been here longer than one and a half years. This turnover created an opportunity to re-examine the department's direction and role in the university. A strategic plan (Section II) emerged from the 2006 review, and with this current review an implementation plan (Section III).

The purpose of the current review is to look forward and not backward. This is necessary because two-thirds of the department will be "new" at the end of this academic year. The department hired an Instructor in January 2006, and Assistant and Associate Professors in June 2007. We will be bringing on another Assistant Professor at the end of this year. Vitas for existing faculty members are found in Section IV g. A summary description is included below:

Paul Matthews, Professor and Chair. Paul Matthews is a water resource geographer who falls at the interface between human and physical geography. He is capable of teaching both human and physical geography introductory courses and can teach water related physical geography courses at the intermediate level. His upper level courses are in natural resource/ environmental management. His research interests are in water resources and public land policy.

Brad Cullen, Professor. Brad Cullen is an economic geographer who falls at the interface between human and physical geography. His teaching interests are in environmental and economic geography. His research concerns marginalized people and marginal regions, focusing both on social and environmental issues. He teaches 100 and 300 level courses that are at that interface. At the graduate level he has been the anchor in delivering the history, philosophy and methodology of the discipline to our students.

Paul Zandbergen, Associate Professor. Paul Zandbergen is a GIScientist with research interests within the interface of human and physical geography. Although his original research and interests were in water resources he has expanded his research into areas of medical geography and criminology. His teaching will all be within the GIScience curriculum.

Maria Lane, Assistant Professor. Maria Lane is a historical geographer with research interests at the interface between human and physical geography. She is capable of teaching any of our introductory courses at the 100 and 200 level including 281L. Her upper-level teaching reflects research interests in environmental knowledge and the American Southwest.

Danielson Kisanga, Lecturer. Danielson Kisanga is a physical geographer (soils) with GIScience capability including remote sensing. His course load is in physical geography and in the GIScience curriculum.

2008 Hire. The person hired in the spring of 2008 will be expected to teach two courses in the GIScience curriculum and upper level courses within their area of specialization.

The department is not what it was and looks forward to a bright future. The future is guided by our strategic plan and will be achieved through the implementation plan. This strategy includes re-focusing the department's direction

Starting in 1994 the department operated under a five-year plan that was subsequently extended until 2005. In that plan the department's concentrations were on environmental analysis and geographic information technologies. This was a relatively narrow focus on the physical environment, environmental modeling, and geographic information sciences. The strategic plan brings the department into the center of the discipline. The intersection between human geography, physical geography, and geographic information science provides an integrative perspective on a wide variety of important issues facing society. The terms used by geographers for this area of concentration are: nature and society, human/environmental interaction, and resource/environmental management from an applied perspective. Included in the concentration is the strength provided by the sub-field of Geographic Information Sciences (GI Sciences). This change of direction will strengthen our graduate and undergraduate programs in many ways. It reflects the interests of our current students and will improve their educational experience. Details for this focus and its rationale are included in the department's strategic plan.

The department has begun preliminary discussions on plan implementation, but is waiting for feed-back from the review committee and campus community before starting the curriculum and degree revisions. The assessment plan is a work in progress, and the department is constantly improving the assessment process. Progress in this area is a major goal for this spring. Other portions of the plan will require a commitment of resources and await decisions related to them. Parts of the plan that do not require additional resources will be implemented as time and energy permit.

II. Geography Department Vision and Strategic Plan - 2008

Introduction

The Geography Department's focus orients the department toward the center of the discipline. The intersection between human geography, physical geography, and geographic information science provides an integrative perspective on a wide variety of important issues facing society. The terms used by geographers for this area of concentration are: nature and society, human/environmental interaction, and resource/environmental management from an applied perspective. The concentration contains elements of regional planning, sustainable societies, environmental change, sustainable environments, human ecology, environmental perception, conflicts between society and the environment, and the challenges of globalization, marginality, and disparity. Included in the concentration is the strength provided by the sub-field of Geographic Information Sciences (GI Sciences).

This strategic plan starts by showing how geography at the University of New Mexico (UNM) fits into the discipline at the national level. The plan then examines the department's role in the state and at the university. It concludes with a vision statement and specific goals.

Geography in the US

Geography as a discipline is undergoing a renaissance. National trends indicate that geography is growing both on campuses and as a discipline. Over 4,500 undergraduate degrees were conferred in 2003-04 which was a new high. Membership in the Association of American Geographers is up from 6500 members in 2000 to over 9000 in 2005. Data from the National Center for Educational Statistics shows that undergraduate degrees in geography at U.S. institutions of higher education grew by 58% between 1987-1988 and 2003-2004. During that same time period, masters degrees in geography grew by 39 % and doctoral degrees grew by 53%. These rates of growth outpaced most other disciplines. In the five-year period between 1999-2000 and 2004-2005, the average size of the faculty in geography departments offering bachelors degrees increased by 16%. During the same time period, the faculty size of departments offering both bachelors and masters degrees grew by 6%, and the average faculty size of departments offering degrees up through the Ph.D. increased by 8%. Equally striking is the number of new geography programs being formed. The period between 1995 and 2006 saw the founding of 11 new Ph.D. programs and 4 new undergraduate programs in geography. A signal development in geography's expanding role in institutions of higher education in the U.S. is the return of geography to Harvard University in the form of a Center for Geographical Analysis. Harvard now clearly recognizes that it can no longer do without geography.

A number of reasons explain geography's renaissance. The public is increasingly aware of geography's relevance in an age of globalization, international instability, and accelerating environmental change. Along with the realization that geography is a fundamental component of a liberal education, geospatial technologies and geographic information science (GI Science) have exploded, making fundamental changes in the analytic capability of the discipline. In

addition, the demand for trained geographers exceeds the supply. These points will be discussed briefly below.

As part of a liberal education, geography provides students with an ability to situate the places in which they live within a larger context. It offers insights into the character of individual places and the interactions among phenomena in different places. It encourages students to appreciate the nature and variety of the differences that make up the world, as well as the reasons those differences exist. Geography gives students the kinds of local and global understandings that are necessary if we are to participate meaningfully in a democratic society. In short, geography is a key component of critical and ethical citizenship.

Another reason for this renaissance is the phenomenal expansion of innovative geospatial technologies and GI Science. This range of technologies includes Geographic Information Systems, Geographical Positioning Systems, satellite imaging, and other rapidly expanding technologies for acquiring and analyzing spatially referenced data. Increasingly common are applications that are part of every day life such as the use of geo-enabled Personal Digital Assistant (PDA) car navigation systems and GPS units in cell phones. In addition, these technologies are proving central to a range of crucial arenas including homeland security, agricultural development, land use decision-making, environmental protection, navigation on land, sea and in the air, marketing analysis, disaster management, understanding the spread of disease, and analyzing variables related to criminal behavior, among many other applications. Expansion in this area in terms of both research and practical applications has been remarkable. The future applications for GIT are still evolving as one estimate contends "80% of all data can be given spatial coordinates" (National Research Council 2006). The technology's future is just beginning to unfold.

Job growth in geography is at an all time high. The Department of Labor (DOL) points to the emergence of geospatial technology as a field in high demand with enormous employment growth. The Department of Labor website identifies the geo-spatial technology field as one of the three hottest emerging industries in terms of employment growth. (See: <http://www.careervoyages.gov/geospatialtechnology-main.cfm>). Within the geo-spatial field, 10-20% growth in job demand is expected in the fields of transportation and distribution, surveying, planning, mapping and environmental work. But, the need for GIT professionals is not just driven by the job market. Knowledge and use of GIT makes for better decision makers and increases scientific understanding. GIT is making long term changes in society and will help move us to the next level of scientific understanding. Geospatial professionals work in all levels of government, as well as both private and non-profit sectors. The industry includes basic and applied research, technology development, education, and applications to address the planning, decision-making, and operational needs of people and organizations of all types. Geospatial technologies have a wide range of applications across fields as diverse as "...agriculture and soils; archeology; biology; cartography; ecology; environmental sciences; forestry and range management; geodesy; geography; geology; hydrology and water resources; land appraisal and real estate; medicine; transportation; urban planning and development; and more" (See <http://www.careervoyages.gov/geospatialtechnology-main.cfm>).

Geography is in a different position from a number of other disciplines because the demand for trained geographers exceeds the supply. Investment in geographical training and research is clearly critical if the possibilities of the geospatial technology revolution are to be realized.

The focus chosen by the department is at the core of the changes occurring within the discipline. By positioning itself at the center of the discipline the Geography Department, and with it the University of New Mexico, will become a contributor to the renaissance.

Geography and GI Sciences in New Mexico and at UNM

The role of geography in the state and within the university needs to be addressed from two perspectives. One is the role of GI Science, and the second is the new departmental emphasis. In the past, the Geography Department has played a significant role in providing GI Science education for the state's work force. The New Mexico Geographic Information Council, a professional group of practitioners within the state, is filled with our graduates. A promising future lies ahead for new graduates as the employment sector expands beyond the traditional opportunities in federal and state land management agencies, local governments, national labs, and consulting firms. Current demands are greater than the department's ability to supply graduates. A newly invigorated department will need to incorporate the rapid changes going on within GI Science in order to meet future demands.

Several departments at the University of New Mexico teach courses in Geographic Information Systems (GIS). In addition, GIS, and to a more limited extent, remote sensing are used as research tools in Biology, Earth and Planetary Science, Community and Regional Planning, Civil Engineering and other departments. Some departments offer applications courses with a disciplinary perspective. The spread of these technologies to all parts of campus is one of the Geography Department's goals. Even though these technologies are applied in many disciplines, the majority of teaching takes place within the Geography Department. Teaching the fundamentals in these technologies should remain in geography, their intellectual home, while more specialized applications are appropriate in other departments. Use of these technologies requires not only specific technical skills, but also a deep understanding of underlying geographical concepts. Any layer in a GIS (for example) involves decisions about data prioritization and spatial representation that are rooted in geographical principles and concepts. Without an understanding of these principles and concepts, products of GI Science cannot be fully utilized or understood.

At present GI Science and geospatial technologies are underdeveloped at the University of New Mexico. Because the intellectual roots of GI Science are in geography, the department must take a leadership role in developing it on campus. The department also has a responsibility to serve the broader campus community. Responding to campus needs requires partnering with other campus users to devise an appropriate curriculum. Taking a leadership role also means encouraging the expansion of these technologies within the social sciences, business and other parts of the campus community where the technologies are under-utilized. In addition, the department, after consultation with the campus community, will modify its curriculum offerings. The addition of an undergraduate secondary concentration and a graduate certificate is planned.

The new focus in geography also fits with the needs of the state and complements strengths within the university. New Mexico calls itself the “land of enchantment”. What makes it so? How is it changing, and are the changes positive or negative? Answers to these questions require an understanding of the interaction between New Mexicans and their environment. For example, water or lack thereof is one of the defining characteristics of New Mexico. The reference to water is not just a reference to precipitation or the Rio Grande. Included are fragile arid lands and the way they are used, cycles of drought and flooding, and the limitations on economic growth resulting from water shortages. Another defining characteristic of the state is its cultural diversity. How has this diversity affected the uses and perceptions of natural resources, environmental quality, and economic development? These questions are a sample of the broader intellectual questions that are part of the new focus. Answers to these questions are very important for the state’s future.

The University of New Mexico has strong programs and specializations. The intent of the Geography Department’s new focus is to complement these strengths. For example, biology, anthropology, natural resource and environmental economics, water resources, and other disciplines will benefit from our complementary specialization in nature and society (human/environmental interaction). Part of this complementarity stems from the broader intellectual questions the specialization addresses. These include questions about spatial variations in food security; the potential for sustainable cities; the nature of flood and drought dynamics and greenhouse gas emissions; human dimensions of climate change; social exclusion, health and health care; ecological processes of land use and land cover change; and social and environmental justice. Geographers are in demand for their ability not only to predict and diagnose the risks associated with environmental change or natural disasters, but also to explain the resulting social conditions that impact affected communities. The priority areas identified by the new university president are water, energy and the environment. The department’s focus provides substantial support in these areas.

Departmental Vision and Goals

The overall vision of the Department of Geography at UNM is to be recognized both regionally and nationally for excellence in research and teaching in the areas of Human/Environmental Interaction and GI Science.

To achieve this vision the Department seeks:

1. To be an integral part of the workings and be an active contributor to the mission of the University of New Mexico,
2. To improve its recognition and reputation amongst Departments of Geography in the region and nationally,
3. To maintain a high level of research and teaching,
4. To provide leadership in GI Science at UNM, and
5. To provide a comprehensive offering of degree programs including minors, majors, certificates, M.S. degrees and a Ph.D. degree.

The Department has the following specific goals:

1. Provide leadership in developing a vision for geospatial technologies and GI Science at UNM.
2. Provide leadership in the development of GI Science across campus, especially in places where it is under-utilized such as the social sciences and business.
3. Build bridges to other disciplines within the University.
4. Hire qualified new faculty members specializing in human/environmental interaction (nature and society) and geographic information science.
5. Improve mentoring of new faculty members and graduate students.
6. Refocus curriculum to reflect the department's new area of emphasis, and reshape the GI Science curriculum to more accurately reflect campus needs (including a secondary concentration in GIS Science for undergraduates and a GI Science Certificate at the graduate level).
7. Maintain a breadth in Geography and GI Science courses as a basic service function for the University and College.
8. Increase majors through a revitalized focus.
9. Maintain the MS program and begin developing a PhD program.
10. Build more effective relationships with alumni.

The Department of Geography's teaching goals are:

1. To hold a reputation for excellence in the teaching of core courses that contribute directly to the University of New Mexico's educational mission.
2. To provide stimulating and challenging courses at the lower undergraduate levels that recruit majors into the Geography Department.
3. To provide specialized courses at the upper undergraduate and graduate levels that teach Geography students/majors to master technical and analytical skills that can be applied to human-environment interaction and the relationship between nature and society.
4. To provide a range of courses, certificates, and degree offerings (from the undergraduate minor in GIScience to a Ph.D. in Geography), that will allow Geography students/majors to prepare adequately for a wide variety of careers in the private sector, in public service, and in academia.
5. To continually improve individual courses and program offerings through the use of regular learning outcomes assessment.
6. To integrate faculty members' research interests into undergraduate and graduate courses as a way of modeling conceptual approaches and analytical techniques appropriate for research in Geography.
7. To provide a curriculum that is responsive to the national standards for undergraduate and graduate education in Geography.

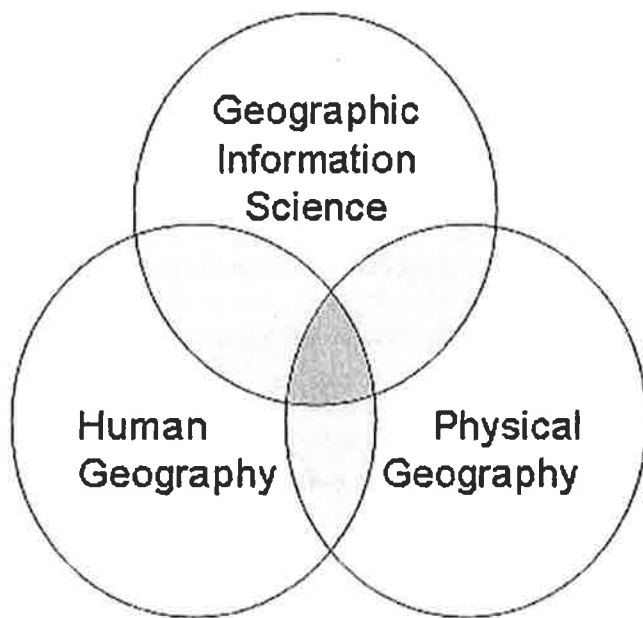
The research goals for the members of the Department are:

1. To develop a regional and national reputation for excellence in human/environment interaction (nature and society), GIScience, and the geography of the Southwest;
2. To maintain a stream of publications in those journals appropriate for establishing the above mentioned reputation;

3. To participate in appropriate regional, national, and international scholarly organizations;
4. To seek extramural funding;
5. To involve undergraduate and graduate students in research projects;
6. To serve the community by participating in the debate over local issues; and
7. To establish interdisciplinary research contacts both within and outside the university.

Description of departmental emphasis

The Geography Department's targeted concentration lies at the center of geography where physical geography, human geography, and geographic information science overlap. As mentioned in the introduction, the terms used by geographers for this area of concentration are: nature and society, human/environmental interaction, and resource/environmental management. The concentration complements many of the university's disciplinary strengths.



Rationale for new direction

Traditionally, conceptual lines have been drawn between different disciplines in the social and physical sciences. Today, this disciplinary matrix has come under attack with the formation of interdisciplinary programs, institutes, and research initiatives. Although geography attempted to overcome these schisms by incorporating biophysical, social, and cartographic sciences (now GI Science) under one disciplinary roof, the attempt was not always successful. An exception is at the center of the discipline where human-environmental relationships overlap and form a broadly based integrative spatial perspective. Today, many geographers still identify with specializations

within physical geography, human geography or geographic information science. But increasingly, the cutting edge of the discipline is where specializations overlap. One illustration is the role geographers are playing in interdisciplinary teams funded under the National Science Foundation 'Dynamics of Coupled Natural and Human Systems' competition that "... promotes quantitative, interdisciplinary analyses of relevant human and natural system processes and complex interactions among human and natural systems at diverse scales".

The role of geographic information sciences has also taken on new importance, expanding well beyond traditional cartography and becoming a research field in itself. Even though specialization in GI Science is possible, most departments prefer faculty members who are well trained in GI Science but focus their research on some other aspect of geography. As GI Science developed, many, but not all, of the geographers who became proficient were physical geographers. Environmental modeling using GI Science became, and still is, a fertile area of research. Increasingly, however, human geographers are practitioners of GI Science, and today, any well trained geographer should be proficient in it to some degree. The department's move to the center of the discipline includes incorporating GI Science as part of the matrix; primarily as a research tool, and to a lesser extent as a primary area of research.

Many of the most active areas of geographic research and education today are oriented toward the middle of the discipline. Thriving subfields include natural hazards, water resources, landscape ecology, as well as some regional geography. This middle ground is targeted as the new specialization within the department. Every new hire need not be exactly in the "center", but must have broad competence in the different aspects of the discipline. The department will focus on hiring the best available faculty members while moving the department incrementally to the "center".

Practical reasons also exist for moving to the "center" of the discipline. With a limited number of faculty members, flexibility in teaching is required. Moving the department's concentration to the center of the discipline provides the greatest flexibility and redundancy in teaching. Preferably, all faculty members should be able to teach the basic core courses.

Refining the Goals

In 2007 the department developed an implementation plan which provides the details for achieving the stated goals. The implementation plan follows in the next section.

III. Implementation Plan – Spring 2008

In order to achieve the goals set forth in the strategic plan an implementation plan has been developed. The implementation plan includes: graduate and undergraduate program revisions, a discussion of GI Science on campus and the department's role, an outcomes assessment plan, a needs assessment plan, and other materials that define the department's role in the university.

A. Graduate and Undergraduate Program Revision

One of the more important changes in the department is a thorough revision of our graduate and undergraduate program. We have also developed new guidelines for the graduate program. Student recruitment is also discussed along with the undergraduate honors program.

At the present time the programmatic revisions are in the planning stage. After input from the review process the department will proceed with course and degree approvals. This step will require discussion with various campus constituents to insure the courses and programs developed meet campus needs.

i. Curriculum/Degree Revisions

1. Human/Environment Programs

Proposed Courses in Human/Environment Curriculum

Proposed: 100 level

- 101 Physical Geography
- 102 Human Geography
- 105L Physical Geography Lab
- 140 World Regional Geography
- 195 Humans as Modifiers of Earth (formerly "Survey of Environmental Issues")

Proposed: 300 level

- 302 Regional Geography (flexible topics)
- 351 Climatology
- 356 Biogeography
- 359 Water in Environmental Systems
- 360 Cultural Ecology/Political Ecology (new course)
- 363 Humans and Natural Resources (formerly "Resource Geography")
- 367 Urban Geography (formerly "Urban Socioeconomic Issues")

Proposed: 400/500 level

- 402 Geography Education
- 445/545 Geography of New Mexico and the Southwest
- 461/561 Nature & Society (formerly "Environmental Management")
- 462/562 Water Resources Management
- 463/563 Public Land Management
- 465/565 The Urban Environment (formerly "Urban Environmental Management")
- 467/567 Natural Hazards? Environmental Justice? (TBD on new fac. member specialty)
- 470 Reading and Research in Geography
- 471 Capstone Seminar

Proposed: 500 level

- 501 Approaches to Geographical Research (formerly "Seminar in Environmental Issues")
- 502 Theory and Method in Geography (formerly "Research Methods Seminar")
- 513 Seminar in Water Resources
- 514 Seminar in Environment and Society

Goals for Key Proposed Changes

- Provide a balance of course offerings in the areas of physical geography, human geography, and human/environment interaction, with a reasonable offering of regional courses.
- Rename human geography courses to better reflect content and focus.
- Add a cultural/political ecology course to balance the human geography curriculum, which otherwise focuses on human modification of the earth.
- Drop EPS offerings in climatology: 251, 352 and 570.
- Merge three regional offerings on New Mexico & Southwest into a single course.
- Rename/revise 461/561 with a broader focus that allows rotating topics.
- Consider adding a class at the 46x/56x level that reflects the expertise of the new hire.
- Rename/revise 470/471 to make it a meaningful capstone experience for all majors (including Honors majors), in which we can perform program-wide learning outcomes assessment.
- Rename/revise the two-semester introductory sequence for graduate students to better standardize the initiation of their independent graduate research.

- Drop graduate seminars on physical geography topics.
- Add a graduate seminar with a broader focus that allows rotating topics.
- Consider using learning outcome assessments as a rationale for requesting TA funding sufficient to make 105L a required lab for 101.

Breakdown of Proposed Courses by Subject Area (see also graphic next page)

Physical Geography

- 101 Physical Geography
- 105L Physical Geography Lab
- 351 Climatology
- 356 Biogeography
- 359 Water in Environmental Systems

Human Geography

- 102 Human Geography
- 360 Cultural Ecology
- 363 Humans and Natural Resources
- 367 Urban Geography

Regional Geography

- 140 World Regional Geography
- 302 Regional Geography
- 445/545 Geography of New Mexico and the Southwest

Human-Environment Interaction

- 195 Humans as Modifiers of Earth
- 461/561 Nature & Society
- 462/562 Water Resources Management
- 463/563 Public Land Management
- 465/565 The Urban Environment
- 467/567 Natural Hazards? Environmental Justice?

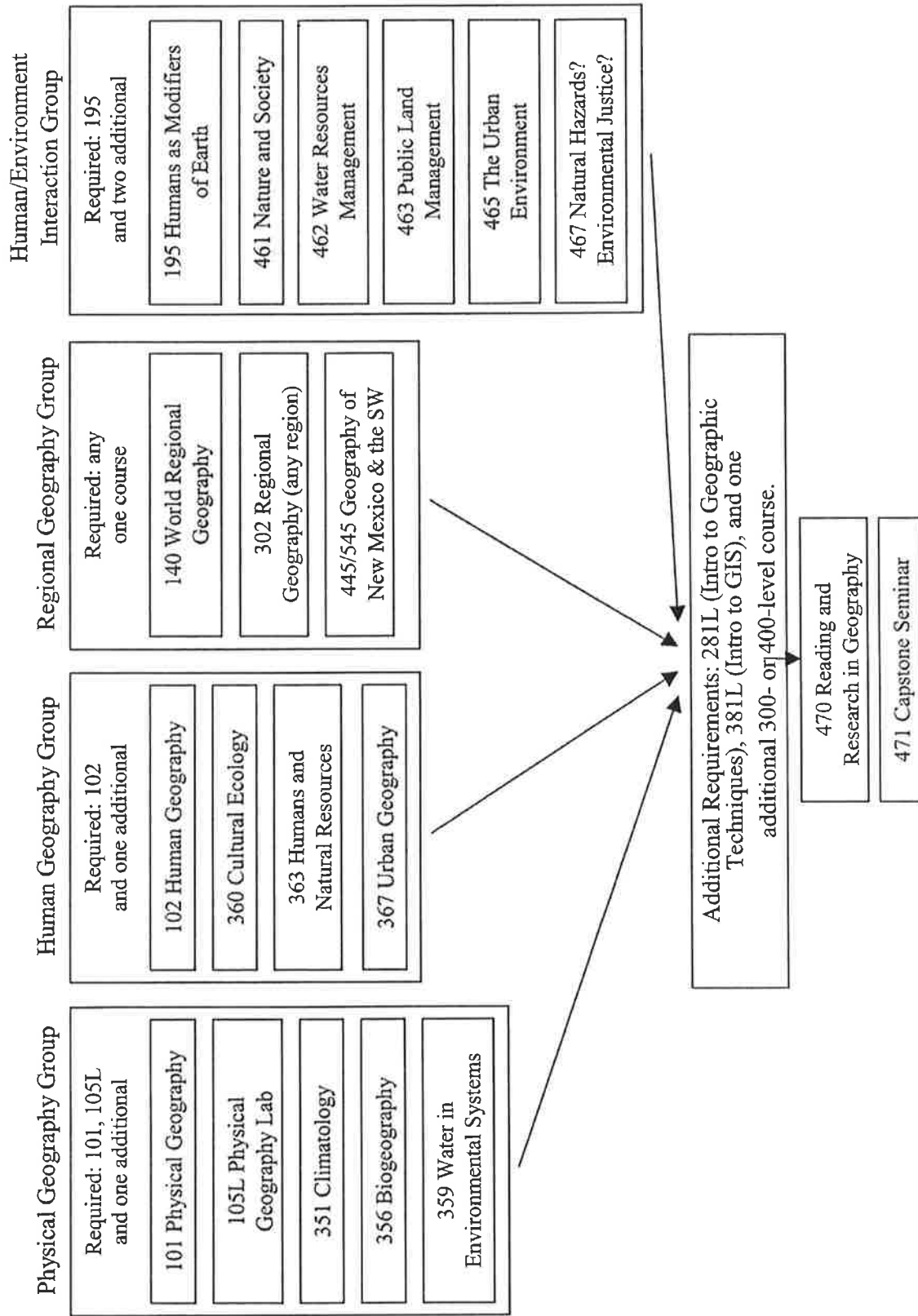
Capstone Sequence for Majors

- 470 Reading and Research in Geography
- 471 Capstone Seminar

Graduate Seminars

- 501 Approaches to Geographical Research
- 502 Theory and Method in Geography
- 513 Seminar in Water Resources
- 514 Seminar in Environment and Society

B.A. Geography Requirements and Electives



M.S. Geography Requirements and Electives: Human/Environment Track

