

**Five-Year Plan for Graduate Studies**  
**Department of Environment and Society**  
*June 2012*

**Executive Summary**

The graduate program in Environment and Society includes 5 MS, 2 PhD, and 2 graduate certificate programs. Because our recruiting, mentoring, management and funding approach is similar across all degrees, we believe a single five-year plan can best meet our needs. Some Graduate Program Review Task Force members suggested merging and eliminating degrees. We recently discontinued a PhD in Recreation Resource Management and will seek to do so for the MA and specializations in Geography, but otherwise we do not see merging degrees as an advantage. Our suite of closely intertwined degrees reflects our interdisciplinary mission, goals, and faculty expertise.

We recruit from a pool of qualified applicants and seek few waivers of School of Graduate Studies (SGS) admissions criteria. Funding for assistantships depends on extramural awards that may be increasingly difficult to obtain from traditional government sources. Thus, with one exception, we do not seek to increase the size of our graduate programs. Instead we will emphasize strategies for recruiting the best applicants, focusing on quality rather than quantity. We seek to improve program visibility through electronic media and increased participation at scientific meetings, and seeking foundation support for under-funded programs.

While students are generally satisfied with their mentoring, we see opportunities for improvement. We will enhance the timely flow of information via an online student handbook, include more career and program-related content in appropriate courses, improve tracking of career placements and publications by alumni, and improve incentives for students to publish via a class on publishing and support for presentations at scientific meetings.

Our degree management strategy includes a review of similar programs at other institutions to identify “best practices” we might adopt. We will seek ways to reduce time to completion among doctoral students, including pursuing “bridge” funds to support dissertation writing and possibly adjusting credit requirements. We will maintain and improve coordination with other degrees across campus with which we share courses (e.g., statistics, GIS, planning).

Funding is at the root of many of these identified needs and improvements. We look to improve our funding through changing our uses of overhead return, seeking foundation support, and obtaining part-time services of a grant-writing specialist.

**Overview**

Environment and Society (ENVS) conducts an active program of graduate education that we regard as vital to the future of our department, as well as appropriate for the interdisciplinary nature of our work. We offer five Master of Science degrees (Bioregional Planning; Ecology; Geography; Human Dimensions of Ecosystem Science & Management; Recreation Resource Management) and two doctorates (Ecology; Human Dimensions of Ecosystem Science & Management). We coordinate graduate certificate programs in Natural Resources and Environmental Education (NREE) and the National Environmental Policy Act (NEPA), and participate in our college’s professional Master of Natural Resources (MNR). Two MS (Bioregional Planning, Ecology) and one PhD (Ecology) are jointly offered with other departments. Such a complex program would be unmanageable in a department with 16 full-time faculty members if we did not maintain a common set of policies, procedures, and goals. Thus our approaches to recruiting, mentoring, management, and funding are applied similarly across all degree programs, with only a few degree-specific variations.

As befits our department's interdisciplinary nature, all faculty members participate substantively in more than one graduate degree program. None of our programs is the sole province of a particular faculty member. While each degree has some unique requirements, most of our graduate courses serve more than one degree. In this way we manage graduate education efficiently yet students may tailor their Programs of Study to meet individual needs. We market our program with degree titles that befit our students' career aspirations but do not overtax the department's resources.

Our Master's degrees prepare students for professional practice or doctoral studies in aspects of human-environment relationships such as planning, international development, wildland recreation, policy analysis, education and outreach. The doctoral programs primarily prepare students for research or academic careers, although some graduates choose other paths. A hallmark of our program is how it shapes and strengthens interdisciplinary perspectives among students, with an emphasis on human connections to environment.

The nature of the program has shifted over the years with evolving faculty and student interests, and with the emergence of critical human-environment problems we are well suited to address. Thus we began participating in 2007 in the Ecology graduate degrees in response to the growing interest within the field of ecology in understanding how natural and human systems are interconnected, and in 2012 eliminated a PhD in Recreation Resource Management to reflect the trend for recreation research to be embedded within the broader fields within the environmental sciences. We expect to continue adjustments to match trends in the field and interests of our faculty, beginning with the following change in Fall 2012:

- **GOAL: *Simplify our graduate program in Geography to reflect interests and expertise of our current faculty, as well as reflect trends among peer institutions.***
- **ACTION: *In Fall 2012, obtain Senate and Trustees' approval to eliminate the rarely used Master of Arts in Geography and the specializations within the MS.***

### **Recruiting**

The success of any graduate program rests ultimately on its visibility and the accomplishments of its faculty. Most important for visibility is awareness of our program among our peers across the U.S. and potential doctoral students now attending other universities. A critical means of gaining and maintaining such visibility is by taking part in national and international scientific meetings.

- **GOAL: *Improve the visibility of ENVS research and graduate programs among academic and student peers.***
- **ACTION: *Beginning in 2012-13, initiate a program of financial assistance for travel by (1) graduate students or (2) faculty to scientific meetings.***

Awareness of the program is the first step of attracting the students; another is "capturing" their interest when they first explore options for graduate programs. Most students search through digital sources: university websites, and possibly social media. Our recruiting success depends on our ability to adapt to changes in the electronic information sphere.

- **GOAL: *Enhance our use of electronic media to gain awareness and maintain interest in our graduate programs among prospective students.***
- **ACTION: *Effective immediately, add a new feature to our ENVS homepage and a new page highlighting the accomplishments of alumni of our programs.***
- **ACTION: *Beginning in Summer 2012, begin using LinkedIn and improve our ongoing use of Facebook to highlight our graduate program.***
- **ACTION: *Continue to monitor sources of information about students' electronic search behaviors and adapt our use of these media accordingly.***
- **ACTION: *Take better advantage of marketing assistance (e.g., brochure design) offered by the School of Graduate Studies.***

We already have been successful in attracting qualified candidates for our degree programs, as evidenced by the fact that just 13% of our active and admitted students required waivers of one or more SGS admissions criteria, the lowest rate in the College and seventh-lowest in the university. At times we have not been able to attract the applicants we most wanted to admit because our offers were less lucrative or because they felt another school would better fit their lives and lifestyles, but rarely are we unable to fill funded assistantships with highly qualified students. Given the nature of our funding structure, which provides very little for teaching assistantships or fellowships, the size of our program is dictated mainly by our faculty's ability to obtain extramural grants that include research assistantships. Accordingly, we do not seek to increase the *quantity* of students we are able to recruit, but the *quality* of our recruits' accomplishments prior to admission.

- **GOAL: Improve the overall quality of our graduate program by admitting the most highly qualified applicants.**
- **ACTION: Reduce the proportion of admissions with waivers of SGS criteria to "very occasional" (i.e., under exceptional circumstances to meet specific needs of an assistantship), achieving an acceptance rate by 2014-15 of <1 per year.**

Two MS programs, Bioregional Planning and the Peace Corps option in Geography, have objectives or structures that do not easily fit into a typical GRA-and-thesis degree. Bioregional Planning prepares students for a professional career and the curriculum is centered on a group practicum ("studio") rather than thesis research, and most students earn the degree by completing a Plan B paper. The Peace Corps Master's International features a coursework-dominated first year, followed by two years in a Peace Corps assignment, and finally a year working on a thesis or Plan B project rooted in the Peace Corps service. The best recruiting tool for excellent students in these programs will be scholarship or fellowship support that reduces the burden of self-funding.

- **GOAL: Improve our ability to attract the best students into the Bioregional Planning and Peace Corps MI Geography degrees.**
- **ACTION: Beginning immediately, focus development efforts on foundation and/or other external support for a fund to support fellowships for top students in these programs.**

### **Mentoring**

For the most part, graduate students in ENV5 have been mentored on an individual basis by faculty members as part of their responsibilities as thesis/dissertation committee chairs. Such mentorship emphasizes education, research, and career topics while a department staff member, Rebecca Hirst, helps graduate students navigate the complexities of graduate program administration (applications, deadlines, insurance and SGS rules, etc.).

From exit interviews and alumni surveys we know that students are comfortable overall with the level and quality of mentoring that they receive, and are especially pleased with the staff assistance. But they also pointed to a few shortcomings. In particular, we identified a need to provide information earlier in the program about degree-, department-, and university-specific deadlines and expectations. We also found that students could benefit by more extensive and up-to-date information about post-degree employment searches.

- **GOAL: Improve department-wide mentoring about program expectations and "life after grad school."**
- **ACTION: By December 2012, develop and implement a systematic approach for tracking and monitoring placements of graduates in all degrees.**
- **ACTION: Continue the practice, begun in Spring 2012, of reserving 2-3 slots in the spring departmental seminar for "how-to" presentations for students.**
- **ACTION: Beginning in Fall 2012, incorporate such information into the syllabus for ENV5 6840, the required graduate introductory seminar.**

- ***ACTION: By Dec. 31, 2012, complete and post on the departmental website a graduate student handbook that supplements the SGS Compass booklet by describing department and college expectations and procedures.***

One key area of mentorship is initiate students into the publication process. In 2010 we initiated a 2-credit graduate course on publication, ENVS 6830, to address this issue. So far the number of graduate student-authored or co-authored papers remains low but we believe we need to give the course time before deciding whether it meets our objectives. A stepping-stone to publication is presentation of student research at conferences. We have seen some increase in such presentations in recent years (5 in 2008-09, 13 in 2009-10, 11 in 2010-11) but the number should be higher still.

- ***GOAL: Increase the number of student-authored or co-authored publications in the peer-reviewed literature of their fields.***
- ***ACTION: Monitor the number of student publications accepted during their time in the program or within 2 years after graduation. Following the Fall 2013 term, review these data as part of an assessment of the ENVS 6830 requirement, and adjust the course if needed to enhance success.***
- ***ACTION: Beginning in 2012-13, initiate a program offering financial assistance for students to present their publishable research at scientific meetings, with a target of >20 student presentations per year by 2015-16.***

For the Bioregional Planning (BRP) MS degree, few students are engaged in research but all are co-authors of a group report based on their first-year “studio” (practicum) projects. Students do present their findings to stakeholder groups in the regions where they have been working, but rarely to peer or professional audiences who can provide useful feedback or connect them with post-graduation opportunities. BRP students would benefit from professional internships – for networking purposes and job experience, but also to provide topics for their Plan B professional papers or Plan A theses.

- ***GOAL: Improve opportunities for Bioregional Planning students to gain pre-professional experiences in their chosen field.***
- ***ACTION: In collaboration with the LAEP Department, find and offer financial support for studio teams to present their work at appropriate professional outlets.***
- ***ACTION: In collaboration with the LAEP Department, actively seek sufficient internship opportunities that every BRP student can take advantage.***

### **Management**

As defined by the review process, “management” of our graduate program encompasses four factors: the research inputs and outputs achieved by our faculty, our efforts to keep our degrees current, our success in helping students complete degrees in a timely manner and enter the workforce, and the structure of our curricula. As noted previously, most of our faculty members participate in more than one degree program so it is difficult to determine which of our programs are better managed than others. Some factors affecting management quality may be affected by the passage of time. In particular, our faculty currently consists largely of probationary and late-career members, with relatively few in a highly productive mid-career stage when publication and grantsmanship rates tend to be greatest. We expect our metrics in this area to improve markedly as younger faculty gain tenure.

On the other hand, we do see opportunities for shortening time to graduation. We have been largely successful in mentoring MS students to degree completion within target time periods, but doctoral rates could be improved. For the most part this is due to funding shortfalls in latter years of the doctoral program that force students to seek work outside the university setting.

- ***GOAL: Reduce the time from entry to dissertation defense for PhD students to 5 years, to be accomplished by the 2014-15 graduating cohort.***
- ***ACTION: Explore options to reduce the requirement to complete 60 credits past the Master’s degree. (For more on this, see the degree-specific section below.)***

- ***ACTION: As a second-level funding priority (after fellowship support for BRP and Peace Corps students), seek external support for “bridge” funds to assist students during the dissertation-writing phase of their programs.***

Environment and Society was the first department in a natural resources college to be specifically organized around human-nature interactions, and our interdisciplinary degrees were among the first of their kind to be offered in the nation. As a result, we have tended to see ourselves as trendsetters and have not sought to compare ourselves to the similar programs that have emerged as competitors. It's time for us to do that.

- ***GOAL: Understand how our programs compare to those of similar departments in the nation and abroad.***
- ***ACTION: By Jan. 1, 2013, complete a comprehensive study of how degrees are managed in programs whose scientists are active in the International Association for Society and Natural Resources (IASNR), including but not limited to matters of curriculum, credit load, course requirements, and funding models.***
- ***ACTION: By April 30, 2013, agree upon those aspects of comparison programs that we should emulate, and propose strategies for doing so.***
- ***ACTION: At the August 2013 departmental retreat, agree upon a blueprint for enhancing the management of our program overall, and within specific degrees.***

In exit interviews and surveys a few students have expressed concern about the availability of required classes. Two specific requirements have been a problem. For first-year BRP students, a GIS course was moved to the spring semester to meet the instructor's needs while our program could better use it in the first semester. And for most majors, a social statistics course has not always been available.

- ***GOAL: Ensure that all required classes are available when needed (in the first year of students' programs of study).***
- ***ACTION: Work with LAEP to provide GIS training at a time when BRP students in both departments can best use it, beginning with the 2013-14 academic year.***
- ***ACTION: Continue regular discussions with social scientist colleagues in other departments across campus to coordinate graduate statistics offerings.***

### **Funding**

Although few of our students are self-funded, financial support levels have varied greatly. Beginning in Fall 2012 the value of teaching assistantships (which are funded internally) will be raised to \$800/mo. We will expect all research assistantships to pay at least as much. We would like to see better consistency in payments across programs, but the level of competition for students and availability of extramural funding of assistantships in different disciplines varies too much for us to establish a common pay scale. Obviously we need more money.

- ***GOAL: Improve our level of extramural research support, specifically by increasing the number and size of graduate research assistantships.***
- ***ACTION: Reallocate funds to hire, as soon as possible, a grant-writing specialist who can help faculty members identify sources of funding and obtain them.***

For 2012-13, our needs for tuition waivers will be substantially met within the university's new funding scheme, with priority to: (1) out-of-state tuition for PhD students; (2) out-of-state tuition for MS students; (3) in-state tuition, PhD; (4) in-state tuition, MS. As the shift in tuition support continues, this may rise to the highest priority for new funding, but at present the priority list is (1) conference attendance; (2) fellowships for outstanding BRP and Peace Corps MI students; (3) bridge funding for late-program PhD students. Funding for the top priority will come from indirect cost recovery; new external support will be needed to achieve priorities 2 and 3.

### **Degree-specific issues**

*Bioregional planning.* Since its inception this degree has been jointly offered with LAEP, but for the past decade only ENVS has admitted students. This will change beginning in the 2013-14 academic year when LAEP becomes a full partner and both departments provide faculty. The greatest need in the next 1-2 years will be to reach agreement about how the partnership will be implemented, and tasks will be allocated between programs. A recruitment plan needs to be developed jointly as well.

*Ecology.* Six USU departments offer these degrees, and much of the degree management is done jointly. Few of our faculty members mentor Ecology students or plan to do so in the near future. We will continue to ensure that our approach to the degree (especially credit requirements for the PhD) matches those of the other two College of Natural Resources departments.

*Geography.* By 2013 we will have three geographers on our faculty, all relatively young. We are not satisfied with the size of this program, but expect it to grow as these junior faculty members become more established and can obtain more funding for assistantships. (See also the plan noted above to enhance the Peace Corps International Master's program.)

*Human Dimensions of Ecosystem Science and Management.* This is our largest and most successful program. Self-study reviewers suggested adopting a shorter name; we have considered that, but concluded the title is not a hindrance to recruiting and feel it is beginning to gain some name recognition. For now we will not change, but will continue to monitor this issue.

*Recreation Resource Management.* No degree-specific issues were identified.