Social Sciences

The Department of Social Sciences has, for more than a decade, been working to transform itself from a service unit into a more complete teaching and research enterprise. That process has aligned well with the various versions of the University's strategic plans, including some aspects but not all of the newest iteration of that document. Let me address each of the three goals in turn.

Goal 1: Attract and support a world-class and diverse faculty, staff, and student population.

The faculty and staff of Social Sciences have made this goal part of every programmatic development effort undertaken here, as well as a continuing consideration in every academic hire we will continue to make. The Department has a good gender balance, although we can do more; we are under-represented in terms of minority members. The number of Social Sciences majors has grown over the past decade, but has stabilized since the development of the Psychology degree. Any attempt to attract quality faculty and students requires that the Department offer quality programs. Before 1995, we could make no such claim. Today we have strong graduate programs but have started stronger undergraduate offerings, but have more to do there. The Department could play a larger role in attracting more diverse students as help is provided to counter the strong "brand" of Michigan Tech as only an engineering school.

Social Science best supports Goal 1 in graduate education. The MS in industrial archaeology is not only unique, but is internationally recognized as the premier program in this academic niche. The new doctoral program in Industrial Heritage is an important step, but it requires careful nurturing and attention over the next couple of years to insure that it can meet its goals. The MS program in environmental policy is moving steadily in the right direction, but remains hamstrung by the limited number of faculty committed to that program. Even so, it makes a major contribution to environmental research on campus, supporting work in several other units.

The Department's undergraduate programs already make a contribution to diversifying the degree offerings on campus – the number of majors has increased from about 25 in 1997 to 70. The jump came with the addition of programs in secondary education and per-law to the original two offerings (general social sciences and history). In 2005-06, we renamed pre-law as Law and Society and added new courses by utilizing the expertise of Susanna Peters. This program is in markedly better shape, thanks to her efforts. The new degree program in anthropology for fall 2006 is a major addition. It aligns graduate and undergraduate teaching, has a strong faculty, and looks more like degrees on other campuses – students understand what it means. But Michigan Tech must insure students learn about this degree for it to succeed.

There is much more to do before other SS majors realistically can hope to attract more students – especially since the new Psychology major realistically is the stronger general social sciences degree. It must be recognized that only the Department's graduate programs realistically recruit on a national or international level. Except for anthropology, all undergraduate degrees in Social Sciences appeal to local and regional

students. We offer quality faculty and close contact, but the small size of the faculty and course offerings in individual fields restrict the these programs. Ideas proposed in the accompanying document for the upcoming campaign address ways to begin addressing this situation.

In sum, this Department currently offers strong support for Goal 1 with our graduate programs. Undergraduate programs help broaden the opportunities on campus, but several show more potential then success at this time. We are not likely to attract large number of students (our current goal is 100 majors) but we can offer strong support to students and programs that fill niches. We need careful marketing in order to grow, for many of the things we do run counter to the historic "brand" of Michigan Tech as an engineering school.

Planned activities: The most important short-term steps are from the Department's diversity report: Actively recruit diverse faculty as positions become available; Develop 2+2 articulation program with KBIC community college for the anthropology major; Strengthen Law and Society by structuring appointment for Susanna Peters; Review secondary education program in light thin course offerings (especially in political science and geography where there are NO full time faculty at the moment) and threat from No Child Left Behind; Strengthen history major.

Long-term goals: Secure additional faculty, either tenure-track or 3-year lecturers.

Goal 2: Deliver a distinctive and rigorous discovery-based learning experience grounded in science, engineering, technology, sustainability, and the business of innovation.

Social Sciences fits this goal in a couple of ways. For majors, faculty insure that students realize that they are accessible and open to a variety of mentoring efforts. "Discovery based learning" in the social sciences means, most basically, giving students a chance to see what the fields are about. The best way for this to happen is via independent study projects and REU type experiences. Three SURF projects are underway this summer continuing a pattern of working directly on faculty research projects. We have added a project course of juniors and seniors as well, and are strongly encouraging majors to take advantage of year-abroad and internship programs. The best fits between this goal and our undergraduate programs, however, is with the new Anthropology degree, for which the summer archaeology field school will serve as the capstone experience for all majors. That same experience is pivotal for the education of the MS students in Industrial Archaeology. And we've been doing this for more than 20 years.

The graduate program in Environmental Policy, on the other hand, contributes substantially to sustainability, as a partner in the recent IGERT , and through research projects pursued collaboratively with several other faculty in several departments. Moreover, the required project course for all EP masters students always deals with a real-world problem and entails substantial hands-on experience in public participation in environmental problems. Barry Solomon plays a large role in developing campus energy and sustainability plans. In sum, we've been doing discovery based learning for some time.

Also in line with this goal, Social Sciences has successfully added an undergraduate computing facility, meeting a pressing need that was repeatedly a source of criticism among majors. We also have organized, with the help of students leadership, a student organization – Social Sciences Students Society (4S) – to provide a means of addressing the desire of our majors for social and professional activities that provide a sense of community. We are pleased at how this has developed – but desperately need space for a student lounge. A student design project to be conducted with Civil Engineering this coming fall with SS student participation, will explore how to best utilize the annex --and might help address this question.

The primary limiting factor the Department faces in terms of Goal 2 is the multiple commitments Social Sciences faculty are always juggling – general education, majors, graduate students. Since nearly every upper-division course in the Department combines majors and distribution list students, it is all but impossible to sustain the rigor that would work best for majors alone. The result is that SS majors routinely express frustration about this class-room dynamic. We are beginning to withdraw some SS upper-division classes from the distribution list and installing departmental pre-requisites on distribution list courses that insure only interested students- -mostly majors, participate in certain classes.

Planned Activities: As noted above, review and continue revamping undergraduate majors; develop space review with sensitivity to needed student lounge and second-floor connector between AOB and Annex.
Long-term Plans: Develop space between Annex and Academic Office building into small class rooms/seminar space, shared with School of Business..

Goal 3: Establish world-class research, scholarship and innovation in science, engineering, and technology that promotes sustainable economic development in Michigan and the nation.

The Social Sciences Department easily contributes to the first part of Goal 3. The Department's reputation in industrial archeology is unmatched in the world. We edit the leading journal in the field and run that society's office. Pat Martin is on the international organization for industrial heritage (TICCIH). Environmental policy faculty are central to a number of projects on campus, including the SFI IGERT, the MUSES project, and individual projects in several engineering departments. Individual faculty are nationally and internationally recognized for their research in mining and Copper Country history (Lankton); engineering education (Reynolds, Seely); environmental economics (Solomon); environmental history and regulation (Gorman); history of transportation, especially highways (Seely).

The second part (economic development) is harder for Social Sciences to show. In some respects, our greatest contribution is simply educating MTU graduates who can think, communicate, reason, and understand the world -- especially the place of technology within that world. Many students gain these capacities through our general education instruction. In addition, the environmental policy research conducted here related to land

and water usage makes a strong contribution to insuring that development is on sustainable terms. Finally, the chair's participation in the nanotechnology education efforts at MTU contributes to the preparation of students who understand what this emerging areas of science and technology is about, including the range of societal implications that surround such a novel domain of knowledge. He team-teaches one introductory course and offers another on societal implications; both are required for the new Nanotechnology minor, which he co-sponsored. Moreover, this same approach of balancing science and society is behind the recently-submitted Genomics and Society IGERT from Forestry, for which the Department chair is co-PI .

All of these elements contain one common thread – Michigan Tech needs to present itself as a ***technological university.*** Everything this department does fits under such a heading -- we are specialized social sciences unit. But students still have to find us, and that requirement means stressing that MTU not only prepares students to learn how develop new science and technology, but also to understand, communicate, manage, and guide technology into sustainable pathways. The second half of this definition opens leaves the opportunity for giving attention to both the history of industry and to the importance of policy studies about science, technology, and the environment.
Planned Activities: Develop Research Center for Industrial Archaeology; Launch Environmental Policy Center focused on land use, water, energy; Encourage university to seriously present itself as a *technological university.*

Long-term Goal: Doctorate in policy studies focused on the environment.

Capital Campaign Stories for Social Sciences

Goal 1: Attract and support a world-class and diverse faculty, staff, and student population.
Under maximize resources and space:
STORY: The Department occupies the oldest building on campus, and has use of a later addition (the annex) that needs to be integrated with the main building to allow full use. Doing so is in keeping with the historic use of these spaces and provides a fine project for students as well. We propose funds for a connector between the Annex and the Academic Office Building that will include 3-4 classroom/seminar rooms with technology, mainly for Social Science and the School of Business. A bridge on the second floor will link the annex and Social Sciences offices. This small construction project maximizes the space in the existing office buildings, and renders the Annex much more functional for Social Sciences. Inclusion of a lounge for Social Sciences majors also would address Goal 2: exemplary student life activities.

Goal 2: Deliver a distinctive and rigorous discovery-based learning experience grounded in science, engineering, technology, sustainability, and the business of innovation.
STORY: The Keweenaw is the perfect location for an environmental policy center focused on land use, water, and energy. The Environmental Policy group is working to develop an Environmental Policy Center. The key need here is for a distinguished

professorship/chair in environmental policy. This position would support not only the new center, but also permit establishment of a doctorate in environmental policy. These combined developments would energize attention to sustainability from the social sciences perspectives. The position envisioned here by definition also would advance Goals 1 and 3.

Goal 3: Establish world-class research, scholarship and innovation in science, engineering, and technology that promotes sustainable economic development in Michigan and the nation.

STORY: We have the word's leading industrial archaeology program on this campus. We are in the process of developing a Research Center for Industrial Archeology. To make this work effectively, we need funding that will fit into this goal's desire for international connections. The Center will incorporate ties to leading heritage study centers in Europe. We hope for endowed funds to create a visiting international postdoctoral fellowship or visiting professor position, allowing use to support European and other scholars during temporary stays at Michigan Tech. Another element could include a visiting graduate student fellowship, also international, for a one-semester stay.