Project Summary:
ADVANCE Institutional Transformation at the South Dakota School of Mines and Technology

It is well known that the percentages of women faculty in STEM fields at the national level are sobering. What these statistics do not convey is how these percentages translate into magnified disadvantages on a small campus due to the lack of critical mass of women. The South Dakota School of Mines and Technology (SDSM&T) is representative of a small campus with low critical mass of tenure track STEM female faculty. Although 6% of the engineering faculty and 14% of the science faculty are female, this translates into only 8 tenure track women on campus. Consequently, many strategies developed at larger institutions, particularly those regarding mentoring and networking, are neither relevant nor easily adapted to small specialty schools (such as SDSM&T) or even comprehensive institutions with small STEM programs.

There is impetus for change at SDSM&T, however. The institution is currently engaged in a reorganization, and the climate created by SDSM&T’s recently hired president, who came to the school in 2003, has been inclusive of all levels of faculty, staff and administration. The president has modeled an effective method of managing true and lasting change that makes SDSM&T well poised for the institutional transformation outlined in this proposal. In addition, diversity has been spotlighted as a priority, with recent hires of three female engineering faculty in the last two years, and the creation of a Women in Science and Engineering (WISE) program. Partnerships with the regional tribal colleges have also provided a positive atmosphere for increased diversity at all levels on campus.

The objectives of the proposal are based on implementing, assessing, adapting, and institutionalizing programs that will allow for the recruitment, retention, promotion and advancement of women, including minority women, at the institution, in South Dakota, and at the regional tribal colleges. The objectives of the proposed project are to:

- Develop a network of women faculty throughout South Dakota and the regional tribal colleges that can be connected with women at other institutions regardless of geographic isolation;
- Increase the critical mass of women in STEM faculty positions at the institution and in the state through improved faculty search programs;
- Provide personal and financial support to women faculty from hire to retire through mentoring, networking, training, and funding;
- Develop and disseminate programming appropriate for institutions lacking in a critical mass of women;
- Develop an awareness of gender issues on campus and throughout the State of South Dakota system, with an emphasis at the department level;
- Ensure that campus and state policies and procedures provide for an equitable experience for all faculty;
- Develop resources and opportunities for Native American women through support and collaboration with faculty at the tribal colleges; and
- Create an inclusive environment for all faculty and administrators in order to achieve a permanent, positive change in campus climate.

The broader impact of the SDSM&T ADVANCE site is embedded in both the model for recruitment/retention/promotion/advancement and the process by which the site’s goals will be accomplished. As one of many smaller institutions with significant STEM programs, the SDSM&T ADVANCE site will serve as a model for other institutions. The SDSM&T ADVANCE site will have additional broader impact by creating “virtual critical mass” of women faculty in STEM fields though development of WEB², a real-time electronic networking and mentoring system based on a videoconferencing model. Isolation will be reduced by linking women STEM faculty throughout academic institutions, particularly those lacking in critical mass. This is urgently needed by women faculty members at geographically isolated institutions and members at institutions with small STEM programs.

The South Dakota university system is structured such that positive policy and procedure changes will have a direct and immediate effect on all of the other South Dakota institutions. Also, tribal colleges constitute significant membership among the partner institutions. This ADVANCE site will not only provide an additional link between the regional tribal and public institutions, but also foster networking and mentoring relationships among the female faculty members in these otherwise isolated towns. Finally, the web-based awareness resources produced will be available to other institutions around the world.