

## **Community-Building First-Year Student Retreat**

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### **INTRODUCTION**

Engineering still has a strong reputation for being an extremely male-dominated profession. Even fields which once used to be considered male-dominated are more gender balanced than engineering. "In 1988, women constituted 33 percent of computer and mathematical scientists, 24 percent of natural scientists and chemists, but only 7.3 percent of engineers."<sup>1</sup>

During the 1970s and early 1980s the field of engineering experienced a surge of women entering the field and it appeared as if engineering was finally changing its reputation. The dramatic change was reflected in the increase of women earning bachelor's degrees in engineering; the numbers rose from less than one percent in the '70s to nearly ten percent in the early '80s (McIlwee & Robinson, pg. 2, 1992).

The College of Engineering at U C Davis also experienced an impressive increase of women engineering students during this same time period. In the fall of 1977 women made up 33 percent of the undergraduates enrolled in the College of Engineering. By the fall of 1979, however, the percentage of women had fallen to 23 percent and continued to fluctuate between 23 and 25 percent until the fall of 1984, when it began to decline. Currently, the female undergraduate population in engineering is 19.1 percent, a percentage above the national average of 16 percent, but significantly below the impressive numbers attained in 1977.

With the percentage of female undergraduates entering engineering declining, the issue of retention becomes even more imperative. According to persistence data for the College of Engineering at the University of California, Davis, by spring 1993, only 41.3% of female engineering majors, who matriculated from high school in the fall of 1988, had graduated with

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<sup>1</sup>McIlwee, J. & G. Robinson, (1992). **Women in Engineering: Gender, Power & Workplace Culture.** (pg. 2) State University of New York Press, Albany:NY.

an engineering degree. In essence, the College realized it was losing over half of its female student population.

### **PLANNING THE RETREAT**

The reasons for attrition range from feeling isolated as an underrepresented group to experiencing the "chilly classroom climate." As a way to combat the loss of women in engineering, the College of Engineering's Center for Women in Engineering (WIE) designed a retention building activity geared specifically for the first-year engineering student. The activity, a weekend retreat, was created to enhance the already existing student services. (WIE provides student programs for all the female engineering students: approximately 400 undergraduates and 100 graduate students). The goal of the retreat was to build a more visible community of female engineering students by starting with the first-year students. The objective was to create a major shift in the institution's male-dominated culture by building a network of women.

In the fall of 1993, the Center received a two-year Officer's Grant of \$27,000 from the Alfred P. Sloan Foundation to conduct student support services with the primary activity being the first-year student retreat.

### **THE 1994 RETREAT**

The first retreat was held the weekend prior to the beginning of the fall quarter (September 23-25). Fifteen entering students participated, twelve first-year and three transfer students. In addition, seven continuing students served as retreat "staff." The retreat site was the Marine Laboratory at Bodega Bay, California, which is owned and operated by the University of California and administrated by the Davis campus.

Retreat activities were designed to not only create community and lessen isolation, but also to address some of the basic problems all first-year students encounter when starting college: life-style & social adjustments, the intimidation of a large institution, and basic transition adjustments. Specific activities included:

- A student panel with the seven continuing students discussing their first-year challenges and viewpoints on being women in engineering;
- A viewing and discussion of the video, "Equity in Education: Gender Bias in the College Classroom (developed and distributed by the Center);
- Meetings of discussion groups based on specific majors and facilitated by a continuing student in that major;
- A team bridge-building project.



## FOLLOW-UP ACTIVITIES 1994-95

The process of building a strong community of women did not end the Sunday the group arrived back in Davis. Instead, the Center continued foraging a bond with the 15 first-year students throughout the academic year. The first activity was a Welcome Back Dinner, sponsored by WIE and held for all returning female engineering students. One-hundred percent of the retreat alumni attended this event. The Center also kept a special mailing list for all those involved in the retreat (first-year alums and retreat staff). Mailings included not only activities open to all female engineering students, but also included special get-togethers for retreat individuals only. During the winter quarter, another dinner, hosted by the Center, was given for retreat students as a way of continuing the continuity and support for the women. Again, 100 percent of the retreat individuals attended the activity. During the spring quarter the Center sponsored a field trip to an in-door rock climbing facility in the city of Davis. Nearly half of the retreat alumni attended the event.

## EVALUATION

Winter quarter the first-year students were sent a follow-up questionnaire as a method of tracking the success in building a community. Most of the students (73%) completed the questionnaire. The students' feedback from this questionnaire and the evaluation completed at the retreat will be used in designing next year's retreat (Fall '95). Spring quarter, the WIE director ran three separate focus groups to gather feedback on how each of the first-year students' fared their first year at the university. Each of the first-year students participated in one of the groups.

## RESULTS

To date, the focus groups are beginning to indicate that the students feel special; they enjoy being a part of the Center's attentions, and they see the benefit in beginning college knowing a small group of peers. The retreat alumni have also begun to recognize their encounters with the "chilly classroom climate" and feel their connection with the Center has assisted them with the recognition of gender inequities in the classroom. Below are quotes from either the focus groups, the questionnaire or from conversations with retreat participants:

"I think the people I feel the most comfortable with here at the university are the people I met at the retreat. Aside from seeing them all the time in classes, I 'hang-out' with them in my free time!" (Transfer student, Chemical Engineering)



"The retreat showed me that I could be more assertive as a woman in engineering; just knowing there is a support system out there has made me more confident in my classes." (First-year student, Civil Engineering)

"My roommate is a humanities major. She had a hard time adjusting her first quarter, but I didn't because I knew lots of people through the retreat. I was happy and she was depressed." (First-year student, Civil Engineering)

## **CONCLUSION**

In conclusion, student testimony indicates the retreat was successful in a number of ways: 1) it provided students with useful information about college-life and an engineering career; 2) it lessened students' anxieties about being alone in a new environment; 3) it offered channels for creating new friendships; 4) it provided peer role-models; 5) it introduced students to the Center for Women in Engineering, which has in turn proven helpful in connecting them to other activities with the College.

## **1995 RETREAT**

The Center for Women in Engineering is currently planning its second first-year student retreat. Applications for retreat staff were sent to each of the retreat alums and 1994 retreat staff. Six retreat alums applied for these positions and four of 1994's retreat staff reapplied. Seven will be selected out of the ten to join the Center's director in running the fall '95 retreat. The retreat site was selected in early April; it will be held in the Sierra foothills on a 425 acre facility owned and operated by United Camps, Conferences & Retreats. Retreat notices will be sent to all entering first-year female engineering students in August. The Alfred P. Sloan grant funds will be able to accommodate up to 20 first-year students for this second retreat.