

Building collaboration between peer mentoring programs and student organizations: WEP's Model of the Peer Assistance Leaders Program (PALs) and the Leadership Collaborative

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Abstract - The Peer Assistance Leaders program (PALs) provide support to first year engineering women transitioning from high school into the Cockrell School of Engineering (CSE), and to precollege students considering engineering as a major and contribute to the overall goal of WEP to recruit, retain and graduate in four years. PALs serve as role models, receive skills development and leadership training, organize and participate in opportunities for first year, transfer and international women to get connected within the Cockrell School of Engineering, visit with prospective students and their families and help coordinate and facilitate pre-college programs. Over 100 volunteer PALs, representing all departments, are selected and trained by WEP each year. Primarily, the PALs are second year female engineering students, further serving as a retention program. The PAL program has grown significantly to nearly 120 volunteers, up from 35 volunteers in 2006. All first year engineering women (approximately 300 students) are automatically matched to a PAL and will connect on the first class day at a large welcome dinner. For PALs, our goals are: to provide the opportunity to serve as positive engineering role models, develop leadership, mentoring, interpersonal and communication skills and to increase the connection to the CSE and sense of belonging within the UT engineering community. For PAL Mentees, the goals are: to use PAL as a resource for academic success, increase connection to their PAL and to WEP, and to increase connection to the UT engineering community. The WEP Leadership Collaborative (WEP-LC) is a collaborative leadership initiative coordinated by WEP, bringing together WEP & 9 student-led organizations that serve UT female engineering students. The purpose of the Leadership Collaborative is to create environments that foster a sense of community for the students. With particular emphasis on the female students, the WEP-LC is designed to showcase this welcoming community during the recruitment process of

high school students through leadership opportunities throughout the academic career of our students. During this process, the goal is not only to create this sense of community and support but also to increase the retention of the female engineering students. Through mentoring, leadership development and opportunities for career mentoring, the offerings span the 4+ years of the academic experience. Four groups are classified as Sponsored Organizations, having formal officers, by-laws and additional privileges granted by the University; one group is classified as a Registered Organization, with limited privileges; and four more maintain a less formal structure and are currently classified as groups. The WEP-LC includes leadership training, monthly collaboration meetings, & coordinated community building, career exploration, mentoring & outreach initiatives. The WEP-LC involves over 30 student leaders and 250 active WEP & organization participants impacting over 1,400 women in engineering. This talk/session would showcase these two initiatives, share best practices and discuss future program offerings and directions.

INTRODUCTION

The Peer Assistance Leader or PAL Program offered by the Women in Engineering Program at The University of Texas at Austin strives to provide mentoring to all first year engineering women in their major. The goal of the PAL mentoring program is to increase the retention and graduation rates of the female engineering students by providing a support network from the very beginning of the student's academic career. The program has been developed and has evolved every year to incorporate additional components and enhancements to better serve the first year community. The PAL program automatically serves all first year engineering women, approximately 300 students, in all engineering

majors. Mentees are matched to a PAL in their same major and all PALs are volunteers.

Preliminary data, compiled by the Cockrell School of Engineering's Director for Special Projects and Data, indicate that the program is indeed successful and surpasses the general population of the Cockrell School. For instance, the three year average graduation rates of PAL mentors verses the three year average for all students in the college the PAL mentors were at 83% graduated in 5 years verses 58%. For students graduating with an engineering degree in 4 years the percentages were 41% of PAL mentors verses 32% of all Cockrell students.

Various PAL sub groups have been created over the years to serve specific subsets of our population such as international and transfer students. The PALs mentoring these two groups were themselves either international or transfer students and can thus identify with the specific concerns and issues of their respective population. Outside of the scope of this paper/presentation is another subgroup of PALs, the Pre-College PALs. This group assists the WEP Office with recruitment of incoming high school students in planned on campus activities and with phone calls to all admitted students. On occasion, the Pre-College PALs assist with off campus requests for students to participate in community programs.

In addition to providing mentoring and guidance to the incoming first year students, the PAL program serves as a retention program for our second and third year female engineering students. By being a part of our community and serving others, PALs are more likely to remain in engineering, earn better grades and graduate from the Cockrell School of Engineering. Some of the learning outcomes that come from participating in the PAL program for first year students are they are able to learn the UT system, develop communication skills, learn how to ask for help, and how to be mentored. The PALs learn how to mentor and be a role model, provide help to others, leadership, listening, teamwork and communication skills. All students are working on time management skills, how to function autonomously, working in a complex environment, decision-making skills and developing relationships with others.

PALs are recruited from the current PAL population as well as from the first year class, in their second semester. An online application is collected and students are interviewed in either a group or individual setting. Returning mentors are exempt from the interview. All PALs mentoring current college students of any type (first year, transfer or international students) are required to enroll or have completed the WEP Leadership Seminar course (or similar equivalent type of training on campus). An introductory PAL training session occurs just before fall classes begin as part of the Cockrell School of Engineering's Student Leaders Conference. A syllabus is provided to all PALs each semester with events, program requirements and suggested communication topics for PALs to use in their communications with their mentees.

The matching of PALs to mentees occurs in late August once a more definitive list of first year and new transfer students is available and after major changes have occurred. The ratio of mentees to each PAL varies by department depending on the number of incoming students and the number of PALs in each department. Ideally, the ratio would be about 3 mentees per PAL but the numbers can be somewhat higher in some departments. For the fall 2013 semester, there are approximately 330 incoming first year women and approximately 140 PALs.

The first contact with mentees happens on the first day of fall classes at a dinner hosted by WEP for all first year students and their PALs. Students are encouraged to connect on Facebook in addition to using email. At the dinner, students are grouped at tables by their major and all incoming students have their PAL's name on their nametag. Lists of the mentee names and emails are provided to the PALs so they can establish contact. The syllabus serves as the communication guide for the PALs to initiate contact with their mentees. A new WEP program goal for this upcoming year is to provide an electronic newsletter for the PALs on a monthly basis with information, hints, tips and encouragement for connecting with their mentees.

The final component of the PAL program is to incorporate a recognition program for the PALs. The plan is to secure funding to provide a small stipend/scholarship for all the PALs as an added incentive for mentoring and maintaining regular contact with their mentees. Additionally, outstanding performers or those nominated and selected as exceptional PALs would be recognized at the WEP Evening With Industry Banquet in the spring semester and presented with an award and an additional scholarship.

The connection between the PAL program and the WEP Leadership Collaborative is in how the mentoring will be delivered for certain departments/majors.

The WEP Leadership Collaborative is the name assigned to the program describing all of the female focused student organizations the WEP Office oversees. In order to clearly understand our structure, it is important to understand that WEP is a student success program created in 1992, automatically serving the needs and concerns of all female engineering students. Our mission is to recruit, retain and graduate more women from the Cockrell School of Engineering. WEP is part of the Cockrell School of Engineering's Student Division comprised of Student Affairs, the Engineering Career Assistance Center, Engineering Scholarships, Equal Opportunity in Engineering and WEP.

All of the newly created female focused student organizations are in addition to a very robust, large and very well organized Society of Women Engineers (SWE) student section. The SWE student organization has been on the UT campus for about forty years, twenty more than the Women in Engineering Program. In the past three years, a SWE Grad section was created as a side arm of the main SWE student organization to address the needs and concerns of female graduate students. SWE Grad offers professional

development programs and workshops to all female graduate students.

Several years ago, the Women in Aerospace for Leadership and Development (WIALD) was created by a group of students in that department looking for new ways to create community for the female ASE students, a historically very low population of female students (around 12% with an incoming class of only about 14 students). The distinction of the WIALD group is that they are a project-based group, creating and executing a new project each academic year. Using the project as the basis for forming and building their community, WIALD seeks to improve retention of women in the department as well as uses the annual project as an incentive to recruit incoming students. This past year, the WIALD group successfully launched a weather balloon project. Video and a project summary are available for viewing during the session, time permitting.

Following the creation of the WIALD group, the Women in Electrical Engineering (WECE) formed with the similar purpose of creating a community for female students in a department with a very low female population (approximately 13% overall, with an incoming class of about 45 students) but without a project based core purpose. Instead, WECE is solely focused on creating a community and connecting the female students in their large department and are inclusive of the graduate female engineering students as well. Female faculty are involved as advisors and supporters to the group. Several female faculty members participate in an annual mentoring dinner as well as provide support and funds for students to attend the Grace Hopper Conference.

The Women in Petroleum Engineering (WPGE) and Women in Mechanical Engineering (WME) groups soon followed the creation of WIALD and WECE and have a similar focus in creating community and connecting the women within their respective academic departments. WPGE focus their efforts only on the undergraduate women and WME include female graduate students.

This past spring semester, the Society of Hispanic Professional Engineers (SHPE) created a sub group for their organization called the SHPE Senioritas, focusing on the needs of the female Hispanic members of their organization. A small sub-population, the SHPE Senioritas plan to concentrate their efforts on additional social and leadership opportunities as well as some additional outreach activities in the community.

Currently forming are two graduate student focused groups: Women in Biomedical Engineering (WBME) and Chemical Engineering Women (CHEW). In addition to providing community and connection points for graduate students, these groups are working toward providing professional development opportunities in their respective departments.

As for the mentoring connection, the WIALD, WECE, WME and WPGE groups will all serve as the PAL mentoring group for the incoming students in each of those majors. Officers from each group are also PALs and will serve in both

functions leading the mentoring effort for WEP while incorporating new students into their community. In addition to including first year students in the activities of each student organization, PALs in these student organizations will provide free informal tutoring on the introductory courses in each major.

As one might imagine, communication is of utmost importance among all of these groups and WEP so as to not create conflicts between the groups or conflicting events and programs. Calendars are of particular importance so that one group is not scheduling on top of another. For instance, WEP has mandated that no group can schedule a program, event or meeting that directly conflicts with a WEP program, event, class or meeting. Similarly, groups must avoid events, meetings or programs that conflict with the SWE meetings or events, since SWE is a group that is for all female engineering students versus a department-focused group such as WIALD. A process has been established to deal with last minute program or event, after the calendar has been set for the semester. WEP establishes the program calendar of events early, in April for the following academic year, so that each group is able to plan around it. SWE has an established set of regularly scheduled meetings each semester so other groups know to avoid these dates. Finally, the graduate focused groups and events are generally not in conflict with either WEP or the undergraduate focused groups so they are free to schedule when it best suits graduate student schedules. Finally, representatives from each group gather monthly with WEP to discuss activities and calendars.

In April of each year, the newly elected officers for each group gather with the outgoing officers and the WEP Office program staff to participate in an annual retreat. The focus is to discuss program goals and to create collaboration between the groups. For example, the SWE organization hosts a one-day program for high school girls to explore the various engineering majors. Each organization hosts an activity room on this day to showcase not only their organization but also a signature hands-on activity. This is a wonderful example of how the groups work together in a way to enhance recruitment of more women into engineering.