The Outreach Office at the College of Engineering is assisting high school students in increasing their understanding of scientific and engineering research through on-campus experiences. For the past three years, grade 11 and 12 students from various high schools in Saskatoon have been paired up with mentors from the College faculty and staff. The program is offered through the Saskatoon Public School Board’s grade 12 credit course Career and Work Exploration 30A/B, and allows students to work on selected research projects that are both a benefit to their schoolwork and help prepare them for university. The program comprises two major elements: 1) an instructional component that includes WHMIS and Occupational Health and Safety training, resume writing, career research, and the development of a professional career portfolio under their teacher’s tutelage; and 2) a ten-week, two-hour-a-day placement at the College and/or associated businesses gaining valuable work and research experience. Students must go through an initial application, interview and selection process prior to acceptance into the program, which is administered by Program Leader, Marlene Flaman-Dunn.

The program benefits both the students and the professors. While students are able to work alongside professors, researchers and professional staff, their supervisors have an opportunity to mentor the brightest and most motivated students in the city and build relationship for potential U of S students. In the past, students have provided assistance in advancing an ongoing research project and have worked on stand-alone projects.

Based on feedback from the students, the projects exposed them to new knowledge and sharpened their research skills. This year, Liz Chen, from Walter Murray Collegiate, worked with Dr. Anh Dinh (Electrical Engineering) on a movement censor developed for medical purposes. Although the exact purpose of the program is to challenge the students to learn real-world applications of science and help them make important career decisions, the students also learned valuable skills that will be useful at university.
Invaluable Learning Experience

“\textbf{I have learned to research and learn independently},” says Liz. “\textit{In the classroom, I was just absorbing information- not really understanding the full meaning of it. But here, I’m actively seeking out information about the subjects I am interested in and understanding them more quickly.}” Liz credits her mentor, Dr. Dinh, for an “enriching experience” and for invoking her interest in multiple engineering disciplines.

Dustin Eichhorn is an Evan Hardy Collegiate student benefiting from the program. Dustin’s supervisor, Dr. Rick Retzlaff (Mechanical Engineering), says he has benefitted immensely from Dustin’s help. “Dustin is working on designing and building a mobile wind turbine. He has a quiet competence and has done everything with precision and accuracy. He has made a significant contribution to this project.” The mobile wind turbine, which would be attached to a trailer, will be used as a teaching tool for undergraduate and high school students. Dr. Retzlaff hopes to take the turbine to schools in Northern Saskatchewan communities with the support of the Outreach Office and teach the students about wind energy. Dustin commented that this is a challenging yet rewarding experience.

Looking forward...

The Career and Work Exploration Program continues to be a great success and has grown to include students from all over Saskatoon. While not all placements were without logistical challenges, all students and their supervisors claimed program a great learning experience. Dustin Eichhorn is going to enroll in Engineering this fall and looks forward to continue his education in Mechanical Engineering. Liz Chen also looks forward to advancing her education in Electrical and Computer Engineering.

College of Engineering faculty members are encouraged to participate in the SPSD Career and Education Program for the upcoming school year. Student placements are accepted during the fall (early October to mid-December) and the spring (mid-March to beginning of June). For faculty who are interested in being involved but cannot commit to full 10-week term, there is the option of having students rotate through shorter placements so that they have a better idea of overall options for engineering studies.