API SUPPORT FOR WOMEN IN ENGINEERING

As the power industry is anxiously keen to increase female representation in engineering roles, The Australian Power Institute has part funded a number of women in power engineering university programs including the program at the University of New South Wales (UNSW) and also at the University of Queensland (UQ) to help promote this message. The API feels passionate about this issue, therefore has developed various strategies and initiatives to help promote and deliver this message. This newsletter highlights a few of the most recent initiatives and events that strive to increase the number of female students involved in engineering roles across Australia.

WHY DO WE CARE HOW MANY WOMEN ARE IN ENGINEERING?

Dr. Alex Bannigan reminded us in her 2014 WiE annual report that:

“Women make up over 50% of the adult population, but less than 20% of the people designing and building the world we live in. Business leaders know well that diversity improves problem solving: the more different kinds of people you have working on a problem, the better solution you are likely to get. Gender equity in engineering will benefit society, businesses and individual women.”

IMPORTANCE OF DIVERSITY

In a powerful diversity statement by Stephanie Crawley (Development & Communications, UQ WiE), Ms. Crawley stated:

“Engineers are society’s problem solvers. As every problem solver knows, the more inputs that are known, the easier the problem is to solve. The best engineering team must therefore be as diverse as the society they work in.

Diversity eliminates silo thinking, fosters innovation and helps break down prejudices and subconscious biases.

Most importantly, diversity is proven to generate better performing and more creative teams.

Women in Engineering are diversity’s first step towards a better world!”
THE API ATTENDED UQ’S ENGINEERING FUTURES EVENING

On Wednesday June 10, more than 100 students, parents and industry experts gathered in the Advanced Engineering Building at The University of Queensland’s St Lucia campus as they attended the Engineering Futures Evening to learn about studying at UQ and more about the diverse career opportunities available throughout the industry.

There were four inspiring industry speakers. Professor Stuart Crozier (UQ), Mrs. Robyn Edwards (Energex), Ms. Fran Curran (UQ) and Ms. Anna Emmerson (Google) shared their journey, work experiences and offered some great advice.

Following the presentations, students and parents took advantage of the opportunity to network with current UQ students, UQ student societies, and current professionals within the industry. Female industry representatives from Powerlink, Energex and Ergon accompanied the CE of The API, Mike Griffin, as all hosted a booth together and were able to give insight into the current workforce.

This inspiring event was very well organised by The UQ Women in Engineering’s Stephanie Crawley (Development & Communications Coordinator) and Debra Lancelot (Marketing & Communications Coordinator) along with the fantastic WiE Student Leaders.

UNDERSTANDING STUDENT WORKFORCE EXPECTATIONS

As an Industry Sponsor of the UQ WiE program, The Australian Power Institute cares about supporting students and strives to improve the advancement from studies into professional careers. In efforts to try and help improve the transition between educational institutes and the professional industry, The API along with the UQ WiE team have prepared a survey in order to better understand the possible perceptions and misconceptions of entering the professional industry.

In efforts to better understand the current expectations and attitudes that current university students have within engineering programs, industry and education faculty will work together and hope to create a more genuine and effective transition for students.

This survey will be promoted and opened for responses during Semester 2 Orientation week on July 20th. Once responses are collected, industry professionals will prepare a response and give insight into current workforce environments in order to better prepare and alleviate possible misconceptions regarding the industry.
The UNSW Women in Engineering Program was a new initiative starting in 2014 that aims to increase the representation of women in the engineering industry through improved recruitment, support and retention of female students and early career professionals.

Through an integrated approach, the Women in Engineering program works with high schools, current university students, alumni and industry to create a sustainable pipeline of outstanding, qualified women in all sectors of engineering.

In a 2014 annual report prepared by Dr. Alex Bannigan (UNSW Women in Engineering Manager), Dr. Bannigan stated that, as a faculty, they stand to gain greater market share of the top students by recruiting more women. In 2014 more than half of the Higher School Certificate subjects were topped by a female and more than half of the distinguished achievers list was female.

**WIE REPRESENTATION AT UNSW**

- Nationally, the average proportion of women studying engineering and IT is 16%
- Overall, 20% of engineering students at UNSW are female
- In 2014, 22% of incoming first year students were female
- Chemical engineering and Biomedical engineering have the highest percentage of female students, at around 43% and 33% respectively.
- Mechanical engineering, computer science engineering, mining engineering and petroleum engineering typically have the lowest percentage of female students, at around 16%.
- The proportion of women receiving Dean’s Awards (top 2% of students) increased from 20% in 2013 to 23% in 2014.
- Over the last five years, approximately 18% of offers made to female students were not accepted, as compared to about 14% in male students.

**UNSW WOMEN IN ENGINEERING CAMP**

At the Women in Engineering Camp, students in years 11 and 12 spend five days on campus in early January, exploring the different fields of engineering through hands-on workshops, site visits and completing a week-long team-based design project. They meet current engineering students, academics and professionals working in industry. Participants who go on to enroll in engineering at UNSW receive a $1,000 scholarship.

2015 was the third year of the camp. The program had 64 applications for the 2015 Women in Engineering Camp, triple the applications of the previous two years’ camps. Thirty girls going into years 11 and 12 were selected to attend, based on their subject choices, performance and apparent interest in engineering.
While at camp, students participated in a series of hands-on workshops, demonstrations, site visits and social events, including a barbeque with current UNSW engineering students, a cocktail networking event with industry representatives and a night bridge climb.

The next camp will run 11-16 January, 2016. Applications for the 2016 camp will open in August 2015. For more information or to apply, visit http://www.engineering.unsw.edu.au.

**CAMP OUTCOMES**

- Of the twelve girls who were in year twelve when they attended the 2013 WIEC, nine enrolled in engineering at UNSW in 2014.
- Of the thirteen girls who were in year twelve when they attended the 2014 WIEC, eight have been made main round offers by UNSW engineering. Several more listed UNSW Engineering as their first preference.

**UPCOMING EVENT**

**Stories of Inspirations Seminar**

Curtin University, IEEE Power and Energy Society (PES) WA, and The Australian Power Institute are organising a series of talks on practical strategies and insights from academic and industry to enhance women’s leadership in engineering for career advancement and success.

This seminar is the first series of events organised by the IEEE PES WA Chapter, the Women in Engineering Panel at Curtin University, and The Australian Power Institute.

**Seminar Abstract:** This event will bring together female engineers with the practice of women in leadership and provide opportunities for networking and sharing of experiences in how female engineers can succeed in male dominated environments. Exploring potential opportunities and obtaining career success needs consideration and planning exercise. Being aware of the right direction to go will help you to establish a unique professional career and full fill your future. To ensure you achieve your long-term leadership objective, you need to face challenges and try to keep a balanced approach between confidence, executive and collaborative leadership. This seminar will also help female engineers to improve their skills and talents in their chosen fields from every perspective and in taking on new responsibilities.

To Register please send an email to Sara Deilami at s.deilami@curtin.edu.au
UPCOMING MASTERCLASS!

Topic: Diversity & Inclusion (I&D)

Work is changing. In the power industry, technology, increasing cost and efficiency pressures, and increasing diversity in the workplace mean that today’s managers and employees require a more complex and diverse set of skills and behaviours. There is a growing expectation that beyond traditional performance management, managers must also provide their team with a more inclusive, learning-centred team environment.

Course facilitators Meg Stephensen & Suzie Drayton of Thoughplace have designed this Masterclass to help address and break down these demands and expectations. This 2-day course series will be interactive with practical tools and activities to encourage participants to explore topics as they relate to their own workplaces.

This Master Class will equip power industry managers and aspiring managers with the skills to better understand themselves and their team members, and provide helpful first steps toward becoming more inclusive. Participants will develop an improved understanding of Inclusion & Diversity, as well as useful knowledge and tools to more effectively handle the impacts of change, stress and complex people management, including:

- Self-awareness to better understand your complex diversity make-up, emotional intelligence and biases
- Awareness of others to understand and navigate group dynamics so that you get the most out of your team
- Practical steps to foster a more inclusive team environment, manage talent inclusively, and practice mindfulness and other renewal strategies to improve your engagement.

This Masterclass is best suited for professionals, managers, and aspiring managers, across all disciplines. The knowledge, skills and techniques covered will be applicable across many settings.

This course will be held later in the year. Keep an eye out on The API website as exact dates and registration details for this course will be released soon!