NAU ASME Newsletter

Maricopa Solar Tour
Peoria, Arizona

Upcoming Events:

- *Student Professional Development Conference (SPDC) – District D: April 15-16, 2011*
- *Human Powered Vehicle Challenge (HPVC) – East: April 29-May 1, 2011*

In This Issue:

What We've Been Up To

NAU ASME is better than ever this semester! Coming off of a very active 2009-2010 year with a strong showing at the Human Powered Vehicle Challenge at California State - Northridge and a first place finish in the impromptu design competition at the District E Student Professional Development Conference, ASME was ready to roll into the fall semester with a lot of steam.

Hubert Gorka, the president of NAU ASME for the past three years stepped down this year, allowing Christopher Larson, the vice president the past two years, to become president. Last year's secretary, Rachael Harley, has been promoted to vice president.

Hubert is still a big part of ASME, and is the Human Powered Vehicle team lead, leading a capstone team of five seniors and the general ASME student body on the project.

Maricopa Solar & Ping Tours

NAU ASME participated in two industry tours this semester. The first of which was a tour of Maricopa Solar in Peoria, Arizona. A group of 18 students attended this tour, which gave an overview of the plant and the technology of the SES SunCatchers.

Sterling Energy Systems (SES), is a company headquartered in Scottsdale, Arizona that builds the SunCatchers. SunCatchers concentrate sunlight on to a collector that provides the heat to run a four piston sterling engine, creating mechanical power directly from sunlight. It then converts the mechanical power into electricity, producing 25kW per unit.

The second tour we went on was of Ping's headquarters, where they gave us a tour of manufacturing and engineering. The tour also included Ping showing us their vault of golden tournament winning putters. It was an incredible tour of an amazing facility dedicated to improving the world of golf through engineering.

Ping Tour
Phoenix, Arizona

HPVC West – 2010
California State University - Northridge

HPVC West - 2010

The Human Powered Vehicle Challenge held at California State University – Northridge was a great event with many well-built bicycles from other universities. As with the Tandem Tank at HPVC West in 2008, the Mystax Cetus wowed the judges and other universities with its size, engineering, and performance.

The truss frame of the Mystax Cetus was a big hit, and despite being the longest and biggest bike at competition, it was very light and highly competitive. This was evident during the women's drag competition, in which NAU took third place behind California State University – Chico and Missouri S&T.

Unfortunately, during the qualifying for the men's drag competition, NAU bent a wheel and couldn't finish the tournament. The wheel was replaced and the Mystax Cetus was ready for the endurance event the next day. During the event, the Mystax Cetus was running third overall before encountering two flat tires in a row, which ended up dropping the team to seventh in the endurance.

The team ended up placing sixth overall in the speed class despite the problems with the wheel and flats. This year NAU will be traveling to the HPVC East in an all new tandem that will push the performance bar even higher than before. The team will be addressing some of the problems from the previous year in hopes of taking home the first place overall trophy in the speed class.

Outreach

The solar energy presentation at Mt. Elden Middle School with Professor Tom Acker was a success. There was a 30 minute power point presentation where the students learned about what solar energy is, how much there is, and how it can be used.

After the presentation the students went outdoors to do an experiment with solar ovens and roasted marshmallows with ASME's solar concentrator. For the solar oven, the students measured water in a cup and predicted how hot it would get in 30 minutes. They set up the solar ovens, put cups of water inside, and took temperature measurements every 5 minutes.

To be able to roast marshmallows with the solar concentrator, the students answered questions about the PowerPoint shown in class and also learned about focal points and how light turns into heat. Dr. Acker went back to the school a few weeks later for another presentation and said, "The kids were still talking about how cool the solar concentrator was." We hope to do more presentations in the following months.

Solar Concentrator Outreach
Mount Elden Middle School

6 Steps for First-Time Job Hunters

Congratulations, you've done it! You made it through college, have your degree in hand and are finally ready to make your mark. You are now in the real world and it's time to get your professional life started.

If you are in the middle of this crossroad, it can be scary, exciting, confusing, overwhelming or all of the above. Following are some steps to make a successful college-to-real world transition.

Step 1: Pinpoint Your Direction.
After four (or five, or six) years of college, you are completely certain about what you want to do, right? If not, now is the time to determine what your strengths are and identify what kind of careers suit you. Are you someone who loves to be around people? Or are you happier crunching numbers or creating computer programs? Consider all of your strengths, weaknesses, likes, dislikes and interests when thinking about your career plan. Read about fields that interest you and talk to others who are doing jobs that you find interesting. Focus your direction on positions and fields that match your interests and talents.

Step 2: Do Your Research.
It is vital to learn as much as you can about the companies that interest you and to consider all of your options, says Pam Webster, a recruiting manager for Enterprise Rent-A-Car. She should know: Enterprise is the nation's largest recruiter of college graduates.

"You should be open-minded about opportunities in companies and industries you might not have thought of before," she says. Once you have identified companies that you want to target, Webster suggests looking at their Web sites, reading news articles and talking to current employees to learn as much as you can. "You also need to look at a company's stability," she says. "Is the company going to be there for the long term?"

Step 3: Assemble Your Toolkit.
It is important to have the right tools for any task. The tools needed for a job search are a résumé, cover letter and a portfolio of your work. Take the time to develop a résumé and cover letter that clearly convey your strengths and experience. Here are a few tips to remember:

- Think about the type of résumé you need. A functional résumé, which highlights your abilities rather than your work history, is a good choice for first-time job seekers.
- Focus on accomplishments and results you have achieved, rather than simple descriptions of experiences.
- Use action words in your résumé and cover letter to describe your experiences, such as "initiated," "produced" and "managed."
- If you are low on practical work experience, look to your part-time work, school activities or volunteer positions. "Evaluate all of your experience and translate how it applies to any job you might apply to," Webster says.

Step 4: Network.
One of the most important tasks in any job search is networking. Take advantage of any resources you have, including your school's career placement office, friends who graduated before you and are already working, friends of your parents, former professors, and neighbors. Send e-mails to ask if your contacts know someone who can help you. Pass your résumé around and ask others to do the same. Call your contacts to see if they know someone who works for a firm you are interested in joining.

Step 5: Play the Part.
If you want to join the professional world, you need to act -- and look -- the part. Buy a business suit and wear it to all of your interviews. "Make sure your e-mail address and voice mail greeting are appropriate," Webster says. That means if your e-mail user name is "crazygirl2005," you might want to get a new account. Webster says you should also remember to be professional at home. "Be prepared for a phone call or a phone interview at any time," she says. The more you play the part of a well-trained professional, the more people will see you as a professional.

Step 6: Don't Give Up.
The real world can be a real challenge. Set realistic expectations and recognize that you will probably have to start at the bottom and work your way up. You will likely face rejection as you start looking for your first full-time job, but everyone goes through it. Just remember to be proactive, be persistent and remain confident that there is a great job out there for you!

Kate Lorenz is the article and advice editor for CareerBuilder.com. She researches and writes about job search strategy, career management, hiring trends and workplace issues.

Ping Quick Facts:

- Founded by an engineer
- Large focus on testing and engineering
- All clubs are custom made to fit the customer
- Developed advanced technology to analyze golf ball flight to build better clubs
- Hires mechanical engineers for full time positions as well as internships

Ping

Ping, the well-known golf club manufacturer, is a company that was founded in Phoenix, Arizona by an engineer who had an idea to build a better putter. It was his engineering background that led to him building a better putter, and making Ping the company it has become today.

Ping doesn't follow trends; instead they put a large focus on testing and engineering, and don't release a new golf club unless it is better than the previous model. This has led to the creation of Ping Man, a robot designed to swing golf clubs, and a Doppler radar system to track the balls trajectory, as well as other important parameters.

Utilizing all these technologies Ping developed, they were able to create nFlight. This computer program takes measurements when a client swings a golf club and inputs them into a computer that can then tell the customer which golf club is right for them. The program can also tell how different golf ball types, weather conditions, and even elevation changes will affect how far the ball will fly.

Looking for a job or internship with Ping? Visit their website: www.ping.com

Ping's tournament winning (12 so far) S56 irons

Donations

If you would like to make a tax deductible donation the Northern Arizona University's student chapter of the American Society of Mechanical Engineers, please make your checks payable to the NAU Foundation, and in the memo write ASME Fund #4841. You can mail your checks to:

NAU Foundation
PO Box 4094
Building 10, Old Main
Flagstaff, Arizona 86011

Thanks to Our Generous Sponsors

Raytheon has renewed their sponsorship of the Human Powered Vehicle, now sponsoring it two years in a row. APS has also sponsored the Human Powered Vehicle for the second time in the past four years, having sponsored the 2008 Tandem Tank as well as the 2011 craft. NAU ASME thanks them and all our previous sponsors for their donations.

Raytheon

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