A Message From the Director

Abraham Lincoln once said, “If I had eight hours to chop down a tree, I’d spend six sharpening my axe.” You could say that co-op provides our students with plenty of axe sharpening time… preparation for the real world and success in that world.

Our numbers speak for themselves: students who participate in the program obtain great full-time positions upon graduation, higher salaries, and more opportunities. This past year, 76% of the students who received full-time offers from their co-op companies accepted them. Obviously, this tells us that our co-op employers are offering the working environment and level of opportunity that our graduates are seeking.

The word must be getting out to both employers and students that this is a partnership not to be missed. During 2010-2011, we had a record breaking number of co-op applicants, placements and employer participants.

In closing, I would like to thank our loyal employers, hard-working students, and dedicated faculty, in addition to the numerous individuals in financial aid, housing, and registrar’s office who assist our students in the transition from school to work.

We hope you enjoy the newsletter, and don’t forget we are again soliciting for both Student of the Year and Co-op Employer of the Year. Also, we have just implemented a graduate co-op program, so be sure and contact us if you would like information on this initiative.

Good People Make Good Things Happen at Crane Co.

CRANE Co. is a diversified global manufacturer of highly engineered industrial products. With operations in 25 countries, CRANE offers exciting opportunities to pursue career paths that are diverse, challenging, and rewarding. Having partnered with the University of Pittsburgh since 2010 (both the Swanson School of Engineering and Joseph M. Katz Graduate School of Business), CRANE has developed a strong mutually beneficial relationship that provides students the opportunity to work within a global company and gives CRANE access to top talent with fresh ideas and new perspectives. In the past two years CRANE has employed six co-op students to work in its fluid handling business segment including chempharma, pumps & systems, energy and nuclear in Ohio, Texas, and Illinois.

So why CRANE? “At CRANE we strongly believe that attracting and retaining top talent is the key element of success. Crane offers an opportunity to learn with competitive pay, a housing allowance, and the potential for full-time employment after graduation. We have a high performance culture of trust and respect. The Swanson School of Engineering has a very comprehensive curriculum that provides students with skills which are needed to be successful in industry. We have been very impressed with the work ethic and performance of the Pitt co-op students.” said Julie Buschur, HR manager, CRANE ChemPharma Flow Solutions.

CRANE co-op students are assigned projects that are meaningful to the business and provide students with hands-on experience. Engineering students will leave CRANE at the end of their assignment with a working knowledge of how to generate drawings and models using 2D CAD software and ProEngineer. Additionally, CRANE provides real designer/draftsman experience for the co-op students. All co-op students are exposed to the CRANE business system and at least one Kaizen (continuous improvement) event.

CRANE will be at the Fall Co-op Job Fair on September 27, 2011. Stop by our booth to discuss future co-op opportunities!

Dates to Remember

Annual Fall Co-op Job Fair
Tuesday, September 27, 2011
William Pitt Student Union
8:30 a.m.-1:00 p.m.

Senior Recognition Dinner*
Friday, December 9, 2011
5-7 p.m.
*completion of rotations required – further information will be sent via email

Annual Spring 2012 Co-op Job Fair
Thursday, January 12, 2012
(tentative)
William Pitt Student Union

Amanda Miller
Mechanical Engineering Co-op
Mine Safety Appliances
Co-ops Challenged at Curtiss-Wright Flow Control Company

For more than half a century, EMD, a business unit of Curtiss-Wright Flow Control Company (CWFC) has been a world leader in delivering advanced electromechanical solutions to the U.S. Navy, commercial nuclear power markets, and process industries. EMD’s Cooperative Education Program has evolved over two decades into a strong program enabling students to achieve a wealth of engineering knowledge, while making meaningful contributions. CWFC employed 38 students this summer, expanding their program to three of their facilities, EMD (Cheswick, Pa.), APSD (Mt. Pleasant, Pa.) and Benshaw (O’Hara Township, Pa.). An additional 29 students are participating this fall. Electrical, mechanical, industrial, and civil engineers have the opportunity to work in a variety of areas (design, manufacturing, analysis, test, quality assurance, and facilities). In addition, CWFC employs several business/ marketing, security, safety, supply chain, and/or accounting students. Each is assigned a mentor. The student and mentor establish business and personal development objectives for the rotation.

Highlighted below are a few of the results achieved by Pitt, while working at CWFC this summer:

Brendan Flynn used TeamCenter and Solid Edge software to design 20 tools for use in manufacturing operations; Mike Clements re-designed a final assembly work stand making it collapsible, safer, and easier to store; Nick Ruff utilized various hardware and software, including state-of-the-art K-Scan laser technology and Polyworks to reverse engineer motor refurbishment parts; Stephanie Small implemented Lean / Six Sigma improvements in the truck and oil house areas of the factory; Jim Smoyer created 3D models for generator bearing cooling; Nick Vukmer performed hydraulic analysis using Computational Fluid Dynamics (CFD).

Under Hope Tremblay, EMD’s Lead Summer Co-op, the co-ops performed research, wrote articles and published the co-op edition of the newsletter. At the end of their rotation, the co-ops shined as they made formal presentations.

Eaton – A Great Way To Power Up a Career

Gaining valuable work experience while working on a degree is powerful! Students see the benefits of a co-op experience strongly related to powering up their career.

Just ask 2010 graduate Alissa Fry who now works for Eaton Corporation, a power management company. Alisa is a participant in Eaton’s Operations Engineering Development program. She learned about Eaton through the Co-op office in 2008. “Co-op is not required but it is very popular at Pitt. It’s a gateway to a job and I wanted to get hands-on experience,” said Fry.

And hands on experience with Eaton is what she got! Alissa worked for Eaton in three Co-op roles. Her first role gave her experience in Purchasing, and she worked her second and third co-op rotations in the Operational Excellence and Engineering Services function in Eaton’s Electrical Sector. “My second rotation was focused mainly on testing equipment in the Arecibo Puerto Rico plant. I even got to visit the Arecibo plant for a week!” This rotation also gave her the opportunity to see how important communication was at all levels – with engineers, plant employees and other staff.

Alisa’s next rotation gave her an opportunity to work in design. She worked with Eaton engineers on existing designs. “That semester gave me exposure on how we respond to our customers and how we are continuously improving our products to be safer.”

All of this time working at Eaton made her realize that Eaton would be a great employer. “Eaton is such a huge business and there are so many opportunities just within the Electrical Sector that I knew I would be able to find a job that fit me. All of my experiences with Eaton were positive so I knew I didn’t want to turn down a great offer.”

And now let’s power forward to Alisa’s current role. As a participant in the Operations Engineering Development Program, Alisa will gain a wide variety of experience by working in different functional roles during her rotations. Currently she is working as a Quality Engineer in Cleveland, Tennessee supporting the launch of a new product.

Alisa has already done a lot of things in her young career and she is thankful for the start she got at Pitt in the co-op program. “Pitt helped me to learn the importance of balance – being able to work on several things at once, but making sure I finish projects on time and doing it right.” And doing things right powers the Pitt Co-op office, Eaton Corporation and Alisa’s career.

Kevin E. Bailey
Campus Manager – University Relations
Eaton Corporation

“This assignment is going great so far. I am given the opportunity to lead projects and challenged to provide useful input to various problems my group faces. If I have any difficulty understanding anything, I can always ask a co-worker.”

Michel Kernizan
Mechanical Engineering Co-op
Eaton Corporation

Summer co-ops visited CWFC’s business unit, Benshaw, a market leader in custom industrial motor control and protection products for low, medium, and high voltage industrial applications.
A Q & A with The Big Idea Competition WILDCARD Winner - Oreste “Rusty” Scioscia (BS Engineering ‘11)

The Big Idea Competition brought together over 250 student entrepreneurs, faculty and alumni, regional entrepreneurs, investors, program sponsors and champions of entrepreneurship.

Tell me about yourself.
I am a mechanical engineering student and will be graduating December 2011, then attending grad school here at Pitt for electrical engineering. Also, I am Vice President of Membership Development in the Sigma Phi Epsilon Fraternity. During the fall and spring, I play for the Pitt’s Club Ultimate Frisbee team. In winter, I go as often as I can to Seven Springs Resort to do free style skiing.

Tell us about the Safe Jump System – The WILDCARD Winning Entry.
While riding the ski lift back up the mountain and watching people crash on these jumps, I realized that there has to be a safer way. After discussing this with my high school prof, we came up with the Safe Jump System.

This was a case of necessity breeding invention. Free style skiers perform large jumps with gaps that need to be cleared. These jumps range in size from 30 feet to well over 100 feet and the typical size is 30-60 feet.

The main factor in determining whether you are going to land safely is the approach speed. The current method of determining the proper speed is either watching someone else do it first, or just “guinea pigging it.”

The Safe Jump System displays your approach speed and the speed that you need to successfully execute the jump. This system can be used for any extreme sports that have large jumps: skate boarding, dirt biking, motor cross and many others.

Do you have any other projects in the works?
I currently have 2 websites that are in the works. Collegeengineeringanswers.com is a forum for college engineering students to share stories, completed projects, help each other with homework or projects. The second is a site dedicated to helping college town landlords find the true market value of their apartments. I am currently looking for funding for this and I need about $5000 to get it off the ground.

My family owns a shampoo and hair color company, Jean Alexander. And I have been helping my grandfather by developing a way to eliminate the need for disposable hairspray cans. The Smart Spray System that we developed allows customers to buy hairspray as a liquid, pressurize it at home, and control the flow of hairspray. It also saves them money.

Where do you see yourself after graduation?
After grad school I will most likely be going into Power and Energy. It’s one of the most rapidly expanding fields and very important to our country’s growth and stability. I do hope that one day I will own a successful startup company.

Co-op Student of the Year, Co-op Employer of the Year

The Co-op Program is fortunate to have strong employer partners and smart, capable students. Co-op Student of the Year and Co-op Employer of the Year recognize the time, effort, and hard work both parties have contributed. This is the time of year to think about those outstanding companies and individuals and submit nominations for the 2011 awards.

The criteria for Co-op Student of the Year are:
1. Excellent academic record
2. Outstanding work contributions with co-op employer (students must have three rotations completed)
3. Volunteerism or contributions to co-op or University community. Ideally, we would like to have one nominee from each department. The University of Pittsburgh can select one candidate to represent us in the National Co-op Student of the Year competition, which is sponsored by the Cooperative Education Division of the American Society for Engineering Education. The winner will be sent to Orlando, Florida, in February 2012 to receive recognition at our annual conference along with a plaque and check for $500. We have won this award twice and have had many outstanding finalists.

The criteria for Co-op Employer of the Year are:
1. Sustained commitment to cooperative education at the University of Pittsburgh
2. Quality of projects and assignments

The Co-op Employer of the Year and all Pitt Co-op of the Year nominees will be honored at our annual recognition dinner scheduled for Friday, December 9, 2011 at the Pittsburgh Athletic Association.

We look forward to accepting your nominations. Please submit your nomination by Friday, October 14, 2011 to Maureen Barcic at paub2m@pitt.edu. Feel free to contact her with all questions pertaining to the nomination process.

“I am enjoying my co-op very much. I am implementing my knowledge from school into actual practice. Everyone is very nice and helpful. I have learned more about my goals in life and I have a better focus towards the field of engineering I would like to go into.”

Derrick Ward
Electrical Engineering Co-op
Mine Safety Appliances
Cooperative Education

Alumni Hall of Fame — A Word with Michael Zellers (BSME ’11)

My name is Michael Zellers and I am a proud graduate of the University of Pittsburgh’s Swanson School of Engineering. Currently, I am a service engineer in the Embraer E190 Fleet Engineering Department for US Airways where I am responsible for structural maintenance. It is very fulfilling to know that my work helps US Airways get their aircraft back into service as quickly and efficiently as possible while maintaining the utmost safety for the passengers that fly with us daily.

I had a number of goals regarding my career before I graduated college. I wanted to have a job that I knew I would enjoy lined up before I graduated, I wanted to make sure that that it was in a field related to my course of study, and if possible, I wanted the job to be located in the Pittsburgh area. Participating in the Swanson School of Engineering’s co-op program and working three terms with US Airways made all of these goals attainable.

During my last semester at Pitt, I began searching for potential employment. With a University of Pittsburgh degree and a full year’s worth of experience, I had no shortage of interviews. Anyone who has had an interview can tell you that it can be quite nerve racking but I found that during each interview, I could reference my co-op to answer almost every question. This was not because I didn’t have any other experiences to reference, but because the projects I worked on and the challenges that I faced during my co-op gave me the insight to effectively answer almost any interview question. I promise that any interviewer would be impressed if you refer to real world experience in industry during your interview. Luckily, an engineering position became available with US Airways when I graduated and I was fortunate enough that one of my co-op supervisors informed me even though I hadn’t had direct experience in that department. However, being a previous co-op student with US Airways gave me such an advantage since I already felt like I participated in a yearlong interview. A week after my interview, I received an offer from US Airways, and couldn’t have been happier how everything worked out. If I had to go back and do it all over, I wouldn’t change a thing.

I can not stress enough how much of an advantage the co-op program gives you over someone only having in-class experience. My co-op experience not only gave me a glance into how a professional company operates but also let me experience things that otherwise I might never see. I have seen a Boeing 737 held up by four jacking points, each about the size of a soft ball; I have watched an Airbus A320 get completely stripped for inspection and then be reassembled and ready for flight in only a number of weeks; I even stood on the horizontal stabilizer of an Airbus A319 and looked up to see my beloved Pittsburgh Steelers emblem on the vertical stabilizer. All in all, participating in the co-op program was an unbelievable experience and helped shape me into the person I am today. This is a “first class” program that really helped my career “take off” (puns definitely intended with sincerity, I couldn’t resist).

For further information, Michael can be reached via Michael Zellers on-site at US Airways www.engineering.pitt.edu/coop.

“...I have been very pleased with the co-op program at Valspar. I’ve been able to work two rotations in manufacturing and one in the Process Development Group, which has provided a wide range of valuable experience in various fields of engineering. I would highly recommend this program to students interested in a co-op.”

Julie Ramone
Chemical Engineering Co-op
Valspar Corporation

SWE, NSBE and SHPE Dinner Event

The co-op office is partnering with several student organizations (Society of Women Engineers, National Society of Black Engineers, and the Society of Hispanic Professional Engineers) to market their DinnerView event during the evening of January 11, 2012. This networking event allows students to rotate to tables and speak with professionals on topics such as dinner etiquette, interviewing, etc. Twenty-five employers will be able to meet with these engineering students, and corporate sponsorship opportunities are available. Contact Chris Frankovic, associate director in the co-op office, at caf54@pitt.edu or 412-624-9883 for more information.

Co-op Job Fair information and online registration can be accessed through our Web site www.engineering.pitt.edu/coop.

“My job is well-paced and I’m learning a lot. It’s challenging, but everyone is helpful and I don’t feel overwhelmed. I’m really enjoying my job!”

Erica Flinchbaugh
Bioengineering Co-op
Cohera Medical, Inc.

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