

UNIVERSITY OF PITTSBURGH
SCHOOL OF ENGINEERING AND
DEPARTMENTS OF CHEMISTRY AND COMPUTER SCIENCE

COOPERATIVE EDUCATION

FALL 2007

20 Years of Pitt Co-op



When we began our engineering co-op program in 1987 under the combined vision and tutelage of then-Dean Chuck Sorber and Senior Associate Dean Larry Shuman, our goal was to reach someday a participation level of 20 percent. At our five-year mark, we underwent an external evaluation process conducted by a member of the National Commission for Cooperative Education and the director of engineering co-op at the University of Toledo. In their report, one of their concerns was that should we exceed 20 percent, could our school handle the growth? Would we still maintain a quality program? After 20 years, we can report that 3,086 students have participated in co-op, more than half of our eligible engineering students are involved, and we have expanded to include computer science, chemistry, and engineering technology at the University of Pittsburgh at Johnstown (UPJ).

Throughout those 20 years, we have seen excellent students become even better, we have seen shy and unsure students develop confidence in their abilities, and we have seen students who have struggled with academics end up on the dean's list.

Our program has expanded to include companies from all over the United States,

and some have experienced international assignments. In a recent study completed by our office, we found that those students who began a co-op between their sophomore and junior years had a 95 percent retention and graduation rate; those who did not co-op after the completion of sophomore year had a 75 percent retention rate. We also found that the grade point average rose for students in all demographics and academic departments.

In 20 years we have experienced unparalleled encouragement and support from our faculty in engineering, chemistry, and computer science in Oakland and the engineering faculty members at UPJ, Bradford, Greensburg, and Titusville. The appropriate course work is offered for our co-ops, and the co-op faculty advisors take an active role in the success of these students. Many faculty members routinely refer students to our office. The support for cooperative education at the University of Pittsburgh comes from the top down, and that is why our program maintains its quality, despite its enormous growth. Much appreciation goes to the co-op staff (including great work-study students), who dedicate themselves to the success of the students.

We also must thank our employers, who have adhered to our philosophy and have worked with us to make Pitt's co-op program one of the best. In addition, our employers have conducted workshops for us and given us innumerable valuable suggestions for the betterment of the program. We could not have done it without you.

And, of course, we must thank the students, who have entered the workforce and done one heck of a job. It has made our job easier when that employer says, "Give me one more just like Mary or Bob."

We are not about to rest on our laurels. We look forward to further expansion of our program to information science and to opportunities for bioengineers and in international experiences.

From the co-op office, we say "thanks" and look forward to working with all of you in the future!

Cooperative Education Fall Job Fair

The cooperative education program of the University of Pittsburgh School of Engineering and Departments of Computer Science and Chemistry is pleased to announce our 12th annual co-op job fair on Tuesday, October 2, 2007, in the William Pitt Union.

8:30 a.m.–1 p.m. Job Fair Open House

Students and employers meet informally. Employers will answer questions and review résumés. Employers may set up interviews for the afternoon or contact students later in the term. Employers will be considering students for spring and/or summer 2008 co-op positions.

1–5 p.m. Optional Interviews

Employers may conduct one-on-one interviews, which they have scheduled throughout the morning.

We are welcoming approximately 80 employers to our fair this year. You can view our companies at our Web site, www.engr.pitt.edu/coop.



Relax Hosts UPJ Co-op Student

Junior Jessie Letosky (second from left), majoring in electrical engineering technology at the University of Pittsburgh at Johnstown (UPJ), spent her summer working at Relax Software Corporation in Greensburg, Pa., along with three other college students. Letosky had a wide range of responsibilities including working on the development of training curriculum materials, performing quality assurance testing for Relax Software's most recent software release, and working on the development of a Web-based reliability terminology dictionary posted on the company's Web

site. Letosky was also a member of UPJ's winning concrete canoe team and was able to travel to Seattle, Wash., over the summer to compete in the national competition. Relax Software is continually looking for bright, young, energetic students like Letosky who would like to spend their summer or co-op terms gaining real-world work experience in the software engineering field. The University of Pittsburgh co-op program has been extremely helpful in providing everyone involved with a win-win opportunity.

U.S. Steel and Pitt

At United States Steel Corporation, our goal is to excel—whether that's ensuring the safety of our workforce, making steel, optimizing financial performance, building business partnerships, increasing shareholder value, or supporting our communities. To aid our efforts, we foster an inclusive company culture that values the diversity of our employees' talents and experiences. As a result, our employees contribute in creative ways, helping to secure our future as a globally competitive company.

U.S. Steel also relies on contributions from students who participate as interns or co-ops in our company's student employment program. Our company has established relationships with colleges and universities across the United States, but one of our strongest ties is with an institution in Pittsburgh, our headquarters city. U.S. Steel and the University of Pittsburgh School of Engineering have worked together for many years to create opportunities that are mutually beneficial to students, the University, and our company. U.S. Steel benefits from the creativity and talent that fresh young minds from the engineering school bring to the workplace, while students benefit from the opportunities to gain relevant work experience before entering the workforce. Cooperative education is taking on new importance

in school-to-work transition, service-learning, and experiential learning initiatives. The activities and projects students participate in during internships and co-op opportunities help them make the connection between theory and practice. In 2007, U.S. Steel had more than 200 students participating in its student employment program—30 of whom attended Pitt. For the upcoming recruiting cycle beginning in September 2007, U.S. Steel has more than 300 student employment opportunities available.

The long-running relationship between U.S. Steel and the University of Pittsburgh doesn't end with student employment opportunities. U.S. Steel provides financial support to the School of Engineering through an endowed department chair, currently held by Gerald Holder. And in 2007, the United States Steel Foundation presented the University with a \$500,000 endowed scholarship that will be available to students studying engineering, business, or technology disciplines.

Like the University of Pittsburgh and its School of Engineering, U.S. Steel is committed to providing students with diverse learning opportunities that will enhance their overall educational experience. For more information about student or full-time employment at U.S. Steel, please visit www.ussteel.com and select "Careers."

A Co-op Experience

By Lydia Ross

Mechanical Engineering

I just finished my third co-op rotation with Groundwater & Environmental Services, Inc. (GES), which is an environmental consulting firm with more than 600 employees and 32 offices nationwide. It has projects throughout the United States and the Caribbean. Although a majority of its work comes from the large petrochemical companies, its clients also include manufacturers, transportation companies, utilities, law firms, and the public sector. Something that sets GES apart from other consulting companies—and keeps my job interesting—is that it does everything, from assessment to closure, in house.

Although GES has an office just north of Pittsburgh in Cranberry, Pa., it offered me financial assistance to relocate. I chose to complete all three of my co-op rotations in the Philadelphia area. Doing so allowed me to work for the corporate engineering group and also gave me the opportunity to experience a new area. Each rotation brought more exciting and challenging tasks, and I hope to remain with GES upon graduation.

GES tries to tailor your co-op to your specific interests/skills within the company. I am a mechanical engineering major working in the environmental industry, so GES made sure I had plenty of opportunities to get my hands dirty in the warehouse rebuilding, updating, and troubleshooting various systems and equipment. I also got a considerable amount of hands-on work in the field, traveling to various job sites. On my first rotation, I observed many tasks such as drilling, groundwater sampling, and chemical oxidation. As my experience and skill level increased, I planned chemical oxidation events, conducted work on-site, and occasionally acted as the on-site engineer. When in the office, I wrote reports, analyzed data to create case studies, designed remediation systems, procured and researched equipment and chemicals, worked on marketing and recruiting, and did a vast variety of other tasks. At GES, I work closely with geologists, environmental scientists, project managers, and engineers from many different disciplines.

I was given the chance to progress throughout my rotations and feel like part of the team. I encourage you to stop by to see GES at the co-op fair or to look through its recruiting material, available in the co-op office. My co-op experience was educational and fun. I want every co-op student to have just as fulfilling an experience!

Co-op Student Wins Award from GE



Tad Czauski, an electrical and computer engineering co-op student at the University of Pittsburgh, was presented with a General Electric (GE) Student/Intern Co-op Contribution Award for his work at GE

Fanuc in Charlottesville, Va., in 2006. This award recognizes only the top students for their outstanding contributions during a GE work term. Czauski has completed three co-op terms with GE Fanuc in Charlottesville, starting when he was a sophomore.

His manager explains Czauski's achievements:

"Tad began his work on our team by taking ownership of one of the most difficult tests—a redundancy test—within the team and quickly came up to speed on this test, thereby reducing the load on the engineers. While Tad was assigned to rework this test for a customer demonstration, he realized one of our common test tools and customer applications, Remote Station Manager, would not work on Windows CE machines. He rewrote the entire application from scratch to make it work with Windows CE. This is a fairly complex task and would be considered beyond the scope of any co-op. This application enhances many communications tests in the lab. The rewrite also allows the company to provide this application to our customers. His knowledge of the redundancy test and the product's features helped the team proceed more quickly through test development for the next phase of the redundancy feature. Tad has earned great respect from all the members of his team."

Co-op Success Story

University of Pittsburgh School of Engineering alumnus Chris Kudrick (BSE '06), like many other engineering students, entered his sophomore year seeking a co-op position with a well-established company. Fortunately, the co-op office facilitated an interview with General Electric (GE) that resulted in five co-op terms, and Kudrick is now a member of GE's Edison engineering program.

Kudrick spent all five terms in Bridgeville, Pa., at the Bridgeville Glass Plant where he worked on projects ranging from control to computer engineering. He also worked on a state-of-the-art vision/inspection system, which integrated electrical engineering, quality control, and manufacturing processes. As part of GE Lighting, Bridgeville Glass Plant has been in operation since 1918 and helped establish GE as one of the original 12 companies on the Dow Jones Industrial Average and grow to become the world's 11th largest company.

Now a full-time employee with GE Transportation in Erie, Pa., Kudrick is working with GE's rail division. As part of the Edison program, Kudrick will rotate through four engineering assignments that are tied to real business priorities. In his first assignment, Kudrick is an embedded system developer/software engineer for the controls engineering team.

"It still amazes me that, for every day of my five co-op terms, I was able to improve upon the efficiency and quality of a 130-year-old product. The experience I gained with Lighting made an easy transition to GE Transportation, another well-established business in GE," Kudrick says. "Thanks to the experience I gained from being in the co-op program, I am able to immediately contribute to keeping GE Transportation at the forefront of technology advancements in the rail transportation industry."

Aerotech Hires Co-op Student

Aerotech has participated in the University of Pittsburgh's cooperative education program for many years, and we've been very pleased with the quality of the participants and the commitment to their engineering education. We've found the students to be focused, well educated, and driven to succeed.

Aerotech manufactures high-precision motion control systems for the global marketplace. The performance of these systems demands high-quality electrical, mechanical, and software engineering. We hope that by immersing Pitt students in this multidisciplinary environment, they will graduate with an appreciation for the real-world science and art of engineering, and with a sense of how they can contribute to the vitality of manufacturing industries.

Pavel G. Puchkarev, the Pitt Co-op Student of the Year for 2006, has now joined Aerotech as a full-time employee. In addition, Brian Fink has completed an Aerotech summer 2007 mechanical engineering internship where he obtained valuable experience with research and test projects involving accuracy and repeatability standards, laser interferometry and the use of SolidWorks, PDM Works, and MATLAB.

We are pleased with the co-op and intern program offered by the University of Pittsburgh and hope that the experience with Aerotech has benefited each of these fine students. Aerotech will continue recruiting co-op students in the future, and we wish the best of luck to Pitt and the co-op program.

Internationalize Your Engineering Education

Kristine Lalley recently joined the School of Engineering as director of international engineering initiatives. In this new role for the School of Engineering, she will oversee the development of an array of study abroad and other international educational programs for all undergraduate students in the School of Engineering. Lalley will be collaborating with the co-op program to identify and develop opportunities for engineering students to engage in an international co-op rotation as part of their overall co-op experience.

Lalley comes from Penn State, where she developed and oversaw an international cooperative education

and internship program in the College of Engineering and managed numerous engineering education abroad programs. She also created and taught a course that prepares engineering students for an international experience. Lalley is a proud Pitt alumna, having received her MA from the School of Arts and Sciences, and is currently completing her DEd in education from Penn State. Her BA is from New York University in French. Please feel free to contact Lalley at krl33@pitt.edu with any questions about international co-op opportunities or to explore other ways to internationalize your engineering education.

The cooperative education program is looking forward to working more closely with our bioengineering students. If any of our employers are interested in our office's hosting a bioengineering café next spring, please contact Maureen Barcic at 412-624-9882.

COOPERATIVE EDUCATION



Upcoming Event

Our annual co-op certificate reception and dinner will be on Friday, December 7, 2007, from 5 to 7:30 p.m. This year's reception will be at the Pittsburgh Athletic Association in Oakland. We will be sending invitations to all graduating students who have completed the co-op program, company representatives, and faculty and staff members who have been instrumental in making the co-op program a success. We also welcome parents and family members to attend.

This annual reception is our way of honoring our co-op students and saying "thank you" to everyone who has supported our students.

U.S. Steel Dean of Engineering Gerald Holder will present each co-op student with a certificate and also will present an award to our Co-op Employer of the Year.

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Co-op Student and Employer of the Year Nominations

It is time once again to think of nominations for both Co-op Student of the Year and Co-op Employer of the Year for 2007. We appreciate any and all nominations.

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 Palm Springs, Fla., in January 2008 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 Student of the Year nominees will be honored at our annual dinner scheduled for Friday, December 7, 2007 at the Pittsburgh Athletic Association.

We look forward to accepting your nominations. Nominations must be received by Wednesday, October 17, 2007. Thank you!

COOPERATIVE EDUCATION PROGRAM

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