



CICEP

INNOVATION AND ECONOMIC PROSPERITY UNIVERSITIES
AWARDS PROGRAM

CASE
STUDY
2013

Providing Talent to Industry in Northwest Ohio and the Nation

One of the most important contributions a university can make to the prosperity of a regional economy is through the development of a talented workforce that can populate industry and provide expertise and creativity needed for an innovative workplace. The University of Toledo is located in Northwest Ohio; a center of the nation's manufacturing industry. Companies in this region need to compete globally by having a strong engineering workforce that is attuned to both product and process innovation. One of the major contributions of the University of Toledo in this regard is through its College of Engineering's cooperative education program.

The University of Toledo's College of Engineering instituted a mandatory cooperative education program in 1997. This program is one of only eight engineering schools in the entire nation to require a co-op experience as a condition of graduation.

The UT mandatory co-op program requires all engineering undergraduates to complete a minimum of three semesters of work experience as part of their curriculum. The work experience must involve the students in engineering-related projects or programs and can be at industrial, government, or at the sites of other organizations (e.g., hospitals, educational institutions). Although three semesters of co-op are required, many engineering students complete additional co-ops prior to graduation. As a result, all of the UT engineering undergraduates graduate with a minimum of one year of work experience. Many of the students find employment following graduation in the companies where they worked while a student.

The mandatory co-op program has continued to grow. Since 1999, over 13,000 students have been placed in engineering co-op positions at approximately 1,900 employer sites throughout the U.S. and even at 36 international locations. Table 1 shows the placements of engineering co-op in Northwest Ohio.

The impact of our co-op program on Northwest Ohio is significant. Over the past year alone, the College has placed engineering co-op students in 557 positions throughout Northwest Ohio.

Our co-op program has been instrumental in supporting Northwest Ohio to prosper by providing access to our engineering talent. Over 5,500 UT co-op students have been placed at over 527 companies in Northwest Ohio alone. Not only does the company benefit directly by having a technically competent student at its site, but through the co-op program the company develops connections to UT engineering faculty members who are able to help address challenging industry problems. This talented pool of engineering students has allowed employers to hire cost effective labor, without the added cost of benefits. All of our students are required to carry medical insurance, thus, relieving companies of this expense.

The economic impact of our engineering co-op program on Northwest Ohio is sizable with almost 40 percent of the total co-op placements over the past year in the local region. Our students earn an average wage of \$16.75 per hour which equates to an average of \$10,720 per co-op semester. Five-hundred fifty-seven placements multiplied by \$10,720 per co-op semester equates to a total payroll of \$5,971,040 over the past year for our engineering co-ops employed in Northwest Ohio.

Upon graduation, many of these students are offered full-time positions at the companies they worked. Because so many students are placed in Northwest Ohio, many former students continue to contribute to the overall economic health of Northwest Ohio and provide technical leadership to their companies. Former students who now hold significant industrial positions in the region credit the co-op and internship program in their preparation for advancement. Table 2 gives personal accounts from alumni on the impact that the co-op and internship program has on the development of a talented workforce.

Impact of UT Engineering Co-Op Program on Northwest Ohio since 1999

Students placed at regional companies	4,597
Students placed in federal, state, and municipal governments and agencies	460
Students placed in other organizations (hospitals, educational institutions)	453
Total students placed in Northwest Ohio	5,510



4/15/2011 Blair Newman, UT engineering student, working on his co-op at the Toledo Zoo

Impact on Talent Development in Northwest Ohio

Name	Title	Comments
Jeff Joldrichsen	Vice President of Operations, North Star BlueScope Steel LLC	I was fortunate as a University of Toledo undergraduate in engineering to have the opportunity to work part-time as an engineering trainee. This part-time position not only helped define the field of engineering that I wanted to pursue but also helped fund my education. The skills and education I gained from this job and the University of Toledo helped set the foundation for my future. Now as a Vice-President of Operations for a multi-national steel producer in northwest Ohio, my company utilizes the University of Toledo as an important resource as we continually look to grow our business and provide positive returns to the stakeholders in our business.
Tracy Momany	Vice President of Professional Services, Plastic Technologies	I held an engineering internship starting the end of my 3rd year of college, working part-time during the school year, and full-time during the summer. This was an essential part of my engineering education. I learned to apply my engineering training to real world situations, and through this gained greater understanding and appreciation of engineering, technology, and business. Upon graduation, I remained with the company I had interned with, Plastic Technologies, Inc. and have advanced in my career to be a vice president in charge of three departments and a board member of the company. I can credit the internship with providing me the opportunity to learn, but perhaps more importantly to earn a starting position in what has been a very dynamic organization.
Craig Bowie	Chief Administrative Officer, SSOE Group	My experiential education provided me the confirmation I needed that I had chosen the right career for me and led to a full-time job offer immediately upon graduation. My career at SSOE, Inc. has included many opportunities in the 32 years since graduation. Today as a Sr. Vice President and Director on SSOE Board, I am transitioning from my former role as Manager of International Operations to my new role as Chief Administrative Officer.
Steve Wesolowski	Sr. Director of Global Engineering, Dana Holding Corporation	I will always be grateful to The University of Toledo for facilitating my experiential education. It was during my junior year when key professors encouraged me to transfer what I learned in the classroom to industry by pursuing an engineering student position at Toledo based Dana Corporation. I look back at that early opportunity as a crucial three-way partnership (University-Company-Student) which formed the foundation for my engineering career. That collaborative groundwork still serves me well today here in Northwest Ohio, as Dana develops new innovative power conveyance and energy management solutions for the world's future sustainability.