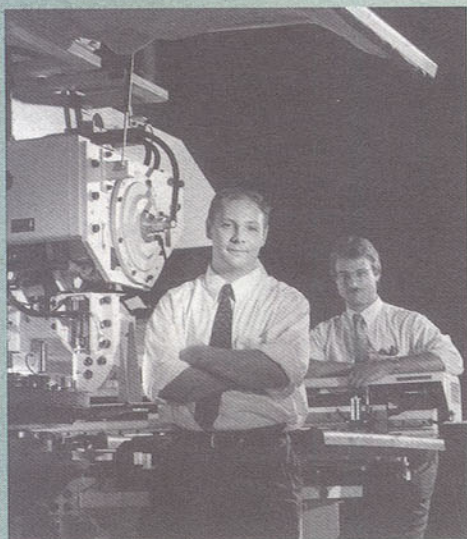




Engineering Reality

ENGINEERING CAREER INSTITUTE:

Nothing Succeeds Like Success



M.E. student Tom Buczek and mentor Stan Kadjasz stand next to equipment on which they made noise reduction improvements

The School of Engineering and Applied Sciences, University at Buffalo, reports the initiation of a new Engineering Career Institute (ECI) that began in the summer of 1994 as a 3-credit course intended to enhance the engineering educational process with a workplace-setting orientation. In order to enhance the value of engineering graduates to prospective employers, ECI provided courses in leadership, communication, teamwork, TQM, and various other subjects to a group of 47 students. At the same time, the students were employed at 21 selected area companies to work on specific projects. On completion of the program, each student presented an oral report on the project first to his or her industry supervisor and subsequently to the entire ECI class.

Based on 1994's smashing success, the 1995 program increased to 80 students employed by 48 companies. Continued rapid growth is anticipated.

According to Dean Millar, the assistant dean who heads up ECI, the program benefits the students, university, and the participating companies as well. "It's obvious that the students involved would benefit from the program," Millar says. "Learning such 'soft skills' as leadership, teamwork, and communication can only make them more marketable in the world of industry. The university gains by turning out better-prepared engineers. The industries involved gain an intelligent intern who completes a valid project, and ultimately get better-prepared engineering graduates."

The students who participated in this first ECI were clearly thrilled with the results. Christian Yungbluth, a mechanical engineering student, says, "The Engineering Career Institute showed me a world beyond theory and equations where my technical skills integrate with business know-how. The experience will make me more of an asset to potential employers." Many students cited the fact that it has become important for an engineer to have a more comprehensive and practical attitude toward business. "The ECI has taught me that engineers of the future will be depended upon for their leadership and broad intelligence as well as for their traditional technical skills," says mechanical engineering senior Steve Nove. Robert

Atkinson, a chemical engineering student, echoes that thought: "The ECI has provided me a strong foundation in 'real world' business and engineering practices. By learning where the connections lie between the technical, financial, and managerial aspects of the business world, we'll be better prepared to make the transition from college to the workforce."

According to the 21 western New York companies that participated, the interns boosted efficiency, provided computer and process support, and in some cases helped cut manufacturing costs by over \$100,000.

University at Buffalo

BACK TO THE FUTURE

Students at Penn State Tear down Products to Learn how to Develop Their Own

Product Dissection at Penn State is the first course in a new manufacturing option based in The Learning Factory, a project of The Manufacturing Engineering Education Partnership (MEEP). The Learning Factory offers a hands-on, practice-based curriculum centered in a learning facility where students can develop and realize design projects.

"Overall, engineering students today don't come with the mechanical and tinkering skills they used to. They may be adept at computers or computer programming, but not have an understanding of how things work," says John Lamancusa, course designer. "We're producing students who are very good at analysis, but who need to learn to synthesize to come up with