

When engineering is job #1



Stairway to success. UT co-op students Tom Matthews, Andrew Dauster, Jasmin Ward, joined on stairs by Becky Lennard (in yellow).

How often do students get a chance to polish their professional skills at NASA? What about Microsoft or Intel? Honda, General Electric, Marathon Oil, Hershey's — corporations where it's all in a day's work for students at UT's College of Engineering who participate in its cooperative education program.

The program, which in six years has placed more than 4,500 aspiring engineers in nearly 40 states and 15 foreign countries, is mandatory for all students pursuing a baccalaureate degree in one of the college's engineering programs. At least a year of co-op experience is required, making the college one of only 11 such engineering programs nationwide. Vickie Kuntz, the program's lead director, said that although the college usually places students with companies who already have co-op programs established, there are times when UT helps get a co-op off the ground. "Detroit Edison, for example, didn't have a structured pro-

gram, but wanted to. We helped them by connecting them with other employers who have had co-ops for years," she said. "The program started out small, but because it was instantly popular with both students and their parents, it's grown a lot. It's become a strong recruitment tool for the college."

Dr. Brian Randolph, associate dean of undergraduate studies, noted that "More than 70 percent of our co-op placements are within Ohio. When you include the intellectual capital they provide to businesses, our students represent a significant economic impact on the state."

A co-op snapshot gives an idea of how the program works.

DePuy, a subsidiary of Johnson & Johnson, is a global research and development firm devoted to orthopaedic devices, with headquarters in Warsaw, Indiana. It's also one of UT's co-op partners. This past semester, eight UT students worked normal 40-hour weeks at DePuy. Because of the distance involved — three hours from Toledo — they relocated for the 16-week period. "Students usually spend one semester doing co-op, the next back at UT, rotating back and forth between work and school until their three required co-op experiences are completed," Kuntz explained.

The UT students were assigned to various projects. Andrew Dauster, a mechanical engineering student in his third co-op at DePuy, outlined one such project, an analysis of how the orthopaedic components are packaged. "We're looking at everything from drop packaging to harmonics," he said, explaining that delivery vehicles produce harmonics

or vibrations that can potentially compromise a product ultimately destined for surgical implantation. "When a doctor opens the package, the product has to be perfect. The last thing you want is a hole in sterile packaging caused by shipping conditions," he said. "It's a matter of constantly improving what we do."

What he's learned from the co-op experience has been professionally invaluable, he said. "The work we do here is exactly the work that a full-time engineer does, only we get more direct supervision."

Ted Burnworth, human resource generalist at DePuy, is currently working with 14 such co-op programs. "I think it's been good for everyone," he said. "We allow students to take theory and apply it in a real-life application, and get financially compensated for their work. We recruit from these students many times, and obviously that's a desirable situation. We get to know them, they get to know us and the community."

One current DePuy employee is a UT grad who did four co-ops at DePuy before being hired in 2002. Project engineer Becky Lennard is now working with various materials involved in hip replacement components, from design to mechanical testing. It's rewarding work, she said. "When we have open houses here at DePuy, we meet patients who have had hip replacements. They tell us how they've had their quality of life restored, from being only partially mobile, or sometimes even bedridden before the surgery."

College Dean Dr. Nagi Naganathan believes the co-op is more than its practical experience. He said, "Our mission goes beyond graduating engineers with a strong technical know-how; we want professionals well positioned to make a difference as leaders in tomorrow's society. Co-op experience is a key element in enabling this transformation. Thanks to all of our industrial partners for making it possible." ▲