

# A COLLABORATIVE SUCCESS

The T-Com Graduate Program based at OU-Tulsa unites electrical and computer engineers and scientists in both academic and research endeavors

There are few better examples of academic collaboration than a program that joins two faculties and spans two campuses in two cities working together to help graduate students navigate through their academic programs and – you guessed it – collaborate with students and each other on research.

The OU-Tulsa Graduate Program in Telecommunications Systems – or T-Com – is a coordinated effort between the schools of Electrical and Computer Engineering and Computer Science that offers two advanced engineering degrees: a master of science degree in telecommunications systems, which focuses on optical networks, optical devices, wireless networks and network security; and a doctorate in electrical engineering, through which students have opportunities to conduct research in such fields as optical networking and devices, wireless networking, network management and voice-data networking.

Currently, 18 students are pursuing master's degrees and 14 are working on doctorates under the supervision of Pramode Verma, director of the T-Com program and professor of computer engineering, Jim Sluss, assistant dean for research, OU-Tulsa Graduate College and professor of computer engineering; Stamatios Kartalopoulos, Williams Professor in Telecommunications Networking; and Hazem Refai, assistant professor of computer engineering.

"T-Com faculty cooperate fully in guiding students at both the Norman and Tulsa campuses and conducting research in photonics and optical networking, wireless networking and telecommunications security," explains Verma. "The program offers courses in those fields as well as fundamentals of telecommunications that address both business and technology issues."

The centerpiece of the program is T-Com's Interoperability Lab, opened in June 2001, a state-of-the-art telecommunications lab that can simulate actual networks, enabling researchers to assess the impact of incorporating new network hardware and software sub-systems in a realistic environment. "The Interop Lab significantly reduces the business risk of entrepreneurs and equipment providers and the operational risk of telecommunications service providers," says Verma.

For example, as packet-voice technology matures, it will be necessary to ensure interoperability between the legacy telephone network and the Internet. "The Interoperability Lab easily can create and verify a wide variety of configurations involving both networks and evaluate their performance in a realistic environment," he says. "This verification will reduce the risk that is inherent in having a packet phone on the Internet (also known as an IP phone) call a legacy phone to provide an adequate set of features and acceptable quality of service."

# FROM THE GENERAL TO THE OBSCURE

Books, journals, databases – you name it. If it's about engineering, chances are good the Engineering Library has it.

By Meaghan Collier

Looking for a book on thermal insulation? Maybe you're a Harley Davidson motorcycle fan or researching what substances are in the hair dye you want to try. Look no further than the Engineering Library in Felgar Hall.

With about 70,000 books and more than 500 journals covering a plethora of engineering topics, this library is a scientist's dream.

Engineering librarian Karen Antell says anyone can come to the library and use the books, journals, microfiche and electronic databases housed there. To use the electronic databases, one need only ask for a temporary username and ID that is valid for two hours.

"Alumni really appreciate the library," she says. "Maybe their company doesn't have the book or journal that they need, so they come to campus and use our resources. Most of the time they don't even care that they have to come to campus to use it – they're just glad they can."

She'd like to see more students come through the door.

"I would love for more freshmen and sophomores to come in," Antell says. "I feel like they sometimes just Google stuff at home all the time. They might not be getting great information on the Internet, and we can help them find great information here."

Lisa Holliday, a structural engineering doctoral student, agrees that the library is a great resource for students.

"No matter what obscure and strange engineering topic I am looking for, Karen knows how to find the latest information on it," she says. "She has helped me find information on things as varied as how to design blast-resistant structures to how to make adobe safe during an earthquake."

