

Ph.D. in technology begins this fall

By David Boggs

In myriad life spheres, from medicine and transportation to recreation and energy, the frontiers of technology know no boundaries. Its consequences are rife with paradox, both to be feared and embraced, for democracy, privacy, job security, identity, opportunity, health and well-being.

Faced with exponential growth in its applications, technology, as an academic discipline, reaches to establish conceptual frameworks and theoretical principles. Two tentative parameters have emerged – the relationships among technology, science and society, and management of the technology life cycle.

The Ph.D. in Technology at Eastern Michigan University is home to that intellectual ferment. Despite stringent budget shortfalls and pockets of reservation, the program enrolls its first student cohort of approximately 12 students in fall semester 2004. Through advanced graduate study, the College of Technology faculty and students

have steadfastly set their sights on being premier contributors to development and effective utilization of technology.

The program seeks to be known for the diversity and academic prowess of its students; for faculty with active research agendas with editorial responsibility for important journals in the field; for contributions to the deliberations of state and national level government bodies; and ultimately, for the number of graduates in faculty and research positions.

These achievements will flow from a curriculum that integrates — according to Haddad and Shah (2004) — first the role that values play in shaping technology; the need for discourse about ethical dimensions of technology development and use; and assessment of the appropriateness of technology to societal groups, nations and society at large. Second, the curriculum will convey a solid understanding of how to combine and manage the technical, organizational, and human dimensions of the innovation process.

Why pursue this degree? What opportu-

nities await successful completion? Two major fields of endeavor await its graduates. The first is faculty careers in higher education, as future professors of technology and instructors in occupational programs. Their purpose will be to engage in policy analysis, research, and preparation of future leaders and practitioners in the realm of technology. The second field consists of management positions with responsibility for technology as it evolves in public, private, and non-profit organizations through the life cycle of planning, design and development, implementation and impact assessment. It is managers as reflective practitioners who are expected to understand technology's strategic value to organizations.

Managerial employment opportunities are to be found in technology design engineering, information systems, information security, manufacturing engineering, quality control, facilities and building construction, polymers and coatings, and in a range of public and service sector industries.

The program has four stars to steer its

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Boone sees future of EMU-China agreement

By Morrell Boone

Lately, I've enjoyed being asked, "So, what did you do on winter break?" That's because this year I can reply, "Oh, not much. I just went to China for five days."

John Dugger, dean of the College of Technology, and I were invited by Professor Meng Qing Guo, president of Tianjin University of Technology & Education (TUTE), to visit his university to explore a possible partnership. I supported Dr. Dugger by representing the COT's Committee on International Activities and as interim coordinator of the master's degree in liberal studies program.

After the 18-hour flight to Beijing, we were met by two officials who took us to Tianjin, the fourth largest city in China with 10 million residents and 18 universities.

TUTE is a technologically-oriented university of 7,500 students with a recent history that is strikingly similar to EMU's College of Technology. The first day of our work week began at 8:30 a.m. with familiarization discussions leading to a delightful lunch hosted by President Meng. After a brief rest period, we had a campus tour leading to a formal "welcome dinner" also hosted by the president.

The second day began at the



FORGING FRIENDSHIPS: (from left) John Dugger, dean of Eastern Michigan University's College of Technology, takes time out from a tour of the city of Tianjin with Professor Xio Chao, director of the International Exchange Office for Tianjin University of Technology and Education, and Morell Boone, EMU professor of interdisciplinary technology. Dugger and Boone were part of an EMU contingent that traveled to China last fall to forge an agreement with Tianjin University.

same time, but was devoted to specific negotiated items leading to an enjoyable lunch, a tour of the new library and more of the city of Tianjin. In the afternoon, there were final negotiations and a signing ceremony where President Meng presented gifts to the

two of us and for EMU President Samuel A. Kirkpatrick. After that, President Meng hosted a formal farewell dinner at a "seafood hotel."

The final day included a leisurely van ride via Badaling (the Great Wall) and the city of

Beijing, where we would prepare for our trip home.

The people at TUTE couldn't have been more hospitable. After two very productive days, President Meng signed a general agreement of cooperation that was signed by President Kirkpatrick upon our return. In addition, President Meng and Dr. Dugger signed an agreement to pursue three mutually beneficial initiatives:

- a training program for 20 vocational principals at EMU;
- an online master's degree with an EMU residency requirement; and
- a four-year bachelor's degree to be offered jointly between EMU and TUTE. All three initiatives are still in the development stage.

One great memory that I took from this trip originated at our last dinner before returning home. Professor Xie Chao, our dinner host at the Beijing Duck Company, received a call from his wife. After speaking to her, he turned to me and said, "My six-year-old daughter would like to talk with you."

I said "hello" and she said, "hello and how are you?" The conversation, in English, continued for a short while. For my part, I was deeply impressed, and

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COT, Epsilon Pi Tau seek fraternity members

During spring 2003, the College of Technology (COT) and the Epsilon Pi Tau (EPT) Delta Alpha chapter at Eastern Michigan University conducted an initiation during the annual COT Honors Banquet. Seventeen students and three faculty and staff were initiated.

What does membership in the Epsilon Pi Tau organization mean? Membership means that those selected are examples of the three precepts of EPT. The precepts are

- **TEXNIKH** - a scientific approach to improving human technological practices,

- **PRAGMATEIA** - human organization that results in improvement, and

- **EXETASIS** - the valuing of research as a tool for adding to knowledge. EPT has been in existence since 1939, when it was formed at Ohio State University.

Students and faculty who are invited to join must exhibit a high level of academic performance and demonstrate commitment and skills in the area of leadership. The trustee and co-trustees of the EPT Delta Alpha chapter review those who possess the appropriate grade point average. Those students who have both the academic and other leadership qualities will be invited to join.

At Eastern Michigan University, one initiation is scheduled each year. During February, prospective members are invited to come and learn more about EPT. Those who have met the qualifications will then join



A FEW GOOD MEN: (above, from left) Cadet Marcus Seiser, COT Dean John Dugger, SFC Thomas Emond, Second Lt. Jeff Botrell, Cadet Andrew Boissonneau, LTC Curt Lapham, and Jerry Streiszler, executive director of Epsilon Pi Tau. (right) Jerry Olson, executive director of Epsilon Pi Tau, and Ernie Savage, retired dean of the College of Technology at Bowling Green State University.

and undergo the initiation ceremony. The initiation ceremony is designed to be a learning experience.

It is envisioned that EPT will be involved in some community service activities such as assisting with university student recruitment, counseling new students, raising funds for scholarships, charity work, or giving

support to other organizations.

Chapter activities may include sponsoring seminars, forums, panel discussions, conferences, exhibits, and tours of educational and industrial facilities where mem-

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CeRNS works toward NSA excellence rating

The Center for Regional and National Security (CeRNS) that was formed in the spring of 2003 is exhibiting growth and maturation.

The Center's organization chart shows two major units, academic and research with major efforts in both branches. A strategic goal for the Center is to gain the Center of Excellence rating by the National Security Agency (NSA). With the current reorganization of the College of Technology, Director of CeRNS Gerald "Skip" Lawver will report to John Dugger, dean of the College of Technology.

The CeRNS has made good progress preparing this application, which includes revising six existing courses and creating four additional courses in information security. The application also includes assurances to satisfy NSA criteria and strengthen the BTE Graduate Certificate in Information Security; evidence of campus-wide involvement in information security and assurance; evidence of research and publications in information security and assurance; and partnership with other universities that currently hold the Center of Excellence rating.

The proposals for the course revisions and the new courses are making their way through the input system in the College of Technology and should be finalized during fall 2004. The department of business and technology education (BTE) provides the major-

ity of these courses with additional coursework provided by the department of interdisciplinary technology (IDT). These courses provide the program of study for the BTE graduate certificate in information security.

Peter Stephenson, director, Information Assurance Platform, CeRNS, and an external consultant to the Department of Interdisciplinary Technology, is leading the team effort in preparing the EMU ap-



plication for the Center of Excellence rating from the National Security Agency (NSA). Documenting the campus-wide efforts and research in information security and information assurance are other components of preparation of the application.

The research platform of CeRNS has an interdisciplinary steering committee. Members include: Lawver (interdisciplinary technology), Hartmut Hoft (computer science), Krishna Narayanan (com-

puter science), Bette Warren (mathematics), Ann Remp (BTE), Paul Kuwik (interdisciplinary technology), Linda Kinckowski (BTE), Max Kanagy (BTE) and Stephenson. The research branch of CeRNS is already active, even before the Center has the NSA Center of Excellence Rating.

The Information Assurance platform of CeRNS (<http://cerns.emich.edu>) is engaged in a number of projects that involve EMU undergraduate students from the department of computer science and the BTE's Network and Information Technology Administration program. One is an ongoing project for SC InfoSecurity News magazine, the leading international trade journal in information security with more than 100,000 readers worldwide. This project comprises periodic testing and reviewing various classes of information security products, the current assignment being intrusion prevention products.

For each assignment, we review up to a dozen different products provided by vendors. After performing a suite of tests—designed by the testing team for each product type—the Center writes brief reviews that are then published under the byline of the student(s) who wrote them.

In addition, the team is developing a number of additional research proposals, with faculty and graduate students from various departments across campus. CeRNS is clearly a growing and maturing center.

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course. Success is achieved when its graduates are able to:

- Analyze technology's interaction with organizations and society using conceptual and ethical frameworks drawn from the humanities, social sciences, and management science;

- Make effective decisions pertaining to the design, planning, implementation and monitoring of technology systems and practices;

- Promote technological literacy among diverse populations and within the organizations for which they have responsibility; and

- Create new knowledge through original high-quality research that contributes to technology theory and practice, and link that research to communities of practice.

Traversing the technology terrain is a unique experience that comes to a small segment of the population and, normally, once in a lifetime. It is a journey that tests the traveler's stamina and intellectual courage, and requires the best efforts that one can bring to the enterprise. It will challenge one's thinking about oneself, one's actions, and one's professional contributions. It can be expected that periods of self-satisfaction will alternate with periods of doubt. The journey requires planning and the support of colleagues, family, and friends. It is not just one more thing to add to an already busy life. Pursuing this relatively new field of study, with the sweeping label of technology, a highly select few are on an excursion toward development and refinement of specialized knowledge and competency.

COT restructured with addition of programs, institute

On Oct. 6, 2003, Provost Paul Schollaert directed the College of Technology to work with the faculty "to craft a recommendation on appropriate organizational structure and nomenclature," which includes the integration of the three targeted programs into the College of Health and Human Services.

Under a restructuring, three programs — apparel, textiles and merchandising, hotel and restaurant management and interior design —and the Textiles Research and Training Institute would be relocated from the human, environmental and consumer resources (HECR) department into the COT.

Although the time constraints made the task very difficult, the provost received our recommendation March 15, 2004. It indicated a strong consensus regarding general organizational structure and some agreement regarding nomenclature.

Following a meeting of all personnel affected by the integration, a procedure was identified that resulted in the plan that was forwarded to the provost for approval. An integration team including John Preston, Dan Fields, Phil Cardon, Susan Gre-

gory and Julie Becker was identified and began work under the leadership of Maj. Cliff Buttram. The first task was to pinpoint a list of related criteria that could be used to group the programs. The second task was to apply the criteria to all programs and propose an appropriate organizational scheme. A COT leadership team also prepared a separate integration proposal that considered administrative concerns. The integration team, with the support of professor Bob Chapman, collected data and applied statistical techniques to assist in the formulation of their recommendations. The administrative team and support staff also have demonstrated a high level of commitment to this necessary change.

Both proposals were distributed to all faculty and staff with opportunities for discussion and feedback. This occurred via e-mail or during meetings that were held to solicit dialogue, seek input and address concerns. In addition to the integration recommendations, justification for considering reorganization was addressed at this time.

There was the need to infuse three programs and an institute

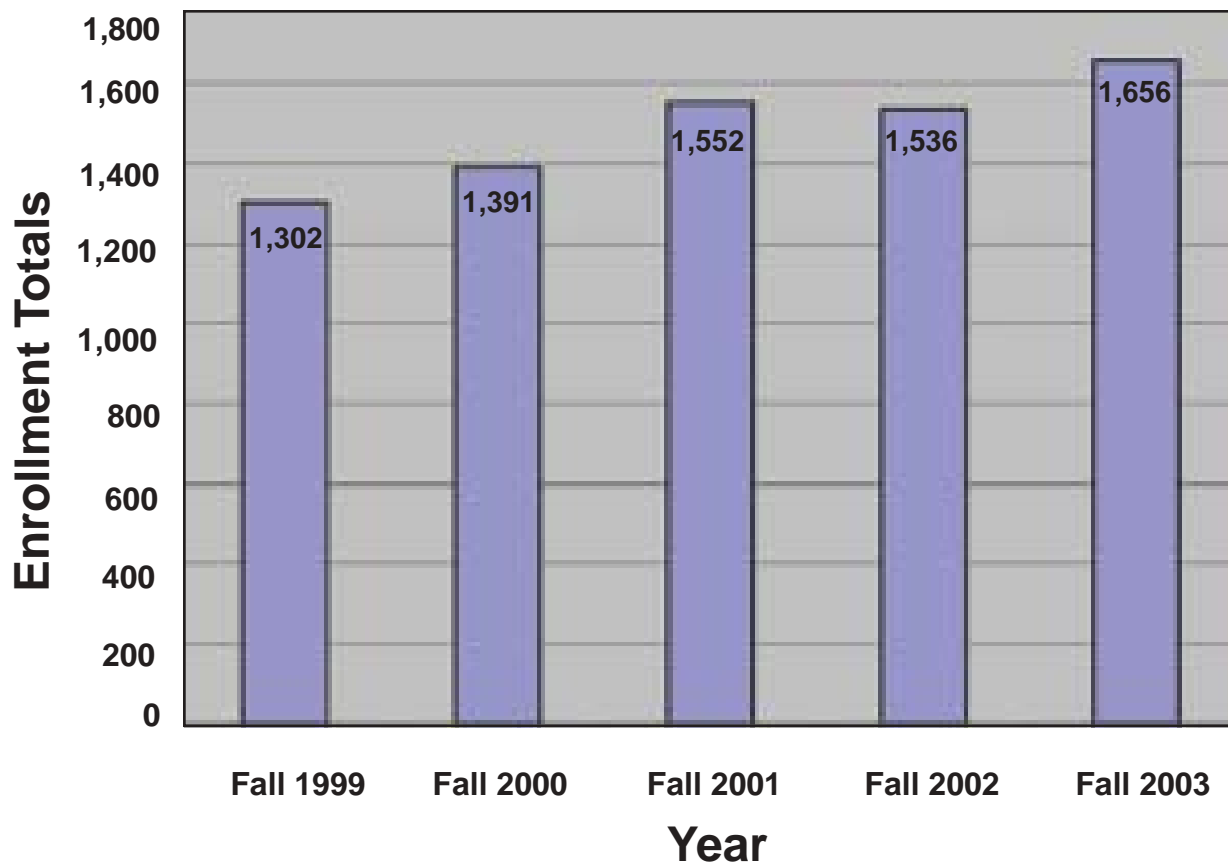
into the COT as well as to align programs with common interests. The lack of a critical mass of programs with math and science intensive curricula was one major concern. The data from the National Survey of Student Engagement (NSSE) study and data about EMU FTIACs confirm the perception that such programs are not visible at EMU.

The placement of *engineering technology* in the unit title, along with the addition of programs such as polymers and coatings, would create the critical mass necessary for greater visibility to prospective high school students and community college transfers.

On April 2, 2004, Provost Schollaert accepted the following recommendations for the structure for the COT. The current three COT departments and the three HECR programs are to be combined into two schools: the School of Engineering Technology and the School of Technology Studies. The four institutes and centers, along with the Ph.D. program, will report to the dean's office. The COT looks forward to meeting the challenges as the implementation process begins.

School of Engineering Technology	School of Technology Studies	Research and Development Unit
Computer Aided Engineering (MS)	Technology Management	Centers, Institutes and Labs ■ Coatings Research Institute ■ Center for Regional and National Security ■ Center for Product Research and Development ■ Textiles Research and Training Institute
Computer ET	Administrative Management	
Engineering Management (MS)	Apparel, Textiles & Merchandising	
Electronic ET	Apparel, Textiles & Merchandising (MS)	
Mechanical ET	Aviation Management Technology	
Manufacturing Technology	Aviation Flight Technology	
Manufacturing ET	Communication Technology	
Pre-architecture	Industrial Distribution	
Polymers and Coatings	Information Security (Graduate Certificate)	
Polymers and Coatings (MS)	Network and IT Administration	
Applied Technology	Hotel & Restaurant Management	
Quality (MS)	Hotel & Restaurant Management (MS)	
Construction Management (MS)	Business Services & Technology Education	
Construction Management (UG)	Business Education (MBE)	
Facility Management	Career Technical and Workforce Education (MS)	
Interior Design	Marketing Education	
Interior Design (MS)	Legal Assistant (Paralegal) Studies	
Computer-Aided Design	Master of Liberal Studies in Technology	
	Tech & Design Education	
	Tech/Industrial and Vocational Education	

COT Five-Year Enrollment Trends



TALE OF THE TAPE: (above) This chart shows undergraduate and graduate student fall enrollments for the College of Technology from 1999-2003. Enrollments steadily rose from 1999-2001, dipped slightly in 2002 before rebounding in 2003.

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touched, that his six-year-old had an interest in speaking with an American.

After returning home, I visited my three grandsons. In addition to giving them the obligatory T-shirts ("I Climbed the Great Wall") and kites, I posted a map from the airplane's magazine on a cardboard box with a magic marker line depicting my flight pattern from Detroit to Beijing.

The oldest grandson, six-year-old Matthew, was very interested, especially about time zones. He asked if he could take the map to his first-grade class the next day for show-and-tell. When he called me the next evening, he said that his classmates wanted to know how the sun got from Michigan to China!

These two six-year-olds (one in Tianjin, the other in Chelsea, Mich.) made such an impression because they embodied my fervent hope that the efforts of Dr. Dugger and myself in China will lead to a long period of cross-cultural educating between our two schools.

Who knows? It might even lead these two six-year olds, in 15 years, to become EMU classmates, carrying on their work and conversations in English and Chinese. Now, wouldn't that have made my winter break trip to China even more special? I hope so!

EMU partners with community to provide legal assistance center to underprivileged

Eastern Michigan University has teamed with Washtenaw County, the Washtenaw County Bar Association, and Legal Services of South Central Michigan to create the Washtenaw County-Eastern Michigan University Legal Assistance Center. The not-for-profit corporation will provide basic legal assistance to people who cannot afford to hire a lawyer and those who choose to represent themselves in legal matters.

Located in the Washtenaw County Annex across from the Washtenaw County Courthouse in downtown Ann Arbor, the Center plans to open its doors to the public Sept. 1, 2004. The opening is scheduled to coincide with statewide Law Day celebrations, a day when the legal community comes together to publicize the legal system and to offer legal help to those in need.

The idea for the Center dates back to August 2002. Dan Ray, program coordinator of EMU's Legal Assistant (Paralegal) Studies Program, circulated a proposal for a legal assistance

center to his program advisory committee members. Ray learned from Kyeena Slater, an advisory committee member, that Washtenaw County was developing a similar idea.

"We found out that we were all working toward the same goal, which was to create a community service organization dedicated to meeting the basic legal needs of the many people who 'fall through the cracks' of our legal services delivery system," Ray said.

The county, the county bar association, Legal Services and EMU quickly decided that the best way to meet this goal was by working together.

Nationwide, the "legal services gap" is well documented. Certain segments of the population — most often the elderly, the poor and those from foreign countries — are chronically underserved by the legal services delivery system. A variety of organizations are available to provide some help, but large numbers of people still have unmet basic legal needs.

For example, Legal Services provides legal help to those at or

near the poverty level. But the income limitations that Legal Services must impose exclude all but the most impoverished. A single mother earning \$20,000 per year with several children, and who owns a home (which was the reason she needed legal help), was unable to qualify for Legal Services help because her



income and assets exceeded the limits.

In Kent County, Mich., the local bar association and other community leaders launched a legal assistance center similar to the Washtenaw County-Eastern Michigan University Legal Assistance Center. Their center opened in March 2002. In the first nine months of operation, the Kent County Legal Assistance Center served in excess of

6,000 patrons.

"We anticipate that the Washtenaw County-EMU Legal Assistance Center will also serve thousands of people each year," Ray said. "One of the factors making the Center unique is that it will be staffed by EMU paralegal students."

The Center's office space, furniture, computers and network infrastructure were donated by Washtenaw County. EMU has agreed to fund a half-time faculty position for a Legal Assistant (Paralegal) Studies Program faculty member to work in the Center. That faculty member, who is an attorney, will supervise paralegal program students who will work in the Center for degree credit.

"People who would otherwise be forced to go without basic legal help and information will get the help they really need," he said. "At the same time, it's an unparalleled clinical learning opportunity for our students. They'll get to deal with real people who have real problems, and help them to solve those problems. You can't simulate that in a classroom."

The Center will offer help in consumer law, real estate and landlord-tenant issues, simple probate matters and family law. The most common problems involve helping people with standardized legal forms and procedures.

"We won't be undertaking attorney-client relationships with Center patrons," Ray said. "We'll simply be educating them and helping them to navigate their own way toward the solutions they need."

At the same time, the Center will not duplicate the kinds of legal services that can be received elsewhere.

For example, the Center will not assist with criminal matters, since public defender services are available to those charged with a crime that cannot afford an attorney. The Center will refer those with non-legal problems to appropriate community organizations. Patrons with more complicated legal problems will be directed to the Washtenaw County Lawyer Referral Service.

For more information, call Dan Ray at 487-4330, or e-mail him at daniel.ray@emich.edu.

COT offers undergraduate advising

The College of Technology Undergraduate Advising Office coordinates and performs advising for all undergraduate students majoring in or seeking information regarding a major/minor in the College of Technology (COT).

The COT Undergraduate Advising Office assists students by providing an academic plan and a program of study guide using current requirements and information. The advising office works closely with faculty advisors to ensure that students have a successful learning experience.

The primary purpose of the COT Undergraduate Advising Office is to assist students in eliminating barriers to earning their degrees and to maximize interest in COT programs. The office also can help with many of the questions about general education program requirements and provide assistance with enhancing performance capability in the academic arena. In some cases, advising is similar to coaching and many students would benefit from the services of the advising office.

A key to good advising is meeting

the students' needs from various perspectives by providing appropriate information in a timely manner from multiple deliveries of services and referrals. Advising is provided to students and staff through various delivery systems, one-on-one meetings, group meetings, e-mail, Web and phone advising. The COT Undergraduate Advising Office works closely with many departments on campus, including admissions, academic records, registration, financial aid, Undergraduate Transfer Center, Holman Learning Center, and Student Services in order to refer or guide students to the right location to meet their specific need.

The COT has many transfer students and maintains excellent relations with community colleges statewide. Areas of undergraduate studies in the college are varied and offer technology programs in administration and management, computers, education, engineering and industry arenas.

The COT currently has the most articulation agreements of the five colleges in the University. Articulation agreements are designed to provide a smooth curriculum transition for students who plan to

transfer from a community college to EMU without loss of credits or duplication of coursework. Articulation agreements are in place with a dozen different community colleges within 18 areas of study, ranging from applied technology to technology management. Business, industry, education and the military seek technology graduates for exciting careers.

The COT undergraduate advisor recently attended a national conference that focused on assessment and was sponsored by the National Academic Advising Association. Using information gleaned from the conference, the Advising Office now has a student survey in place and is seeking feedback. This assessment process should assist in enhancing services, allowing better service to students while furthering development of the COT Undergraduate Advising Office.

Anyone interested in the COT is encouraged to visit the COT's Undergraduate Advising Office in 109 Sill Hall, or call (734) 487-8695. The Web site is <http://cot.emich.edu/advising.htm>, or e-mail cot.advising@emich.edu or Robert.Teehan@emich.edu.

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bers and other students in the College of Technology can gain additional knowledge and skills that will help them later in life.

In the College of Technology, the following are the trustee and co-trustees of the Delta Alpha chapter of EPT:

■ Trustee (COT): **John Dugger**, Dean, COT, (734) 487-0354

■ Co-Trustee (INDT): **David Gore**, (734) 487-1161

■ Co-Trustee (MLSC): **LTC Curt Lapham**, (734) 487-1020

■ Co-Trustee (IT): **Bob Lahidji**, (734) 487-2040

■ Co-Trustee (BTE): **Phillip Cardon**, (734) 487-4330

Epsilon Pi Tau, an international college society for professions in technology, was established in 1928. In response to

educational, political, social and technological changes, its original collegiate membership has been modified to include associate degree granting institutions, field chapters for practitioners and members-at-large.

For questions, contact any of the trustees.

