

*From the
Department
Chairperson*



You are well aware that the past several years have been exceptionally challenging times for higher education. Budget deficits the state level have had a substantial impact across the ISU campus as well as on the Department of Technology. Over the past 3 fiscal years, we have lost approximately 26% of our operating budget (not including the current year) to mandated rescissions. These reductions have forced us to make some difficult decisions and to defer some needs related to equipment and facilities. This is the bad news.

Now for some good news.

- In spite of the serious losses to the department, which have impacted our ability to do such things as upgrade equipment, maintain our computing infrastructure, and provide for faculty travel, student and faculty morale remain quite positive.
- Undergraduate student enrollments are strong. We have even implemented plans to manage enrollments in the Construction Management and Industrial Computer Systems sequences, which is yielding manageable class sizes, filled with better quality students.
- Technology Education enrollments continue to increase with increasing percentages of native freshmen declaring the major. Student teaching sites continue to be major feeders into our program.
- The name of the Printing Management Sequence has been changed

to Graphic Communications. The faculty in this area are doing an exceptional job of recruiting students, refining their curriculum, and upgrading the facilities.

- The Industrial Computer Systems sequence continues to expand and refine their course offerings in the areas of networking, telecommunications, and other certification-related areas.
- The Integrated Manufacturing Systems faculty are actively engaged in conceptualizing the new Integrated Systems laboratory, which is being funded as part of the Caterpillar Corporation's capital campaign gift to ISU.
- Graduate enrollments are up significantly, fueled by the strong interest in the new Project Management degree and certificate offerings.
- In addition to their excellent performance in the classroom, the faculty have been very productive in publishing and presenting at professional conferences.

In addition to these and many other positive developments in the department, I want to highlight one particularly impressive activity, which is directly related to the present budgetary challenge. Over this past year, Department of Technology faculty have been involved in (and successful with) grant writing at an unprecedented level. During a time when state resources are shrinking, the faculty have seized the initiative to pursue opportunities for external funding. Not only do these activities provide valuable additional resources, they also enable faculty to inject new and creative ideas and outcomes back into their classrooms.

During this past year, 7 of our faculty received nearly \$1.5 million from external sources. This is in addition to the \$1.2 million that has been designated for the development of a new integrated manufacturing laboratory. I am very pleased to announce that this past year, your Department of Technology faculty rated number one among all departments in the College of Applied Science and Technology (CAST) for our level of external funding.

Not all grant applications are funded, however, since most grant opportunities are extremely competitive. I am also pleased to report that in addition to the 7 faculty who received grant funding, 5 additional faculty members submitted grant proposals, which were positively reviewed and hold promise for future funding. Collectively, 11 out of our 15 tenure track faculty were involved in grant writing over this past year. This represents an exceptionally strong record of performance in this important area.

One key indicator of character, whether at the individual level or faculty level, is how one chooses to respond to difficult circumstances. The faculty's decision to pursue and generate resources during this period of shrinking budgets makes a very positive statement about their commitment, quality, and ability.

Of course, we continue to appreciate and depend on the strong financial and moral support that we to receive from our alumni and friends. These gifts and other expressions of support are very much appreciated and help to make as strong as a department. Please stay in touch and stop for a visit in when you are in the area.

DEPARTMENT NEWS

DEPARTMENTAL AWARDS

At the annual holiday party, three members of the Technology faculty were honored by the department for the exemplary quality of their work. The three citations, awarded each year since 1989, recognize scholarly productivity, teaching, and service. The selection committee, comprised of faculty members who have received the awards during the previous year, made their choices based on the merit, value, worth, and significance of the projects or quality of performance in instructional settings. This year's winners were: Chris Merrill - Research, Mark Comerford - Teaching, and Rick Boser - Service.



Chris Merrill
Research



Mark Comerford
Teaching



Rick Boser
Service

DO YOU KNOW THE TOP TEN REASONS FOR THE GRADUATE FOLLOW-UP SURVEY?

1. We really want and need to know what you think
2. Helps us achieve program accreditation, which increases the VALUE of YOUR degree
3. Helps keep programs current and viable
4. Maintains quality of program
5. Increases student placement by keeping standards high
6. Keeps competitive edge for our program and our graduates
7. Ensures that the degree is compatible with the needs of industry
8. Helps department complete the assessment process
9. Informs us about your career successes
10. Ultimately leads to higher starting pay for our graduates!

The Graduate Follow-Up Surveys are sent to graduates approximately nine months after graduation. So, if you have recently received a Follow-Up Survey from the Department of Technology, please help us maintain our quality program by taking a few minutes of your time to respond to the Graduate Follow-up Survey.

2004 OUTSTANDING YOUNG ALUM NAMED

Brian Murphy, a 1993 Industrial Technology Graduate in the Construction Management sequence, has been selected as this year's Outstanding Young Alum. Brian has worked for Drees Homes for eleven years. He is currently a Construction Manager with Drees Homes in Cleveland, Ohio. Brian will be the keynote speaker at the Spring Awards Banquet on April 30, 2004 in the Old Main Room at the Bone Student Center.

PRINTING MANAGEMENT SEQUENCE RENAMED

The Printing Management and Imaging Technology Sequence has been renamed Graphic Communications. Graphic Communications reflects the current state of the industry and is a means of conforming to an accepted standard. Many companies involved in print media production, and who hire our graduates, are now accepting digital layouts from customers and "repurposing" those layouts for print, CD-ROM media, and the worldwide web. The name change will reflect the broad nature of the field, with its' digital workflows and alternative graphic media. It will also better enable those students interested in this field of study to identify the sequence as a potential major..

FACULTY UPDATE

Richard Boser, Construction Management Sequence Coordinator and Assistant Chair of the Department, presented a paper entitled *Characteristics and Risks Associated with Liquid Siding Coatings* at the recent Associated Schools of Construction Regional Conference held in Downers Grove. The ISU/CM Program was the organizer and host of the ASC Conference and regional construction management student competitions. The event was attended by over 150 students, faculty, and industry sponsors. During this past year, he led the development of the Construction Management self study for the American Council for Construction Education (ACCE) site visit that took place on March 20-23, 2004. A decision on accrediting the CM program will be made in July at the ACCE annual meeting.

Paul Brauchle has been appointed to serve the Association For Career and Technical Education as a member of their Charter Research and Information Committee. He is also serving the National Association of Trade and Industrial Teacher Educators (NAITTE) as chair of a special committee to revise the Administrative Handbook and the Bylaws. He has recently co-authored with Janel H. Hastings of Scripps College an article entitled "Using Unemployment Wage Data to Assess Educational and Economic Outcomes in a Multicultural Inner-City Community College" in the *The Journal of Applied Research in the Community College*. Dr. Brauchle and Md. Shafiqul Azam have published "A Study of Supervisor and Employee Perceptions of Work Attitudes in Information Age Manufacturing Industries" in the *Journal of Vocational Education Research*. Another article, entitled "Contemporary Approaches to Return on Investment in Training", has been accepted for publication by the *Journal of Industrial Teacher Education*.

Dan Brown continues to serve as the Graduate Coordinator. He was elected President-elect of the National Association of Industrial and Technical Teacher Educators. He serves as a reviewer for the *Journal of Career and Technical Education* and the *Journal of Industrial Teacher Education* and has been delivering project leadership courses on a contract basis to business and industry professionals in the Central Illinois region.

Ryan Brown conducted a 7-hour workshop entitled "Using Autodesk Viz for Design Visualization" for secondary teachers in the Kaskaskia College Tech Prep Consortium on October 24. On Friday, November 21, Dr. Ryan Brown presented "*Creating a Database of Computer-based Training Demonstrations*" at the National Association of Industrial Technology conference in Nashville, TN.

Hank Campbell and his son, Ryan, presented "Global Sourcing & Supply Chain Management at Motorola Corporation: A Key Strategy for Economic Survival" at

the NAIT conference in Nashville. He continues as Project Manager for the Illinois Manufacturing Extension at ISU. Dr. Campbell is also the Education Chair of the ASQ Central Illinois Section 1200. He is trustee of Epsilon Pi Tau, the national honorary society of technologists and is active in the University Club. This spring, he will receive the College of Applied Science and Technology's Outstanding Service Award.

Mark Comerford continues as a member of the Construction Management faculty. He and Dr. Boser recently completed a study on residential liquid coatings. He co-authored with Chris Merrill and article accepted by *The Technology Teacher, Technology and Mathematics Standards: An Integrated Approach*. In December, he was awarded the Department of Technology's Outstanding Teaching Award.

Rodney Custer, Department Chair, is completing a four year term as President of the Council on Technology Teacher Education and will now serve a term on the board of Directors of the International Technology Education Association. He continues to work on Project ProBase, a \$750,000 NSF-funded curriculum development project for upper level High School classes. In addition to these activities, he is serving on several national study committees at the National Research Council and the National Academy of Engineering focused on the assessment of technological literacy and the advancement of engineering education at the secondary school level.

Michael K. Daugherty received a \$315,000 grant from the Illinois State Board of Education to coordinate the *Connections/High Schools That Work* project in Illinois. He presented the "Current status and future of technology teacher education" at the 90th Annual Mississippi Valley Technology Teacher Education Association Conference in Nashville, TN. He was the keynote speaker at the Technology Educators of Indiana State Conference.

Kevin Devine continues as Professional Practice Coordinator. He also coordinates the annual Technology CareerDay and also presented "Knowledge Transfer in Manufacturing Education" at the NAIT Conference held in Nashville, TN. this past May, he successfully completed his doctoral degree and will join the faculty this fall in a tenure track position as a result of a national search.

Anu Gokhale authored a book "Introduction to Telecommunications", which has been translated into Chinese by the International Division of Delmar Thomson Learning. She is currently working on the second edition of her book. Dr. Gokhale was an invited speaker at the Women in Information Technology 2003 International Conference held at Annamalai University in India in December, 2003. As part of Gokhale, Machina and Brauchle's NSP grant, ISU faculty have created and implemented course

modules to increase freshman awareness of science, technology and engineering, better prepare them for careers changing under the influence of science and technology, and change freshman attitudes toward female participation in these disciplines.

David Kennell continues as an instructor in the Integrated Manufacturing Sequence. He has been a leading proponent of the Wind Farm project at the ISU Farm in Lexington, IL. He is introducing significant new and advanced simulation technologies into the process control and electronics courses in the department.

Cathy McKay continues as the Undergraduate Advisor. She participates in the Departmental Curriculum Committee, Family Weekend, and Transfer Days.

Ron Meier has been teaching two of the graduate level Project Management courses in the department and has been providing leadership to a group that is delivering project management courses as part of the Department's Technology Transfer initiative. He is completing a term as a member of the Executive Committee of the National Association of Industrial Technology. He presented "Enterprise Risk Management and its relationship to project management at the Central Illinois Chapter of the Project Management Institute. He has also taught project management seminar courses through Extended University.

Chris Merrill presented *Materials Science & Technology Education* at the Technology Education Conference in Peoria, hosted the 3rd Annual Technology Day at ISU, delivered three presentations at the International Technology Education Association in Albuquerque, New Mexico, and presented at the Connections Conference in St. Charles, IL. He had three manuscripts accepted for publication and continued his work this year with a funded undergraduate research program. He serves on the Illinois Technology Student Association, and Illinois Drafting Educators.

Keith Rahn is finishing his first year teaching in the construction sequence. He is the faculty advisor and team coach for the student team which placed 4th in the nation at the MCA competition. The team presented their proposal at the MCA Annual Convention in Orlando, FL on March 3, 2004.

Lou Reifschneider continues to conduct research in the design and fabrication of plastics processing technology. He collaborated with Dr. M. Kostic of Northern Illinois University to study the use of computer-aided engineering software to design profile extrusion dies and the accompanying calibration hardware. The results will be presented at the SPE ANTEC meeting in May. He and three students attended the Society of Plastics Engineers (SPE) Thermoforming Division Conference in Cincinnati.

Klaus Schmidt presented a paper entitled: "An Interdisciplinary Collaborative Project in Teaching and Learning" at the World Conference on Educational Multimedia, Hypermedia & Telecommunications in Honolulu, Hawaii, on June 26, 2003. The project was conducted with and co-authored by Dr. Maria Canabal, Family and Consumer Sciences. Dr. Klaus Schmidt was the Editor of the ITEA directory, 42nd Edition for the years 2003-04. He became the editor of the Industrial Teacher Education Directory and he developed an on-line database to collect information from Australia, Japan, Taiwan, Canada, and the United States pertaining to technology education programs. The directory is sponsored by the National Association of Industrial and Technical Teacher Educators and the Council on Technology Teacher Education.

Ken Stier, Department of Technology, gave a refereed presentation entitled "Teaching Lean Manufacturing Principles in a Capstone Course with a Simulation Workshop" at the American Society of Engineering Education 2003 Annual Conference in Nashville, TN on June 24th. At the conference he attended other presentations and a tour of the Dell Computer manufacturing plant. He had a refereed article entitled "University and Industry Partnerships: Moving the Manufacturing Curriculum from Mass Production to Lean Production" published in the *Journal of Industrial Technology* in August. He has also received a planning grant to serve on a grant writing team for a coalition to address workforce development needs for the manufacturing industry and career awareness at the secondary education level.

Marty Westrick continues as an Instructional Assistant Professor in the Graphic Communications sequence. He continues to be actively involved in the continuous improvement of the sequence facilities and curriculum. Last fall, he was accepted into a doctoral program in the College of Education at the University of Illinois and is specializing in Human Resource Education.

Dr. Dan Wilson published The GATF Bindery Training Curriculum as lead author with Graphic Arts Technical Foundation staff. The project involved input and review from an advisory committee made up of industry leaders from 20 different companies, equipment manufacturers, educational institutions, and technical associations. Marketed to industry and educational institutions, the 320 page Instructor's Manual provides technical content, lesson plans, activity ideas, operating procedure checklists, review questions, a glossary, along with an instructional CD-ROM containing more than 200 movie clips and illustrations. For learners, a Trainee's Workbook provides worksheets, checklists, troubleshooting charts, and other learning aids. He participated in a press conference at the Graph Expo Conference and Exposition at McCormick Place in Chicago.

TECHNOLOGY STUDENT EVENTS

EPSILON PI TAU INITIATES NEW MEMBERS

The Gamma Theta Chapter of Epsilon Pi Tau held an initiation for new members on Friday, November 14, 2003. Jessica Martin, Brandon Lamkey, Dustin Wyse-Fisher, Melisa Kaehlert, and Ryan Cross were initiated. Epsilon Pi Tau is an international honorary society for technologists which was founded in 1928 at Ohio State University. Students are recommended by faculty members for their scholastic ability and participation in the department.

CM PROGRAM HOSTS ASC REGIONAL CONFERENCE AND COMPETITION

The Illinois State University Construction Management program was the host school for the Associated Schools of Construction Regional Conference and student competitions held in Downers Grove, IL from November 5 – 8, 2003. Richard Boser, Hank Campbell, Mark Comerford and five students attended from ISU. Our construction students, Michael Bjes, Tim Lumppp, Mark Rakoczy, Joel Midiri, and Tim Clark participated in the Commercial Construction Competition. In addition to faculty events, about 110 students from 10 regional construction programs competed on 18 competition teams. Teams competed in one of three divisions: commercial, design-build, or heavy highway construction. The Illinois State University team participated in the Commercial Construction competition.



Left to right: Joel Midiri, Tim Clark, Tim Lumppp, Mark Rakoczy, and Michael Bjes

IMS STUDENTS ATTEND NATIONAL MANUFACTURING WEEK CONFERENCE

The SME student organization had a guest speaker on Motor Sports Technology in February and then they sponsored a field trip to the National Manufacturing Week Conference on February 25th in the McCormick Complex in Chicago. Drs. Kevin Devine and Ryan Brown took the students to the conference.

CM TEAM PARTICIPATES IN NAHB COMPETITION

The Construction Management program again fielded a team in the National Association of Home Builders Residential Construction Management Competition sponsored by Centex Homes and held in conjunction with the NAHB International Builders Show in Las Vegas from January 17-20, 2004. The five-student team had to develop a business proposal for a 117 home single family community in Blaine, MN. The proposal included a market analysis, marketing plan, cost estimate, schedule, and financial analysis. The proposal (about 100 pages of documentation) was prepared by the team at ISU during November and December and then sent to the judges prior to their presentation in Las Vegas. At the Builders Show, each team had 30 minutes to present and defend their proposal. The ISU team finished seventh out of 28 teams from 4-year construction programs across the nation. The ISU team included Andy Chudzick, Brian Hopkins, Scott McCloud, Brian Ransom, and Scott Rozwalka. Each team member had a specific role for the presentation, such as company president, chief financial officer, or project superintendent. Students' travel expenses to attend the Builders' Show were sponsored by the Bloomington-Normal Area Home Builders Association, the NAHB National Housing Endowment, Pulte Homes, and the Residential Construction Employers Council of the Chicago area. We would like to sincerely thank these organizations. Without their support we would be unable to participate in this excellent education event.



Left to right, Andy Chudzick, Brian Ransom, Brian Hopkins, Scott McCloud and Scott Razwalka

TECHNOLOGY EDUCATION STUDENTS PARTICIPATE IN CONFERENCES

Members of the Technology Education Collegiate Association (TECA) were involved in two professional state functions during the fall of 2003: The Illinois Technology Education Conference (ITEC) and the Third Annual Technology Day. Students at the ITEC Conference delivered professional presentations and were involved in the Midwest Regional of the national TECA. TECA students helped to develop, judge, and run the Technology Day event at ISU with over 250

students from elementary and high schools from around Illinois. TECA students delivered two presentations (Engineering at the High School and Developing Technology Education Activities) at the 10th Annual Illinois Technology Education Conference November 7-8 in Peoria, IL. Dr. Merrill and thirteen Technology Education pre-service teachers designed and judged the 35th Annual Illinois Technology Student Association state competition in Carlinville, Illinois on March 5 and 6, 2004.

GRAPHIC COMMUNICATIONS STUDENTS ATTEND GRAPH EXPO IN CHICAGO

Dr. Dan Wilson and Graphic Communications students David Thoms, Daniel Cohen, Colleen Kuta, Allison Shutz, and Matthew Hatfield attended the Graph Expo Conference at McCormick Place on September 29, 2003. The show, the largest of its kind in the Americas, took place in Chicago on September 28-October 1, 2003. More than 38,000 industry professionals took part in the event, and 580 companies exhibited their latest products and services in 375,000 square feet of display space. In addition to its exhibits Graph Expo and Converting Expo offered a program of more than 60 educational seminars, which drew almost 1,500 registrants. A variety of free general sessions and vendor presentations, brunch presentations, and mini-seminars staged on the show floor were available at the show.

CM TEAM INVITED TO MECA CONFERENCE AND COMPETITION



On left, back row, left to right: Josh Bradbury, Chad Coffman, Scott Regnier, Jay Lyon (MCA Chicago Representative), Elizabeth Bolin, Kate Murphy, Chris DePooter and Keith Rahn, Faculty Advisor

The Mechanical Contractors of Chicago sponsored the ISU Mechanical Electrical Student Association to attend and compete in the Mechanical Contractors Association of America held in Orlando, Florida on February 29 - March 3, 2004. The ISU Team was one of four teams out of the original ten teams who were asked to compete at the MCAA Competition in Orlando, Florida. Elizabeth Bolin, Chad Coffman, Katie Murphy, Scott Regnier, Josh Bradbury, and Chris DePooter were members of the ISU team which received an honorable mention for placing 3rd in the final competition. This was an excellent showing for a first time competition team. Congratulations on a job well done!

ICS STUDENTS RECEIVE CERTIFICATION

41 students enrolled in Industrial Computer Systems coursework have obtained certifications; 18 students completed A+CORE Certification, 8 students obtained Net+ Certification and 15 students obtained Cisco Certification.

CAREER DAY 2004

The Annual Technology Career Day was held on February 13, 2004 with twelve companies participated in the event. If your company is interested in participating in the 2005 Technology Career Day on Friday, February 18, 2005, please send a note and business card with an e-mail address to:

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