Welcome to the Orfalea College of Business Industrial Technology Area newsletter. As the new area chair, I feel privileged to be trusted by my colleagues and Orfalea College of Business Dean Dave Christy who appointed me to this position.

I have been involved in industrial technology education for more than 18 years at three different universities. My experience and appreciation of the industrial technology field has given me the confidence and determination to move our program forward. Along the way, I am counting on the support of our faculty, students, college administration and advisory board members as we pursue a number of important objectives this year.

We continue to develop the new IndTec (also known as IT) curriculum with a target completion date of December 1, 2011. I encourage you to read this newsletter for a greater understanding of our academic goals for the year.

Additionally, we are focusing our efforts on growing the enrollment to match our capacity, developing new literature to actively recruit typically underrated populations, namely female students, to IndTec. We are eager to see how these efforts will help to promote our program’s identity and answer the basic question of what industrial technology is about.

This newsletter aims to help our constituents stay in touch with exciting developments in the IndTec Area. If you are an alum of our program, please feel free to send me your news. We would love to hear how you are doing and share your personal and professional news with the broader Cal Poly community.

Manocher Djassemi, Area Chair
djassemi@calpoly.edu
After the workshops, the following recommendations were outlined:

1. Restructure the IndTech curriculum with two clear academic tracks:
   - Operations Technology
   - Packaging Science and Technology

2. Institute a new IndTech program mission:
   Making Technology Work: for students, in collaboration with industry, through research.

3. Implement the following goals for strategic growth:
   - Expand the student body to 300 full-time equivalent students
   - Establish an identity that works for students, industry and research
   - Engage an extraordinary collaboration between faculty members
   - Graduate successful students
   - Provide a world-class polytechnic applied research program

4. Employ a new action plan:
   The course of action for improving the IndTec Area is a multi-step process, beginning with a one- to two-year effort to revise the IndTec curriculum for the new two-track focus areas, revising the IndTec area website, and obtaining student feedback. A three- to five-year plan for enhancing industry partnership, research, increased funding, and assessing student success will follow. Since the Spring 2011 quarter, efforts have been underway to implement the first steps of the plans, including revising the IndTec curriculum to accommodate the new two-track focus areas. A comprehensive plan, along with several new course and course modification proposals, will be submitted to the college curriculum committee by December.
Where Did the ‘IT’ Go?

One of the issues that perennially arises in the strategic planning for the IndTec Area has been the confusion that the acronym “IT” causes in communicating to interested parties outside the program. Simply said, Information Technology has just too big a base in the marketplace. Once again, we confirmed that Industrial Technology is a more suitable name for the program at Cal Poly with a tradition, legacy and brand of which we are all proud. However, we will migrate to the term “IndTec” as the area’s preferred short form reference for all communications, logos and such pertaining to the area. Moving to new terminology can be tough, particularly given the common usage of “IT.” However, the differentiation and unique identity of IndTec is part of what truly separates our program from other institutions. We ask for your support and help in making this transition.

—Eric Olsen, Associate Professor

IndTec Seniors Boast 100% Pass Rate on CTM Exam

IndTec seniors achieved a 100-percent pass rate on the Certified Technology Manager (CTM) exam. All senior IndTec students are required to take this online exam as part of a senior project course administered through the Association of Technology, Management and Applied Engineering (ATMAE). The test covers many of the basic principles covered throughout the IndTec curriculum including production, management, safety and quality control.

Cal Poly to Host World Packaging Conference in June 2012

IndTec’s Packaging Program will host the 18th IAPRI World Packaging Conference at Cal Poly, June 17-21, 2012. Research areas will include Packaging Materials and Containers; Packaging for Food and Agriculture; Distribution Packaging; Medical, Cosmetic and Pharmaceutical Packaging; Packaging Testing and Standards; Packaging Innovations and Development; Packaging Sustainability; Active and Intelligent Packaging; Packaging for Hazardous and Dangerous Goods; Packaging Machinery and Systems; and Packaging Design, Printing and Graphics. For more information or to inquire about corporate sponsorship opportunities, please visit the conference website at www.iapri2012.com.

2011 IndTec Scholarships

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<td>BOEING CORPORATION</td>
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<td>PAPERBOARD PACKAGING ALLIANCE</td>
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THE CAL POLY CENTER for INNOVATION & ENTREPRENEURSHIP

Central Coast Lean Summit

On January 17, 2012, Cal Poly brings lean thinking to the Central Coast. This one-day workshop organized by Professor Eric Olsen will:

Create an opportunity for lean leaders in the Central Coast region of California to network and learn from each other’s experience.

Spread lean thinking beyond the bounds of manufacturing to services, education, healthcare and government.

Create an easy entry-level opportunity for people to learn about lean and its potential to improve processes and organizations on the Central Coast.

Mark your calendar
Tuesday, January 17, 2012
8 a.m. — 5 p.m.
Cal Poly Chumash Auditorium

THE CAL POLY CENTER for INNOVATION & ENTREPRENEURSHIP

Center for Innovation and Entrepreneurship Blossoms

This year, Entrepreneurship officially became an interdisciplinary business concentration that is housed and administered in the IndTec Area, with support from and partnership with other concentrations in the Orfalea College of Business. It provides students with knowledge, leadership capabilities and Learn by Doing experiences that lay the groundwork for potential future new ventures. Several Industrial Technology courses figure prominently in the curriculum and the Entrepreneurship courses are of interest to IndTec majors, making for a happy partnership! Associate Professor Jon York, assisted by Professor Lou Tornatzky, has led this development process, and enrollment in Entrepreneurship has grown rapidly in the past 18 months, as it has in similar programs on many campuses across the U.S.

Contributing to the increased prominence of entrepreneurship has been the Cal Poly Center for Innovation & Entrepreneurship, launched in June 2010. With York and Tornatzky as co-directors, and Thea Chase as managing director, momentum was built quickly with a campus-wide mission to inform, encourage and build “entrepreneurship culture.” The center delivered an Entrepreneurship Forum speaker series, hosted several entrepreneurs-in-residence to mentor students across the campus, developed a Founders Circle of Cal Poly grads to support and guide the center, and ran a 10-week “Hot House” business incubator this summer. For more information, visit http://ecenter.calpoly.edu/.

Senior Project Highlights

Each year, our IndTec students complete more than 25 senior projects, most of which are industry-based. Here is a sample of a few impressive projects by our students.

Alex Lumbard and Justin Loy
A rubber track conversion system for four-wheel drive vehicles: This project involved the design, manufacturing, testing of the prototype marketing, and business planning for a new rubber track system for four-wheel drive vehicles as an alternative to standard tires for traveling to inaccessible regions.

Alex Strehl
Implementing Lean Packaging Methods at Lockheed Martin: This senior project provided a solution for the needs required by Lockheed for the packaging of their components. The result involved using a new packaging solution that provides adequate product protection, reduces the time to package parts, and is completely recyclable. Keeping this packaging solution sustainable followed Lockheed’s “Go Green” program by reducing the waste generated by individual packaging.
After growing up in the foothills of Yosemite, David Guadagnini came to Cal Poly in the fall of 2007 to pursue a degree in Industrial Technology. Upon graduation, an opportunity arose for Guadagnini to apply to the Business and Technology Masters (MSBT) program at Cal Poly, and he “welcomed the idea of gaining a more in-depth education while helping to run the undergraduate laboratories.” Currently a member of ATMAE, he recently became a Certified Technology Manager. Over the course of the next two years, he will be working closely with Dr. Singh and Dr. Saha, as well as fellow MSBT student, Evan Cernokus, on various packaging industry research projects.

Evan Cernokus is a MSBT student who received a B.S. in Industrial Technology in 2010, and is working as a teaching and research assistant for the Packaging Program. This includes industry research and instructing packaging design, technology and performance testing laboratories. As a packaging engineering intern at Nutrilite, Cernokus gained valuable industry experience involving nutraceutical packaging, R&D and supplier relations. In May 2011, he received the Italian Packaging and Technology Award for his paper covering technical innovations in packaging machinery, an auspicious start to his pursuit of a career in packaging engineering, management and operations.

PACK EXPO 2011

The Packaging Program was represented at Pack Expo Las Vegas 2011 by 36 students and three faculty members. Pack Expo draws more than 22,000 customers and buyers including at least 2,000 international visitors from more than 75 countries. The show focuses on the latest developments in packaging technology and showcases exhibitors’ state-of-the-art advances in packaging machinery, materials, packages and containers, and components. This year, the comprehensive exhibition provided students with an opportunity to learn about the latest developments in the packaging industry and relate them to course material covered in the Packaging Program curriculum. This educational trip was made possible by funds from Cal Poly’s instructional-related activities and corporate sponsors such as Dow Chemicals, Innovative Packaging, Lansmont, Inc., Morningstar, PTIS and Westpak.

PMMI Student Competition

Cal Poly students placed second in the Student Packaging Solutions Contest hosted by PMMI at PACK EXPO Las Vegas 2011. Participants Paul Marchetti, Evan Cernokus, David Guadagnini and Tyler Sewell were tasked with designing and recommending a packaging machinery system for a contract packaging company that orients, fills, caps and check-weighs rigid plastic packages for corn starch. The three main objectives were to minimize product giveaway, reduce powder contamination, and prevent powder discharge into ambient air or onto conveyors and machines. The team delivered a written report, poster and presentation to a panel of three judges, and was awarded a scholarship of $2,000.

New IndTec Lab Coordinator

Ray Kisch has an extensive background in engineering, production and maintenance, as well as packaging and packaging machine design. He reached the top of the corporate ladder in the poultry processing industry before venturing into his own corrugated manufacturing plant and engineering shop in South Africa. He holds various U.S. patents for box and box-forming machinery designs and continues to innovate in both of these areas. His other interests include cabinet making and scuba diving.

Ray’s goal for the Industrial Technology department is to ensure that both students and faculty have a safe working and fully functional laboratory environment that is up to date with current industry standards and needs.
Richard Bronson has more than 30 years of experience with Lockheed Martin within the manufacturing field, and has spent more than 20 years of his career with Lockheed Martin Skunk Works. He has worked on a variety of programs, including the C-5, F-117, F-22, F-35, JASSM Missile, Hybrid Vehicles, L-1011, SR-71 and U-2, as well as numerous government programs. His experience includes “cradle-to-grave” programs, as well as managing manufacturing and production engineering activities within a depot, developmental/prototype and production environment. He completed his undergraduate studies at UCLA, holds a MPA from CSUN, and is a certified Lockheed Martin Lean Six Sigma Black Belt.

For the past 24 years Pruett has been in the Structural Steel Fabrication business. Among the numerous exciting projects throughout his career, the most notable have been the new Bay Bridge in San Francisco, the earthquake retrofit of the Coronado Bridge in San Diego, the San Rafael Bridge retrofit, amusement rides, oil refineries, power plants and aircraft maintenance platforms. Pruett is currently working in Kern Steel Fabrication on the marketing of a large structure dubbed an AutoPark facility, whereby cars are robotically parked, stored and retrieved. “My IT degree from Cal Poly provided me with the fundamental abilities to understand the many fabrication processes along with technical management, communication and sales skills,” Pruett said.

Terry Hellinger earned his B.S. in Industrial Technology from Cal Poly in 1991. He started his own company in 1994 in a spare bedroom, and today that company boasts sales of more than $5 million a year. Hellinger specializes in the design and project management of integrated security systems such as access control, CCTV, Intrusion and fire systems. For the last six years, he has been specializing in the design of CCTV systems for the cruise ship industry. These systems have upwards of 600 cameras per ship with a central command center and remote viewing capabilities. It is an exciting endeavor that has taken Terry around the world many times.

Steven Ricklefs is Sr. Manager–CA Operations for Pratt & Whitney Rocketdyne (PWR), a major designer and manufacturer of propulsion, power and energy products. Ricklefs has overall leadership responsibilities for detail part fabrication, product sub-assembly, facility infrastructure and manufacturing engineering support for PWR’s California-based operational activities. PWR products can be found on the Space Shuttle, Delta Airlines and Atlas family of rockets and launch systems, serving NASA, the U.S. Army and Air Force, and commercial customers. Ricklefs has more than 28 years of work experience and skill expertise in manufacturing engineering, lean factory layout, process improvement and technology insertion, anomaly investigation, and capital and strategic planning. In addition, he has held numerous process leadership positions in such high-value manufacturing process areas as machining, welding, tooling design and fabrication, assembly, and chemical and heat processing. He holds a B.S. in Mechanical Engineering from California State University, Northridge and a MBA from Pepperdine University.

Shasta Palmer is a 2006 IndTec alumna with B.S. and M.S. degrees. Since graduating, she has been working at Next Intent, Inc. in San Luis Obispo, CA as a manufacturing engineer. The company is a specialty high-tech machine shop that serves large customers in the aerospace and semi-conductor industries. Palmer is also the manager/owner of Earth Art Gem & Jewelry.
visit us at
cob.calpoly.edu/academic/industrial-technology

Accredited by

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