

**Major Accomplishments by Mission:
Purdue School of Engineering and Technology, IUPUI
July 1, 2011-June 30, 2012**

Teaching and Learning

- *U.S. News and World Report* ranked the School of Engineering and Technology #102 in the Best Engineering Graduate School Category (national research category) up from #107 in the prior year. The School was ranked higher than 7 out of the 12 IUPUI campus peers, including South Florida, Wayne State, Louisville, Temple, UAB, VCU, and UC-Denver.
- Per the American Society for Engineering Education, the School continues to rank #1 nationally for the number of bachelor's engineering technology degrees awarded to women, ranks #2 nationally for the number of bachelor's engineering technology degrees awarded, and ranks #3 nationally for total engineering technology enrollment.
- Graduate enrollment in Fall 2011 was up 45% as compared to Fall 2007. Most notably, Ph.D. student enrollment has increased to 21 students from 5 in the Fall of 2007.
- The Department of Computer Information and Leadership Technology partnered with Purdue University to provide a study abroad experience in India to examine Indian Services Industry and Technology Outsourcing in Chennai, India.
- The Department of Engineering Technology launched two new certificate programs: i) Sustainable Technology; and ii) Quality Management–Lean Six Sigma Green Belt Certificate.
- The M.S. in Technology program was authorized to expand its offerings to include a Motorsports area of specialization. <http://www.engr.iupui.edu/news/MotorsportsMastersIUPUITakesSporttotheNextDegree.shtml>
- The Department of Electrical and Computer Engineering signed an “Implementation Plan for 2+2 and 2+3 dual degree programs,” with the School of Physics and Engineering, Sun Yat-sen University for the B.S. in Electrical Engineering and the combined B.S./M.S. in Electrical and Computer Engineering program.
- The Department of Electrical and Computer Engineering developed an off-campus Master's program in electrical and computer engineering with an electronic warfare emphasis at Naval Surface Warfare Center-Crane in partnership with Purdue University, West Lafayette and Naval Postgraduate School. IUPUI will administer and award the degree. The first cohort of students start Fall 2012.
- The Department of Electrical and Computer Engineering developed new undergraduate areas of concentration in mechatronics, nanotechnology, energy systems, and bio-electrical engineering.
- The Department of Electrical and Computer Engineering in collaboration with the Department of Mechanical Engineering developed a graduate certificate program in advanced electric and hybrid vehicle technology. New courses were taught in both traditional and video-streaming modes.
- The Department of Mechanical Engineering finalized a unique 2+2 Mechanical Engineering program with Sun Yat-sen University. Cohorts of rising juniors from Sun Yat-sen will complete their last 2 years of study at IUPUI. The inaugural freshmen cohort begins Fall 2012, with matriculation to IUPUI expected Fall 2014.

- Seventeen undergraduate Mechanical Engineering students took the Fundamentals of Engineering exam during the spring 2012 semester with a pass rate of 94%, which was higher than the national average of 87%.
- Faculty members from the Departments of Mechanical Engineering and Electrical and Computer Engineering developed modules for project-enhanced learning in two engineering courses with funding provided by a National Science Foundation grant.
- The Jafaris Fellowship Program was created through the generosity of Dr. Ali Jafari and his wife May to increase graduate student fellowship funding.
www.engr.iupui.edu/news/documents/JafarisGraduateFellowshipAnnouncement.pdf
- Tom and Peg Ward and OmniSite, Inc created the Student Innovation Fund, promoting the entrepreneurial spirit among undergraduates, with a generous gift of \$100,000. A student leadership team will oversee awards from this fund. <http://www.engr.iupui.edu/news/receivesforStudentInnovation.shtml>

Research, Scholarship, and Creative Activity

- The School of Engineering and Technology received approximately \$12 M in extramural awards during the 2011-2012 fiscal year, setting an all-time record. This was accomplished in a significantly more competitive environment, given no earmark or stimulus funds.
- The Department of Biomedical Engineering received \$4.85 M in extramural awards during the 2011-2012 fiscal year, including \$2.6 M from the Department of Defense.
http://www.engr.iupui.edu/news/BME_Yokota.shtml
- The Department of Electrical and Computer Engineering's Transportation Active Safety Institute (TASI) received a contract of \$4.1 M from Toyota through its Collaborative Safety Research Center program. http://www.engr.iupui.edu/news/TASI_Toyota.shtml
- The Transportation Active Safety Institute (TASI) opened a new laboratory at the historic Stutz building in downtown Indianapolis to support research sponsored by Toyota.
- The Department of Computer Information and Leadership Technology was awarded an Operation Diploma Grant, funded through the Purdue University Military Family Research Institute, in partnership with the IUPUI Office of Veteran and Military Personnel. The grant focuses on the needs of Veterans and improving the retention and graduation rates of Veteran students.
- The Department of Mechanical Engineering was awarded \$1.34 M by the Department of Energy to establish an IUPUI Industrial Assessment Center (IAC). The center will train energy efficiency workforce and help industry to be more energy efficient. http://www.engr.iupui.edu/news/DOE_grant.shtml
- The U.S. Energy Secretary, Dr. Steven Chu, visited the School and several energy related research laboratories. He also held a Town Hall meeting on Energy Efficiency.
<http://www.engr.iupui.edu/news/SecretaryofEnergySpecialVisitIUPUI.shtml>
- A group of faculty from Mechanical Engineering and Electrical and Computer Engineering developed a Lithium-ion Battery Safety Monitoring System sponsored by a U.S. Navy grant. A patent was filed for the system.

- The School received a \$600K grant from the National Science Foundation for scholarships to support financially disadvantaged but academically talented engineering students.

Civic Engagement

- The School of Engineering and Technology faculty remain deeply engaged with industry, K-12 school systems, and community organizations. Examples include IU Hospital, IU Orthodontic Dental Clinic, Carrier Corporation, Rolls-Royce, Indianapolis Public Schools, and Riverside Civic League. <http://www.engr.iupui.edu/news/SchoolCollaborateRiversideNeighborhood.shtml>
- The School Hosted a Project Lead The Way Exhibition with students from Indiana and Ohio. <http://www.engr.iupui.edu/news/IUPUIHostsProjectLeadTheWayExhibition.shtml>
- An alumni event was held for 125 alumni and friends of the School in Kuala Lumpur, Malaysia.
- A School delegation visited Guangzhou and Beijing, China to advance collaborative partnerships with Sun Yat-sen University, Tsinghua University, and the Beijing Institute of Technology.
- The Motorsports Engineering program was featured in the Indianapolis Star, WTHR, WRTV, WISH-TV, and various other Central Indiana news media outlets highlighting student and faculty involvement during the month of May at the Indianapolis Motor Speedway.
- The Motorsports Engineering program was featured in Racer Magazine as the nation's only four-year degree program in Motorsports Engineering. The article highlighted the inaugural graduating class and other accomplishments. <http://www.racer.com/insight-iupuis-degree-to-indycar-team-pipeline/article/242396/>
- The School partnered with Sarah Fisher Hartman Racing to sponsor one of the Indy 500 teams. <http://www.engr.iupui.edu/news/SarahFisherHartmanRacingFindsPerfectPartnerinMotorsportsIUPUI.shtml>
- The School honored 13 former Distinguished Alumni recipients at the 2012 Bepko Honors Convocation. <http://www.engr.iupui.edu/news/DistinguishedAlumnusAlumnaHallOfFame.shtml>
- The Department of Computer Information and Leadership Technology's STEM Mentoring Program for Indianapolis Public Schools and Washington Township Schools finished its fifth year with plans to expand into online tutoring.
- The Department of Computer Information and Leadership Technology supplied leadership for the development and approval of a five-year plan for Talent Alliance.
- The Computer Graphics Technology program continued to provide service learning opportunities which resulted in over 20 projects being completed for community businesses and organizations.
- Study abroad opportunities in both Poland and Thailand served a total of 14 students. <http://www.engr.iupui.edu/dct/news.shtml?menu=news>
- The Interior Design program had numerous students throughout the year working on civic design projects for buildings in the Indianapolis area.
- The Department of Engineering Technology's Engineers without Borders club is designing a community center and educational facility for an association for the blind in Ecuador.
- The Department of Engineering Technology's Society for Student Constructors volunteered 3 days to help rebuild Henryville, IN and collected over \$1,000 in donations to aid tornado victims.

- Mechanical Engineering's Industrial Assessment Center conducted energy assessments for two Indiana manufacturing companies. Students participated in the audits under the supervision of faculty. The assessments resulted in recommendations for improving energy efficiency.

Diversity

- Three out of 4 tenure-track faculty members hired during the year in our School have been members of traditionally underrepresented groups in engineering. All 4 hires belong to either female and/or minority groups as defined by the IUPUI Office of Equal Opportunity.
- For Fall 2012, African-American undergraduates admitted to the School of Engineering and Technology are up approximately 14% from Fall 2011 and Hispanic/Latino admits are up 29%.
- The School of Engineering and Technology recruited students from Puerto Rico, continuing a longstanding tradition of attracting Hispanic students to Engineering and Technology disciplines.
- The School was an active campus team member to create and sign a memorandum of understanding with Tuskegee University, a historically black college/university (HBCU). The MOU will potentially advance research collaborations and recruiting underrepresented graduate students.
- The School continued the longstanding summer Minority Engineering Advancement Program to reach underrepresented minority children and engage them in STEM activities.

Best Practices

- Published a new 5-year strategic plan with the vision of being regarded as one of America's great urban schools of engineering and technology with themes: compete at the highest levels, strive for excellence in core mission, and enhance image and reputation.
<http://www.engr.iupui.edu/news/ETStrategicPlan.shtml>
- IU/IUPUI was re-designated as a NSA Center of Academic Excellence in Information Assurance for 2012-2017, due in part to the contribution by Computer and Information Technology.
- The Department of Engineering Technology revised assessment data collection practices to leverage electronic portfolios.
- The School of Engineering and Technology's Computer Network Center completed the network upgrade project for the SL building; all offices and labs now have Gigabit Ethernet connectivity.
- A new formula for distribution of IUPUI block grant funding was implemented, directly incentivizing student research funding and outcomes, especially journal publications. In concert, School funding of graduate students was regularized in the departments' base budgets, with encouragement of competitive recruitment of graduate students with both full assistantships and partial tuition awards.
- Policies for non-resident tuition remission were improved by Purdue, WL to reduce impediments to working toward the PhD in engineering at the IUPUI campus.

External Awards and Accomplishments

- A Biomedical Engineering faculty member edited the book: *Computational Cardiovascular Mechanics*, Springer.

- A Computer and Information Technology faculty member was named editor of Cengage Publishing's new Adobe Creative Suite CS6 books. <http://www.engr.iupui.edu/news/starks2011.shtml>
- A Music and Arts Technology faculty member received Internet2's highest award for innovation, the IDEA award, in fall 2011. <http://newscenter.iupui.edu/5357/Internet2-Names-IDEA-Award-Winners-From-University-of-Virginia-IUPUIESnet-UC-San-Diego-and-Columbia-University>
- An Electrical and Computer Engineering faculty member was appointed the chair of IEEE Medal for Environmental and Safety Technologies Committee.
- An Electrical and Computer Engineering faculty member and School Administrator was appointed to the Indiana Automotive Council by Governor Mitch Daniels and facilitated by Conexus.
- An assistant dean was appointed to the Indiana Motorsports Association board of directors. <http://www.engr.iupui.edu/news/IMAAppointsAssistantDeantoBoard.shtml>
- A Computer and Information Technology Professor was awarded the TechPoint MIRA Individual Award in Technology in Education Excellence & Innovation for his pioneering work with Angel Learning. <http://newscenter.iupui.edu/5643/IUPUI-professor-receives-Technology-Oscar-for-hightech-entrepreneurial-success>
- An Organizational Leadership and Supervision staff member was awarded the 2011-12 Indiana Council for Continuing Education (ICCE) Outstanding Faculty Award.
- An Organizational Leadership and Supervision faculty member received an award from the World Association for Case Method Research and Application for leadership and contribution to case method research and application.
- A Department of Design and Communication Technology faculty member received a Fulbright Scholarship from the State Department in Washington, DC and used it during his sabbatical in Poznan, Poland during the Fall 2011 semester. <http://www.engr.iupui.edu/news/Fulbrightgrants2011-12.shtml>
- A Biomedical Engineering Technology student was the Association for the Advancement of Medical Instrumentation National scholarship winner.
- A Mechanical Engineering Technology faculty member was recipient Fredrick J. Berger award from Engineering Technology Division of the American Society for Engineering Education.
- A Department of Engineering Technology staff member and M.S. in Technology student won an International Facilities Management Association scholarship.
- A Construction Engineering Management Technology faculty member was named Honorary Chair and Keynote Speaker for the International Conference on Pipeline and Trenchless Technology 2011 held in Beijing, China and Keynote Speaker to the No-Dig Down Under Conference 2011 held in Brisbane, Australia. http://trenchlessinternational.com/news/no-dig_down_under_2011_an_international_success/064320/
- Motorsports engineering at IUPUI emerged as the reigning champions of the Purdue Grand Prix in West Lafayette with IUPUI teams claiming first, second and third place finishes in a competitive race. <http://www.engr.iupui.edu/news/IUPUISweepsGrandPrix.shtml>