

Major Accomplishments by Mission:

Purdue School of Engineering and Technology, IUPUI July 1, 2012-June 30, 2013

Teaching and Learning

- The School of Engineering and Technology was ranked #97 (an all-time high) in the 2014 *U.S. News and World Report* edition of the Best Engineering Graduate School Category (national research category). 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.
- The School was the 3rd highest ranked in the 2014 *U.S. News and World Report* edition of the Best Engineering Graduate School Category based on its size. Only Yale University and the University of North Carolina, Chapel Hill were ranked higher, while having smaller graduate engineering programs than our School.
- Per the 2012 report from the American Society for Engineering Education, the School ranks #3 nationally for the number of bachelor's engineering technology degrees awarded and ranks #3 nationally for total engineering technology enrollment.
- Per the 2012 report from the American Society for Engineering Education, the School of Engineering and Technology ranks #41 nationally for the number of BS degrees awarded in computer engineering.
- The School of Engineering and Technology set an all-time enrollment record in the fall 2012 semester with 2,870 students pursuing degrees offered within the School.
- Graduate enrollment reached an all-time record in Fall 2012 in the School of Engineering and Technology: 127 new students enrolled (+38% over Fall 2011); 218 new students admitted (+30% over Fall 2011); 388 new applications (+27% over Fall 2011); and total graduate enrollment reached 320 MS students and 18 PhD students, compared to 184 MS and 5 PhD students five years ago.
- Students from the School of Engineering and Technology participated in over 300 credit-bearing internship or co-op experiences with external employers.
- Energy Management and Assessment and Hybrid Electric Vehicle Technology graduate certificate programs were approved and will commence in the Fall 2013 semester.
<http://enr.iupui.edu/departments/me/grad/certificates/energy-management-and-assessment.php>
<http://enr.iupui.edu/departments/me/grad/certificates/hybrid-electric-vehicle-technology.php>
- The School renegotiated the financial arrangement for the engineering dual degree program to ensure its continuation with Butler University. This program seamlessly integrates engineering with liberal arts degree programs and allows residence at Butler University. Students earn a Purdue University engineering degree at IUPUI and a Butler University liberal arts degree.
- The School executed an engineering dual degree program with Marian University. Students who complete the program earn degrees from both institutions -- a Bachelor of Science or Bachelor of Arts from Marian and a Bachelor of Science in an engineering or engineering technology program from Purdue University. <http://newscenter.iupui.edu/5818/Marian-University-IUPUI-partner-to-create-new-engineering-dualdegree-program>
- The NSF STEM Talent Expansion program was cited as an exemplar by increasing STEM degrees by 25 percent over three years by use of peer mentoring, facilitated community college transfers, and a

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high school to college transfer program in June 2013 testimony to the U.S. House of Representatives Committee on Science, Space, and Technology by a representative from the National Science Foundation.

Received notification on August 16, 2012 that the B.S. degree program in computer and information technology (CIT) and the B.S. degree program in computer graphics technology (CGT), respectively, received accreditation from the Computing Accreditation Commission (CAC) of ABET, Inc. through September 16, 2016.

- The Transfer 2 Success program was designed for implementation starting the Fall 2013 semester and will be overseen by the School of Engineering and Technology's Student Services organization. The program has a series of engagement activities focused on increasing the persistence to graduation of transfer students.
- The department of biomedical engineering (BME) graduated its 100th bachelor of science recipient.
- The Organizational Leadership (OLS) program developed online formats for all core and elective course offerings required to complete the OLS B.S. and Human Resource Management Certificate. All course offerings in each of the OLS undergraduate programs were offered in web formats during the spring and summer terms.
- Established new B.S. degree in Technical Communication approved by the Indiana Commission for Higher Education on November 9, 2012. The Purdue University Technical Communication B.S. degree is unique to the IUPUI campus and responds to the needs of STEM employers by embedding the rigor of the project-based engineering and technology programs into the curriculum.
<http://newscenter.iupui.edu/5856/Higher-education-commission-approves-new-technical-communication-degree-at-IUPUI>
- The department of electrical and computer engineering (ECE) created a minor. Students who complete the minor will have the requisite background to pursue a master's degree in ECE.
- The computer graphics technology (CGT) program created a dynamic new 8-week schedule block to maximize laboratory space, standardize schedules for students, and add flexibility for students.
- The computer graphics technology (CGT) program launched a high-enrolling online course entitled The Road to Hollywood, which featured as a principal guest instructor John Van Vliet, an internationally-renowned visual effects animator and supervisor; enrollment included students from not only IUPUI, but from other IU campuses, other colleges and universities, and high schools.
<http://news.iupui.edu/releases/2013/04/Van-Vliet.shtml>
- OLS faculty, in collaboration with Music and Arts Technology (MAT) faculty, received a Curriculum Enhancement Grant for development of a Graduate Certificate in Mixed-methods Research.

Research, Scholarship, and Creative Activity

- The Indiana Economic Development Corporation (IEDC) awarded \$1.15 million for the motorsports engineering program to develop a partnership with Dallara to conduct basic and applied research involving dynamic vehicle simulation. <http://inside.iupui.edu/headlines/2013-05-28-racing-simulatoriupui.shtml>
- The School of Engineering and Technology submitted 156 proposals during FY 13 as compared to 125 proposals in FY 12. The number of proposals submitted per year has significantly increased over the past few years.
- Toyota's Collaborative Safety Research Center continues to commend the progress of the

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Transportation Active Safety Institute's research in driver behavior and collision mitigation to accident reconstruction and enhanced crash data analysis.

- The School of Engineering and Technology collaborated with several Indiana industries on research, undergraduate, and graduate student projects and proposals, with sponsors/partners including Cummins, Praxair, Stanley Security, and Rolls Royce.

A Mechanical Engineering faculty member received an NSF grant to advance the study of wave rotor combustion technology, with additional graduate research support from Rolls Royce.

<http://inside.iupui.edu/features/stories/2013-01-29-razi-nalim-award-iupui.shtml> □ A Mechanical

Engineering faculty member received a NASA grant for future aircraft engines study.

<http://inside.iupui.edu/features/stories/2013-05-28-NASA-grant-iupui.shtml>

- The Biomechanics and Biomaterials Research Center (BBRC) was reconstituted and based in the biomedical engineering department.
- A Computer Information and Graphics Technology faculty member received an NSF Research Experiences for Undergraduates grant related to cyber security.
- A Computer Information and Graphics Technology faculty member received a grant from the Northrop Grumman Cyber Security Research Consortium.
- The School of Engineering and Technology launched faculty research sponsor interest groups in two areas (Industry, and DoD/NASA) in addition to two prior areas (NSF and NIH).

Civic Engagement

- The School of Engineering and Technology developed a partnership with Rolls-Royce to develop an internship program for FIRST Robotics student mentors.
- The School of Engineering and Technology faculty remain deeply engaged with industry, the K-12 school system, and community organizations. Examples are IU Hospital, IU orthodontic dental clinic, Cummins, Praxair, Carrier Corporation, Rolls-Royce, Indianapolis Public Schools, Riverside community organization.
- Computer Graphics Technology faculty members produced an animated film bumper for the Indianapolis International Film Festival.
- The School of Engineering and Technology had significant participation in both Indiana Aerospace and Defense Council and the Indiana Automotive Council.
- The computer information technology program continued the longstanding Living Lab experiential learning opportunities, in which students and faculty engaged in field-based practical, service learning, and other forms of providing IT outreach to not-for-profit organizations.
- The computer information technology program continued its longstanding outreach to K-12 students and teachers through its Tech Camp, Business Professionals of America events, IT badge with the Girl Scouts, and the Math Science Partnership through the IUPUI Urban Center for Advancement of STEM Education.
- A computer information technology program lecturer worked with the Citizen's Water Company to develop the prototype of an Android application to service their customer base.

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- Technical Communication faculty collaborated with the IUPUI Solution Center to incorporate service-learning projects in its classes, including a cross-campus joint service-learning project with the School of Informatics.
- The Department of Technology Leadership and Communication (TLC) launched the new FacULT3 community engagement initiative and conducted pilot service project with the Center for Leadership Development, a local non-profit.
- The Indy Learning Center within the School of Engineering and Technology created lab space to expand online tutoring and mentoring for students in the growing number of IPS Schools participating in this program. <http://indylearn.org/Home.aspx>

Computer graphics technology faculty members created a short film for the Indiana Motion Graphics 49 Hour Film Competition.

Diversity

- Per the 2012 report from the American Society for Engineering Education, the School of Engineering and Technology ranks #2 nationally for the number of bachelor's engineering technology degrees awarded to women.
- The School of Engineering and Technology has built a productive research relationship with Tuskegee University, including joint proposals for externally funded research support.
- Cummins Engine created an endowed RISE Scholarship for an underrepresented engineering student.
- School of Engineering and Technology Recruitment activities continue in Puerto Rico and with the Atlanta University Consortium (AUC) in conjunction with the Admissions Office and the Office of Diversity, Equity, and Inclusion. The School is proactive in visiting prospective students in Puerto Rico and on the campuses of Morehouse, Clark Atlanta, and Spelman.
- The School of Engineering and Technology hosted 3 MEAP (Minority Engineering Advancement Program) week-long camps during the summer.
- The School of Engineering and Technology hosted POWER (Preparing Outstanding Women for Engineering Roles) for a week-long, residential summer camp exclusively for high school girls.
- The School of Engineering and Technology started an additional weeklong residential camp for high school girls interested in Information Technology named Win IT (Women in IT).
- The Technical Communication program developed a course section that provided cultural immersion for international students through engagement in service learning activities in the local community.

Best Practices

- The School of Engineering and Technology achieved a record-setting response rate of 65.7% on the 2012 post-graduate survey of those alumni receiving BS degrees, with 90% reporting employment related to their degree or enrollment in graduate or professional programs.
- Graduates responding to the School of Engineering and Technology's annual new undergraduate alumni survey reported starting salaries considerably higher than national averages for the following degrees: biomedical engineering, electrical engineering, mechanical engineering, computer information technology, computer engineering technology, mechanical engineering technology, and

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organizational leadership and supervision. (note: some E&T degrees do not have national data available for comparison).

- Reached employer capacity for the Career Connection Career Fair with 82 employers in attendance.
- A Music and Arts Technology faculty member created the first MOOC within Indiana University in collaboration with CourseNetworking, LLC. <http://www.thecn.com/mooc100>
- The Graduate Education Management System (GEMS) was launched, providing single-point access to grad student application information, automatically pulled from IU records, based on a SharePoint portal running on UITS servers.

A computer information and graphics technology staff member contributed to enhanced understanding of academic advising practices through a leadership role, attending and presenting at local (JACADA) and national (NACADA) conferences.

- Computer information and graphics technology introduced new forms of course structures and collaborative learning technologies (e.g., CN; Skype; Adobe Connect) in online and hybrid courses across all programs to support institutional initiatives advancing online learning.
- The Department of Technology Leadership and Communication collaborated with the Center for Teaching and Learning staff to provide the first in a series of professional development workshops focused on increasing student engagement in online and hybrid course offerings. Archived workshops were made accessible to over 50 full-/part-time current faculty.
- A Technology Leadership and Communication staff member developed a first-year experience course to serve newly admitted military veterans and provide support to ensure academic success.
- The School of Engineering and Technology's Computer Network Center and University Information Technology Services completed the network upgrade project for the ET building; all School offices and labs now have Gigabit Ethernet connectivity.
- School of Engineering and Technology faculty and staff completed the move to the University's new Microsoft Lync voice-over-IP service.
- Continued to leverage UITS central services; completed the move of ET administrative and academic servers to the IT building data center, retired old servers by utilizing the UITS Intelligent Infrastructure virtual server environment.

External Awards and Accomplishments

- Mechanical and motorsports engineering graduate Kirk Barber was named the 2013 Intern of the Year by the American Society for Engineering Education. <http://newscenter.iupui.edu/5932/Largest-group-of-engineering-educators-in-world-selects-IUPUI-student-as-intern-of-the-year>
- Electrical engineering student Nathaniel Girrens received the Scholarship Plus Award from the Institute of Electrical and Electronics Engineers (IEEE) Power and Energy Society.
- A biomedical engineering faculty member was awarded a Young Investigator Award from the Frontiers in Bioengineering Workshop organized by Georgia Institute of Technology. <http://www.ibb.gatech.edu/frontiers/investigators>
- A computer information technology faculty member was awarded the Meritorious Service Award from the Business Professionals Organization in recognition of work with programming competitions

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through the year, and the Outstanding Educator Award in Science, Technology or Engineering Leading Light Award from Women & Hi Tech. <http://womenandhitech.com/dnn/LLA.aspx>

- Technology Leadership and Communication received philanthropic support from The Boeing Company to provide support for the Attributes of a Global Engineer Project.
- A Technology Leadership and Communication faculty member served as the keynote speaker at an international conference in Costa Rica focusing on best teaching practices in applied linguistics.
- A Music and Arts Technology faculty member served as the Featured Keynote speaker for the College Music Society on distance learning (online videoconference from Montreal), bringing in colleagues from Australia, Finland, Iowa, and Indianapolis, to the conference site in San Diego.