DEPARTMENT OF TECHNOLOGY

FY17 Annual Budget Report

January 2017

ILLINOIS STATE UNIVERSITY

Illinois' first public university

TED BRANOFF – CHAIRPERSON

JOSH BROWN – ASSISTANT CHAIRPERSON

Faculty
Matt Aldeman, PhD: Renewable Energy
Richard Boser, PhD: Construction Management
Ted Branoff, PhD: Chairperson
Josh Brown, PhD: Technology & Engineering Ed.
Adam Burke, MS: Graphic Communications
Geoffrey Campbell, MS: Computer Systems Tech.
Joseph Cleary, MS: Construction Management
Kevin Devine, EdD: Engineering Technology
Anu Gokhale, PhD: Computer Systems Technology
Jin Ho Jo, PhD. Renewable Energy
David Kennell, MS: Engineering Technology
Mark Laingen, PhD.: Engineering Technology
Chris Merrill, PhD: Technology & Engineering Ed.
Borinara Park, PhD: Construction Management
Louis Reifschneider, PhD: Engineering Technology
Klaus Schmidt, PhD: Graduate Coordinator
Euysup Shim: PhD: Construction Management
Pranshoo Solanki, PhD. Construction Management
Jeritt Williams, MS: Engineering Technology
Dan Wilson, DIT: Graphic Communications
Haiyen Xie, PhD. Construction Management

Administrative Professionals & Civil Service
James Evens: Computer Systems Manager
Elizabeth Gerrard: Graduate Secretary
Cindy Wert: Financial Secretary
Cathy McKay: Academic Advisor
Jennifer Florence: Assistant to Advisor
Robert Shuman: Laboratory Technician

FY17 Annual Budget Report
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Introduction

The purpose of the Annual Budget Report is to (a) summarize our departmental support of the CAST Strategic Plan and Educating Illinois, (b) indicate measures of productivity, (c) describe resource reallocations or reorganizations, (d) and provide accountability for supplemental funding. Where possible, performance measures are from quantitative data compiled by other ISU units such as Research and Sponsored Programs Office and Planning, Research and Policy Analysis.

Department Vision, Mission and Goals

Mission: *Preparing technology-oriented professionals for an ever-changing environment.*

Vision: *The first choice for premier technology-oriented programs.*

Goal 1: Provide premier undergraduate and graduate programs in high demand majors.

Goal 2: Conduct research and scholarship that inform teaching, advance technology professions, and are recognized at the state, national, and international levels.

Goal 3: Provide professional service and outreach activities that complement the Department's teaching and research functions.

Goal 4: Enhance the effectiveness of the Department by strengthening advancement and resource development.

Listing of College and University Goals

CAST Strategic Plan

1. CAST provides premiere comprehensive undergraduate programs.
2. CAST provides graduate education programs that have state, national, and international reputations for excellence.
3. CAST maintains state, national, and international recognition for quality research and scholarship.
4. CAST provides outreach initiatives that enhance the public and private sectors.
5. CAST provides state-of-the-art technology and infrastructure that is sensitive to a healthy, safe, and environmentally sustainable campus.
6. CAST attracts, develops, and maintains meaningful relationships with internal and external constituencies.

Educating Illinois 2013 - 2018

1. Provide a supportive and student-centered educational experience for high-achieving, diverse, and motivated students that promote their success.
2. Provide rigorous, innovative, and high-impact undergraduate and graduate programs that prepare students to excel in a globally competitive, culturally diverse, and changing environment.
3. Foster an engaged community and enhance the University’s outreach and partnerships both internally and externally.
4. Enhance institutional effectiveness by strengthening the organizational operation and enhancing resource development

Departmental Goal Alignment with CAST and Educating Illinois

DEPARTMENT OF TECHNOLOGY GOALS	CAST	EDUCATING ILLINOIS 2013-2018
1. Provide premier undergraduate and graduate programs in high demand majors.	1. Provide premier, comprehensive undergraduate programs. 2. Provide graduate education programs that have a state, national, and international reputation for excellence.	1. Provide a supportive and student-centered educational experience for high-achieving, diverse, and motivated students that promotes their success.
2. Conduct research and scholarship that informs teaching, advances technology professions, and are recognized at the state, national, and international levels.	3. Maintain state, national, and international recognition for quality research and scholarship.	2. Provide rigorous, innovative, and high-impact undergraduate and graduate programs that prepare students to excel in a globally competitive, culturally diverse, and changing environment.
3. Provide professional service outreach activities that complement the Department's teaching and research functions.	4. Provide outreach initiatives that enhance the public and private sectors.	3. Foster and engaged community and enhance the University's outreach and partnerships both internally and externally.
4. Enhance the effectiveness of the Department by strengthening advancement & resource development.	5. Provide state-of-the-art technology and infrastructure that is sensitive to a healthy, safe, and environmentally sustainable campus. 6. Attract, develop, and maintain meaningful relationships with internal and external constituencies.	4. Enhance institutional effectiveness by strengthening the organizational operation and enhancing resource development.

I. Accomplishments and Productivity for FY17 --

Progress at Achieving Departmental Goals

Goal 1: Provide premier undergraduate and graduate programs in high demand majors.

Goal 1: Strategy 1. Regularly assess and evaluate all departmental functions and programs to assure continuous improvement of academic rigor, scholarship and service.

Implementation actions	FY 17 Outcomes / Status
1. Maintain program quality as indicated by successful program reviews and re-accreditation by discipline-specific accrediting agencies such as ACCE, ATMAE, and NCATE.	• Computer Systems Technology (CST), Engineering Technology (ET), and Graphic Communications (GC) were re-accredited by the Association of Technology Management and Applied Technology (ATMAE) in November 2011. A re-accreditation visit is scheduled for March of 2017 for Computer Systems Technology and Engineering Technology. • Graphic Communications (GC) initial accreditation for ACCGC for 6-years by ACCGC in September 2015. • Construction Management (CM) re-accreditation for 6-years by ACCE in July 2015. • Engineering Technology submitted a program review to the University in FY17. • Technology and Engineering Education (T&EE) re-accredited by NCATE/CTTE in 2011.

2. Update and implement the departmental *Academic Quality Assurance Program* for all programs and services (Deliverable: *Annual Assessment Report and Program Goal Reports).*	• The annual assessment report is posted on the TEC website each year (About Us).
	• TEC Assistant Chair oversees data collection and the development of the annual assessment report. Each program is charged to document program improvements based upon annual assessment data.
	• Academic Quality Improvement Plans updated in 2012 as part of program review. Posted on University Assessment Services web site.
	• The UCC approved the following curriculum revisions:
	  • Computer Systems Technology: one new course, TEC378.
	  • Construction Management: New Course, TEC293.
	  • Engineering Technology Curriculum Revision (Including one new course, TEC333, one course revision, TEC292, and one course drop, TEC316).
	  • Graphic Communications Curriculum Revision (Including one course revision, TEC354).
	  • Renewable Energy Curriculum Revision (Including two new courses, TEC258 & TEC259, and two course revisions, TEC160 & TEC262).
	• The DCC has approved the following actions:
	  • Computer Systems Technology Curriculum Revision.
	  • Construction Management Curriculum Revision, including a revision to TEC223.

3. Maintain active industry advisory committees in each program that meet at least annually to review, improve, and validate curriculum and other strategic programmatic directions.	*Advisory Board Meetings Dates* Program / # / Date(s) CST / 1 / 4/22/2016 CM / 2 / 4/29/2016 & 11/4/2016 ET / 1 / 4/1/2016 GC / 1 / 4/22/2016 RE / 1 / 4/22/2016

	Tech Ed: 0, 4/19/2016 Grad: 1, 11/18/2016
4. Conduct regular classroom peer observations with probationary faculty and non-tenured track faculty (NTT) to assess teaching performance and to promote quality of instruction.	• Peer observations and follow-up of 2 tenure-track faculty in October 2016. Teaching expectations and feedback from IDEA evaluations included in Assignment of Duties letters to part-time instructors. • One-on-one meetings held with all full time faculty each spring to review IDEA ratings and plans for instructional improvements, as well as plans for scholarship, service, and professional development.
5. Encourage students to pursue professional certification exams (such as CISCO, Microsoft, AIC Level 1, SME, Teacher Certification, etc.).	• Computer System Technology faculty encourage students to take professional certification exams (e.g., CISCO, Microsoft, etc.). • Construction management students are encouraged to take the AIC Level 1 exam. • All Technology & Engineering Education students are required to take teacher licensure examinations.
6. Review and update as necessary DFSC Policies to provide appropriate incentives for high quality performance in teaching, research, and service.	• DFSC guidelines last revised in Fall 2016. Main revisions were to clarify Example Indicators of Teaching, Scholarship, and Service Performance.
7. Utilize enrollment management to maintain appropriate instructional capacity and student quality.	• Target admission numbers provided to EMAS for each program. • All courses are major blocked until TEC students have registered. • Recruitment activities in #8 below. • Admission GPA is similar to other units in CAST. • The Department had a 12% increase in enrollment from Fall 2013 to Fall 2016 and received $45,000 as part of the Enrollment Rebound Incentive Program. The funds were used for instructional improvements in classrooms.

Goal 1: Strategy 2. Recruit, retain, and recognize diverse high quality students.

Implementation Actions	FY 17 Outcomes / Status
8. Annually update the departmental *Diversity Plan* to ascertain actions needed for enhancement of participation by underrepresented groups.	• CM and GC have developed articulation guidelines with Chicago City College programs. • Technology and Engineering Education grants target diverse schools across Illinois. T&EE students are required to complete 50 clinical hours in a diverse school setting. • Gokhale grant targeted learning communities to recruit women and minorities into computing. • Departmental Diversity Plan updated annually.
9. Provide funding to faculty and staff for high-impact recruitment activities.	• Recruitment events included participation in (a) ISU Open Houses and departmental showcases, (b) selected high school career days, (c) visits from high schools, (d) articulation meetings and subsequent agreements with community colleges, (e), and special recruitment and promotional events such as IDEA competition, TSA competitions, and Tech Day that collectively bring hundreds of students and numerous high school teachers to the Department and ISU over the course of the year. • Periodically host University College advisors for educational tours. Last tour was in Fall 2011 for approximately 25 advisors. In 2016 we hosted a tour for staff from Admissions.

<table>
<tr><td></td><td>• Chair, Advisor, and Program Coordinators (as needed) meet regularly to review recruitment activities outlined in annual program Plans of Work.
• A welcome letter is sent to all admitted students in January.</td></tr>
<tr><td>10. Maintain up-to-date professional marketing materials, including a department Web site, program brochures and information sheets, and portable travel displays.</td><td>• Last major TEC website updated by IWSS in October 2011. The Department is scheduled for a major website revision in 2017.
• Website updated each summer and periodically as needed throughout the year.
• News blog replaced mailed newsletter in December 2009.
• Program brochures largely discontinued as material is web-based.</td></tr>
<tr><td>11. Maintain updated articulation guidelines with Illinois community colleges.</td><td>• Department maintains over 100 program level articulations with 22 Illinois community colleges. Guidelines updated by Coordinators as needed to accommodate curriculum changes.</td></tr>
<tr><td>12. Respond to university initiatives to inform and direct students to Department of Technology programs.</td><td>• The Department provides University College with up-to-date materials so they can properly advise students across campus about our programs.
• Department advisors and Department Chair participated in Preview during the summer of 2016.</td></tr>
<tr><td>13. Annually award scholarships and other recognitions to high-performing students.</td><td>• TEC Scholarship and Honors recognition held in conjunction with Family Weekend, September 17, 2016. Attended by approximately 80 students, family, friends, and faculty.
• 20 new or continuing students shared in over $27,000 of departmental scholarship awards. In addition, 4 students reported receiving an additional $6,250 in external scholarships.</td></tr>
<tr><td>14. Promote student participation in the Honors Program and other scholarly recognitions.</td><td>• Eight students within the Department are enrolled in the Honors program (academic good standing, a full-time student, and have completed a minimum of 60 hours with a cumulative GPA of 3.3 on a 4.0 scale).

5-year comparison of Honors Students.

<table><tr><th>Year</th><th>Fall Census</th></tr><tr><td>2016</td><td>8</td></tr><tr><td>2015</td><td>9</td></tr><tr><td>2014</td><td>11</td></tr><tr><td>2013</td><td>13</td></tr><tr><td>2012</td><td>8</td></tr></table></td></tr>
<tr><td>15. Pursue alternate delivery of courses to meet global changes and market conditions.</td><td>• Seven undergraduate and three graduate courses were offered online during summer 2016.
• The Department began planning for online delivery of a masters sequence to target non-traditional audiences into the graduate program.</td></tr>
</table>

Goal 1: Strategy 3. Recruit, retain, and recognize diverse high quality faculty and staff.

<table>
<tr><th>Implementation Actions</th><th>FY 17 Outcomes / Status</th></tr>
<tr><td>16. Fill tenure track lines as permission is granted to search.</td><td>• The Department received permission to search for two tenure-track positions in FY17 in the areas of Technology Management and Computer Systems Technology.</td></tr>
<tr><td>17. Provide support for faculty professional development to continually improve knowledge and skills in teaching and research</td><td>• All full-time faculty are eligible for a specified level of travel funds for conferences, presentations, and professional development.
• Competitive professional development funds available as budgets permit. Nine faculty initiatives were funded for FY16. Faculty requesting funds are required to submit a 3-year professional development plan outlining enhancement strategies and benefits of the planned activities.
• Mentor programs are established for all TT faculty.
• Tenure-track faculty in their first two years are provided additional professional development funds to nurture a focused research agenda.
• Faculty are strongly encouraged to participate in/apply for CTLT and other internal professional development (PD) funding opportunities.</td></tr>
<tr><td>18. Structure teaching loads to facilitate research expectations.</td><td>• When possible without impacting instruction, accommodations in teaching assignments, such as scheduling classes on only two or three days per week, are made to provide blocks of time conducive to scholarly productivity.
• As funds permit, new tenure-track faculty receive a one course release in the fall semester during their first two years.</td></tr>
<tr><td>19. Provide opportunities for summer employment and industry externships.</td><td>• Ten faculty taught courses during the 2016 summer.
• One faculty updated lab software and equipment for renewable energy and engineering technology.</td></tr>
<tr><td>20. Annually recognize outstanding departmental faculty for teaching, research, and service and nominate faculty for other award programs as appropriate.</td><td>• 2016 Departmental Awards to Solanki, Aldeman, and Merrill respectively for Teaching, Research, and Service.
• Solanki: CAST Outstanding Researcher – Pre-Tenure Research Award
• Solanki: University Research Initiative Award
• Cleary: University Environmental Stewardship Award
• Aldeman & Jo: University Cross-Disciplinary Research Team Award
• Gokhale: CAST Outstanding Service Award
• TEC Alumni awards to Steve Skorup ’85, and Matt Scoville ‘07
• CAST Alumni awards Bobby Pillot ‘00, Linda Rae Markert ‘78</td></tr>
<tr><td>21. Encourage faculty involvement in CTLT services and workshops.</td><td>• Faculty regularly participate in CTLT topical workshops to improve classroom instruction.
• The table below presents the number of TEC faculty who participated in CTLT events and the total participation hours for all faculty for the each of last eight years.
<table><tr><th>Year</th><th># of Faculty</th><th>Total Hours</th></tr><tr><td>2016</td><td>10</td><td>201</td></tr><tr><td>2015</td><td>11</td><td>473</td></tr><tr><td>2014</td><td>8</td><td>257</td></tr></table></td></tr>
</table>

2013	17	219
2012	18	244
2011	13	220
2010	9	78
2009	14	175

Goal 1: Strategy 4. Promote collaborations among faculty, student, and industry to develop leadership skills, professionalism, and collegiality.

Implementation Actions	FY 17 Outcomes / Status
22. Promote opportunities for faculty and students to study abroad, present and/or collaborate on international research projects, host visiting scholars, and globalize the curriculum.	• Xie worked on arrangements for two visiting scholars from Chang'an University in China. Dr. Zhang Jinxiao and Dr. Li Hui arrived at ISU in January of 2015 and returned to China in February of 2016. • Xie also arranged for Dr. Yanfung Sun from Taiyuan University in China to be a visiting scholar from July 2016 – July 2017. • Jo and Xie worked with the Office of International Studies and Programs to develop international experiences for students in Denmark and China, respectively. • Schmidt provided instruction in French to students from Africa participating in the ISU Management International Development Initiative (MIDI). • Gokhale was awarded a Fulbright Distinguished Chair to the University Pernambuco in Brazil. • Gokhale was a liaison between Illinois State University and two universities, Obafemi Awolowo University (Nigeria) and Chandigarh University (India). ISU signed MOUs with both Universities in 2016. • Branoff met with Louis Canales (Director) and Yimin Wang (Associate Director) from the Office of International Studies and Programs to discuss possibilities of 3+1 programs between Illinois State University and Chinese Universities.
23. Solicit funding to support and encourage student participation in professional organizations and associated events such as field trips, guest speakers, conferences, competitions, and trade shows.	Numerous opportunities available for students to engage in meetings, field trips, conferences and competitions sponsored by professional organizations. Following is a representative sample of these activities. • Over 30 CM students attended ASC, MCAA, and NAHB national/state/local meetings/events/competitions, mostly funded by industry and professional organizations. • CM Partnership program was established in 2013 to fund student professional development. See http://tec.illinoisstate.edu/construction-management/partnership.shtml • 35+ ET students and 3 faculty advisor travelled to the 2016 International Technology Manufacturing Show in Chicago in September 2016. • 4 GC students competed in the Phoenix Challenge Competition and travelled to Fort Worth, Texas in May 2016 to present solutions. Student travel was partially funded by the *Dr. Hank Campbell Endowment for Global Vision and Problem Solving* and the *William P. LaBounty Endowment for Graphic Communications*. • T&EE students participated in conferences and competitions associated with state, regional, and national professional

	organizations including ITEEA, Midwest TEECA, and ITEEA Conference and the national TEECA competitions. • The Department supported student travel with General Funds in the amount of $4,213.27.
24. Promote experiential learning opportunities and mentoring for students such as graduate and undergraduate research, and industry-based assistantships, professional practice, honors projects, and independent studies.	• CM and ET require work experience hours prior to the senior capstone courses. • 12 BS and 29 MS students were placed in internships in 2016. Most undergrads opt for "informal" summer internship positions without registering for credit.
25. Encourage student civic engagement in community service activities, student organizations, and service learning projects.	• Students from several majors serve as hosts for the IDEA (Illinois Drafting Educators Conference) at ISU. • TEECA students assist in hosting Tech Day for TSA high school students. This day is also a significant recruiting event and attracted over 400 secondary students in Fall 2016. • CM students regularly participate in Habitat for Humanity or Youth Build of McLean County as part of TEC 121. Several continue to volunteer their services as a result of this exposure in class. • TEC 175 Living in a Technological World and TEC 275 Technology and Society are electives in the campus-wide Civic Engagement minor. • Students in TEC 320 Project Management and other courses regularly work on community based projects for real world clients.
26. Organize and conduct social events that promote student-faculty interaction (i.e., tailgates, homecoming, etc.)	• Scholarship and Honors recognition held September 17, 2016. • CM students in conjunction with other majors (RE, FCS– IED) have built a float for the homecoming parade in each of the last seven years.

Goal 2: Conduct research and scholarship that inform teaching, advance technology professions, and are recognized at the state, national, and international levels.

Goal 2: Strategy 1. Enhance a culture of research and scholarship across the department that also celebrates faculty involvement in internally and externally funded activities.

Implementation Actions	FY17 Outcomes / Status
27. Support the department's scholarly productivity with an emphasis on refereed publications and other appropriate scholarship.	• See: Goal 1: Strategy 3. Recruit, retain, and recognize diverse high quality faculty and staff for details regarding initiatives and resources provided to support faculty travel for scholarly presentations, professional develop, teaching load assignments, mentoring, and awards. • The *Wiens/Custer Professional Development Endowment* provides financial support for faculty participation in development activities that promote skills related to scholarship and grantsmanship. In addition, funding is available for incentivize consulting support tailored to specific external grant needs in the areas of budget preparation, critical review, and even proof reading. Preference will be given to faculty who are in the early stages of their career.
28. Promote participation in grants and external funding by tenured faculty.	• Success at grantsmanship is recognized at public venues and faculty are nominated for research related awards. Annual merit review values and rewards grantsmanship.

	Summary of Annual Grant/Contract Productivity Data from Research and Sponsored Programs
29. Provide departmental resources in support of research and grant submission.	• The *Wiens/Custer Professional Development Endowment* provides financial support for faculty participation in development activities that promote skills related to scholarship and grantsmanship. • Each year faculty have the opportunity to submit proposals to received funding for activities related furthering their professional development.
30. Facilitate effective mentorship of junior faculty to develop a focused line of scholarship that integrates teaching, research, and service/outreach.	• Mentors are assigned to all new tenure-track faculty. Chair also visits with tenure-track faculty regularly to review, encourage, and support scholarly productivity. • Tenure-track faculty are strongly encourage to participate in the URG program and other CAST/ISU workshops to enhance grantsmanship skills. • Two TT faculty received URGs in 2016. Five TT faculty have competitive external grant awards.
31. Promote faculty involvement in CAST, CTLT, and University sponsored opportunities to advance research skills.	• Tenure-track faculty regularly participate in the CAST/RSP research and grant writing workshops. Tenured faculty participate as appropriated.

Year	# of Proposal	$ Submitted	# of Awards	$ Awarded
FY16	2.67	380,250	2.07	252,701
FY15	2.45	653,861	1.00	212,939
FY14	1.00	223,715	2.33	1,018,336
FY13	3.00	1,846,121	3.00	1,221,075
FY12	6.53	2,318,546	4.50	1,420,262
FY11	5.43	1,066,706	4.43	1,170,619
FY10	7.29	1,762,938	4.35	1,249,597

Goal 2: Strategy 2. Disseminate the results of research through journal publications, conference proceedings, and research presentations.

Implementation Actions	FY 17 Outcomes / Status
32. Encourage tenure-track faculty to participate in the CAST Publication Incentive Program.	• Faculty are encouraged to access CAST Publication Incentive Program (PIP) funds for additional travel support. In 2016, 6 faculty submitted 10 applications and earned PIP awards for 12 peer reviewed journal or proceedings publications. *5-Year Comparison Of Faculty Scholarly Productivity As Measured by PIP Awards*
33. Provide travel support for faculty making refereed presentations at professional conferences.	• TEC provides $1000 in travel support annual to faculty making refereed presentations at professional conferences. Additional funds are available to tenure-track faculty in their first two years. • TEC provides funding for graduate students who are accepted to give peer reviewed research presentations at professional conferences.

Yr	# of Faculty	# CAST Awards
2016	6	18
2015	8	12
2014	5	12
2013	6	16
2012	9	13

Goal 3: Provide professional service outreach activities that complement the Department's teaching and research functions.

Goal 3: Strategy 1. Encourage involvement in outreach, consulting activities, and leadership in appropriate state, national and international professional organizations.

Implementation Actions	FY 17 Outcomes / Status
34. Encourage faculty participation in outreach and technology transfer activities.	Outreach/consulting activities in 2016: • Schools that Work consulting - Merrill. • Teacher professional development and 3D printing– Merrill, J. Brown. • Robotics and manufacturing consulting – Devine. • Wind/Solar energy workshops – Aldeman & Jo. • IDEA workshops for drafting educators – Laingen. • MIDI workshops – Park & Schmidt. • Plastics workshops through technology transfer – Reifschneider. • Quality Management and Analytics workshops through technology transfer – Park.
35. Encourage faculty participation and leadership in national and international professional organizations associated with our disciplines.	All 20 full-time faculty were actively involved in providing service to State or National Professional Organizations. A sampling of professional acronyms includes: ACCE, ACCGC, ANTEC, ASC, ASEE, ASQ, ATMAE, GLGA, IEEE, IGAEA, ITEEA, SPE, and TSA.
36. Encourage faculty participation as members of accreditation boards and accreditation and program review teams.	Boser and Wilson served as accreditation visiting team chairs for ACCE and ACCGC.
37. Encourage faculty participation in campus-wide service activities.	All faculty serve on one or more TEC/CAST/ISU committee. Faculty service is included in annual activity reports. Following is a listing of TEC faculty serving in College and University level committees. Dean's Search Comm. — Klaus Schmidt CAST Council — Bo Park CAST Curriculum Comm., Chair — Kevin Devine CAST Curriculum Committee — Dan Wilson CAST Graduate Council — Klaus Schmidt CAST Research Council — Josh Brown CAIST — Anu Gokhale CFSC — Klaus Schmidt Council for Teacher Education — Josh Brown Colman Faculty Fellow Committee — Anu Gokhale University Graduate Council — Sally Xie Intellectual Property Comm. — Pranshoo Solanki Ombudsperson — Klaus Schmidt Panel of 10 — Lou Reifschneider UAS – Advisory Council — Josh Brown & Dan Wilson University Curriculum Committee — Euysup Shim University Honors Council — Jin Jo Intellectual Property Committee — Pranshoo Solanki University Ombudsperson — Klaus Schmidt University Reinstatement Comm. — Sally Xie University Research Council — Chris Merrill University Review Committee — Rick Boser & Bo Park

Goal 3: Strategy 2. Encourage service learning opportunities for students.

Implementation Actions	FY 17 Outcomes / Status
38. Encourage faculty to develop service learning experiences in appropriate courses.	• CM students regularly participate in Habitat for Humanity or Youth Build of McLean County as part of TEC 121. Several continue to volunteer their services as a result of this exposure in class. • TEC 175 Living in a Technological World and TEC 275 Technology and Society are electives in the campus-wide Civic Engagement minor. • Students in TEC 320 Project Management and other courses regularly work on community based projects for real world clients.
39. Provide professional development support for faculty to develop service learning experiences in appropriate courses.	• The university offers annual funding opportunities for Civic Engagement. All faculty are eligible to apply for these awards. • Faculty can apply for Professional Development funds to develop service learning components to their courses.

Goal 4: Enhance the effectiveness of the Department by strengthening advancement and resource development.

Goal 4: Strategy 1. Encourage collaborations with alumni and emeriti faculty.

Implementation Actions	FY 17 Outcomes / Status
40. Arrange meeting with program coordinators and emeriti faculty to foster collaborative development initiatives.	• Held first collaborative meeting January 16, 2015 to introduce coordinators to emeriti faculty group. Since this date, coordinators have met individually with specific emeriti faculty to brainstorm potential development initiatives.
41. Maintain regular contact with alumni and friends (newsletter, website, campus events, award recognitions, etc.) and nominate for awards as appropriate.	• News blog highlights accomplishments of students, faculty, and alumni/friends. • Alumni awards and recognitions in 2015-2016: ▪ Linda Rae Markert ’78, SUNY Oswego, CAST Hall of Fame ▪ Bobby Pillot ’99, ABB, CAST Academy of Achievement ▪ Steve Skorup, ’85, TEC Distinguished Alumnus ▪ Matt Scoville, ’07, TEC Outstanding Young Alumnus
42. Support faculty participation at events that engage alumni and friends.	• Each program has an advisory board comprised of alums and industry friends that meet at least once a year (~ 70 individuals). • ET hosts a fieldtrip and scholarship dinner each fall for Association for Facilities Engineering (AFE) Central Illinois members. As part of the dinner event, two $1,000 scholarships are awarded to Technology students. • Technology and Engineering Education faculty annually sponsor competition events that attract many alumni who are teaching in career and technical education. • ET and Computer Graphics faculty host the Illinois Drafting Educators Association annual meeting each fall and a drafting competition for students each spring. Events typically attract 25 – 40 teachers, many of whom are alums, and over 200 students. • CM sponsored a Career Fair each semester in 2016 that attracts various firms, many of whom were staffed by TEC alums. More than 35 companies attended the Fall 2016 career fair. • CM hosts an annual friend and fundraising golf outing the last Friday in April. The 2016 event attracted 40 foursomes.

Goal 4: Strategy 2. Model a culture of giving and philanthropy.

Implementation Actions	FY 17 Outcomes / Status
43. Encourage all faculty to contribute to the Foundation on a regular basis (Family campaign - 100% committed).	*8-Year comparative summary of faculty giving* Year / # Faculty Giving 2016: 12 2015: 10 2014: 13 2013: 11 2012: 11 2011: 9 2010: 11 2009: 11
44. Where appropriate, talk about the importance of giving back to the University to current students and alumni.	• During the TEC Scholarship Reception, the chair talks about the importance of giving and how current scholarship recipients have benefited from donations to the Department.

Goal 4: Strategy 3. Maintain high quality instructional technology, facilities, and computing infrastructure.

Implementation Actions	FY 17 Outcomes / Status
45. Submit group comments from TEC to the *Campus Master Plan* taskforce in support of new or upgraded facilities.	• When appropriate, the Department may submit entries to the Campus Master Plan blog.
46. Annually update the *5-Year Facility and Major Equipment Plan* linked to departmental strategies.	Program Coordinators submit annual Resource Allocation Plans (RAP) for capital equipment and facilities improvements. Requests are prioritized and supported as funding allows. Programs are encouraged to include longer-term resource planning in their annual Plan of Work. Projects completed or in progress for FY17 include: • Computer Systems Technology – Upgraded lab equipment. • Construction Management – Purchase materials to make a sample ejector and upgraded pdf conversion software. • Engineering Technology – Purchased a CNC lathe to be delivered in spring of 2017. • Graphic Communications – Purchased HP Flatbed Printer and new video cameras. • Renewable Energy – Purchased materials for building two additional data acquisition wind stations. • Technology and Engineering Education – Purchased 4 VEX robotics kits, 3 3D printers, and 8 new Dell workstations.
47. Annually invest in the department computer network infrastructure including hardware and software, projection equipment, computer lab updates (4-year rotation), servers and security components.	• Purchased 30 new computers and rotated them into labs.
48. Consider sustainability and environmental impacts when making material/equipment purchases and facility improvements.	• Faculty encouraged to provide electronic instructional materials to students to minimize printing. • Many faculty use VPN and Remote Desktop to work from off campus locations. • Most faculty utilizing ReggieNet for course management. • At least 8 online classes delivered in each of the past 6 summers.

49. Annually update and implement the departmental Advancement & Development Plan that includes a long-range vision and funding targets for equipment, facility, and endowed scholarships.	• *Departmental Development Plan* updated annually. Available upon request. • Sixth year of emeriti faculty Million Dollar Challenge initiative to double the principle of TEC endowments. ▪ Since January 2011, 6 new endowments have been established, one partially funded endowment now fully funded, and the principal increased for many others. In total, TEC has 20 fully funded endowments and 1 additional still partially funded. ▪ In September of 2014, the Emeriti Group reached their Million Dollar goal. ▪ Webpage developed to support the emeriti Million at:http://advancement.illinoisstate.edu/support/campaigns/emeritus/ • Facility and equipment highlights: ▪ Dean's office is planning to provide Provost Enhancement Funds to renovate the Graphic Communications lab in Nelson Smith. At the end of the 2016 summer session, renovations were complete. ▪ Programs maintain a facility/equipment enhancement plan as a basis for seeking internal or external funding of upgrades.

Goal 4: Strategy 4. Leverage the experience of advisory board members to strengthen and explore advancement opportunities.

Implementation Actions	FY 17 Outcomes / Status
50. Add advancement and development initiatives to regular advisory board meeting agendas.	• TEC Coordinators are encouraged to add advancement and development initiatives to advisory board meetings. With the help of University Advancement, the Construction Management faculty have created an Industry Partnership Program to provide opportunities for organizations to support student activities.
51. Encourage advisory board members to explore creative advancement and development opportunities.	• When appropriate and when time permits, TEC Coordinators dedicate portions of their advisory meetings to advancement and development opportunities.

Departmental Measures of Productivity

A five year listing of key measures of productivity are presented below. Additional measures are listed in the aforementioned major accomplishments.

Degrees Conferred	2012	2013	2014	2015	2016
B.S. Degrees (All Majors)	170	140	130	140	138
M.S. Technology Degrees	34	27	27	36	114*

**Outcome is based on the number of unique degrees rather than the number of unique students; therefore, if a student earned more than one unique award in the same fiscal year, then he or she would be counted more than once.*

Enrollment by B.S. Degree – Fall Census Day	2012	2013	2014	2015	2016
Industrial Technology – Computer Systems Tech	61	65	75	87	83
Construction Management	146	147	157	171	166
Engineering Technology	79	79	90	107	118
Graphic Communication	65	62	65	62	58
Renewable Energy	93	80	83	70	60
Technology Education	41	21	16	21	33
Total	485	454	454	486	518
M.S. Technology – Fall Census Day	56	71	86	71	82

Fall Faculty FTE	2012	2013	2014	2015	2016
Tenure Track	16	16	16	16	16
Full-Time Non-Tenure	3	4	4	4	4
Part-Time Instructors (FTE)	3.3	2.0	2.5	*	2.55
Dept. Total	22.3	22.0	22.5	*	20.5

** No data was provided by the University in 2015*

Credit Hours	2012	2013	2014	2015	2016
Undergraduate Total	8,212	7,500	7,946	8,085	8,187
Graduate Total	1,289	1,030	1,209	1,475	1,470
Dept. Total	9,501	8,530	9,155	9,560	9,657

External Funding Awards	FY 12	FY 13	FY 14	FY 15	FY 16
# of Proposal	6.43	3.00	1.00	2.45	2.67
$ Submitted	2,318,546	1,846,121	226,715	653,861	380,250
# of Awards	4.50	3.00	2.33	1.00	2.07
$ Awarded	1,420,262	1,221,075	1,018,336	212,939	252,701

Source: Research and Sponsored Programs

Faculty Productivity Measures	2012	2013	2014	2015	2016
Refereed Journal & Proceedings (PIP)	13	19	17	11	15
Refereed Proceedings and Presentations	36	40	41	28	9
Books (new or revised editions)	0	1	2	1	1

II. Internal Reallocations and Reorganizations

I. Describe any reallocations or reorganizations including the movement of positions, the upgrade of positions, the creation of new positions, or the reallocation of personnel or operating funds within the unit.

Variance dollars were used to fund adjuncts, non-tenure track faculty, and summer courses.

II. Describe how the unit used additional funds to enhance accomplishments and productivity: Additional funds may include enhancement dollars, external funding, foundation funds, variance dollars, external contracts, and technology tuition dollars, or other special funds provided with general revenue dollars.

Enhancement Dollars

None in FY2016.

Variance Dollars

Variance is utilized to fund qualified adjuncts, non-tenure track faculty, and graduate student stipends. Also see following report and data regarding instructional capacity accountability.

Instructional Capacity Funds

Describe the use of instructional capacity funds and how these funds have helped meet the goals and priorities of the College/Unit. Include plans for any component of instructional capacity not yet fulfilled for FY17 (as applicable).

The CAST Strategic Plan, Goal 1 states, "*CAST provides premiere comprehensive undergraduate programs.*" Under Goal 1, Strategy IC says "Increase tenure-track, non-tenure track, and/or AP personnel, as necessary, to accommodate quality teaching and research." Instructional capacity funds directly support these College goals and priorities. The Department of Technology has a similar goal to "*Provide premier undergraduate and graduate programs in high demand majors."* Instructional capacity funds are allocated to the Department of Technology for each academic year from the CAST allocation.

In FY 17, the Department of Technology was allocated $94,600 of instructional capacity funding from CAST and spent $115,213.50 on classes taught by adjunct instructors. Of that total, $23,400 came from buy-out support from grants or faculty teaching release for services provided to other academic units. Therefore, the total paid from Technology resources to maintain instructional capacity was $0.00. Detailed instructional capacity expenses have been submitted to CAST in a separate document.

External Funding

- TEC students received approximately $6,250 in externally funded scholarships from corporate or professional organizations.
- Registered Student Organizations received over $15,000 in industry support for student travel and expenses to participate in conferences and competitions sponsored by professional organization.
- Corporate partners provide a wide range of industry caliber software at no or low cost. The biggest donation of software in 2016 came from Cadenas Partsolutions (valued at $500,000). Other software provided at no cost includes EAF, EskoArtwork's ArtiosCAD, On-Center, QuickBid, Palisade @RISK, and PrintSmith. Software purchased at discounted educational pricing includes Articulate, Siemens NX, and RobotStudio. The following software is used at no cost to the Department through AutoDesk's educational licensing agreements: AutoCAD, Building Design Suite Ultimate, and Inventor.

Foundation Funding

The table below summarizes the value of gifts and the number of donors during the past five years. This number includes regular "Gladly we Give" contributions by 11 faculty/staff. Sources of funding to Foundation TEC accounts include alumni gifts, corporate matching gifts, Annual Fund, scholarship sponsors, emeriti, and faculty/staff payroll deductions. Endowment yields and other Foundation accounts funded approximately $25,000 in annual scholarship awards or program enhancement funding. In addition, Foundation dollars are used to supplement faculty recruitment and hiring processes, host alumni and scholarship events, support alumni award recipients to return to campus. Begun in January 2011, TEC emeriti have been spearheading the Million Dollar Challenge to double the value of TEC endowments. Over the past four years, this Challenge has been the primary driver for increasing the value of TEC Advancement funds from approximately $500,000 to over $1,000,000. A brochure and webpage were developed during 2012 to support this initiative (more at *http://advancement.illinoisstate.edu/support/campaigns/emeritus/*). This effort has created seven (7) new endowments (Brauchle, Campbell, Kagy, LaBounty, Lockwood, Loepp, McCarthy, and L. R. Miller) that have either been fully funded or have pledges to fully fund within five years. Two existing endowments, Nelsen, Weede, were also fully funded as a result of this initiative.

Year	Amount	# of Donors
FY16	$115,513*	215
FY15	$123,530	165
FY14	$127,501	208
FY13	$106,516	186
FY12	$101,240	178
FY11	$74,821*	139
FY10	$62,248	151
FY09	$105,755	154

**Does not include in-kind software donations*

External Contracts

As reported by Research and Sponsored Programs, Technology faculty submitted proposals for grants and contracts totaling $380,250 and was awarded $252,701 in external support. Following are the highlights from external funding in 2016.

- Gokhale and Machina, were awarded a new NSF grant in fall 2013 titled, *Illinois State University Initiates Teacher Education in Computer Science*. The project award was for $700,000. The purpose of the project is to prepare both pre-service and in-service teachers to pass the ISBE certification exam for the Computer Science Endorsement.
- Merrill and Brown are Co-PIs on a $275,000 ISBE leadership grant focused on Career and Technical Education (CTE) and students from special populations. This annual award is part of an on-going project that has provided approximately $1,375,000 of funding over the past five years.
- Aldeman is a Co-PI on a $400,000 grant "Smart Grid for Schools 2.0" sponsored by the Illinois Science and Energy Innovation Foundation.
- Jo is a Co-PI on a $130,001 grant "Renewable Energy for Schools" sponsored by the Illinois Department of Commerce and Economic Development.
- Jo is a supporting member on a $109,469 US Department of Energy grant. The grant is titled, "*Partnership with Midwest Renewable Energy Association for Solar Market Pathways*."
- Dr. Louis Reifschneider presented workshops for Caterpillar Corporation. The three-day workshops are part of the Caterpillar University training about plastics technology. (Each workshop costs CAT only $3,100. A standard three-day workshop offered through SPE could cost $10,000 for twelve participants.)
- Collectively, these activities have enhanced the mission and productivity of the department by (a) providing indirect funds, (b) developing and maintaining vitally important involvement of faculty with industry, (c) providing opportunities for student involvement, and (d) generating data and experience for application in faculty publications and presentations.

Tech Tuition Funds

Tech tuition funds are utilized to support computer laboratory monitors (student workers) and to upgrade equipment in eligible laboratories.

Fiscal Year	Tech Tuition Funds
2017	$25,973
2016	$22,526
2015	$25,973
2014	$25,973

III. **Major Objectives for FY18**

Describe the unit's most important objectives for FY18. Outline how the objectives support the mission/goals of the Unit/Department/School, College and *Educating Illinois*.

Goal 1: Provide premier undergraduate and graduate programs in high demand majors.

Action Items – Faculty

1. Mentor and provide professional development opportunities for the junior faculty who have joined our department over the past several years.
2. Maintain professional development opportunities for all faculty funded from grant in-directs and other resources.
3. Request permission for two faculty searches in Construction Management (CM) and two faculty searches in Engineering Technology (ET). To maintain instructional capacity in the face of two retirements and changes in staffing requires that we will utilize adjunct faculty to teach 12 courses per semester next year.

Action Items – Curriculum actions in progress

4. Faculty in all areas are examining their curricula to make revisions before the Fall 2017 deadlines.
5. Develop online graduate courses in Project Management to target students who would not normally attend Illinois State University.

Goal 2: Conduct research and scholarship that inform teaching, advance technology professions, and are recognized at the state, national, and international levels.

Action Items - Research & Scholarship

6. Deliver on existing grants and continue to pursue external grant and contract opportunities.
7. Partner with other ISU units and external organizations to pursue new grants and contracts.
8. Collaborate with international colleagues on research initiative arising from MOUs.

Goal 3: Provide professional service outreach activities that complement the Department's teaching and research functions.

9. Continue to deliver outreach consulting and training to industry and education. Topics may include CM leadership, LEEP AP, project management, Schools that Work, safety consulting, and manufacturing process improvement.

Goal 4: Enhance the effectiveness of the Department by strengthening advancement and resource development.

Action Items – Facilities and Equipment

10. **Computing**: The department maintains approximately 200 computers distributed amongst three primary PC computer laboratories (TUR 167, 171, and 210), one PC networking lab (TUR 173), one Mac laboratory (NSB 010), faculty, staff, and GA office machines, and various other laboratory support functions. In order to maintain industry level computing power, our goal is to systematically upgrade one computer lab per year and then rotate out our lowest performing machines. In FY18 we will upgrade computers in faculty/staff offices and in the smaller TEC labs.

11. **Graphic Communications Phase 2**

    Phase 1 completed in 2013: The Graphic Communications (GC) instructional areas and offices in the Nelson Smith Building (NSB) were significantly upgraded in 2013 to provide a safe, contemporary learning environment that is attractive and functional for teaching and learning. The upgrades were in conjunction with Facilities asbestos abatement project in the basement of NSB and an Administrative Technology upgrade of all computer cabling in the GC area.

    Phase 2: NSB Rooms 9 H through P. Although originally conceived as one project, the estimate by Facilities was limited to the areas and work described in Phase 1. The modernization vision also included removal of approximately 140 linear feet of non-loadbearing masonry walls enclosing very small, non-functional rooms originally erected for dark-room photography (a process no longer taught), and 1100 square feet of laboratory floor space. This area is no longer functional and opening the space to be contiguous with the rest of laboratory (NSB 9B) would create opportunities for more contemporary GC applications. Removing the walls would require relocating some electrical utilities, removing the gypsum ceilings, patching of floors and walls, and painting the original open space walls and ceiling to match the rest of the laboratory. This work was completed at the beginning of FY17. The Department of Technology purchased a large flatbed printer in FY17, and the goal for FY18 is to purchase a new CAD/packaging table

Action Items – Advancement and Development

12. **Leverage expertise of Emeriti Faculty**: In September of 2014 the TEC emeriti faculty reached their $1,000,000 fundraising goal. In FY16 we arranged meeting between the emeriti faculty and program coordinators in the Department. The plan is to move forward in a strategic manner to help focus fundraising for the programs.

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