# **Illinois State University**

## **Department of Technology**

## Annual Assessment Report for 2022-2023

January 2024



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#### **Overview of Assessment Methods and Reports**

The Department of Technology offers five undergraduate degrees: B.S. in Computer Systems Technology (CST), B.S. in Construction Management (CM), B.S. in Engineering Technology (ET), B.S. in Graphic Communications Technology (GCT), B.S. in Sustainable and Renewable Energy (SRE), and B.S. in Technology & Engineering Education (TEE). The Department also offers a M.S. in Technology with areas of specialization in Project Management, Quality Management and Analytics, and STEM Education and Leadership. Each program has an Academic Assessment Plan (AAP) posted on the University Assessment Services (UAS) website (http://assessment.illinoisstate.edu/program/cast/).

This annual Department Assessment Report is comprised of four sections.

- 1. Assessment of student learning outcomes for each sequence or program. The analysis is in dashboard format that includes the intended learning outcomes of the program, benchmarks and both direct and indirect measurements from a variety of sources, and any actions planned.
- 2. Each degree program's on-going development is guided by a strategic planning document called a "Program Goal Report". This report includes the mission of the degree program, the goals of the program, goal alignment with department goals, college goals, and Educating Illinois goals, a plan of work from the previous year, and a report on the outcomes of that plan of work.
- 3. A semiannual senior exit survey is conducted each year. The exit survey provides information on departmental services such as advisement, equipment and facilities, and overall perceptions on the quality of instruction. This survey also captures data points on learning outcomes used in the learning outcomes report dashboard.
- 4. An annual ISU Alumni Survey is conducted by the University Assessment Services (UAS). The department participates in the UAS survey, which includes general questions on perceptions of ISU, as well as a series of questions that correspond specifically to department programs and instruction. The UAS survey collection timeline has recently changed, and the data is now reported late in the spring semester.

#### Learning Outcomes Measurement Points by Program and Sequence

Each academic program and sequence has the option of using the measurement tools that they deem most effective to assess learning outcomes. Direct measurement tools may include: (a) examinations or performance activities in specific classes or (b) student performance on certification examinations (AIC, ATMAE, edTPA, etc.). Indirect measurements include (c) results from UAS alumni survey, (d) results of the semiannual senior exit survey, and (e) results of an annual employer survey.

#### **Assessment Information and Actions**

The following events are designed to "close the loop" between collection and analysis of data and program improvement actions:

- Each program holds at least one faculty meeting to discuss the results of outcome measures and plan instructional and curricular improvements. These plans are reported annually in each program's Learning Outcomes Report and also provided to the University Assessment Services.
- Programs are strongly encouraged to share their outcomes with advisory committees for discussion. In many cases, this leads to plans for improvement reported in the Learning Outcomes Report.
- As appropriate, the annual faculty retreat will include a session dedicated to assessment planning.

#### **Program Goals Report and Work Plan**

Each program in the Department of Technology has a strategic plan for on-going development and planning. A plan of actionable items are developed each year and then reported on for progress the following year. These plans and reports can be found within this report.

#### **Reporting Learning Outcomes & Program Work Plans**

The Learning Outcomes and the Program Goals Report is submitted to the chair in the Fall semester of each year. The plan of work for the coming year is also submitted for review and discussion with the chair. As appropriate, results may be further disseminated to the faculty at large, and/or Advisory Committees for further action aimed at program improvement. All data and reports are made available on a cloud-based document management system.

## **Program Learning Outcomes Dashboards**

Computer Systems Technology Construction Management Engineering Technology Graphic Communications Technology Sustainable & Renewable Energy Technology & Engineering Education Graduate Program

	Direct Measurements	Indirect Measurer	nents			
Computer Systems Technology Learning Outcomes. The graduate will be able to:	*Performance Criteria Evaluation	Employer Survey 2014, 2016, 2017, 2019 (employers n=, alumni n=11)	Senior Survey (n=5, Fall 2022/Spring 2023) (1.0 - 5.0 scale)	Alum Survey (n=2, 2015, 2016, 2017) 1.0 - 5.0 scale	Planned Curricular Action Improvement (2023-2024	
<ol> <li>Apply the fundamental concepts of digital/analog signals and electronics to computer systems, networking, and media</li> </ol>	(a) 80%	10=Meets Expectations; 0=Below Expectations	4.0	4.0	We will continue to review learning outcomes, curricu course content with CST f Recommendations will be the Advisory Board memb	Ilum, and aculty. shared with pers.
2. Use specifications and applications of computer components, network devices, and media in network administration	(b) 75%	10=Meets Expectations; 0=Below Expectations	4.3	3.5	Incorporate more cloud co security, wireless network Things (IoT), and smart h concepts in our courses.	ing, Internet of
3. Configure network operating systems and manageable network devices	(c) 85%	10=Meets Expectations; 0=Below Expectations	4.2	3.5	Continue to incorporate m virtualization tools and ed in teaching courses in a w learning outcomes and course	ge computing ay that achieve
<ol> <li>Design database interfaces and utilize basic programming techniques for business applications.</li> </ol>	(d) 75%	9=Meets Expectations; 1=N/A 0=Below Expectations	3.8	3.5	We will include the development that help students to study courses by accessing conc database.	opment of apps for CST
<ol> <li>Use project management techniques to develop solutions, and address business issues to meet client needs.</li> </ol>	(b) 75%	10=Meets Expectations; 0=Below Expectations	4.5	3.5	We will continue assessin lab including equipment c and propose a new lab wit relevant equipment	urrently used
*Performance Benchmarks		Action benchmark f Data < 3.5/5.0 scale			k for Employer Data < ctations" or above	
Direct Measurement: Performance criteria: Overall average of each related project (a) Design, build, and code a real-life application like a digital clock and integrated timer with LED display (TEC 244);		5 – well above averag 4 – above average 3 – average 2 – below average 1 – well below averag				

(b) Network Design team project documenting and presenting	
topology, network devices, wired and wireless configuration,	
security, data capacity, and pricing including justification; posed	
by and evaluated by a team of external senior network managers	
in industry (TEC 390); (c) Configure Windows server operating	
systems with multiple roles and several other specifications (TEC	
245); (d) Develop end-to-end Java application that involves	
database design, middle-tier logic, and user interface.	

		Direct Me	asurements	Indirect	t Measur	ements				
Co	onstruction Management		Work in CM	Employer Survey <sup>2</sup> (n=19, no of						
	arning Outcomes	Overall Score	Courses	(n=19, no of graduates hired=91) Meet Expectation/ Below Expectation/ N/A		graduates hired=91) Meet Expectation/ Below Expectation/		Survey <sup>3</sup> (n=29, Fall 2022/ Spr 2023)	ISU Alum Survey <sup>3</sup>	Planned Curricular Actions for Improvement (2023-2024)
1	Create <b>written communications</b> appropriate to the construction discipline.	91.1%	TEC 394 (n = 52)	18/0/1	100%	4.4	N/A	No action at this time. Objective and self- report measures all positive.		
2	Create <b>oral presentations</b> appropriate to the construction discipline.	89.3%	TEC 394 (n =52)	15/0/4	100%	4.3	N/A	No action at this time. Objective and self- report measures all positive.		
3	Create a construction project <b>safety</b> plan.	74.8%	HSC 272 (n = 27)	13/0/6	100%	4.2	N/A	No action at this time. Objective and self- report measures all positive.		
4	Create construction project <b>cost</b> estimates.	81.6%	TEC 229 (n =56)	14/2/3	88%	4.4	N/A	No action at this time. Objective and self- report measures all positive.		
5	Create construction project schedules.	83.2%	TEC 325(n =50)	15/1/3	94%	4.3	N/A	No action at this time. Objective and self- report measures all positive.		
6	Analyze professional decisions based on <b>ethical principles</b> .	87.8%	TEC 120 (n = 60); TEC 123 (n = 33)	17/0/2	100%	4.5	N/A	No action at this time. Objective and self- report measures all positive.		
7	Analyze <b>construction</b> <b>documents</b> for planning and management of construction processes.	93.5%	TEC 123 (n =37); TEC 229 (n =57)	16/2/1	89%	4.4	N/A	No action at this time. Objective and self- report measures all positive.		
8	Analyze <b>methods, materials,</b> <b>and equipment</b> used to construct projects.	94.4%	TEC 224 (n =21); TEC 292 (n =43)	17/1/1	94%	4.4	N/A	No action at this time. Objective and self- report measures all positive.		

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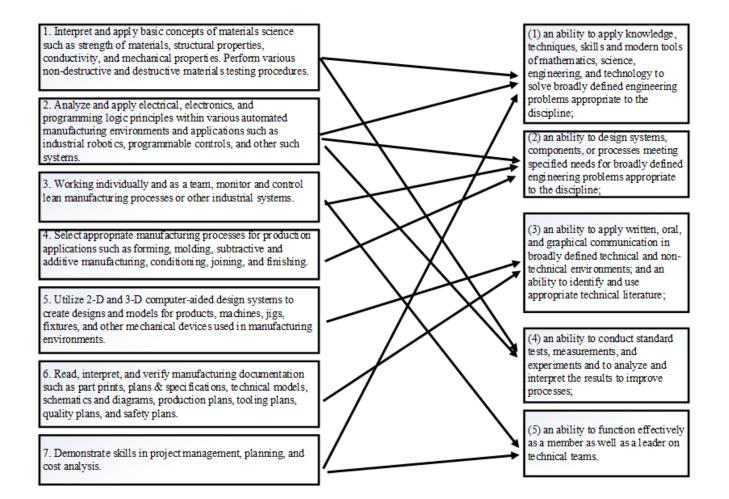
9	Apply construction management skills as a member of a <b>multidisciplinary team.</b>	83.3%	TEC 217 (n =74); TEC 229 (n =55); TEC 325 (n =41)	18/0/1	100%	4.5	N/A	No action at this time. Objective and self- report measures all positive.
10	Apply <b>electronic-based</b> <b>technology</b> to manage the construction process.	77.0%	TEC 217 (n =74)	18/1/0	95%	4.3	N/A	No action at this time. Objective and self- report measures all positive.
11	Apply basic <b>surveying</b> <b>techniques</b> for construction layout and control.	92.6%	TEC 223 (n =55)	7/1/11	88%	4.1	N/A	No action at this time. Objective and self- report measures all positive.
12	Understand different <b>methods of</b> <b>project delivery</b> and the roles and responsibilities of all constituencies involved in the design and construction process.	82.2%	TEC 226 (n =61); TEC 229 (n =66)	17/1/1	94%	4.4	N/A	No action at this time. Objective and self- report measures all positive.
13	Understand construction <b>risk</b> management.	79.1%	TEC 226 (n =62); TEC 325(n =69)	14/0/5	100%	4.4	N/A	No action at this time. Objective and self- report measures all positive.
14	Understand construction accounting and cost control.	85.4%	TEC 326 (n =63)	16/0/2	100%	4.2	N/A	No action at this time. Objective and self- report measures all positive.
15	Understand construction <b>quality</b> assurance and control.	83.7%	TEC 292 (n =43)	17/0/2	100%	4.2	N/A	No action at this time. Objective and self- report measures all positive.
16	Understand construction <b>project control</b> processes.	75.9%	TEC 325 (n =50)	16/1/2	94%	4.5	N/A	No action at this time. Objective and self- report measures all positive.
17	Understand the <b>legal</b> <b>implications of contract,</b> <b>common, and regulatory law</b> to manage a construction project.	76.9%	TEC 226 (n =61)	13/1/5	93%	4.4	N/A	No action at this time. Objective and self- report measures all positive.
18	Understand the basic principles of <b>sustainable construction</b> .	90.9%	TEC 329 (n =68)	16/0/3	100%	4.3	N/A	No action at this time. Objective and self- report measures all positive.
19	Understand the basic principles of <b>structural behavior</b> .	95.5%	TEC 327 (n = 61)	15/0/4	100%	4.4	N/A	No action at this time. Objective and self- report measures all positive.
20	Understand the basic principles of <b>mechanical, electrical and piping systems</b> .	89.7%	TEC 222 (n =51)	16/1/2	94%	4.1	N/A	No action at this time. Objective and self- report measures all positive.

]	Not	te		
	1	Benchmark: >70% /100% or exceed national average	Action benchmark for Survey Data: < 3.5/5.0 scale	Action Benchmark
4	2	# of 'meets expectations'/# of 'below expectations'/# of 'N/A'		for employer data:

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3	Benchmark for Action for Survey Data < 3.5 on 5-pt. scale		5	Well above average	<75% "meets
4	nd = No Data	Scale	4	Above average	expectations" or
5	= Measure below benchmark		3	Avg	above
6	Trigger for action = 2 or more measures below benchmark		2	Below average	
			1	Well below average	

Engineering Technology program updated its learning outcome in the spring 2023, The direct measurement are based on the new outcomes and the indirect measurement are from the old outcomes. Below is a chart which maps the old outcomes to the new outcomes. The 2022-2023 academic year is a transition year. All measurements will be based upon the new criteria in future years.



## New Engineering Technology Outcomes – Direct Measurements

Engineering Technology Learning Outcomes	Direct Measurements	Planned Curricular Actions for Improvement (2023-2024)
The graduate will be able to:		
Identifies the problem and problem- solving strategy (Knowledge)	TEC 111 (100%)	Limited sample size Consider increasing rigor.
Applies appropriate solution techniques using math / science / engineering, and technology principles. (Application)	TEC 240 (22%)	Extra in-class instructions and practice problems In future, assess more than one problem to get more accurate and holistic assessment.
Solve a calculation problem using tools in science and engineering (Application)	TEC 240 (57%)	Extra in-class instructions and practice problems In future, assess more than one problem to get more accurate and holistic assessment.
Recommend and defend the solution (Evaluate)	TEC 263 (85%)	Consider increasing rigor In future, assess more than one problem to get more accurate and holistic assessment
Identify the critical elements of a broadly defined engineering problem (e.g., the need, criteria, constraints, etc.) (Identify)	TEC 111 (75%)	Students should be able to reflect on to hole/shaft fit table to calculate the problem
Analyze and compare existing solutions (Compare/ Analyze)	TEC 263 (80%)	Determine from a set of 4 potential solutions, which PLC LD program satisfies the design requirement of a "seal- in circuit". Then, students must complete a narrative response on why they chose the answer they did and provide reasoning for not choosing other options.

Select and apply appropriate tools, techniques, and methods for problem- solving (Identify/ Apply)	TEC 233 (76%)	Students are given print plans for a subtractive manufacturing project on the lathe. There are various solutions, techniques, and tooling that the student can apply / choose.
Design and develop a solution based on a specific need (Synthesize/ Apply)	TEC 263 (55%)	Development of PLC LD programming solution for 4 problems.
Identify and select appropriate technical literature	TEC 216 (78%)	77 % of the students achieved the target. In TEC 216 students were asked to do the fit and tolerance calculation based on fits table, and most of the students were able to identify and select the approximate values for the calculation. Should continue using the existing strategy.
Present information orally to an audience	TEC 130 (85%)	Introduce small presentation/public speaking activities throughout the course. Required Presentation Participation from all students.
Generate graphical representation(s) of data	TEC 313 (69%)	Failed to achieve the target by 1%, there were two students who did not attempt the quiz. Reinforce the use of U chart by means of recorded video's and make it mandatory to watch before attempting the assignment on U chart.
Create a written technical report	TEC 285 (68%)	Make Expectations Clear for each Lab – Lab Procedure Packet, Report Rubric and Evidence.
Follow the design of an experiment plan (knowledge)	TEC 285 (82%)	Include process justification rationale in lab packet discussion section.

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Acquire data on appropriate variables (application)	TEC 293 (71%)	Include additional instruction and in-class examples.
Compare experimental results to appropriate theoretical models (analysis)	TEC 293 (40%)	Include additional instruction and in-class examples. Consider assessing more than one item to get more accurate and holistic assessment.
Offer explanations of observed differences between model and experiment (evaluation)	TEC 285 (52%)	Differentiate model part and calculate expected results before running the experiment.
Participates in the establishment of goals and workplan of the team.	TEC 130 (57%)	Increase Sample Size, Differentiate individual student participation to better assess completion., Clarify Project Deliverables (Rubric)
Contributes to the development of a collaborative team environment.	TEC 392 (78.6%)	Continue with the existing strategy
Encourages an inclusive team environment.	TEC 392 (78.6%)	Continue with the existing strategy
Exhibits dependability in the achievement of the team's goals.	TEC 392 (85.7%)	Continue with the existing strategy

# Dept. of Technology 2022-2023 Learning Outcomes: B.S. in Engineering Technology

## Previous Engineering Technology Outcomes – Indirect Measurements

	Indirect Measurem	ents		
Engineering Technology Learning Outcomes The graduate will be able to:	Employer Survey 2013, 2014, 2015, 2016 (employers n=8, alumni n=10)	Senior Survey (n=12, Fall 2022/Spring 2023) (1.0 - 5.0 scale)	Alum Survey (n=11, 2015, 2016, 2017) (1.0 - 5.0 scale)	Planned Curricular Actions for Improvement (2022-2023)
1. Interpret and apply basic concepts of materials science such as strength of materials, structural properties, conductivity, and mechanical properties. Perform various non-destructive and destructive materials testing procedures.	5 meets expectations 0 below expectations 5 N/A	4.0	4.2	No action at this time. Objective and self-report measures all positive.
<ol> <li>Analyze and apply electrical, electronics, and programming logic principles within various automated manufacturing environments and applications such as industrial robotics, programmable controls, and other such systems.</li> </ol>	9 meets expectations 0 below expectations 1 N/A	3.8	3.9	No action at this time. Objective and self-report measures all positive.
<ol> <li>Working individually and as a team, monitor and control lean manufacturing processes or other industrial systems.</li> </ol>	8 meets expectations 0 below expectations 2 N/A	4.4	4.1	No action at this time. Objective and self-report measures all positive.
4. Select appropriate manufacturing processes for production applications such as forming, molding, subtractive and additive manufacturing, conditioning, joining, and finishing.	6 meets expectations 0 below expectations 4 N/A	4.1	4.3	No action at this time. Objective and self-report measures all positive.
<ol> <li>Utilize 2-D and 3-D computer-aided design systems to create designs and models for products, machines, jigs, fixtures, and other mechanical devices used in manufacturing environments.</li> </ol>	8 meets expectations 0 below expectations 2 N/A	4.5	4.5	No action at this time. Objective and self-report measures all positive.

# Dept. of Technology 2022-2023 Learning Outcomes: B.S. in Engineering Technology

		4 - at 3 - at 2 - bt	vell above averag bove average verage elow average vell below average	-	
*Direct Measurement Performance Benchmarks *Performance criteria: at least 75% average in each category indicates good achievement of the learning outcome.			ion benchmark a < 3.5/5.0 scale	•	Action benchmark for Employer Data < 75% "meets expectations" or above
<ol> <li>Demonstrate skills in project management, planning, and cost analysis.</li> </ol>	8 meets expectations 0 below expectations 2 N/A		4.2	N/A	No action at this time. Objective and self-report measures all positive.
<ol> <li>Read, interpret, and verify manufacturing documentation such as part prints, plans &amp; specifications, technical models, schematics and diagrams, production plans, tooling plans, quality plans, and safety plans.</li> </ol>	10 meets expectations 0 below expectations 0 N/A		4.4	4.5	No action at this time. Objective and self-report measures all positive.

	Direct Measurements	Indirect Measu	irements		
Graphic Communications Technology Learning Outcomes The graduate will be able to:	*Performance Criteria Evaluation	Employer Survey (n=8, 2018, 2019, 2020, 2021, 2022, 2023 (1.0-5.0 scale)	Senior Survey (n=12, Fall 2022/Spring 2023) (1.0 - 5.0 scale)	Alum Survey (n=3, 2015, 2016, 2017) (1.0 - 5.0 scale)	Planned Curricular Actions for Improvement (2023-2024)
1. Create and manage digital media content, including photographic, illustration, video, and animation.	(a) 94%	5.0 4 N/A	4.8	2.7	No action at this time. Objective and self- report measures all positive.
2. Develop production-ready graphic layouts for digital media, print products, and cross-media products like publications, packages, labels, and signage.	(a) 95% (b) 83.5%	5.0 1 N/A	4.8	3.0	For the Tec 352 project, one student did not complete. Most issues with the project revolved around the concept of technical layout. One student completed design of each page, including fonts, in Photoshop. Others did not leave margins for text. Basic compositional rules for text layout will be covered when assigning.
3. Participate productively in a range of graphic production processes, including printing (litho, flexo, digital), ePublishing, and website development.	(a) 76.75% (b) 88%	5.0	4.8	2.7	For the Tec 351 project, similar issues to the Tec 352 project above. One person did not participate, and many technical layout issues related to image resolutions and file formats. Basic compositional rules for text layout will be covered. Also, more variable text fields need to be added to documents for deeper personalization of mailer.
<ol> <li>Employ a technology management skill set, including project management, quality control, and business practices.</li> </ol>	(a) 97.5% (b) 94% pass rate	5.0	4.5	3.3	No action at this time. Objective and self- report measures all positive.
5. Learn independently within the context of the graphic communications discipline.	(a) 89%	5.0	4.8	3.3	No action at this time. Objective and self- report measures all positive.
6. Solve problems within the context of the graphic communications discipline.	(a) 87.7%	4.9	4.8	3.3	For the Tec 350 project, issues related to bleeds past cut lines and onto glue tabs,

		converting fonts to outlines, and orientation of graphics on package. A review of technical layouts will be covered when assigning the project.
Graphic Communications Technology Performance	Action benchmark for Survey	Action benchmark for Employer Data < 75% "meets
Benchmarks: 80% average on major integrative assignments.	Data < 3.5/5.0 scale.	expectations" or above.
	<b>7</b> 11 1	
#1 (a) Compositional Shooting Project related to image editing,	5 – well above average	
layout, and DAM (TEC 253)	4 – above average	
#2 (a) Omni-publishing production project related to print and	3 – average	
mobile magazine layout (TEC 358) (b) Integrative pre-press project (TEC 352);	2 – below average 1 – well below average	
#3 (a) Omni-publishing production project related to WordPress	1 – well below average	
website and Google News app (TEC 358) (b) Flexographic label		
printing (TEC 257)		
#4 (a) Packaging project related to project management (TEC 350);		
(b) Idealliance Print Planning & Estimating Certification Exam (TEC		
354)]		
#5 (a) Entrepreneurial Feasibility Study (TEC 356)		
#6 (a) Packaging project related to production (TEC 350)		

	Direct Measurements	Indirect Measurem	ients		
Sustainable and Renewable Energy Learning Outcomes The graduate will be able to:	*Performance Criteria Evaluation	Employer Survey 2015 - 2021 (employers n=13, alumni n=15)	Senior Survey (n=8, Fall 2022/Spring 2023) (1.0 - 5.0 scale)	Alum Survey (n=5, 2015, 2016, 2017) (1.0 - 5.0 scale)	Planned Curricular Actions for Improvement (2022-2023)
1. Describe the physical laws and resources that constrain our energy systems.	(a) 88.5% (b) 81%	13 meets expectations 2 N/A	4.8	4.8	No action at this time. Objective and self-report measures all positive.
<ol> <li>Define the operation of RE systems in terms of basic electrical and physical principles.</li> </ol>	(a) 100% (b) 100% (c) 96.4% (d) 89.8% (e) 90.4%	13 meet expectations 1 below expectations 1 N/A	4.6	4.4	No action at this time. Objective and self-report measures all positive.
3. Apply basic business, economic, and technical management principles in a variety of technical and non-technical contexts.	(a) 87.5% (b) 80.5%	14 meet expectations 1 below expectations	4.5	4.2	No action at this time. Objective and self-report measures all positive.
<ol> <li>Explain and defend their positions on energy/political/social issues.</li> </ol>	(a) 100%	12 meet expectations 3 N/A	4.8	4.8	No action at this time. Objective and self-report measures all positive.
<ol> <li>Design residential and commercial solar photovoltaic (PV) systems using renewable energy software</li> </ol>	(a) 86.6% (b) 86%	7 meets expectations 8 N/A	4.8	3.0	No action at this time. Objective and self-report measures all positive.
6. Analyze wind data using professional software.	(a) 78.8% (b) N/A – not completed in Fall '22 due to adjunct instructor	3 meets expectations 12 N/A	4.3	3.2	No action at this time. Objective and self-report measures all positive.
<ol> <li>Optimize renewable energy business decision- making.</li> </ol>	(a) 92%	11 meets expectations 4 N/A	4.1	3.6	No action at this time. Objective and self-report measures all positive.

<ol> <li>Develop a business case for a commercial RE project.</li> </ol>	(a) 97%	12 meets expectations 1 below expectations 2 N/A	4.3	4.0		is time. Objective and asures all positive.
*Performance Benchmarks		Action benchmark f Data < 3.5/5.0 scale	or Survey	Action bench Employer Da expectations	ata < 75% "meets	
Performance criteria: at least 80% averag category #1(a) Final Grade (TEC259); (b) TEST#1 (T #2(a) TEC 160 Assignment #3; (b) TEC 160 #5; (c) Average of TEC 259 Assignments #11 PV Workstation Labs – average score (TEC2 Wind Tunnel Lab (TEC258) #3(a)TEC 262 Assignment #2; (b) TEC 262 A #4 #4(a) TEC 160 Case Study Presentation #5(a) TEST#2 (TEC260) (b) TEST#3 #6(a) TEST#4 Wind Data Assessment (TEC2 Model Wind Turbine Project (TEC258) #7 (a) TEST#4 (TEC260) #8 (a) Final Grade (TEC 360)	EC160) Assignment 3 - #18; (d) 58); (e) Assignment	5 – well above average 4 – above average 3 – average 2 – below average 1 – well below average				

	Direct Measurements	Indirect Measure	ments		
Technology & Engineering Education Learning Outcomes The graduate will be able to:	*Performance Criteria Evaluation	*Performance as Classroom Teacher (2017, 2018) ISBE Overall Evaluation Data.	Senior Survey (n=4, Fall 2022/Spring 2023) (1.0 - 5.0 scale)	Alum Survey (No TEE graduates responded 2015, 2016, 2017)	Planned Curricular Actions for Improvement (2023-2024)
1. <b>The Nature of Technology</b> Technology and Engineering teacher education program candidates develop an understanding of the nature of technology within the context of the <i>Design World</i> .	(1) 100% TEC 101 (n=12) (2)100% Pass (n=9)	12/12 meets expectations	4.5	N/A	No curricular changes planned.
2. <b>Technology and Society</b> Technology and Engineering teacher education program candidates develop an understanding of technology and society within the context of the <i>Designed World</i> .	(1) 100% TEC 101 (n=12) (2)100% Pass (n=9)	12/12 meets expectations	4.5	N/A	No curricular changes planned.
3. <b>Design</b> Technology and Engineering teacher education program candidates develop an understanding of design within the context of the <i>Designed</i> <i>World</i> .	(1) 100% TEC 303 (n=8) (2)100% Pass (n=8)	12/12 meets expectations	4.5	N/A	No curricular changes planned.
4. Abilities for a Technological World Technology and Engineering teacher education program candidates develop abilities for a technological world within the contexts of the <i>Designed World</i> .	(1) 100% TEC 305 (n=9) (2)100% Pass (n=8)	12/12 meets expectations	4.5	N/A	No curricular changes planned.
<ol> <li>The Designed World Technology and Engineering teacher education program candidates develop an understanding of the Designed World.</li> </ol>	(1) 100% TEC 303 (n=8) (2)100% Pass (n=9)	12/12 meets expectations	4.5	N/A	No curricular changes planned.
6. <b>Curriculum</b> Technology and Engineering teacher education program candidates design, implement, and evaluate curricula based upon the <i>Standards for</i> <i>Technological Literacy</i> .	((3) edTPA not completed. (2)100% Pass (n=9)	12/12 meets expectations	4.5	N/A	No curricular changes planned.

Dept. of Technology 2022-2023 Learning Outcomes: B.S. Technology & Engineering Education

7. Instructional Strategies	(3) edTPA not	12/12 meets	4.7	N/A	No curricular cha	anges planned
Technology and Engineering teacher education	completed.	expectations	4.7	11/21		unges plumed.
program candidates use a variety of effective	(2)100% Pass	enpeetations				
teaching practices that enhance and extend	(n=9)					
learning of technology.						
8. Learning Environments	(3) edTPA not	12/12 meets	4.7	N/A	No curricular cha	anges planned.
Technology and Engineering teacher education	completed.	expectations				
program candidates design, create, and manage	(2)100% Pass					
learning environments that promote	(n=9)					
technological literacy.						
9. Students	(3) edTPA not	12/12 meets	4.3	N/A	Continue to exp	
Technology and Engineering teacher education	completed.	expectations				work with students in
program candidates understand students as	(2)100% Pass				a variety of real	-world settings.
learners, and how commonality and diversity	(n=9)					
affect learning. 10. <b>Professional Growth</b>	(3) edTPA not	12/12 meets	4.3	N/A	Encourage stud	ents to engage in
Technology and Engineering teacher education	completed.	expectations	4.5	11/2	professional opp	
program candidates understand and value the	(2)100% Pass	expectations			(conferences, w	
importance of engaging in comprehensive and	(n=9)				(conferences, w	orkbridgs, etc.)
sustained professional growth to improve the	( >)					
teaching of technology.						
*Performance Benchmarks:		Action benchmarl	k for survey	Action benchman	·k for	
(1) Course Grades – Pass Rate		data < 3.5/5.0 scal	e	employer data <	75% "meets	
					-	
(2) Teacher Licensure Exams (T&EE Content) – Stu	dents may have			expectations" or	above	
taken more than once.	-			expectations" or	above	
<ul><li>taken more than once.</li><li>(3) edTPA Scored Portfolio – On Pause due to the pa</li></ul>	-			expectations" or	above	
<ul> <li>taken more than once.</li> <li>(3) edTPA Scored Portfolio – On Pause due to the pa</li> <li>(4) Student Teaching</li> </ul>	-			expectations" or		
<ul> <li>taken more than once.</li> <li>(3) edTPA Scored Portfolio – On Pause due to the pa</li> <li>(4) Student Teaching</li> <li>Performance Outcomes Instructional Strategies</li> </ul>	ndemic				5 – well above a	
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<ul> <li>taken more than once.</li> <li>(3) edTPA Scored Portfolio – On Pause due to the pa</li> <li>(4) Student Teaching</li> <li>Performance Outcomes Instructional Strategies</li> <li>Outcomes 1- 5, 7, 8: These outcomes are accomplish varied pedagogical approaches and assessment strategiedTPA scored portfolio during student teaching. (T&amp;I</li> </ul>	ndemic ed by program fac ies for the classroo EE Program Goal	om/laboratory. Furth	er, this outcome	riate, proven, and is measured by the	5 – well above av 4 – above averag 3 – average 2 – below averag	ge ge
<ul> <li>taken more than once.</li> <li>(3) edTPA Scored Portfolio – On Pause due to the pa</li> <li>(4) Student Teaching</li> <li>Performance Outcomes Instructional Strategies</li> <li>Outcomes 1- 5, 7, 8: These outcomes are accomplish varied pedagogical approaches and assessment stratege edTPA scored portfolio during student teaching. (T&amp;I Outcomes 1-6, 8: This outcome is accomplished by page 100 page 1</li></ul>	ed by program fac ies for the classroo EE Program Goal 1 program faculty sta	om/laboratory. Furth l) lying current and pro	er, this outcome pactive in techno	riate, proven, and is measured by the logical,	5 – well above av 4 – above averag 3 – average	ge ge
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	Direct Measurements		Indirect Measurement	
M.S. Technology Learning Outcomes The graduate will be able to:	Course Experience	Comprehensive Experience	<b>ISU Alumni</b> <b>Survey</b> (n= 9, 2015, 2016, 2017) 1.0 - 5.0 scale	Planned Curricular Actions for Improvement (2023-2024)
1. Approach problems and challenges in a systematic way	Major Project in Research methods course. 100% pass rate (N=56)		4.1	No action at this time. Objective and self- report measures all positive.
2. Understand trends, issues and developments in area of specialization		Either write a research paper, complete culminating coursework experience, participate in TEC 404 or 400 or engage in an internship (n=64)	4.3	No action at this time. Objective and self- report measures all positive.
3. Demonstrate professional written and oral communication skills	Writing (including writing across disciplines and professional theme-based writing) has become a major part in the curriculum as demonstrated in writing Intensive courses such as: TEC 497 and TEC 430		4.2	No action at this time. Objective and self- report measures all positive.
<ol> <li>Effectively use current techniques and technologies of specialization</li> </ol>	Students apply state of the art software and technologies in specific areas of concentration. Specifically, statistics software and simulation software	Specialized external certifications	4.1	No action at this time. Objective and self- report measures all positive.
5. Function as a leader in your field		Student engaged in internship opportunity (n=19)	4.4	No action at this time. Objective and self- report measures all positive.
<ul> <li>6. Understand, evaluate and apply appropriate research</li> <li>Direct Measurement Performance</li> </ul>	All students engage in technical and academic writing in the core classes of the program.		4.1	No action at this time. Objective and self- report measures all positive.
pass rate	Denemmark: 90% mrst ume			

## **Program Goal Reports**

Computer Systems Technology Construction Management Engineering Technology Graphic Communications Technology Sustainable & Renewable Energy Technology & Engineering Education Graduate Program

## **Department of Technology** Program Goals and Plan of Work (2022-2023) **B.S. in Computer Systems Technology**

Mission: The mission of the program is to support the workforce needs of businesses developing or utilizing computer-related technology while enhancing critical thinking and professional skillsets of students.

	0 1				
CST Goals	Goal Alignment	Strategies	Plan of Work for 2022-2023		Re
1. Provide students with high quality educational experiences by featuring a modern, up-to-date curriculum that will develop technical knowledge and skills, and an understanding of project management while fostering attitudes necessary for successful professional roles in computer systems technology.	Educate Connect Elevate Illinois State Goal #1, 2 CAST Strategic Plan Goal #1 TEC Department Goal #1	<ul> <li>a. Maintain strong business and industry input to program curricula and facilities decision making.</li> <li>b. Maintain high quality curriculum and instruction.</li> <li>c. Maintain a high quality teaching laboratory to deliver program courses.</li> </ul>	<ul> <li>a. Program faculty meet regularly to review and update curriculum and teaching/learning facilities.</li> <li>b. Convene a CST Advisory Board Meeting in spring of each academic year.</li> <li>c. Conduct survey of graduating students, alums, and employers of graduates of the program to seek their feedback for program update.</li> <li>d. Conduct an annual CST program review for internal purposes.</li> </ul>	ton the sub and wai b. The acc from c. The	ching u include plan of omitted d the Co- iting for e progra creditati m ABE e CST 4 ring and
2. Recruit and graduate a diverse group of individuals to support the computer technology businesses in Illinois and throughout the United States.	Educate Connect Elevate Illinois State Goal #3 CAST Strategic Plan Goal #1, 6 TEC Department Goal #1	<ul> <li>a. Maintain sustainable enrollment in the CST program at ISU.</li> <li>b. Promote the program to diverse audiences of potential students.</li> <li>c. Promote scholarships to existing and potential students.</li> </ul>	<ul> <li>a. Continue to participate actively in Dept. Showcase and other recruiting events that bring high-school students, teachers, and counselors to campus.</li> <li>b. Establish communication with high school and community college instructors with the goal of recruiting students.</li> <li>c. Participate in recruiting events within ISU to facilitate internal transfers.</li> <li>d. Promote CST program to business and industry through alums of the program for support—probably to subsidize student membership in professional organizations</li> </ul>	and	forts we d to enc dents w ograms.
3. Provide opportunities for students to interface with businesses either developing or utilizing computer-related technology and services.	Educate Connect Elevate Illinois State Goal #2, 4 CAST Strategic Plan Goal #1, 6 TEC Department Goal #3	<ul> <li>a. Facilitate events that promote student interaction with businesses.</li> <li>b. Forge relationships with computing-related personnel in businesses.</li> </ul>	<ul> <li>a. Faculty invite business professionals into the classroom.</li> <li>b. Faculty visit with businesses who are hiring computer-related majors during ISU career events.</li> <li>c. Faculty encourage students to attend ISU career events.</li> </ul>	b. The	ssroom ofession perience ormatio chnolog curity ch embers a cy transi e facult idents w
4. Provide service to the computing field through applied research, consulting, and participation in professional organizations.	Educate Connect Elevate Illinois State Goal #2, 4 CAST Strategic Plan Goal # 3, 4	<ul> <li>a. Tenured or tenure-track faculty will engage in applied research.</li> <li>b. Tenured or tenure-track faculty members will maintain participation and leadership in relevant professional organizations.</li> </ul>	<ul> <li>a. Tenured or tenure-track faculty continue to present and publish applied research.</li> <li>b. Tenured or tenure-track faculty maintain membership in and serve in leadership roles in relevant professional organizations.</li> <li>c. Tenured or tenure-track faculty continue to promote student membership and involvement in relevant professional organizations.</li> </ul>	foll	e tenure lowing 1. As 2. Th In 3. In

## Report on POW 2022-2023 (November 2023)

gram faculty met regularly to discuss curriculum and updates. The discussions included changing the curriculum ude the new course of Cloud Computing as well and updating of study. This culminated to the change of program being ed and approved by the Department Curriculum Committee College Curriculum Committee. The changes are currently for approval at the University Curriculum Committee. gram faculty also discussed changing to the ABET ation and the work to align our student outcomes with those BET is underway.

Advisory Board Meeting has been convened each year in and we got valuable feedback from the board members.

tinued conducting surveys of graduating students.

were made to promote STEM education in local high schools ncourage underserved students to enroll. Additionally, female were encouraged to participate in technology-related

members invited different professionals to come to the m to talk to students about their experiences. Some of the onals were from Amazon Web Services who shared their nce with cloud-based solutions with students. The Chief tion Officer from the university's Central Information ogy area came to talk to students about the ever-increasing challenges they notice in their line of work. CST Board s also came to the classroom to talk to students about how nsitioned from being students into the workplace.

ulty encouraged students to attend ISU's career events. were encouraged in class and email reminders were also

- re-track faculty presented and published articles in the ng proceedings:
- Association of Computing Machinery
- The International Conference on Software Engineering and Information Management
- International Institute for Applied Knowledge Management

	TEC Department Goal #2	c. Promote student participation in professional organizations and community service activities.	d. Tenured or tenure-track faculty continue to promote student involvement in undergraduate research and publications	b. c.	Tenure-tra Associatic have also several pe Security ( The facult in the IEE membersh
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-track faculty have maintained memberships in the ation of Computing Machinery (ACM). Additionally, they so served as program committee members and reviewers for peer-reviewed journals including Information and Computer y (ICS) and Informing Science Institute.

culty continued to encourage and promote student membership EEE Student Club. The forums used to promote student rships included classrooms, emails, and open house events.

## Department of Technology Program Goals and Plan of Work (2022-2023) B.S. in Construction Management

<u>CM Goals</u>	Goal Alignment	Strategies	Plan of Work for 2022-2023	
1. <i>Student Learning</i> <i>Outcomes</i> : Continually improve the curriculum and provide students with high quality educational experiences that will develop technical and managerial knowledge and skills necessary for successful leadership roles in the construction industry.	<ul> <li>[Educate Connect Elevate 2018–2023]</li> <li>1. Enhance Strength and Stability <ul> <li>a. Ensure strong enrollment and student success.</li> </ul> </li> <li>3. Nurture Diversity and Inclusion <ul> <li>c) Advance learning experiences that help faculty, staff, and students succeed in a global society</li> </ul> </li> <li>[CAST 2019-2024] <ul> <li>1. Integrate relevant applied learning and technologies to provide an exemplary educational experience focusing on individual goals for both undergraduate and graduate students.</li> </ul> </li> <li>[TEC 2019-2024] <ul> <li>1. Provide state-of-the-art applied learning environments for undergraduate and graduate students in high-demand disciplines.</li> </ul> </li> </ul>	<ul> <li>a. Continuously improve the CM learning experiences for students and link program content closely to industry.</li> <li>b. Maintain an effective advisory board focused on continuous program improvement.</li> <li>c. Encourage all graduating seniors to acquire industry credentials such as AC and OSHA 30 hours training.</li> <li>d. Continuously improve the curriculum in alignment with ACCE standards.</li> <li>e. Encourage faculty and industry board members to attend professional meetings and accreditation visits to learn the latest in industry and academia</li> </ul>	<ul> <li>a. Incorporate new construction paradigms, technologies, and methods into existing courses (Faculty): adoption of Primavera P6 for construction scheduling in TEC 325 (Shim and Mallery); adoption of 3D scanning and Mixed Reality technologies in TEC 117 and TEC 217 (Xie).</li> <li>b. Conduct employer and senior surveys (Solanki).</li> <li>c. Provide research and unconventional learning opportunities to complement traditional education (Faculty).</li> <li>d. Arrange project tours and guest lectures (Faculty).</li> <li>e. Continue to evolve the Advisory Board to reflect the industry on a National and global scale representing industry insight that can guide the CM program to mold students best prepared to meet the challenges of today and adapt to the ever changing industry as they face the innovative curriculum, adaptable to the quick and dramatic changes in the industry and the revised ACCE outcomes for incorporation into next catalog (Faculty).</li> <li>g. Actively participate in ACCE meetings, committee/ accreditation activities. Faculty members attend ACCE meetings for accreditation training (Faculty).</li> </ul>	<ul> <li>a. All 20 S various incorpo</li> <li>b. Initiated TEC 21 Midwes TEC 29 (Sales M</li> <li>c. Both th (29 resp in the C</li> <li>d. Researcd students</li> <li>e. The Ad includin different</li> <li>f. CM stu changes Attende Virtuall Internat</li> </ul>
2. <i>Recruitment and</i> <i>Retention</i> : Recruit and graduate a diverse, high- quality cohort of individuals into the program to support the construction industry in economic development in Illinois and throughout the United States.	<ul> <li>[Educate Connect Elevate 2018–2023]</li> <li>1. Enhance Strength and Stability <ul> <li>a) Attract and retain exceptional faculty and staff.</li> </ul> </li> <li>2. Foster Innovation <ul> <li>a) Support academic program offerings to meet enrollment demand in current and emerging fields of study.</li> </ul> </li> <li>3. Nurture Diversity and Inclusion <ul> <li>a) Enhance diversity of faculty, staff, and student populations across the inclusion spectrum.</li> <li>b) Invigorate the campus community by providing a welcoming and inclusive environment.</li> </ul> </li> <li>4. Enrich Engagement <ul> <li>a) Foster partnerships offering collaborative and mutually beneficial opportunities.</li> </ul> </li> <li>[CAST 2019-2024]</li> <li>2. Foster a cohesive culture of diversity, inclusion, and equity that reaches all our students, faculty, and staff.</li> <li>4. Develop and maintain productive relationships with external constituencies.</li> </ul>	<ul> <li>a. Host career fairs and other promotional events.</li> <li>b. Promptly distribute job and internship opportunity announcements to students.</li> <li>c. Collaborate with other majors and RSO's.</li> </ul>	<ul> <li>a. Maintain community colleges-articulation agreements (Solanki).</li> <li>b. Host two Construction Management career fairs during the year (Fall and Spring semesters), (Jacobs &amp; Solanki) and provide opportunities for employers to visit throughout the year (Faculty).</li> <li>c. Distribute information on jobs, internships, scholarship, and CMSA activities in a timely fashion (Faculty).</li> <li>d. Connect employers and alumni in CM fields and share job related information with students. (Faculty)</li> <li>e.</li> </ul>	<ul> <li>a. Updated (Solanki)</li> <li>b. Career fa 52 (Sprin students.</li> <li>c. Distribut CMSA a email, an</li> </ul>

### Mission: Our mission is to be a "first choice" provider and center for construction education.

#### Report on Plan of Work 2022-2023

20 Students Learning Outcomes were directly assessed in ous CM courses. The direct assessment results were orporated in CM learning outcomes assessment. (Faculty). ated Mixed Reality technologies using a HoloLens device in C 217 class (Xie); Organized field trip to United Contractors west asphalt plant and Roanoke ready-mix concrete plant in C 292 (Solanki); Organized guest lecture of Mr. Sean Roche es Manager, Tensar) in TEC 224 (Solanki).

h the employer survey (19 responses) and senior exit survey responses) were administered, and the result was incorporated the CM learning outcome assessment (Solanki and Jacobs) earch opportunities for students (Xie advised 2 Interior Design ents and 1 Renewable Energy student over 4 different topics.) Advisory Board includes members from diverse backgrounds uding regional/national contractors and representatives from erent trades/sectors in the construction industry (Faculty) students learning outcomes were changed according to the nges made by the ACCE. (Faculty)

nded Mid-year annual ACCE meetings in Dallas, TX (Shim). ually attended and presented at the 59th ASC Annual mational Conference 2023, Liverpool, UK (Xie).

ted community colleges-articulation agreements as needed nki).

er fairs were hosted both in Fall and Spring with 57 (Fall) and pring) employers and around 122 (Fall) and 122 (Spring) nts. (Jacobs and Solanki).

buted information on jobs, internships, scholarship, and A activities in a timely fashion through class announcement, , and Facebook (Faculty).

	4. Promote a culture of respect and inclusion among faculty, staff, and students.			
3. <i>Professional Development</i> : Provide students with educational experiences necessary skills to successfully function in professional leadership roles in the construction industry and provide service to the construction industry through applied research, consulting/workshops, and participation in professional organization.	<ul> <li>[Educate Connect Elevate 2018–2023]</li> <li>2. Foster Innovation <ul> <li>b) Support advancement of research, creative works, and knowledge generation.</li> </ul> </li> <li>3. Nurture Diversity and Inclusion <ul> <li>c) Advance learning experiences that help faculty, staff, and students succeed in a global society.</li> </ul> </li> <li>4. Enrich Engagement <ul> <li>b) Involve more faculty, staff, and students in outreach, engagement, and research opportunities locally, regionally, and globally.</li> <li>c) Deepen student engagement in activities that prepare them for lifelong learning and success</li> </ul> </li> <li>[CAST 2019-2024]</li> <li>3. Support a workplace that facilitates and rewards faculty and staff excellence.</li> <li>4. Develop and maintain productive relationships with external constituencies.</li> </ul> <li>[TEC 2019-2024]</li> <li>2. Support and reward faculty and staff excellence.</li> <li>4. Enhance the effectiveness of the Department by strengthening engagement.</li>	<ul> <li>c. Maintain active student chapters that promote high levels of student interaction with industry.</li> <li>d. Tenure-Track/ Tenured faculty contribute at least 2 professional presentations and/or publications (including books, book chapters) annually.</li> <li>e. Provide industry workshops as appropriate (e.g. MCA, Laborers, Green Building training, etc.).</li> </ul>	<ul> <li>a. Facilitate student-led organizations and activities [CMSA:]</li> <li>CMSA Meetings – Monday monthly</li> <li>CMSA Executive Board Meetings - monthly.</li> <li>CMSA field trips – 1 or 2 per -year</li> <li>MCAA and NECA meetings for travel &amp; competition work</li> <li>MCAA Education Conference</li> <li>ASC Region 3 Conference and Student Competition (Commercial//Preconstruction), Downers Grove, IL.</li> <li>NECA student competition</li> <li>NAHB student competition</li> <li>ACI student competition (Solanki)</li> <li>Conduct applied research and professional development opportunities (CM Faculty).</li> <li>Connect with professional associations by attending their meetings (CM Faculty).</li> </ul>	a. Student- • CMS 1. Ma 2. 9/1 Pea attr 3. 4/2 Sta (Ja attr 4. N nd F. A 5. M (r m A 5. M (r m A 6. Sp attr Jus 7. Tw AS tea 8. Pro corb b. Conduct (CM Fac 6 ref book c. Students Above
4. <i>Internal and External</i> <i>Funding Support</i> : Through a combination of internal and external resources, maintain the funding necessary to support CM Program activities.	<ul> <li>[Educate·Connect·Elevate 2018–2023]</li> <li>3. Enhance Strength and Stability <ul> <li>c) Strengthen financial position</li> </ul> </li> <li>4. Enrich Engagement <ul> <li>a) Foster partnerships offering collaborate and mutually beneficial opportunities.</li> </ul> </li> <li>[CAST 2019-2024]</li> <li>4. Develop and maintain productive relationships with external constituencies.</li> <li>[TEC 2019-2024]</li> <li>4. Enhance the effectiveness of the Department by strengthening engagement.</li> </ul>	a. Promote and maintain multiple ways for industry to connect with and support the program.	<ul> <li>a. Evolve CM Annual Industry Partnership program. (Faculty).</li> <li>b. Host the CMSA Golf Outing the last Friday of April to maintain personal connections with CM alumni and industry leaders with proceeds to support the CM endowments (Jacobs).</li> <li>c. Monitor and promote CM Scholarships, both at TEC website and other regular and on-going scholarships (Faculty)</li> <li>d. Maintain ISU CM Alumni group on Facebook to keep alumni engaged and share job openings for experienced candidates (Jacobs).</li> </ul>	<ul> <li>a. CM Inc (Facult)</li> <li>b. Hosted persona proceec</li> <li>c. Monito website</li> <li>d. Mainta engaged prograr with Al</li> </ul>

ent-led organizations and activities were facilitated (Faculty). MSA Meetings – 2nd Mondays 6:30 pm monthly (Jacobs) Many Industry Partners as guest speakers throughout the year

- CMSA Board Meetings monthly (Jacobs)
- CMSA Field Trips 1 2 per year
- 9/16/22 \$250 Million -Proton Therapy Cancer Center OSF Peoria, IL – PointCORE – Tim Bassett (host) – 16 students attended
- 4/21/23 & \$119 Million Underground Parking Garage State of Illinois – Springfield, IL – River City Construction (Jason Love & Brady Messman Host) – 14 ISU CM students attended
- NECA National Convention Auistin, TX Students chose not to attend due to conflict with Homecoming – members FA22 Billie Epperson, John Taterra, Justin Jagiello, Grace Arveson, Liam MCCafferty, Stone Sowa, Marc Alejandro MCAA Annual Convention – FA 22 Student Summit (receive problem) – Boston, MA – attended by team members Miriam Zappa, Justin Jagiello, Luke Tempistini,
- Alexis Britton,
- Spring 23 MCAA National Convention Scottsdale, AZ attended by team members Miriam Zappa, Luke Tempestini, Justin Jagiello
- Two teams (Commercial and Preconstruction) participated in ASC region 3 competition and the Commercial competition team took the second place.
- Preconstruction team participated in the ASC region 6-7 competition (nationally open competition) (Shim)
- ucted applied research and professional development activities Faculty)
- refereed journal articles, 13 refereed conference proceedings, 0 pok chapters

ents attended meetings for professional associations. (Jacobs ve

Industry Partnership had 6 partners (>\$2,000) for 2022-23 ulty).

- ted the CMSA Golf Outing the last Friday of April to maintain onal connections with CM alumni and industry leaders with eeds to support the CM endowments (Jacobs).
- itored and promoted CM Scholarships through e-mails, TEC site, student-shared drive and during classes. (Faculty) ntained ISU CM Alumni group on Facebook to keep alumni
- ged and share job openings for experienced candidates. CM ram Facebook is updated regularly for successful interacting Alums and current students. (Faculty).

## **Department of Technology** Program Goals and Plan of Work (2022-2023) **B.S. in Engineering Technology**

Mission: The mission of the program is to prepare technically-oriented managerial professionals and leaders for business, industry, government, and education by articulating and integrating student experiences and core competencies in engineering technology

ET Goals	Goal Alignment	Strategies	Plan of Work for 2022-2023	Report on POW 20
1. Provide students with high quality educational experiences by featuring a modern, up-to-date curriculum that will develop the technical and managerial knowledge, skills, and attitudes that are foundational to success as ET professionals	ISU - Educate, Connect, Elevate Goal I. CAST Strategic Plan Goal I & II. TEC Department Goal 1.	<ul> <li>a. Maintain strong industry input to program curriculum decision making.</li> <li>b. Maintain high quality curriculum and instruction.</li> <li>c. Maintain modern ET labs.</li> <li>d. Maintain highly qualified faculty.</li> </ul>	<ul> <li>a. Conduct a least one advisory board meeting in the 2022/2023 school year.</li> <li>b. Measure student performance for outcomes assessment and revise instruction as needed.</li> <li>c. Attend professional development events, including ASEE regional and national conferences, ATMAE national conference, and industry trade shows.</li> <li>d. Update a 5-year equipment and facility plan and seek funding to modernize software and equipment.</li> <li>e. Work with the CAST office to pursue equipment donation opportunities.</li> <li>f. Investigate curricular changes required to pursue ABET accreditation.</li> <li>g. Purchase and install updated equipment in the CAT-IML.</li> <li>h. Recruit and hire replacement for retiring Dr. Devine.</li> <li>i. Revise ET leadership and operating procedures due to the retirement of Dr. Devine.</li> <li>j. Develop new teaching assignments due to retirement of Dr. Devine</li> </ul>	<ul> <li>a. Advisory board meeting was conducted.</li> <li>b. Student learning was assessed across administered during TEC 392</li> <li>c. Blunier, Williams, Aldeman, and Motor ASEE, IDEA, and ITEA conferences</li> <li>d. Ongoing effort</li> <li>e. Ongoing discussions</li> <li>f. Curriculum updated with MATH required g. Updated equipment in the lab</li> <li>h. Recruited Mr. Williams</li> <li>i. Revised ET leadership and operating Mr. Williams joined as a tenure facutor</li> </ul>
2. Recruit and graduate a diverse group of individuals to support companies and organizations that will employ ET professionals in Illinois and throughout the United States.	ISU - Educate, Connect, Elevate Goal I & III CAST Strategic Plan Goal I & II TEC Department Goal 1 & 3	<ul> <li>a. Maintain sustainable enrollment in the ET Program at ISU.</li> <li>b. Promote the program to diverse audiences of potential students.</li> <li>c. Promote industry-sponsored scholarships to existing and potential students.</li> </ul>	<ul> <li>a. Update the department Website focusing on developing attractive images of the ET labs.</li> <li>b. Post appropriate scholarship opportunities and support student efforts for scholarship awards.</li> <li>c. Pursue opportunities to interact with K-12 students and teachers.</li> <li>d. Monitor ET enrollments.</li> </ul>	<ul> <li>a. The ET pages on the department well</li> <li>b. Scholarship opportunities were advelowed on the competition was hosted by ET visited the robot and RE labs.</li> <li>d. ET applications and admissions were</li> </ul>

2022-2023 (November 2023)

ucted on February 24th 2023 oss all learning outcomes via the ET assessment Exam

Mohammed attended several development events including ces.

equirement

ng procedures. culty and for additional and hired adjunct faculty

vebsite were updated. vertised by email and personal contact with our students. ET faculty members. Area elementary school students

ere closely monitored.

<ol> <li>Provide opportunities for students to interface with ET professionals.</li> </ol>	Connect, Elevate Goal IV CAST Strategic Plan Goal I & II. TEC Department Goals 1 & 4.	<ul> <li>a. Facilitate events that promote student and faculty interaction with industry.</li> <li>b. Promote internship opportunities for ET students.</li> <li>c. Create and maintain relationships with companies and personnel that employ ET professionals.</li> </ul>	<ul> <li>a. Promote student involvement in the ET student organization.</li> <li>b. Promote student attendance at industry trade shows.</li> <li>c. Organize field trips to applicable companies.</li> <li>d. Invite ET professionals to visit classes.</li> <li>e. Maintain and establish new contacts with potential employers.</li> <li>f. Encourage students to pursue and secure internships.</li> <li>g. Help students locate internships/temporary job opportunities.</li> </ul>	<ul> <li>a. Students were encouraged to particip</li> <li>b. Trade shows were announced in sev</li> <li>c. Field trips: TEC 240 went to Zenteci Bridgestone and VRF State farm res</li> <li>d. TEC345 &amp; TEC263 had a guest spea</li> <li>e. ET faculty maintain regular contact facility in the summer of 2022</li> <li>f. Students are being encouraged to ge verified as a prerequisite to TEC392</li> <li>g. Emails are sent to the ET list serve a encouraged to attend the ISU career</li> </ul>
4. Provide service to companies and organizations that employ ET graduates through applied research, consulting/workshops, and participation in professional organizations.	ISU - Educate, Connect, Elevate Goal IV CAST Strategic Plan Goals IV TEC Department Goals 2 & 4	<ul> <li>a. Tenured or tenure-track faculty will engage in research and technology transfer activities that supports the industry.</li> <li>b. Tenured or tenure-track faculty members will maintain participation and leadership in relevant organizations, boards, or committees.</li> <li>c. Promote student organization participation in industry or community service activities.</li> </ul>	<ul> <li>a. Promote graduate assistantships to assist with faculty research and ET instruction.</li> <li>b. Conduct scholarly activities such as publishing peer reviewed manuscripts and completing research.</li> <li>c. Provide leadership in professional organizations.</li> </ul>	<ul> <li>a. ET students are encouraged by ET f</li> <li>b. Drs. Branoff, Aldeman, Mr. Willian Illinois academy of sciences</li> <li>c. Mr. Williams and Mr. Blunier are or board of directors for ITEA Dr. Mo of Sciences</li> </ul>
5. Maintain industry and ET alumni relationships in support of the Program.	ISU - Educate, Connect, Elevate Goal IV CAST Strategic Plan Goals IV TEC Department Goals 2 & 4	<ul> <li>a. Maintain information distribution to alums through the department newsletter and website.</li> <li>b. Encourage participation of ET alumni in homecoming events.</li> <li>c. Establish relationships with companies who employ ET professionals.</li> <li>d. Provide avenues for internship and graduate recruitment.</li> </ul>	<ul> <li>a. Contribute information to the Department Blog and ET website.</li> <li>b. Develop active participation with related companies.</li> <li>c. Investigate revised procedures to help students locate internships/temporary job opportunities.</li> </ul>	<ul> <li>a. ET events and news were forwarded</li> <li>b. ET faculty members maintain person</li> <li>c. This task is ongoing.</li> </ul>

cipate in the ET club

everal classes.

ech Manufacturing in Spring 2023 / Fall 2023, TEC 293 to research

beaker

ct with many employers. Had CAT-Decatur visited our

get work experience. Student work experience is being 92.

e announcing internship opportunities. Students were also er fairs.

F faculty to consider enrolling in the TEC MS program. ams presented at ASEE. Dr. Mohammed presented at

on the board of directors for IDEA. Mr. Blunier is on the Mohammed is the councilors at large for Illinois Academy

ed to Tec personnel to be posted. sonal contact with industry contacts.

## Department of Technology Program Goals and Plan of Work (2022-2023) B.S. in Graphic Communications Technology

Mission: The mission of the Graphic Communications	program is to support the human	resource needs of the graphic communic	ations industry while fostering the intellectual

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GCT Goals	Goal Alignment	Strategies	Plan of Work for 2022-2023	
1. Provide students with high quality educational experiences by featuring a modern, up-to-date curriculum that will develop the technical and managerial knowledge, skills, and attitudes necessary for successful professional roles in the graphic communications industry.	ISU - Educate, Connect, Elevate Goal I. <i>CAST Strategic Plan</i> Goals I & II. <i>TEC Department</i> Goal 1.	<ul> <li>a. Maintain strong industry input to program curriculum decision making.</li> <li>b. Maintain high quality curriculum and instruction.</li> <li>c. Maintain a cutting edge graphic communications lab.</li> <li>d. Maintain highly qualified faculty.</li> </ul>	<ul> <li>a. Explore the possibility of acquiring a new hybrid digital/flexographic press to replace the Comco Cadet. Explore adding dye sublimation printing to the production lab.</li> <li>b. Assemble and conduct an advisory board meeting in Spring 2023 semester. Share information with the advisory board throughout the rest of the year, including this plan of work.</li> <li>c. Prepare and encourage students to take theses certifications: Adobe Certified Associate for Print and Digital Media Production (TEC 250), Autodesk Certified User in Maya (TEC 317), Idealliance Print Planning &amp; Estimating Digital Printing certification (TEC 354), Idealliance Fundamentals in Color Management Certification (TEC 353), Adobe Certified Associate in Visual Design Using Adobe Photoshop CC (TEC 253).</li> <li>d. Develop curriculum for 3D scanning and modeling for Tec 317.</li> <li>e. Install, train, and develop curriculum to include the donated software IC3D into multiple classes that could utilize the package design software.</li> <li>f. EFI Digital Storefront software was acquired by a new parent organization. Work with the organization to continue to receive a donation of the software and update curriculum as necessary.</li> <li>g. Work on acquiring a new imposition software. Kodak Preps is no longer donated to the program.</li> <li>h. Measure student performance for outcomes assessment 2022/2023 and revise instruction as needed.</li> <li>i. Conduct an employer survey in Summer 2023 to assess graduate performance according to program learning outcomes.</li> <li>j. Faculty development by attending professional development events, including Printing UNITED, FTA/InfoFlex, GCEA, and Label Congress.</li> </ul>	<ul> <li>a. A Mark And</li> <li>in the lab and t</li> <li>printer was insi</li> <li>in Tec 150.</li> <li>b. Advisory bo</li> <li>c. Students in t</li> <li>Print Planning</li> <li>Fundamentals of</li> <li>d. It has been de</li> <li>computer hous</li> <li>properly.</li> <li>e. IC3D softwat</li> <li>team and some</li> <li>to production.</li> <li>f. Donation of</li> <li>investigation n</li> <li>g. It was deterr</li> <li>software that a</li> <li>This software that a</li> <li>a. j. Multiple</li> <li>Ferguson</li> <li>Challenge</li> <li>FTA/Info</li> <li>GCEA Communication</li> </ul>
<ol> <li>Recruit and graduate a diverse group of individuals to support the graphic communications industry in Illinois and throughout the United States.</li> </ol>	ISU - Educate, Connect, Elevate Goals I & III CAST Strategic Plan Goals I & II TEC Department Goals 1 & 3	<ul> <li>a. Maintain sustainable enrollment in the GC program at ISU.</li> <li>b. Promote the program to diverse audiences of potential students.</li> <li>c. Promote industry-sponsored scholarships to existing and potential students.</li> </ul>	<ul> <li>a. Review and update existing 2+2 articulation plans. Explore the options for including new community colleges.</li> <li>b. Post appropriate scholarship opportunities GLGA, FFTA, PGSF, SGIA, and support students' efforts for scholarship awards. Also, better promote departmental internal scholarships.</li> <li>c. Review existing database of relevant high school programs and update. Print &amp; mail posters to high schools in Illinois. Develop a promotional piece that can be handed out to potential students highlighting the skills needed for the graphic communications industry.</li> <li>d. Provide in person tours to community colleges and high schools. Attend relevant community college and high school career fairs.</li> <li>e. Make multiple points of contact to all applicants to the GCT program.</li> <li>f. Work with admissions to better target potential students for the program</li> </ul>	a. The process b. A flyer was to our major. M Scholarships. T received an int c. Graduate ass school program promotional m The first editio program. Stude schools to pror d. Students from Burke and stud e. Graduate ass our program of a. f. A meetin program a University of the rest

### growth and professional development of students.

Report on POW 2022-2023 (November 2023)

ndy Digital Pro hybrid digital/flexographic press was installed I training received in Summer 2023. A dye sublimation installed in the lab and has been incorporated into course work

board meeting was held on April 21st, 2023.

n the Tec 354 and Tec 353 completed the Idealliance Digital g and Estimating certification and the Color Management is certification.

a determined we need to upgrade the hardware of the PC using the 3D modeling software in order for it to work

ware has been used by the Phoenix Challenge Competition ne use in Tec 350 for simulating coatings and finishing prior n.

of the EFI storefront software was secured for one year, needs to begin of acquiring a new digital storefront software. ermined the University has a site license for HP SmartStream allows for variable data printing and building impositions. e will take the place of Kodak Preps in Tec 352 and other ing to build impositions.

rformance was measured and corrective actions taken. overs returned evaluations for students who were hired for and full time positions.

ple students along with Burke attended Label Expo. Kalani on and Burke attended Printing UNITED, the Phoenix ge Competition Team, Calkins, and Burke attended foflex. Calkins attended the TAGA Conference and the Conference.

ss of updating 2+2 agreements has begun with ICC. s put together with links to all external scholarships relevant Multiple students received the PGSF and Printing UNITED . Two students received the FTA scholarship. One student internal department scholarship.

assistant Kalani Ferguson updated the list of relevant high ams in Illinois. The Tec 358 class and Calkins created a magazine for our program that will now be updated yearly. ion was sent to over 40 Illinois High schools promoting the dents from the Tec 358 class also visited their former high omote the program.

rom ICC and Morton East/West High Schools toured or lab. udents attended the Harper College Print Expo.

ssistant Kalani Ferguson reached out to admitted students to on multiple occasions to field any questions they had. eting was held with admissions advisors to promote our

n and discuss how we can attract undeclared students at the ity. The promotional magazine develop in Tec 358 was one esults from the interaction.

<ul> <li>students to interface with the graphic communications industry.</li> <li>4. Provide service to the GC industry through applied</li> </ul>	Connect, Elevate Goal IV CAST Strategic Plan Goals I & II. TEC Department Goals 1 & 4. ISU - Educate, Connect, Elevate	<ul> <li>and faculty interaction with industry.</li> <li>b. Increase internship opportunities for GC students.</li> <li>c. Forge relationships with graphic communications companies and personnel. Provide avenues for graduate recruitment.</li> <li>b. Tenured or tenure-track faculty will engage in research that supports the</li> </ul>	<ul> <li>speakers for multiple courses</li> <li>b. Burke and students will participate in the Careers in Corrugated teleconference, FTA InfoFlex, Printing UNITED Conference, and Label Expo</li> <li>c. Organize visitations to a wide variety of GC businesses.</li> <li>d. Make a focused effort to expand employment and internship opportunities for students.</li> <li>e. Compete in the Phoenix Challenge Competition</li> <li>f. Explore competing in the Printing United and PGSF design and print competitions.</li> <li>g. Continue to revitalize the Registered Student Organization through updating the constitution and providing new production opportunities.</li> </ul> a. Burke will participate in Printing UNITED, Label Expo, GCEA, GLGA, and FTA activities.	Imagine Chica site interviews b. FTA Infofle students. c. Field trips v d. Multiple org posted to Link emails receive e. Students con two awards fo f. John Underv his label, pack g. RSO is run regular meetin production the of labels and s a. a. Burke attend Activities. Cal
research, consulting/workshops, and participation in professional organizations.	Goal IV CAST Strategic Plan Goal IV TEC Department Goals 2 & 4	<ul> <li>c. Tenured or tenure-track faculty members will maintain participation and leadership in relevant organizations, boards, or committees.</li> <li>d. Promote Student organization participation in industry or community service activities.</li> </ul>	<ul> <li>b. Burke and Calkins will explore the option of hosting an in person GCEA Region One Spring conference</li> <li>c. Burke will judge the Skills USA competition</li> <li>d. Burke will run for Vice President of GCEA Region One</li> <li>e. Calkins will attend the Technical Association for the Graphic Arts International Conference and work towards developing research to present there the following year.</li> <li>f. Calkins is collaborating with other graphic professionals on a publication that impacts higher education and industry combined.</li> <li>g. Calkins will serve as a peer reviewer for a few journals in the higher education arena.</li> <li>h. The RSO will return to completing community service activities that have been dormant for a few years.</li> </ul>	<ul> <li>b. Plans were</li> <li>The event was</li> <li>c. Graphics red</li> <li>d. Burke served</li> <li>accepted the r</li> <li>e. Calkins atteed</li> <li>f. Calkins had</li> <li>Communication</li> <li>professionals;</li> <li>g. Calkins join</li> <li>Graphic Arts.</li> <li>h. Calkins rev</li> <li>journal as well</li> <li>Education Rest</li> <li>i. RSO did no</li> <li>period.</li> </ul>

en Bay Packaging, Johnson & Quin, Lightning Labels, and icago all gave in class presentations and some scheduled onws with students.

flex, Printing UNITED, and Label Expo were attended by

s were taken to Taylor Corporation and Huston Patterson. organizations provided on site interviews for students. Jobs nkedIn were forwarded to students from Burke along with ved from potential employers.

competed in the Phoenix Challenge Competition and received for best concept and design.

erwood won first place in the college awards for GLGA with ckaging, and POP project.

in by Calkins and Burke. The constitution was updated and tings were held for the organization. A new avenue of he student organization has been working on is the production

signage for other RSO's on campus.

ended Printing UNITED, Label Expo, GLGA, and FTA Calkins attended FTA and TAGA events.

re in place to host a GCEA regional conference in Spring 2023. ras cancelled due to lack of registered attendees.

related events were cancelled from Skills USA competition. ves as Vice President for GCEA for a two-year term. He also e role of education liaison to the Board of Directors to GLGA. ttended TAGA Conference and the GCEA Conference. ad a manuscript accepted for publication in the Visual tion Journal that was a collaboration with external graphics

s; it will be published in December 2023.

bined the Advisory Board for the Technical Association of the s.

eviewed manuscripts for the Research in Higher Education ell as served as a reviewer of proposals for the American esearch Association (AERA) international conference. not complete community service projects in this academic

## Department of Technology Program Goals and Plan of Work (2022-2023) B.S. in Sustainable & Renewable Energy

## Mission: The mission of the program is to prepare technically-oriented managerial professionals and leaders for business, industry, government, and education by articulating and integrating competencies in Renewable Energy

SRE Specific Goals**	Goal Alignment	Strategies	Plan of Work for 2022-2023	
1. Provide students with high quality educational experiences by featuring a modern, up-to-date curriculum that will develop the technical and managerial knowledge, skills, and attitudes that are foundational to success as SRE professionals.	ISU - Educate, Connect, Elevate Goal I. CAST Strategic Plan Goal I & II. TEC Department Goal 1.	<ul> <li>a. Maintain strong industry input to program curriculum decision making.</li> <li>b. Maintain high quality curriculum and instruction.</li> <li>c. Maintain modern SRE equipment and lab.</li> <li>d. Recruit and maintain highly qualified faculty.</li> </ul>	<ul> <li>a. Conduct at least one advisory board meeting</li> <li>b. Jin Jo and Matt Aldeman will attend at least one energy related conference.</li> <li>c. SRE faculty will maintain and updated RE lab equipment.</li> </ul>	<ul> <li>a. One advise</li> <li>b. Jin Jo and Conferenc the ASEE Division).</li> <li>c. We receive PV workst</li> </ul>
2. Recruit and graduate a diverse group of individuals to support companies and organizations that will employ SRE professionals in Illinois and throughout the United States.	ISU - Educate, Connect, Elevate Goal I & III CAST Strategic Plan Goal I & II TEC Department Goal 1 & 3	<ul><li>a. Maintain enrollment in the SRE Program at ISU.</li><li>b. Promote the program to diverse audiences of potential students.</li></ul>	<ul> <li>a. SRE faculty will host prospective students and their families for tours and information sessions.</li> <li>b. SRE faculty will work with RES to promote the program at energy-related events.</li> <li>c. SRE faculty will advise students from AAMS in Denmark and promote the exchange program to RE students.</li> </ul>	<ul> <li>a. SRE faculty events.</li> <li>b. SRE faculty example, Ga Baltimore, M competition c. Jin Jo mento the exchange</li> </ul>
3. Provide opportunities for students to interface with SRE professionals.	ISU - Educate, Connect, Elevate Goal IV CAST Strategic Plan Goal I & II. TEC Department Goals 1 & 4.	<ul> <li>a. Facilitate events that promote student and faculty interaction with industry.</li> <li>b. Promote internship opportunities for SRE students.</li> <li>c. Create and maintain relationships with companies that employ SRE professionals.</li> </ul>	<ul> <li>a. Actively promote involvement and advise the Renewable Energy Society (RES), an RSO.</li> <li>b. Promote student attendance at conferences and trade shows and energy-related events.</li> <li>c. Invite SRE professionals to visit SRE classes, or RES.</li> <li>d. Update the database of potential employers and initiate contact for graduate employment and student internships.</li> </ul>	<ul> <li>a. Both Jin Jo variety of R Tailgating).</li> <li>b. SRE faculty RES. Gabby Baltimore, I</li> <li>c. SRE faculty Sustainable between fal</li> <li>d. SRE faculty students.</li> </ul>

Report on POW 2022-2023 (November 2023)

sory board meeting was conducted in April 2023. nd Matt Aldeman attended the IEEE Green Technologies nce in Denver, CO in March 2023 and Matt Aldeman attended E conference (Energy Conversion and Conservation ived RAP funding and purchased new 12V batteries for the stations. ty hosted tours and information sessions via a variety of TEC ty promoted RES students to attend energy conventions. For Babby Hershey attended the 2023 ASEE conference in MD. SRE faculty also advised the Solar District Cup n group. ntored 3 SRE students who are interested in participating in ge program. Jo and Matt Aldeman worked with the RES members on a f RES activities (Solar District Cup, ASES, & Sustainable Ity promoted the energy related events and conventions to by Hershey attended the 2023 ASEE conference in e, MD. lty hosted a career forum (Feb 22), and also hosted a le Energy seminar series with five guest speakers spread fall and spring semester. lty provided job and internship opportunities to the SRE

4.	Provide service to companies and organizations that employ SRE graduates through applied research, consulting/workshops, and participation in professional organizations	<i>ISU - Educate,</i> <i>Connect, Elevate</i> Goal IV <i>CAST Strategic Plan</i> Goals IV <i>TEC Department</i> Goals 2 & 4	<ul> <li>a. Collaborate with renewable energy industry partners to support student research</li> <li>b. Tenured or tenure-track faculty members will maintain participation and leadership in relevant organizations, boards, or committees.</li> <li>c. Promote student organization participation in industry or community service activities.</li> </ul>	<ul> <li>a. SRE faculty will collaborate with industry partners to support faculty and student research.</li> <li>b. SRE faculty will work with industry partners to coordinate internship positions and promote student employment.</li> <li>c. SRE faculty will update SRE-related job and internship openings.</li> <li>d. SRE faculty will establish the Sustainable Energy Consortium (SEC).</li> </ul>	a. b. c. d.	Capstone g project inc. Office. SRE facult students. Same as th The SEC a
i.	Develop industry and SRE alumni relationships in support of the program	<i>ISU - Educate, Connect, Elevate</i> Goal IV <i>CAST Strategic Plan</i> Goals IV <i>TEC Department</i> Goals 2 & 4	<ul> <li>a. Maintain information distribution to alums through the department newsletter and website.</li> <li>b. Establish relationships with companies who employ SRE professionals.</li> <li>c. Strengthen relationships with alumni.</li> </ul>	<ul> <li>a. Provided updated information about the SRE program to program alumni.</li> <li>b. SRE faculty will build and maintain relationships with industry partners through industry energy-related events.</li> <li>c. SRE faculty will maintain relationships with SRE alumni via social media.</li> </ul>	a. b. c.	SRE facult SRE facult throughout event in Cl energy ind SRE facult

e groups worked with industry partners on their research neluding Normal Township and ISU Energy Management

alty provided job and internship opportunities to the SRE

the above

and its website have been established.

ulty provided program updates via social media e.g. LinkedIn. ulty led a sustainable energy-themed seminar series out the 2022-2023 academic year, and attended an alumni Chicago in June 2022, where many alumni are working in the ndustry.

ulty actively communicate with SRE alumni via social media.

## Department of Technology Program Goals and Plan of Work (2022-2023) B.S. in Technology & Engineering Education

	Mission: The mission of the Technolog	gy and Engineering Education Prog	gram at Illinois State University is to p	prepare the best, most q	ualified, technology	y and engineering education te
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T&EE Goals	Goal Alignment	Strategies	Plan of Work for 2022-2023	Report
<ol> <li>Provide and model appropriate, proven, and varied pedagogical approaches and assessment strategies for the classroom/laboratory</li> </ol>	ISU - Educate, Connect, Elevate Goal I. CAST Strategic Plan Goal I & II. TEC Department Goal 1.	<ul> <li>a. Continue to expand research-based pedagogical practices</li> <li>b. Continue to refine quality curricular materials and/or develop new courses for undergraduate and graduate programs</li> </ul>	<ul> <li>a. Continue to include and model pedagogical approaches pre-service teachers are observing in secondary school settings, including those from student teaching</li> <li>b. Implement changes to program curricula based on findings from the CPAST student teaching evaluation system.</li> </ul>	a. Continued to adap student teaching f b. Review new asses evaluation. CPAS implemented in th
2. Stay current and proactive in technological, pedagogical, curricular, and laboratory advances	ISU - Educate, Connect, Elevate Goals I & II. CAST Strategic Plan Goal I. TEC Department Goal 1	<ul> <li>a. Continue to redesign, reshape, and reconfigure state-of-the-art facilities based on technological literacy and the needs of the public schools</li> <li>b. Continue to expand research-based pedagogical practices</li> <li>c. Continue to refine quality curricular materials and/or develop new courses for undergraduate and graduate programs</li> </ul>	<ul> <li>a. Purchase laboratory equipment that relates to the scope and sequence of the program</li> <li>b. Continue to work with and utilize the technology and engineering education advisory board and ISBE on issues related to the public school setting</li> </ul>	a. Implemented upgr new software for t b. Working with fee Center to investig opportunities.
3. Provide educational opportunities for students to teach in a diverse classroom/laboratory	ISU - Educate, Connect, Elevate Goal III & IV CAST Strategic Plan Goal I, II, & IV. TEC Department Goals 1, 3, & 4.	<ul> <li>All teacher candidates are placed in school-based diverse settings for at least 50 hours prior to starting their student teaching experience</li> </ul>	a. Continue to work with Illinois school districts for pre-service placements that offer a diverse setting	a. All technology and diverse placement teaching, and also
<ol> <li>Provide professional development opportunities for technology and engineering education graduates</li> </ol>	<i>ISU - Educate, Connect, Elevate</i> Goal IV <i>CAST Strategic Plan</i> Goals I & II. <i>TEC Department</i> Goals 1 & 4.	<ul> <li>a. All <i>interested</i> teacher candidates, including members of the student-based Technology Education Collegiate Association (TECA) work with Pre-K through 12<sup>th</sup> grade students at local, regional, state-based contests and/or events</li> <li>b. TECA members participate in professional development activities at state-based and international conferences</li> </ul>	<ul> <li>a. Deliver summer coursework for practicing teachers</li> <li>b. Promote professional conferences to undergraduate and graduate students</li> <li>c. Continue undergraduate and graduate professional development by working with ISU-TEECA, Illinois TSA, and TEAI</li> </ul>	<ul> <li>a. TEC 310 and TEC undergraduate and online.</li> <li>b. Undergraduate stueducation associate</li> <li>c. Program faculty a candidates have w Illinois by hosting meetings.</li> <li>d. Undergraduate stu Technology and E Minneapolis, MN</li> </ul>

### teacher for the secondary school.

ort on POW 2022-2023 (November 2023)

lapt course curriculum based upon feedback from preg field experience and student teaching. sessment data from the CPAST student teaching AST is temporarily replacing edTPA and is first the fall of 2022.

ograded laboratory equipment and furniture including or the shopbot.

eedback from ISBE and the Lauby Teacher Education igate new ways of providing alternative licensure

and engineering education teacher candidates received ents during their 100-hour preparation before student lso during their student teaching.

EC 423 were offered during the summer to both and graduates students; both courses were delivered

students attended the state technology and engineering viation conference.

y and technology and engineering teacher education worked closely with the professional associations in ng events, judging events, and attending professional

students and faculty attended the International I Engineering Education Association conference in IN.

5. Continue to recruit and secure talented undergraduate students and graduate assistants	<i>ISU - Educate,</i> <i>Connect, Elevate</i> Goal I & III <i>CAST Strategic Plan</i> Goals I & II <i>TEC Department</i> Goals 1 & 3	<ul> <li>a. Recruit talented students into the TE program.</li> <li>b. Recruit and secure at the local and national levels talented graduate assistants to help with programmatic duties, as well as grant-funded activities</li> </ul>	<ul> <li>settings</li> <li>b. Disseminate print and electronic media to help with recruiting efforts</li> <li>c. Secure graduate assistants that would benefit from ISU's program</li> <li>d. When available, position graduate assistants on funded projects to assist in</li> </ul>	<ul> <li>a. Recruiting still re a regular basis to and engineering e schools and hoste We have had stro b. We continued to c. One graduate stue research activities</li> </ul>
6. Continue to have faculty leaders who are engaged in professional organizations and who serve in leadership capacities	ISU - Educate, Connect, Elevate Goal IV CAST Strategic Plan Goals III & IV TEC Department Goals 1, 2, & 4	d. Technology Education faculty hold state-based offices in professional associations and work with the national and international technology education- based organization on a regular basis	<ul> <li>a. Technology and engineering education faculty continue to hold departmental, university, state, and national leadership office positions</li> <li>b.</li> </ul>	<ul> <li>Drs. Chris Merr departmental, co committees invo and research.</li> <li>Drs. Chris Merr team for the Tec</li> </ul>
7. Promote the scholarship of teaching and learning by conducting research and publishing the findings in professional journals and delivering presentations	ISU - Educate, Connect, Elevate Goals II & IV CAST Strategic Plan Goals III & IV TEC Department Goals 2 & 4	a. Conduct, publish, and present scholarly work at regional, state, and international venues	<ul> <li>a. Technology and engineering education faculty continue to publish and present scholarly work at regional, state, and international venues that focus on the teaching and learning of STEM education.</li> </ul>	<ul> <li>Drs. Chris Merr engineering edu international lev</li> </ul>

## Technology & Engineering Education Specific Goals\*\*

The Technology & Engineering Education goals in this report are specific to the programmatic needs at Illinois State University. Although not present in the specific goals listed above, the goals of the accrediting bodies (NCATE/CTETE/ITEEA) are also included, i.e., (a) Technology & engineering teacher education program candidates develop an understanding of the nature of technology within the context of the Designed World; (b) Technology & engineering teacher education program candidates develop an understanding of design within the context of the Designed World; (d) Technology & engineering teacher education program candidates develop an understanding of the Designed World; (f) Technology & engineering teacher education program candidates develop an understanding of the Designed World; (f) Technology & engineering teacher education program candidates design, implement, and evaluate curricula based upon the national Standards for Technology & engineering teacher education program candidates use a variety of effective teaching practices that enhance and extend learning of technology & engineering teacher education program candidates understand students as learners, and how commonality and diversity affect learning; and (j) Technology & engineering teacher education program candidates understand and value the importance of engaging in comprehensive and sustained professional growth to improve the teaching of technology

remains the number one activity program faculty do on to increase the number of candidates in the technology g education program. Program faculty visited high sted events to increase the enrollment in the program. rong recruiting classes the past three years. o disseminate recruiting materials.

tudent was hired to assist with program teaching and ies.

rrill and Josh Brown continue to hold national, college-level, and university-wide positions on volving teacher education, faculty/program assessment,

rrill and Josh Brown both serve on the state leadership echnology Student Association.

rrill and Joshua Brown presented technology and ducation/STEM-related presentations at the state and evels.

# Department of Technology Program Goals and Plan of Work (2022-2023) M.S. in Technology

Project Management Goals	Goal Alignment	Strategies	Plan of Work for 2022-2023	Report on POW 2022-2023 (November 2023)
1. Provide students with high quality educational experiences by featuring a modern, up-to-date curriculum that will develop technical knowledge and skills, and an understanding of project management while fostering attitudes necessary for successful professional roles in a variety of industries using project management techniques.	<i>ISU - Educate, Connect, Elevate</i> Goal I. <i>CAST Strategic Plan</i> Goals I & II. <i>TEC Department</i> Goal 1.	<ul> <li>a. Maintain strong business and industry input to program curricula and facilities decision making.</li> <li>b. Maintain high quality curriculum and instruction.</li> <li>c. Maintain a high quality teaching laboratory to deliver program courses.</li> </ul>	<ul> <li>a. Program Faculty continues to have strong relationships with industry including numerous visits a year with potential employers for graduating students.</li> <li>b. Courses will continue to be fine-tuned. More guest speakers will be invited into a variety of courses, specifically TEC 430.</li> <li>c. Quality Management and Analytics will be reviewed and applied to practical environments, including companies feedback through advisory board.</li> <li>c.Provide more laboratory experiences in the graduate courses and allow 300 level courses as electives if student background or experiences are given.</li> </ul>	<ul> <li>a. Graduate faculty visited and worked with numerous potential employers and sponsors for internships.</li> <li>b. Local industry professionals participated in a variety of graduate courses.</li> <li>c. Quality management and analytics faculty collaborated with professionals in industry to receive feedback.</li> <li>d. Multiple discussions with sequences conducted to explore 300/400 level course changes.</li> </ul>
2. Recruit and graduate a diverse group of individuals to successfully engage in projects in a variety of industries in Illinois and throughout the United States.	ISU - Educate, Connect, Elevate Goals I & III CAST Strategic Plan Goals I & II TEC Department Goals 1 & 3	<ul> <li>a. Maintain sustainable enrollment in the Graduate program at ISU.</li> <li>b. Promote the program to diverse audiences of potential students.</li> <li>c. Promote scholarships to existing and potential students.</li> </ul>	<ul> <li>a. Recruitment to the program has been successful. A goal number of enrollment is about 70 students total.</li> <li>b. The program is already one of the most diverse graduate programs on campus. The program coordinator continues to recruit students from around the world and also diversify the local applicant pool.</li> <li>c. The list of available scholarships and tuition waivers has been posted online for the first time and will be promoted to all students. Also, diversity scholarships will be encouraged and linked to from our website.</li> <li>d. External Scholarship might be provided by some industrial partners of the graduate program.</li> </ul>	<ul> <li>a. Graduate program enrollment has maintained at 84 major students, in addition to students in the INTO program or other majors, such as economics or business.</li> <li>b. The graduate program is still one of the most diverse programs on campus and currently enrolls over 50% international students.</li> <li>c. Scholarships and tuition waivers are provided for many graduate students. The diversity scholarships have not been linked from our website.</li> </ul>
3. Provide opportunities for students to interface with businesses either developing or utilizing project management and quality management techniques and services.	ISU - Educate, Connect, Elevate Goal IV CAST Strategic Plan Goals I & II. TEC Department Goals 1 & 4.	<ul><li>a. Facilitate events that promote student interaction with businesses.</li><li>b. Forge relationships with</li></ul>	<ul> <li>a. Company recruiters (such as Allstate, NTT) will continuously be invited to meet and greet students. Potential employers will partake in student projects.</li> <li>b.Continue to build relationships with local industry to develop external assistantships.</li> </ul>	<ul> <li>b. Industry partners continue to recruit our students and work with them on internships.</li> <li>c. No external assistantships have been developed.</li> </ul>
4. Provide service to the a variety of industries through applied research, consulting, and participation in professional organizations.	ISU - Educate, Connect, Elevate Goal IV CAST Strategic Plan Goal IV TEC Department Goals 2 & 4	<ul> <li>a. Tenured or tenure-track faculty will engage in applied research.</li> <li>b. Tenured or tenure-track faculty members will maintain participation and leadership in relevant professional organizations.</li> <li>c. Promote student participation in professional organizations and community service activities.</li> </ul>	<ul> <li>a. Faculty involved with the graduate program continue applied research with local companies.</li> <li>b. More faculty will be involved with the graduate program.</li> <li>c. A graduate student organization will be revitalized.</li> <li>d. Graduate students are encouraged to attain certificates from a variety of spectrums and join professional organizations such as PMI.</li> </ul>	<ul> <li>a. Graduate faculty members have worked with local industry partners involving students in applied research.</li> <li>b. Multiple faculty taught graduate courses.</li> <li>c. The graduate student organization M.A.S.S. hosted multiple meetings with professionals from industry.</li> <li>d. Students have obtained industry certifications through TEC 404 and TEC 400 studies and in partial fulfillment of their graduate experience.</li> </ul>

## Senior Exit Survey Summary

The Senior Exit Survey is comprised of questions on a 5-point Likert-type scale investigating topics such as quality of instruction, advisement, laboratory facilities, and learning outcomes. There are also openended responses soliciting additional comments about the services and program offerings in the department.

Data were collected via a Web-based survey from all department program seniors graduating in December 2022 and May 2023, resulting in a sample of 75 responses.

The Senior Exit Survey form is presented followed by the results for the overall department and also by program/sequence. An average response of 4.0/5.0 suggested that students were satisfied with the quality of instruction. The overall average ratings over the past five years (2018 to 2023) have remained consistently high in this area.

## Senior Survey Form Example – Computer Systems Technology

#### **Department of Technology Senior Exit Survey**

As part of our continuous quality improvement process, we would like to know your perception of how well we have performed as a department and as an academic degree program.

This brief survey has two parts: (a) ratings of general perceptions about the department and its quality, and (b) ratings on how well you achieved the intended learning outcomes for your major. Anticipated time to complete the survey is about 10 minutes.

Thank you very much for your feedback on the quality of the Department of Technology and its programs of study!

#### Instructions for questions 1 to 8:

This section includes ratings of your perception about the Department of Technology and its quality.

1.	Overall, the quality of	of instruction in my TEC				
		Excellent	Good	Neutral	Fair	Poor
	Quality	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$
2.	TEC faculty expertise	e in their subject matte	r areas was:*			
		Excellent	Good	Neutral	Fair	Poor
	Expertise	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$
3.	Overall, the laborate	ory quality of my TEC co	ourses (machines, d	evices, computers, so	ftware) was:*	
		Excellent	Good	Neutral	Fair	Poor
	Lab Quality	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$
1.	Timeliness of the TE	C Advisement Office res	sponses to my inqui	ries was:*		
		Excellent	Good	Neutral	Fair	Poor
	Timely Advisement	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$
5.	My Tec Advisor's effe *	ectiveness in my Acader	mic planning was:			
		Excellent	Good	Neutral	Fair	Poor
	Advisement Expertise	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$
		s of my TEC major in ex	panding my career	options as:*		
5.	I rate the usefulness	. ,				

		Useful	osciui	ncutiui	0001000	Useless
	Career Options	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$
7.	I would recommend TEC	o a good friend or	family member.*			
		Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
	Recommendation	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$

8. Would you care to share any additional comments about your experiences with the Dept of Technology?

#### Instructions for questions 9 to 14:

#### Please indicate how well your degree program prepared you to perform each of the following.

9. I am able to apply the fundamental concepts of digital/analog signals and electronics to computer systems, networking, and media.\*

	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
Electronics Concepts	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$

10. I am able to use specifications and applications of computer components, network devices, and media in network administration.\*

	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
Network Administration	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$

#### 11. I am able to configure network operating systems and manageable network devices.\*

	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
Network Operating Systems	$\bigcirc$	$\odot$	$\bigcirc$	$\bigcirc$	$\bigcirc$

12. I am able to design database interfaces and utilize basic programming techniques for business applications.\*

	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
Databases	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$
13. I am able to use proj	ect management techr Strongly Agree	niques to develop s Agree	olutions, and address Neutral	s business issues to m Disagree	neet client needs.* Strongly Disagree
Project Management	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$

https://survey.lilt.ilstu.edu/TakeSurvey.aspx?PageNumber=1&SurveyID=72134782&Preview=true

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14. Please provide any feedback about the instruction and your learning related to your degree program.

. At what stage are you i	n finding a position i	n your major field?			
	Accepted an offer	Have tentative offer		Interviewing	Have no started searching
Job Search	$\bigcirc$	$\bigcirc$		$\bigcirc$	$\bigcirc$
If you are actively sear more than one)	ching for a job or hav	ve landed a position, w	hat has been r	nost helpful so far: (	you may answer
	ISU Career Services	ISU Career Fairs	eRecruiting	TEC Faculty Employer Contacts	My Own Searches (Websites, personal contacts, etc.)
Help in job search					
Name of employer			ployer:		
			ployer:		

https://survey.lilt.ilstu.edu/TakeSurvey.aspx?PageNumber=1&SurveyID=72134782&Preview=true

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# Summary of Senior Survey Results by Program and Overall

2022-2023 Senior Exit Survey Data Department of Technology Programs		1705/17(1)(1)(1)	Cocurt Subs.	198 Quarter March Coord	Antipition of the second secon	Acrisenter Construction	Major Creections	People Contract Contr	Trong the second	or Family
Construction Management	N	32	32	32	32					
	Mean	4.3	4.3	4.0	4.0					
	SD	0.8	0.9	1.0	1.0	1.1	0.7	0.8		
Computer Systems Tech	N	5	5	5	5	5	5	5		
	Mean	4.0	4.4	4.0	4.2			4.2		
	SD	0.7	0.5	1.0	0.4	0.4	0.4	0.4		
Engineering Technology	N	13	13	13	13					
	Mean SD	4.2 0.9	4.5 0.7	3.6	4.2 0.7					
	50	0.9	0.7	1.2	0.7	0.7	0.5	1.2		
Graphic Communications Technology	N	12	12	12	12	12	12	12		
	Mean	4.7	4.7	4.8	4.7	4.6	4.5	4.4		
	SD	0.5	0.5	0.5	0.5	0.7	0.5	0.7		
Sustainable & Renewable Energy	N	8	8	8	8	8	8	8		
Sustainable & Kellewable Ellergy	Mean	4.6	4.8	4.3	4.5					
	SD	0.5	0.5	1.0	0.8					
<b>Technology &amp; Engineering Education</b>	N	5	5	5	5	5	5	5		
	Mean	4.8	4.8	4.4	4.0	3.6	4.6	4.4		
	SD	0.4	0.4	0.5	1.2	1.7	0.5	0.9		
Department Total	N	75	75	75	75	74	75	75		
Department Total	Mean	4.4	4.5	4.1	4.2					
	SD	0.8								
		W		enchmark	<=3.5 on 5	- Point Sca				
	Scale		5			Strongly	Agree			
			4			Agree				
			3 2			Neutral				
		_	1			Disagree Strongly				
			T			Sciongly	Disayiee			

# Department & Support Services Comparison Over 5 Years

	PECQuality of,	PECSOLITY CHONGROUP	l'Éclabs	TECADUSEDIA	IECAONSON AND AFTICO	Career Options	Recommend r.		
Question #	1	2	3	4	5	6	7	N =	
TEC Avg 2022/23	4.4	4.5	4.1	4.2	4	4.5	4.4	75	
TEC Avg 2021/22	4.5	4.6	4.4	4.5	4.5	4.5	4.0	85	
TEC Avg 2020/21	4.3	4.4	4.1	4.6	4.6	4.3	4.3	78	
TEC Avg 2019/20	4.3	4.4	4.1	4.6	4.6	4.3	4.5	108	
TEC Avg 2018/19	4.3	4.4	4.2	4.5	4.4	4.6	4.3	106	
5 - Year Avg.	4.4	4.5	4.2	4.5	4.4	4.4	4.3	452	
		W	/eakness B	enchmark	<=3.5 on 5	- Point Sca	le		
	Scale		5			Strongly	Agree		
			4			Agree			
			3			Neutral			
			2			Disagree			
			1			Strongly	Disagree		

## Alumni Survey Summary

Each year, University Assessment Services conducts a survey of Illinois State University alumni one and five years out from graduation. An annual ISU Alumni Survey is conducted by the University Assessment Services (UAS). The department participates in the UAS survey, which includes general questions on perceptions of ISU, as well as a series of questions that correspond specifically to department programs and instruction. The UAS survey collection timeline has recently changed, and they collected multiple years of data during years 2015, 2016, & 2017. The results are reported in each of the program learning outcomes reports. Because the survey is conducted with graduates either one or five years after graduation, the results from the survey capture insight from graduates between the years of 2011 and 2016.