



K-State 2025 Strategic Action and Alignment Plan

College or Major Unit: College of Engineering

Department: Architectural Engineering and Construction Science

1. What are your Department’s mission and vision and how does your organization contribute to achieving the University’s and your College’s/Major Unit’s vision for K-State 2025?

Department of Architectural Engineering and Construction Science Mission Statement:

Our mission is to provide a learning environment of value to students and of benefit to industry, the academic community, and society as a whole. We are committed to focusing individual attention and resources to achieve the highest standard of excellence in undergraduate education for Architectural Engineers and Constructors. We strive to prepare our students for successful life long careers and to provide leadership in the industry with our educational programs. We promote excellence in faculty and student performance related to instruction, research, and service.

Department of Architectural Engineering and Construction Science Vision Statement:

The Kansas State University Department of Architectural Engineering and Construction Science will be a recognized leader in providing a quality education to prepare students for successful careers in their respective professions.

2. What are your Department’s key strategic activities and outcomes?

3. Identify [in brackets] which of your Department’s strategic outcomes are directly linked to your College’s/Major Unit’s outcomes. (If your Department or similar unit is not in a College or Major Unit, skip this question.)

Theme 1. Recruit and retain diverse academic achievers from both inside and outside Kansas to produce graduates who will take the lead in generating technological solutions for and new knowledge about tomorrow’s challenges.			
Key Activities	Short Term (2013 - 2015) Key Outcomes	Intermediate (2016 - 2020) Key Outcomes	Long Term (2021 - 2025) Key Outcomes
<i>What we plan to do...</i>	<i>What we expect to happen...</i>	<i>What we expect to happen...</i>	<i>What we expect to happen...</i>
(a) Undergraduate Students 1. Support programs to retain students with emphasis on students who are high-performing and/or from underrepresented groups 2. Enhance comprehensive advising programs and provide support at Department level 3. Increase undergraduate enrollment and number of engineering graduates 4. Provide opportunities for undergraduate research	A. Increase undergraduate enrollment from 587 (S13) to 662 [ENT1B]	A. Increase undergraduate enrollment to 737 [ENT1B]	A. Increase undergraduate enrollment to 756 [ENT1B]
	B. Increase engineering graduates from 128 (2012) to 144 [ENT1E]	B. Increase number of engineering graduates to 160 [ENT1E]	B. Increase number of engineering graduates to 164 [ENT1E]
	C. Improve freshmen-to-sophomore retention rate from 63% (F10 cohort, w/in Dept.) to 66%* [ENT1G]	C. Improve freshmen-to-sophomore retention rate (w/in Dept.) to 69%* [ENT1G]	C. Improve freshmen-to-sophomore retention rate (w/in Dept.) to 71%* [ENT1G]
	D. Define undergraduate research on departmental level and	D. Increase # of undergraduate students participating in research to	D. Increase # of undergraduate students participating in research

<p>(b) Graduate Students</p> <p>1. Focus on integrated B.S.-M.S. programs to promote graduate programs</p> <p>Note: Key Activities and Key Outcomes with quantifiable metrics are seen as strategic planning strategies and goals at this point in time and this is not intended to be a static document. Per COE direction, as plans move forward we plan to review and adjust the strategies and/or the goals accordingly.</p>	<p>increase # of undergraduate students participating as defined in research from 0 to 4** [ENT1H, ENT3I]</p> <p>*Goal based on attempt to match COE targeted % improvement</p> <p>**Current metric not defined within department therefore number is somewhat arbitrary</p>	<p>7** [ENT1H, ENT3I]</p>	<p>to 10** [ENT1H, ENT3I]</p>
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Theme 2. Provide outstanding and diverse faculty and technological facilities so students receive quality teaching and advising, enabling them to become problem solvers, leaders, and critical thinkers highly sought after by universities, industry, and the government.

Key Activities	Short Term (2013 - 2015) Key Outcomes	Intermediate (2016 - 2020) Key Outcomes	Long Term (2021 - 2025) Key Outcomes
<p><i>What we plan to do...</i></p> <ol style="list-style-type: none"> Recruit and retain outstanding faculty with teaching, scholastic, and professional excellence. Invest in upgrading classroom technology, classroom expansions, and new construction Hire additional faculty members to improve student-faculty ratio Provide incentives and opportunities for continuous development of faculty <p>Note: Key Activities and Key Outcomes with quantifiable metrics are seen as strategic planning strategies and goals at this point in time and this is not intended to be a static document. Per COE direction, as plans move forward we plan to review and adjust the strategies and/or the goals accordingly.</p>	<p><i>What we expect to happen...</i></p> <ol style="list-style-type: none"> Increase number of teaching recognition and awards at the college or university level from 1-2 in five year period to 2-3 in five year period [ENT2B] Reduce student-faculty ratio from 35 (S13) to 34 [ENT2D] Improvements in classroom infrastructure and facilities [ENT2E] 	<p><i>What we expect to happen...</i></p> <ol style="list-style-type: none"> Increase number of teaching recognition and awards at the college or university level from 2-3 in five year period to 3-4 in five year period [ENT2B] Continued improvement in student-faculty ratio to 32 [ENT2D] Improvements in classroom infrastructure and facilities with addition of 5,400 square feet space (3rd floor W Seaton) [ENT2E] 	<p><i>What we expect to happen...</i></p> <ol style="list-style-type: none"> Increase number of teaching recognition and awards at the college or university level from 3-4 in five year period to 4-5 in five year period [ENT2B] Maintenance of student-faculty ratio to 32 or below [ENT2D] Excellent and well-maintained learning environments [ENT2E]

Theme 3. Establish focused, high-impact, nationally recognized research programs and build a prominent faculty that will enhance the college's national and international reputation.

Key Activities	Short Term (2013 - 2015) Key Outcomes	Intermediate (2016 - 2020) Key Outcomes	Long Term (2021 - 2025) Key Outcomes
<p><i>What we plan to do...</i></p> <ol style="list-style-type: none"> Allocate resources to research Provide funds and other inducements to retain top-quality faculty 	<p><i>What we expect to happen...</i></p> <ol style="list-style-type: none"> Increase number of scholarly publications/presentations in journals and/or at conferences from 3 to 6* per year [ENT3A] 	<p><i>What we expect to happen...</i></p> <ol style="list-style-type: none"> Increase number of scholarly publications/presentations in journals and/or at conferences to 9* per year [ENT3A] 	<p><i>What we expect to happen...</i></p> <ol style="list-style-type: none"> Increase number of scholarly publications/presentations in journals and/or at conferences to 12* per year [ENT3A]

<p>3. Establish and maintain a diverse faculty</p> <p>4. Establish efforts for faculty to gain national honors and to contribute national service to government agencies and professional societies.</p> <p>5. Provide opportunities for undergraduate research</p> <p>Note: Key Activities and Key Outcomes with quantifiable metrics are seen as strategic planning strategies and goals at this point in time and this is not intended to be a static document. Per COE direction, as plans move forward we plan to review and adjust the strategies and/or the goals accordingly.</p>	B. Increase number of endowed chairs and professorships from 5 to 6 [ENT3C, ENT4B]	B. Increase number of endowed chairs and professorships to 7 [ENT3C, ENT4B]	B. Increase number of endowed chairs and professorships to 8 [ENT3C, ENT4B]
	C. Increase research expenditures from \$30K (FY12) to \$45K* [ENT3E]	C. Increase research expenditures to \$60K* [ENT3E]	C. Increase research expenditures to \$100K* [ENT3E]
	D. Define undergraduate research on departmental level and increase # of undergraduate students participating as defined in research from 0 to 4** [ENT1H, ENT3I]	D. Increase # of undergraduate students participating in research to 7** [ENT1H, ENT3I]	D. Increase # of undergraduate students participating in research to 10** [ENT1H, ENT3I]
<p>*Requires additional resources & some transition from current model of heavy teaching-focused appointments</p> <p>**Current metric not defined within department therefore number is somewhat arbitrary</p>			

Theme 4: Establish lifelong connections with alumni and capitalize on this network, corporate partnerships, and related research/scholarship within the college to strengthen the education experience, research/scholarship quality, and financial support of the college

Key Activities	Short Term (2013 - 2015) Key Outcomes	Intermediate (2016 - 2020) Key Outcomes	Long Term (2021 - 2025) Key Outcomes
<i>What we plan to do...</i>	<i>What we expect to happen...</i>	<i>What we expect to happen...</i>	<i>What we expect to happen...</i>
<p>1. Encourage faculty involvement that establish ties to industry, state agencies and alumni for the purpose of developing research, scholarship, and educational experiences for students and faculty</p> <p>2. Work with the College Development staff to strengthen ties with alumni and industries to garner funding</p> <p>3. Promote student connections with the college that foster long-term relationships after graduation via student clubs, events, and competitions</p> <p>Note: Key Activities and Key Outcomes with quantifiable metrics are seen as strategic planning strategies and goals at this point in time and this is not intended to be a static document. Per COE direction, as plans move forward we plan to review and adjust the strategies and/or the goals accordingly.</p>	A. Increase annual philanthropic gifts from \$460K to \$603K* [ENT4A]	A. Increase annual philanthropic gifts to \$769K* [ENT4A]	A. Increase annual philanthropic giving to 981K* [ENT4A]
	B. Increase number of endowed chairs and professorships from 5 to 6 [ENT3C, ENT4B]	B. Increase number of endowed chairs/professorships to 7 [ENT3C, ENT4B]	B. Increase number of endowed chairs and professorships to 8 [ENT3C, ENT4B]
	C. Increase in departmental scholarships to students from \$213K to \$256K* [ENT4C]	C. Increase departmental scholarships provided to students per year to \$313K* [ENT4C]	C. Increase departmental scholarships provided to students per year to \$356K [ENT4C]
	D. Continued support of 90-100 students participating in state, regional, and national student organizations and competitions [ENT4D]	D. Continued support of 90-100 students participating in state, regional, and national student organizations and competitions [ENT4D]	D. Continued support of 90-100 students participating in state, regional, and national student organizations and competitions [ENT4D]
	E. Increase department endowment from \$3.3M to \$4.8M* [ENT4E]	E. Increase department endowment to \$6.9M* [ENT4E]	E. Increase department endowment to \$8.6M* [ENT4E]
<p>*Goal based on attempt to match COE targeted rate of improvement</p>			

Theme 5. Prepare students and faculty for the changing global environment to create a culture of diversity, creativity, innovation, and entrepreneurship.			
Key Activities	Short Term (2013 - 2015) Key Outcomes	Intermediate (2016 - 2020) Key Outcomes	Long Term (2021 - 2025) Key Outcomes
<i>What we plan to do...</i>	<i>What we expect to happen...</i>	<i>What we expect to happen...</i>	<i>What we expect to happen...</i>
1. Promote internships that allow students to work in industry settings and gain real-world experience, both within and outside of Kansas	A. Continued support of Kansas industries participating in internship programs [ENT5C] B. Continued support of student internship programs [ENT5D]	A. Continued support of Kansas industries participating in internship programs [ENT5C] B. Continued support of student internship programs [ENT5D]	A. Continued support of Kansas industries participating in internship programs [ENT5C] B. Continued support of student internship programs [ENT5D]

4a. What resources and/or opportunities exist for your Department to achieve its vision and outcomes?

The major resource that the Department has is its dedicated faculty and staff.

4b. What resources and/or opportunities are needed for your Department to achieve its vision and outcomes?

To achieve the goals, the Department will need the following resources:

- Additional faculty lines (3 of 20 lines coming from funds from UEIA and matching tuition fee)
- Incentives to recruit and retain high-performing faculty including compensation packages, endowed chairs/professorships and startup packages (1 of 10 endowed chairs/professorships coming from UEIA match from private sources)
- Funds to expand scholarship programs (focus of the Capital Campaign)
- Funds to expand recruitment and retention programs (focus of the Capital Campaign)
- Improvements in facilities and research infrastructure (focus of the Capital Campaign)
- State and Foundation funds for scholarships
- Funds to hire instructors to enable research-active faculty to conduct more research (1 of 10 lines coming from funds from UEIA and matching tuition fee)

5. How do you propose to acquire the resources needed for your Department to accomplish its vision and outcomes?

We plan to acquire the resources as follows:

- Request central administration (through COE) for additional faculty and instructor lines
- Request central administration (through COE) for improvements in facilities and research infrastructure
- Pursue development opportunities to raise funds for scholarships and endowed positions
- Pursue grant opportunities to create a stable funding base for students
- Leverage UEIA funds to improve teaching and classroom facilities

Additional notes:

- Theme 1. B and E: Used UEIA baseline data at COE level.
- Data will be reviewed again after departments submit their plans and then adjusted accordingly.

**6. How does your plan link to the K-State 2025 University Benchmark Metrics, Common Elements, and Thematic Goals, Outcomes, and Metrics?
(See below)**

6. Departmental Links to K-State 2025 University Benchmark Metrics, Common Elements, and Thematic Goals, Outcomes, and Metrics

Links to Benchmark Metrics
B-1 - Total research and development expenditures B-2 - Endowment pool B-4 - Number of faculty awards B-6 - Freshman-to-sophomore retention rate B-7 - Six-year graduation rate B-8 - Percent of undergraduate students involved in research

Links to Common Elements
CE-1 - Communications and Marketing CE-2 - Culture CE-3 - Diversity CE-4 - External Constituents CE-5 - Funding CE-7 - Sustainability CE-8 - Technology

Links to University Thematic Goals, Outcomes, and Metrics			
Links to 2025 Thematic Goals and Metrics	Links to Short Term Outcomes (2011 – 2015)	Links to Intermediate Outcomes (2016 – 2020)	Links to Long Term Outcomes (2021 – 2025)
T1 - Research, Scholarly and Creative Activities, and Discovery (RSCAD) Theme 1 Metrics: T1-2 - Total sponsored extramural funding expenditures T1-3 - # of juried, adjudicated, or externally vetted performances, shows and designs	T1-A - Increased intellectual and financial capital to support RSCAD T1-F - Enhanced and systematic approach for UG research T1-G - Successful recruitment, retention, evaluation, compensation, and rewards strategies in place to support RSCAD needs T1-H - Enhanced visibility and appreciation for research, discovery, and scholarly and creative activities	T1-I - Intellectual and financial capital in place for expanded RSCAD efforts T1-J - Greater proportion of nationally and internationally recognized award-winning faculty in RSCAD programs T1-L - Recognized for prominent and productive placement of our graduates T1-M - Increased participation by undergraduates in expanded opportunities in research	
T2 - Undergraduate Educational Experience (UEE) Theme 2 Metrics: T2-3 - Total funding awarded for undergraduate scholarship support T2-4 - # and % of students participating in an undergraduate student success program	T2-A - Excellent, customized academic advising and services available to all students to support their success and degree completion T2-B - Engaged students benefitting from high impact educational practices used by excellent faculty and staff across the university T2-C - Increased participation by undergraduates in expanded opportunities for meaningful research	T2-I - Integrated learning communities experienced by students, faculty, and staff that promote student success within a culture of excellence T2-J - Excellent reputation for high quality teaching and advising that prepares students for their professional, community, social, and personal lives T2-K - Superior and diverse faculty recognized for teaching excellence	T2-O - An undergraduate educational experience recognized as one of the best among the nation's Top 50 Public Research Universities T2-P - Faculty teaching and advising awards comparable to our benchmark institutions T2-Q - Freshman to Sophomore retention ratios comparable to benchmark institutions

Links to University Thematic Goals, Outcomes, and Metrics			
Links to 2025 Thematic Goals and Metrics	Links to Short Term Outcomes (2011 – 2015)	Links to Intermediate Outcomes (2016 – 2020)	Links to Long Term Outcomes (2021 – 2025)
	<p>T2-E - Effective evaluation practices that recognize and reward teaching, advising, and life-long learning/professional development</p> <p>T2-F - Effective system in place that supports and promotes teaching excellence</p> <p>T2-G - Successful recruitment and retention strategies that address our entire student population</p> <p>T2-H - Improved six-year graduation rates and retention ratios</p>	<p>T2-M - Increased undergraduate contributions in the creation of scholarship through research</p> <p>T2-N - Ongoing improvement of six-year graduation rates and retention ratios</p>	<p>T2-R - Six-Year graduation rates comparable to benchmark institutions</p>
<p>T3 - Graduate Scholarly Experience</p> <p>Theme 3 Metrics:</p> <p>T3-1 - # and % of graduate students with assistantships, endowed scholarships, and fellowships</p> <p>T3-2 - Total funds awarded for graduate assistantships, endowed scholarships, and fellowships</p> <p>T3-6 - # of graduate terminal degrees awarded</p>	<p>T3-C - Engaged graduate students integrated in university life with enhanced visibility and appreciation</p> <p>T3-D - Outstanding mentoring for our graduate students</p> <p>T3-E - Expectation of excellence for the graduate scholarly experience</p> <p>T3-F - Increased capacity to secure funding for graduate research and teaching</p> <p>T3-H - Expanded partnerships with industry and government to provide high level learning and experiential training opportunities for graduate students</p>	<p>T3-J - Expanded reputation for outstanding graduates with the critical skill sets needed to excel in their careers in a global environment</p> <p>T3-K - Increased funding for graduate research and teaching</p> <p>T3-L - Increased number of nationally and internationally recognized award-winning graduate faculty</p>	<p>T3-N - National and international reputation for outstanding graduates with demonstrable career success</p> <p>T3-O - World-class reputation as a preferred destination for outstanding graduate students</p> <p>T3-P - Stable funding for graduate research and teaching competitive with benchmark institutions</p>

Links to University Thematic Goals, Outcomes, and Metrics			
Links to 2025 Thematic Goals and Metrics	Links to Short Term Outcomes (2011 – 2015)	Links to Intermediate Outcomes (2016 – 2020)	Links to Long Term Outcomes (2021 – 2025)
<p>T4 - Engagement, Extension, Outreach and Service</p> <p>Theme 4 Metrics: T4-1 - # and % of undergraduate students participating in engagement/service learning T4-5 - # of participants involved in community-based research and outreach projects</p>	<p>T4-A - Enhanced integration between academics and student service learning</p> <p>T4-B - Increased participation by undergraduates in expanded opportunities for meaningful Engagement experiences</p> <p>T4-D - Increased numbers and diversity of faculty and staff participating in Engagement</p> <p>T4-F - Recognition as leaders in Engagement within our state and nation</p>	<p>T4-H - Exposure on a national level as a leader/partner engaged in significant social, political, health, economic and, environmental issues</p> <p>T4-I - All undergraduate students engaged in at least one engagement /service learning project</p> <p>T4-K - Increased appreciation by K-State graduates for lifelong involvement in engagement and service</p>	<p>T4-N - Nationally recognized as a leader in and model for a re-invented and transformed land -grant university integrating research, education, and engagement</p> <p>T4-O - Nationally and internationally recognized as leaders in Engagement on a global scale</p> <p>T4-P - Recognized as a leader in Engagement reaching both rural and urban communities</p>
<p>T5 - Faculty and Staff</p> <p>Theme 5 Metrics: T5-2 - # and % of faculty with endowed chairs, professorships, and fellowships T5-3 - Competitive compensation packages for faculty and staff T5-5 - % of tenure/tenure-track faculty by demographic group T5-6 - % of fulltime staff by demographic group T5-7 - % of faculty and staff reporting satisfaction in the work environment</p>	<p>T5-A - Total compensation competitive with aspirant university and regional employers for faculty and staff in high priority areas</p> <p>T5-C - Career-long learning recognized by the university and its employees as a shared value and responsibility</p> <p>T5-D - Effective evaluation processes that result in accountable faculty and staff with a clear understanding of their job expectations and how they contribute to the University's mission</p>	<p>T5-E - Total compensation competitive with aspirant university and regional employers for all employees</p> <p>T5-F - Faculty and staff current with developments in their fields and the skills needed to achieve excellence in performing their jobs</p> <p>T5-G - Successful recruitment and retention of a talented and high performing, diverse workforce</p>	<p>T5-H - Talented and high performing, diverse workforce recognized for excellence and award-winning faculty and researchers</p> <p>T5-I - Stable funding available for recruitment and retention of top level faculty and staff</p> <p>T5-J - Optimal number of faculty and staff comparable with our benchmark institutions</p>
<p>T6 - Facilities and Infrastructure</p> <p>Theme 6 Metrics: T6-1 - # and % of technology enabled classrooms T6-2 - Total expenditures for physical facilities and infrastructure projects</p>	<p>T6-A - Responsive, timely, and strategic facilities services aligned with campus operational needs as well as future planning and implementation</p>	<p>T6-D - Adequate office space for all K-State employees equipped to support their work and productivity</p> <p>T6-E - Enhanced campus community experience and collaborative learning and working environments promoted by facilities that support</p>	<p>T6-G - High quality, technology enabled, flexible and adaptable classroom space appropriate to the evolving needs of the learning environment and readily available to K-State faculty and students</p> <p>T6-I - Well-maintained buildings,</p>

Links to University Thematic Goals, Outcomes, and Metrics			
Links to 2025 Thematic Goals and Metrics	Links to Short Term Outcomes (2011 – 2015)	Links to Intermediate Outcomes (2016 – 2020)	Links to Long Term Outcomes (2021 – 2025)
<p>T6-3 - Total annual expenditures for deferred maintenance</p> <p>T6-4 - Total funding available to support facilities and infrastructure needs</p> <p>T6-5 - % of faculty, staff, and students reporting satisfaction with facilities and infrastructure</p>		<p>multidisciplinary work and integrated interaction between students, faculty, researchers, staff, and administrators</p>	<p>utilities, IT infrastructure, and grounds consistent with the expectations and image of a highly ranked land grant research and teaching institution</p> <p>T6-J - An excellent campus community experience supported by facilities and landscapes that enhance social interaction, learning and collaboration</p>