



K-State 2025 Strategic Action and Alignment Plan

College or Major Unit: Arts & Sciences

Department: Statistics

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?

Vision: By 2025, the Department of Statistics will be recognized as one of the nation’s Top 50 departments.

Mission: The Mission of the Department includes (1) the pursuit of theoretical and applied research driven by novel data types that arise in a variety of scientific contexts and (2) the training and educating of future generations of statisticians through cutting-edge BS, MS and PhD programs.

Contributions to College & University 2025 Visions: The contributions of the Department include (1) enhanced Kansas State research in science and engineering through active collaboration and (2) communication of statistical thought through quality education in graduate and undergraduate service courses for the training of data scientists to help meet national and state initiatives on STEM workforce development.

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.)

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. Develop a marketing plan for the Department of Statistics.	A. The department will build on its reputation across campus as a resource for interdisciplinary research, and initiate development of a Center for Big Data Analytics. [College Themes I-A;X-C]	A. Develop corporate partnerships with bioscience firms in AHC & tech firms associated with NBAF, BRI for mutual scientific gains and enhanced research funding. [College Theme X-E]	A. Research funding will be increased commensurate with peers for a Top 50 program. [College Theme II-F]
2. Increase the focus on interdisciplinary research and high impact projects while not eschewing core statistical research.	B. Alumni, campus and professional organizations will be updated on the activities and contributions of the department to the profession. [I-A; VII-B]		
3. Create an enhanced undergraduate majors program.	C. A plan for majors / minors growth will be developed in year 1. [V-C; VIII-B]	C. Grow majors from current 15 to peer levels, offering UG research engagement. [V-E]	
4. Develop an improved program for quality graduate student recruitment, to include GTA and GRA recruitment.	D. A plan for enhanced recruitment of high quality graduate students will be developed in year 1. [VI-B,C,D]	D. Graduate program will grow from current 50 commensurate with peer levels. [VI-E]	D. Grow the PhD output from current levels (5/yr) commensurate with peers for a Top 50 program. [VI-G,H]
5. Streamline current DCE graduate offerings for efficient delivery and add offerings built around K-State 2025 directions.	E. Key strategic research strengths will be identified for new hires, including university cluster hires. [II-A,B;III-A;X-C]	E. Tenure track faculty lines will grow to 22. Research faculty will have a standard teaching load of 3 courses per year. [I-C]	E. Faculty numbers will grow commensurate with peer levels to accommodate instruction and research for a Top 50 program. [I-C]

<p>F. PhD level instructors hired for added focus on undergraduate and distance learning education. [VIII-B]</p>		
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4a. What resources and/or opportunities exist for your Department to achieve its vision and outcomes?

[In addition to the College general budget fund for current faculty/staff salaries and limited OOE resources, one of the more consistent sources of revenue has been the department’s distance learning program through DCE. University tuition and fees generated by the department through DCE are approximately \$1M, of which approximately 30% is transferred to the department and used for instructor salaries and added OOE. Further, the faculty has lines in funded grants totaling approximately \$3M, often as co-PI, co-Investigator, collaborator or consultant.]

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

[Faculty numbers at least approaching levels commensurate with the nation’s Top 50 programs (e.g. highly ranked Statistics departments, including Iowa State University and North Carolina State University among our peer institutions, have faculties with more than double the size of our department). To attract and retain quality faculty / staff / GTAs /GRAs requires competitive salaries / stipends relative to highly ranked public research universities. Importantly, quality space and infrastructure is also critical to bring talented personnel to the university. Such resources are necessary to align the department, which is the only academic Department of Statistics in the state of Kansas, with the nation’s highly ranked programs.]

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

[Along with critical revenue from the College, the department will continue its diligent efforts to secure external funding through high impact interdisciplinary and core research opportunities. With an entrepreneurial approach, the department proposes a re-structuring of the DCE distance learning program to improve its course offerings in a competitive market, anticipating a higher generation of funds to the university and a 50% transfer of such to the department, resulting in at least \$500K for added OOE and instructor salaries. Continuing the entrepreneurial approach, the department proposes to expand research and funding opportunities through corporate partnerships and development of a Center for Big Data Analytics for R&D and instructional purposes. Importantly, the department will work to connect with alumni and friends to enhance scholarship opportunities and faculty chairs. Currently, the department has approximately \$1.5M in bequests and / or endowed scholarships, critical for proposed growth in the undergraduate program and for enhanced graduate student recruitment.]

**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-5 - Number of doctorates granted annually B-8 - Percent of undergraduate students involved in research

Links to Common Elements
CE-1 - Communications and Marketing CE-4 - External Constituents CE-5 - Funding CE-7 - Sustainability

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>T1 - Research, Scholarly and Creative Activities, and Discovery (RSCAD)</p> <p>Theme 1 Metrics:</p> <p>T1-1 - # of interdisciplinary research projects, institutes, and centers</p> <p>T1-2 - Total sponsored extramural funding expenditures</p> <p>T1-4 - # of refereed scholarly publications per academic year and allocated faculty member</p>	<p>T1-A - Increased intellectual and financial capital to support RSCAD</p> <p>T1-B - More clusters/centers of collaborative RSCAD focus</p> <p>T1-D - Tuition waivers for all GRAs</p> <p>T1-E - Competitive compensation and support available to GRAs, GTAs, and GAs</p> <p>T1-F - Enhanced and systematic approach for UG research</p> <p>T1-G - Successful recruitment, retention, evaluation, compensation, and rewards strategies in place to support RSCAD needs</p>	<p>T1-K - Nationally and internationally recognized research centers</p> <p>T1-L - Recognized for prominent and productive placement of our graduates</p> <p>T1-M - Increased participation by undergraduates in expanded opportunities in research</p>	<p>T1-O - Extramural funding competitive with our benchmark institutions</p> <p>T1-P - Research and development expenditures competitive with benchmark institutions</p>

Links to University Thematic Goals, Outcomes, and Metrics

<p align="center">Links to 2025 Thematic Goals and Metrics</p>	<p align="center">Links to Short Term Outcomes (2011 – 2015)</p>	<p align="center">Links to Intermediate Outcomes (2016 – 2020)</p>	<p align="center">Links to Long Term Outcomes (2021 – 2025)</p>
<p>T2 - Undergraduate Educational Experience (UEE)</p> <p>Theme 2 Metrics:</p> <p>T2-3 - Total funding awarded for undergraduate scholarship support</p> <p>T2-4 - # and % of students participating in an undergraduate student success program</p>	<p>T2-C - Increased participation by undergraduates in expanded opportunities for meaningful research</p> <p>T2-D - Successful integration of undergraduate education and meaningful research is standard practice</p>	<p>T2-M - Increased undergraduate contributions in the creation of scholarship through research</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>T3-4 - # of private/public sector partnerships supporting graduate experiential training opportunities</p> <p>T3-6 - # of graduate terminal degrees awarded</p>	<p>T3-A - Competitive compensation and support available for GRAs, GTAs, and GAs</p> <p>T3-B - Tuition waivers for all GRAs</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-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-L - Increased number of nationally and internationally recognized award-winning graduate faculty</p> <p>T3-M - Increased number of Doctorates Awarded</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> <p>T3-Q - Doctorates Awarded comparable with benchmark institutions</p>

Links to University Thematic Goals, Outcomes, and Metrics

<p align="center">Links to 2025 Thematic Goals and Metrics</p>	<p align="center">Links to Short Term Outcomes (2011 – 2015)</p>	<p align="center">Links to Intermediate Outcomes (2016 – 2020)</p>	<p align="center">Links to Long Term Outcomes (2021 – 2025)</p>
<p>T5 - Faculty and Staff</p> <p>Theme 5 Metrics:</p> <p>T5-1 - # of national and international faculty awards</p> <p>T5-3 - Competitive compensation packages for faculty and staff</p>	<p>T5-A - Total compensation competitive with aspirant university and regional employers for faculty and staff in high priority areas</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:</p> <p>T6-1 - # and % of technology enabled classrooms</p> <p>T6-4 - Total funding available to support facilities and infrastructure needs</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 multidisciplinary work and integrated interaction between students, faculty, researchers, staff, and administrators</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, 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>

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)
			T6-K - Signature facilities that promote collaborative learning and working environments, multidisciplinary work, and integrated interaction between students, faculty, researchers, staff, and administrators