



K-State 2025 Strategic Action and Alignment Plan

College or Major Unit: Arts and Sciences

Department: Chemistry

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?

The mission of the Department of Chemistry is to create, accumulate and disseminate knowledge of benefit to the citizens of the State of Kansas, our country and the world. It does so through original research activity and subsequent publications and presentations; through quality instruction in classrooms and laboratories; through training of undergraduate, graduate and postdoctoral students; and through service to the profession, the University and the community.

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. Improve UG laboratory experience and equipment. (V, VIII)	Dedicated A&S instructional fee. [Themes I, IV, V, VIII in A&S plan]	Improved UG laboratory curricula with modern instrumentation. Increased student retention. Improved research infrastructure. [Themes I, IV, V, VIII in A&S plan]	Chemistry students will emerge as highly trained graduates actively sought by employers and graduate/professional schools. [Themes I, IV, V, VIII in A&S plan]
2. Improve graduate student stipends in order to attract higher quality students. (VI)	Stipend supplements from departmental resources will be expanded. [Themes I, II, V, VI in A&S plan]	Base graduate student stipends, funded centrally, will be raised to 95% of our peer group averages. [Themes I, II, V, VI in A&S plan]	KSU Chemistry will be recognized as a top destination for highly qualified entering graduate students. [Themes I, II, V, VI in A&S plan]
3. Expand faculty numbers in order to a) deal with increased enrollment pressures and meet the goals of the Engineering Initiative, and b) reinvigorate the successful Chemistry / Physics collaborations in nanotechnology that weakened after KJ Klabunde's retirement; c) position the department to contribute to a successful DOE or NSF research center proposal. (II)	Establish departmental criteria for tenure/promotion of a Chemical Educator. [Themes I, II, V, VI, VIII, X in A&S plan] Strive for at least 50% of new hires to be women or under-represented minorities. [Themes III, V, VIII, IX in A&S plan] Continue to explore opportunities for a joint hire with Physics in nano area. [Themes I, II, III, V, VI, VIII, X in A&S plan]	A talented tenure-track colleague in Chemical Education will have joined our faculty, begun collaborating with others in Physics, Math, etc., and will have elevated our department's instructional expertise. [Themes I, II, V, VI, VIII, X in A&S plan] Existing research ties and overlap with Physics will be strengthened and central support for the joint position will be secured. [Themes I, II, III, V, VI, VIII, X in A&S plan]	Chemistry and A&S will have a strong presence in a Center for Discipline-based Education Research that attracts extramural funding and provides benefits and opportunities for our students. [Themes I, II, V, VI, VIII, X in A&S plan] Our new colleague will represent a cornerstone in the effort to establish a Center for Nanotechnology at KSU. [Themes I, II, V, VI, VIII, X in A&S plan]

<p>4. Expand research and teaching space to a) facilitate interdisciplinary research (with Physics, BMB, Vet Med); b) create flexible classrooms suitable for guided-inquiry instruction; c) provide at least 10,000 sq ft of research lab space for 4 new colleagues and modern instrumentation in microscopy, laser spectroscopy, XRD, safe solvent drying etc. (IV)</p>	<p>The chemistry department will work with others in A&S and Central Admin to plan for the construction of a multi-disciplinary science building and of a multi-use general classroom building. [Themes I, II, IV, V, VI, VIII, X in A&S plan]</p>	<p>plan] Plans for the construction of both buildings will appear in the University's campus master plan. [Themes I, II, IV, V, VI, VIII, X in A&S plan]</p>	<p>Both buildings will be under construction. [Themes I, II, IV, V, VI, VIII, X in A&S plan]</p>
<p>5. Enhance compensation for non-tenure track colleagues (Instructors, Teaching Scholars, Glassblower, Electronics Tech., Lab Director, NMR and XRD senior scientists) using data from Univ. peer group institutions. (II)</p>	<p>Push to implement Professional Titles Workgroup recommendations. [Themes I, II, III, IV, V, VI, VIII, X in A&S plan]</p>	<p>Departmental promotion criteria for non-tenure track colleagues will have been established. [Themes I, II, III, IV, V, VI, VIII, X in A&S plan]</p>	<p>Stable, talented and fairly-compensated group of non-tenure track faculty and unclassified staff. [Themes I, II, III, IV, V, VI, VIII, X in A&S plan]</p>
<p>6. Develop Study Abroad opportunities. (X)</p>	<p>First students from Heriot-Watt University (Edinburgh) will enroll at KSU for their research year abroad. [Themes V, IX, X in A&S plan]</p>	<p>First KSU UGs will have had Study Abroad experiences at H-WU. [Themes V, VIII, IX, X in A&S plan]</p>	<p>Relationships with other universities (e.g., Zhejiang Sci-Tech University in Hangzhou, University of Nottingham, Nottingham Trent University) will be in place. [Themes V, VIII, IX, X in A&S plan]</p>

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

Departmental fund-raising efforts

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

Better support centrally for Chemistry in particular and Arts and Sciences in general

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

Working with other A&S departments and College of Engineering to allocate funds from State of KS Engineering Initiative in a manner that ensures support for Chemistry's role; broadcasting our successes and needs through the K-State Capital Campaign, seeking at least two endowed professorships, three endowed graduate student fellowships, an endowed technical support staff Excellence Fund, and a Research Equipment seed fund.

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-2 - Culture CE-4 - External Constituents CE-5 - Funding CE-6 - International 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)
<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-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-I - Intellectual and financial capital in place for expanded RSCAD efforts</p> <p>T1-J - Greater proportion of nationally and internationally recognized award-winning faculty in RSCAD programs</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-Q - Competitive amongst our peers in the percentage of undergraduates involved in research</p>
<p>T2 - Undergraduate Educational Experience (UEE)</p> <p>Theme 2 Metrics:</p> <p>T2-1 - # and % of undergraduate students participating in a meaningful international experience</p> <p>T2-3 - Total funding awarded for undergraduate scholarship support</p> <p>T2-5 - # of students awarded national and international prestigious</p>	<p>T2-B - Engaged students benefitting from high impact educational practices used by excellent faculty and staff across the university</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</p>	<p>T2-I - Integrated learning communities experienced by students, faculty, and staff that promote student success within a culture of excellence</p> <p>T2-J - Excellent reputation for high quality teaching and advising that prepares students for their professional, community, social, and personal lives</p> <p>T2-K - Superior and diverse faculty recognized for teaching excellence</p>	<p>T2-O - An undergraduate educational experience recognized as one of the best among the nation's Top 50 Public Research Universities</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)
scholarships	<p>practice</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>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>T3-3 - # and % of graduate programs offering competitive compensation and support packages</p>	<p>T3-A - Competitive compensation and support available for GRAs, GTAs, and GAs</p> <p>T3-D - Outstanding mentoring for our graduate students</p> <p>T3-F - Increased capacity to secure funding for graduate research and teaching</p> <p>T3-G - Broader spectrum and greater overall number of courses offered at the graduate, and especially at the PhD level</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-P - Stable funding for graduate research and teaching competitive with benchmark institutions</p>
<p>T5 - Faculty and Staff</p> <p>Theme 5 Metrics:</p> <p>T5-1 - # of national and international faculty awards</p> <p>T5-2 - # and % of faculty with endowed chairs, professorships, and fellowships</p> <p>T5-3 - Competitive compensation packages for faculty and staff</p> <p>T5-4 - # and % of faculty and staff participating in international</p>	<p>T5-A - Total compensation competitive with aspirant university and regional employers for faculty and staff in high priority areas</p>	<p>T5-E - Total compensation competitive with aspirant university and regional employers for all employees</p> <p>T5-G - Successful recruitment and retention of a talented and high performing, diverse workforce</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>

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)
experiences T5-7 - % of faculty and staff reporting satisfaction in the work environment			
T6 - Facilities and Infrastructure			<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-H - High-quality research laboratories and specialty spaces that enhance research and scholarly activities</p> <p>T6-K - Signature facilities that promote collaborative learning and working environments, multidisciplinary work, and integrated interaction between students, faculty, researchers, staff, and administrators</p>