



THE CARL R. ICE COLLEGE OF ENGINEERING BUILDING UPON UNDERGRADUATE EXCELLENCE

Do you remember the first time you stepped into Seaton, Durland, Rathbone or Fiedler Hall? Can you recall your first time in an engineering laboratory or collaborative space? Maybe you felt inspired to achieve new heights or even awestruck by this new world! Today, we invite you to consider investing in that experience for the next generation of engineers.

Kansas State University's engineering departments have a rich heritage of success and national recognition for producing well-prepared graduates who excel in engineering and science careers.

Our achievements are a direct result of the dedication of alumni and friends like you, who work together to promote educational excellence.

Your investment in facilities used for undergraduate education would have a tremendous impact on the Carl R. Ice College of Engineering's reputation and overall success. At the same time, you will join thousands of Wildcats who are investing in Innovation and Inspiration, the historic \$1.4 billion campaign to advance Kansas State University. Your gifts will bring our learning environments on a par with modern

requirements and ensure engineering students are well-prepared to embark on successful career paths.

**INNOVATION
&
INSPIRATION**
THE \$1.4 BILLION CAMPAIGN FOR K-STATE

The Innovation and Inspiration Campaign will raise \$1.4 billion to advance the initiatives of K-State 2025.

inspire.k-state.edu #KStateInspires

ENGINEERING FACILITIES INVESTMENT OPPORTUNITIES

Department of Computer Science (CS)

To keep up with the growing demand for core computer science courses, the department must upgrade its laboratory file system infrastructure, hardware, and virtualization and backup/disaster recovery systems.

These improvements will:

- Provide students more efficient and reliable access to state-of-the-art hardware and software used in their courses.
- Allow additional students use of our teaching laboratory facilities, both on and off campus.
- Ensure uninterrupted student learning in the event of major/minor disruptions.
- Enhance the overall learning environment of our teaching facilities.

Total funds needed: \$450,000

Department of Biological and Agricultural Engineering (BAE)

Transformation in engineering education seeks new ways to improve experiential learning through active learning and/or hands-on laboratory exercises. The Bio-Environmental Systems Teaching (BEST) Learning Center will enhance BAE's educational programs through creation of an innovative learning-centered environment with eight fully equipped teaching laboratory workstations and an active learning studio for collaborative work and team-based projects. The space will feature modern laboratory equipment and flexible classroom seating.

Impacts of the BEST Learning Center will:

- Enhance students' ability to use techniques and state-of-the-art tools necessary for engineering careers.
- Develop students' critical-thinking and problem-solving skills while promoting retention and inclusivity through collaborative academic and co-curricular activities.
- Increase undergraduate experiential learning opportunities and improve teaching facilities.

Total funds needed: \$450,000

Department of Electrical and Computer Engineering (ECE)

The new biomedical engineering degree program within the ECE department requires one teaching laboratory to accommodate the new BME courses. A 640-square-foot laboratory in Engineering Hall has been identified to be repurposed for this role.

This laboratory will:

- Support four different BME courses using this laboratory each year, with class sizes estimated to be at least 50 students for each.
- Continue providing state-of-the-art facilities for faculty and students.
- Provide an excellent facility for current students as well as a showcase for prospective students.
- Serve as a tool to help recruit excellent new BME faculty.

Total funds needed: \$500,000

Department of Industrial and Manufacturing Systems Engineering (IMSE)

To invigorate manufacturing education that will fortify engineering programs across the college, IMSE faculty members propose to build the K-State Manufacturing Innovation Laboratory. This will be a place where engineers from multiple disciplines collaborate to transform ideas into reality. It will inspire and incubate an entrepreneurial spirit.

The K-State Manufacturing Innovation Lab will:

- Enable the department to keep up with the growing demand for core manufacturing courses.
- Enhance the education of all industrial engineering students in most of the required IMSE courses.
- Provide student access to a new manufacturing group that will support senior design and competition team manufacturing needs, as well as entrepreneurship efforts.

Total funds needed: \$500,000

Tim Taylor Department of Chemical Engineering (ChE)

To ensure students continue to have opportunities for hands-on experiences with real chemical process equipment in a safe environment, the CHE department proposes the following upgrades to its teaching laboratories:

- Modernize process control systems with state-of-the-art instrumentation, such as Labview software, to control experiments involving liquid-liquid extraction, distillation and heat exchangers.
- Create a separate, well-ventilated room for experiments involving volatile/toxic components such as liquid-liquid extraction, distillation and a new fluidized-bed experiment.
- Refurbish laboratory space specifically for the Chem-E-Car undergraduate design team to include dedicated areas for its equipment, tools and supplies.

Total funds needed: \$500,000

GE Johnson Department of Architectural Engineering and Construction Science (ARE/CNS)

To keep pace with software and technology advancements/utilization in the industry, as well as meet the demand for a larger classroom space, the department has an urgent need for two improvements to its facilities:

1. Upgrade the estimating lab.
2. Convert the reference library and adjacent drawing room into a 72-seat classroom to fill the need for a larger lecture-style hall.

These improvements will:

- Replace the drawing tables in the current estimating lab with work stations to allow students to use laptop computers with dual-screen interface, better facilitating on-screen takeoff and other estimating software applications.
- Reconfigure the estimating lab, install a forced-air HVAC system and upgrade the finishes to improve acoustics and provide a more conducive learning environment.
- Provide a much-needed, larger classroom than our current space of 48-seat maximum capacity.

Total funds needed: \$506,000

Department of Civil Engineering (CE) — Environmental

To provide hands-on training in water, wastewater and biological analysis, combined with process engineering on par with current demand in federal, state and consulting research facilities, and to upgrade the physical infrastructure of the environmental engineering teaching labs, the department would be well served with specific additions of an autoclave, walk-in environmental chamber, and completely refurbished and expanded research and teaching labs.

These improvements will:

- Provide students with more efficient and reliable access to state-of-the-art laboratory facilities, preparing them for jobs in professional consulting and government careers.
- Enable higher classroom enrollments currently capped by limited infrastructure.
- Foster cutting-edge scientific research by ensuring the highest quality research methodology is employed.
- Enhance the overall learning environment of our teaching facilities.

Total funds needed: \$300,000

Alan Levin Department of Mechanical and Nuclear Engineering (MNE)

Solid mechanics and materials is a growing technical field in the MNE department. The department has hired several new faculty members who are expanding its teaching and research in this area at both nano- and macro-scales, and hence, the department is renovating its materials testing laboratory.

Improvements to the materials testing laboratory will:

- Provide students with reliable access to state-of-the-art equipment in their courses.
- Allow students use of hydraulic and electric load frames, impact and hardness testers, and treatment furnaces.
- Enhance the ability of undergraduate and graduate student teams to conduct meaningful experiments.

Total funds needed: \$350,000



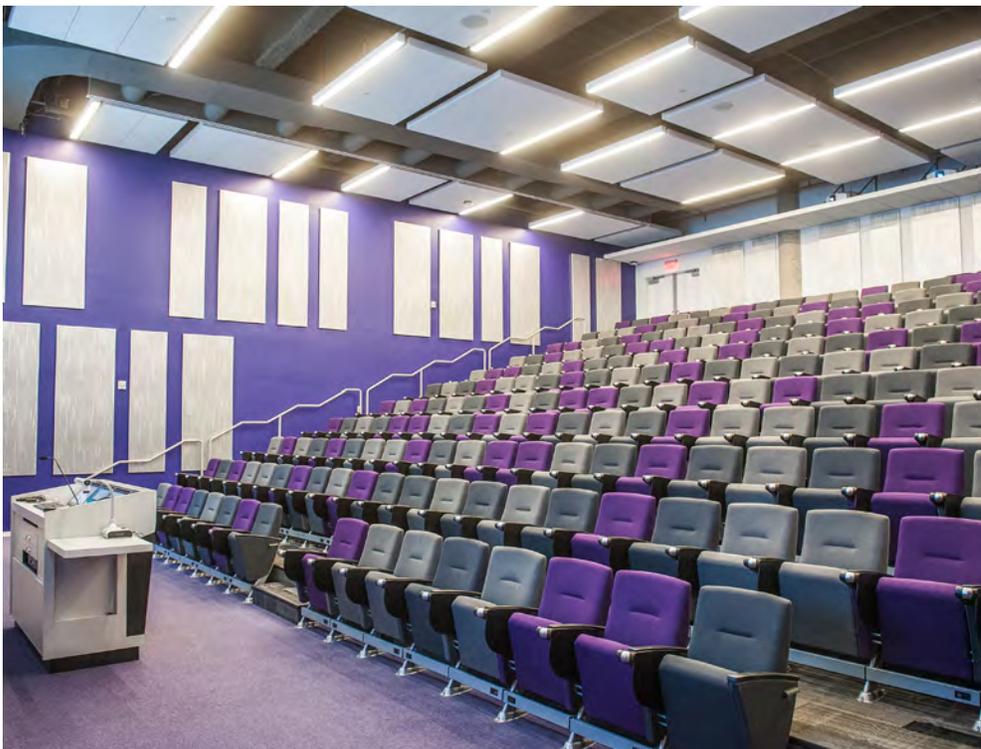
Building upon undergraduate excellence

To build upon our tradition of undergraduate excellence, K-State's engineering departments must continue modernizing their facilities to include state-of-the-art laboratories and advanced equipment for hands-on training.

Your investment in improved undergraduate learning facilities will:

- Ensure our continued output of well-prepared engineers and scientists.
- Advance the Carl R. Ice College of Engineering's vision to pursue excellence in all of its endeavors.

Please contact us today to discuss how your philanthropic priorities can align with departmental needs and advance the future of K-State, the engineering industry and the world.



Join us!

You can become part of our exciting future. We invite you to contact a member of our development staff today and begin the discussion about how you can make a difference.

For more information, please contact:



Gary A. Clark
Interim Dean
Carl R. Ice College of
Engineering
785-532-5590
gac@k-state.edu



Dana Hunter
Senior Director of
Development
Carl R. Ice College of
Engineering
785-775-2087
danah@ksufoundation.org



Jenna Brown
Assistant Director of
Development
Carl R. Ice College of
Engineering
785-775-2043
jennab@ksufoundation.org



Brett Seidl
Assistant Director of
Development
Carl R. Ice College of
Engineering
785-775-2051
bretts@ksufoundation.org



Gavin Hargrave
Development Officer
Carl R. Ice College of
Engineering
785-775-2047
gavinh@ksufoundation.org

**KANSAS STATE UNIVERSITY
FOUNDATION**

BOLDLY ADVANCING **K-STATE** FAMILY

1800 Kimball Avenue, Suite 200
Manhattan, Kansas 66502-3373
785-775-2000 • ksufoundation.org
engg.k-state.edu