State of Kansas partners with K-State engineering through University Engineering Initiative Act renewal

Over the last decade, the Carl R. Ice College of Engineering has used funding from the University Engineering Initiative Act to increase its number of engineering graduates as a way to fuel economic growth and business success in Kansas.

The program was so successful in meeting its goals, funding for a second 10-year program was signed into law by Gov. Laura Kelly in April and celebrated with a signing ceremony Oct. 18 alongside Matt O'Keefe, dean of the College of Engineering and LeRoy C. and Aileen H. Paslay chair, and other leaders in engineering from across the state.

"We are pleased to see the state legislature make another crucial investment in engineering education in the state of Kansas," O'Keefe said. "This partnership has already yielded many tangible benefits to both K-State and the Kansas economy, and we're certain the next 10 years will see a continued high demand for K-State engineering graduates at businesses and firms all over the state and the region."

The ceremonial signing took place on-site at the Topeka engineering firm Bartlett & West, with Gary Clark, senior associate dean, Stacy Hutchinson, associate dean for research and graduate programs, and Sue Peterson, chief government relations officer, joining O'Keefe for the event.

This legislation will support our state's tradition of churning out great engineers, and we'll encourage them to use and keep their talents right here in our state," Kelly said in a statement. "I want to thank the bipartisan coalition of legislators, stakeholders and businesses who worked with my administration to make sure this program remained strong and in place.

"My administration will continue to do everything we can to support engineering talent development at our universities and provide opportunities for engineering students to succeed."

The previous University Engineering Initiative Act saw K-State reach and exceed its portion of the overall goal to increase the number of engineering graduates statewide four years early in 2017. The college's 2020-2021 class of 675 bachelor's degree graduates exceeded the goal for the program by nearly 15%.

While the original act focused on increasing the number of engineering graduates in the state to 1,365 students per year, the objective of the current funding is to increase the number of engineers working and living in Kansas.

"We are excited about meeting the challenge of providing education to students who can then contribute to the Kansas economy for decades to come," O'Keefe said. "This program will help reinforce our already strong partnerships with Kansas companies that value the work that we do."

Like the original bill, the renewed University Engineering Initiative Act provides $105 million to K-State, Wichita State University and the University of Kansas over 10 years. Each institution receives $3.5 million per year and matches it with $3.5 million per year from non-state sources.
Rural Education Center receives grant for nearly $2.7 million to boost interest in STEM degrees, careers

The Rural Education Center in Kansas State University’s College of Education has been awarded a three-year U.S. Department of Defense grant for nearly $2.7 million to help mentor and promote science, technology, engineering and mathematics degrees and careers to seventh- through 12th-grade students throughout the state.

The project is part of more than $47 million in awards recently announced under the National Defense Education Program in STEM, Biotechnology and Enhanced Civics Education.

In partnership with the Center for Remote Sensing of Ice Sheets at the University of Kansas, the Rural Education Center plans to build upon the College of Education’s successful Summer STEM Institute to encourage middle and high school students in Kansas to consider careers in STEM through Project LEAPES, which stands for Learning, Exploration and Application for Prospective Engineering Students.

Spencer Clark, director of the Rural Education Center and associate professor of curriculum and instruction, said the primary goal of Project LEAPES is to engage students in awareness, exploration and preparation activities related to careers in aerospace engineering, artificial intelligence and computer science.

Project LEAPES will offer three programming phases: an awareness camp for seventh- and eighth-grade students, career exploration for ninth and 10th graders, and academic and career preparation for 11th and 12th graders. Nearly 3,000 students and 360 teachers are expected to take part in the project’s summer programs over the three years of the grant. Project LEAPES also will provide in-person and virtual opportunities for students, as well as professional learning sessions for teachers during the school year.

“We are excited to receive this grant to help further our growth in the Rural Education Center and continue to guide students in pursuing degrees in STEM,” said Debbie Mercer, dean of the College of Education. “Each summer, we witness the wonderful effects of the Summer STEM Institute and the passion that the Rural Education Center has for enhancing learning. Momentum is building through this grant award. I have no doubt we will continue to expand and impact more lives.”

This is the second grant that partners the Rural Education Center and the KU center. Both were partners on a National Science Foundation grant for a geosciences project.

K-State Salina campus enhancing its training aircraft fleet

Kansas State University Salina Aerospace and Technology Campus is taking another step forward in becoming a global aerospace leader by providing career-ready pilots.

The campus has added 17 new aircraft to enhance its fleet and provide students with a high-quality flight training program. These new planes were purchased from two well-known airplane manufacturers.

“This is a major step toward our vision to meet industry demands by providing students experience from a primary trainer all the way to a business-class

New $3.43 million NIH grant to create core research facility at College of Veterinary Medicine

Like a hub that connects the spokes of a wheel, the College of Veterinary Medicine is creating a new research center that brings together five highly focused laboratories at Kansas State University. The core laboratory is being made possible by a $3.43 million grant from the National Institutes of Health and will strengthen research efficiency and collaboration among K-State scientists and beyond.

The core-facility suite is the final element of a three-phase renovation at the College of Veterinary
airplane,” said Alysia Starkey, CEO and dean of K-State Salina.

The addition of the new aircraft allows for diverse training options with high-performance, complex, low-wing and high-wing planes, said Clinton Strong, head of the aviation department on the Aerospace and Technology Campus.

K-State Salina has purchased 10 new Cessna 172 Skyhawks with Garmin G1000 avionics from Textron Aviation that will be delivered during the first quarter of 2022. These planes will provide students with training in a top aircraft and bring the number of this model in the K-State fleet to 20. The increase helps accommodate the campus’s growing aviation enrollment.

Through its strategic partnership with Cirrus Aircraft, K-State Salina has purchased five new Cirrus SR20s featuring innovative systems, including electronic stability and protection and the Cirrus Airframe Parachute System, or CAPS, as an added protective layer for pilot and passengers. The campus will receive its first aircraft in the fourth quarter of this year and the remaining four aircraft in the second quarter of 2022. The addition of the high-performance Cirrus aircraft will provide students with the advanced-aviation training needed to become safe, professional pilots.

The campus also has added two more Beechcraft Baron G58s for complex, multi-engine training.

**Agricultural economics department awarded NIFA grant to develop farm and ranch transition center**

The agricultural economics department at Kansas State University was awarded a Beginning Farmer and Rancher Development Program grant through the National Institute of Food and Agriculture to establish the Office for Farm and Ranch Transition. The office will provide critical services for beginning farmers/ranchers in Kansas.

“As the average age of farm operators in Kansas continues to increase, we know many farm families will be looking to transition their operations in the near future, either to the next generation or to unrelated younger producers,” said Robin Reid, K-State extension farm economist. “We are extremely excited for our department to provide education and services specifically for transitioning farms and ranches and to assist beginning farmers and ranchers in being successful operators.”

The project will have three main objectives:

1. Development of a land-link program to introduce exiting landowners with beginning farmers/ranchers through an application and curated matching process.
2. Provide one-on-one technical services to facilitate transition of an existing farm/ranch operation.
3. Develop an extensive training program for beginning farmers/ranchers to master critical financial and business skills.

Medicine. Phase 1 delivered the Boehringer Ingelheim Auditorium adjacent to Mosier Hall — a 220 seat, contemporary educational space. Phase 2 became the Hill’s Pet Health and Nutrition Center for clinical training and community service, which occupies the first-floor space created by deconstruction of the outdated, two-story auditorium. Phase 3, the 5,000-square-foot research laboratory, will occupy the second floor of the old auditorium space.

“This new core research facility strategically combines five key disciplines: animal model/pathology, molecular and cellular biology, microscopic imaging, flow cytometry and cell sorting, and next-generation sequencing,” said Bonnie Rush, dean of the College of Veterinary Medicine.

The new research facility represents a critical component of the university’s research infrastructure to support infectious disease studies. It will provide direct support of K-State’s Center on Emerging and Zoonotic Infectious Diseases, or CEZID, which was created by an $11.3 million grant in 2020 through the NIH’s Center of Biomedical Research Excellence, and nearby federal facilities in Manhattan that include the U.S. Department of Agriculture’s National Bio and Agro-Defense Facility, or NBAF, and Arthropod-Borne Animal Diseases Research Unit.

“Kansas State University is poised to become the preeminent institution to advance the discovery and development of biosecurity strategies for emerging and zoonotic infectious diseases,” Rush said. “With the upcoming deployment of the National Bio and Agro-Defense Facility next to our college, K-State will be the only U.S. university with a full continuum of biosecurity level-1 through biosecurity level-4 facilities co-located on one campus. The new core laboratory will be an important resource for non-containment research.”

Currently, existing laboratories are isolated from each other, spread across three buildings and in some cases, hosted by individual faculty members, creating a burden for the host scientist and inefficient workflow for all parties, Rush said. Consolidating these individual facilities into a combined core will improve laboratory access, optimize research workflows and experimental outcomes, and provide coordinated training opportunities for students.

“Yet will give our university a modern biomedical research facility with advanced instrumentation and technical support to foster collaborative, transdisciplinary science across the university and beyond,” Rush said. “This is critical to promoting a robust research and training environment where researchers can answer the most challenging and urgent biomedical questions of our time.”

Rush said the latest NIH grant will support CEZID and collaborating scientists to advance the discovery and molecular characterization of infectious pathogens and diseases affecting animals and people.”

The newly funded, core-facility suite will assemble state-of-the-art technologies in a single location to facilitate the delivery of coordinated services for academic, corporate and federal researchers in imaging and molecular analyses, providing a complete range of services from whole tissues to
“The overall goal of this project is to equip beginning farmers/ranchers to be successful farm managers and provide resources and technical services that will enable opportunities for land access,” said Allen Featherstone, agricultural economics department head. “The land-link program will bring farm families together through the matching process, they will receive one-on-one technical assistance in developing their transition plans, and general education conferences on farm transition will increase farm financial knowledge and business skills.”

Partnering agencies for the office include Kansas Department of Agriculture, Kansas Bankers Association, Kansas Farm Bureau, Kansas Livestock Association, Kansas Farm Service Agency, Kansas Natural Resource Conservation Service and Kansas Grazing Lands Coalition.

As part of the more than $745,000 three-year grant project, the department is hiring a director for the center. The position is secured for three years with another three-year commitment by K-State Research and Extension to help support this program. Long-term plans are to make this a self-sustaining program.

single-cell nucleic acid analyses. Currently, CEZID has collaborative partnerships with the University of Missouri, Columbia; MRI Global in Kansas City, Missouri; and regional pharmaceutical companies in the Kansas City Animal Health Corridor, such as Boehringer Ingelheim Animal Health in St. Joseph, Missouri, CEVA Animal Health in Lenexa and Elianco Animal Health in Overland Park.

Rush said the proposed plan is to complete renovation and then occupy the consolidated biomedical core facilities by the 4th quarter of 2023.

(Note: The project as described in this announcement is supported by the U.S. Department of Health and Human Services, National Institutes of Health (NIH) under Award Number C06OD031987. The content is solely the responsibility of the authors and does not necessarily represent the official views of the NIH.)

**DID YOU KNOW?**

The team of Megan Klug, Britta Beesley and Ana Sank, seniors in K-State’s personal financial planning program, received second place in the national Financial Planning Competition.