

## K-State Cybersecurity Institute

### Problem/Issue Statement

Cybersecurity is a major concern across society today with regular cyberattacks on critical systems frequently in the news. Research efforts are needed that focus on the resilience of safety-critical infrastructures such as power, water, agricultural, medical devices, transportation, and smart cities. Safety-critical infrastructure requires expertise from the entire computer science department, including high assurance software, cyber-physical systems, data science, artificial intelligence as well as cybersecurity. To study “assured” artificial intelligence, researchers will identify security vulnerabilities in artificial intelligence technologies and develop revolutionary approaches to enhance current systems as well as construct future high-assurance AI systems from the ground up. Research in the resilience and security of cyber-social systems will focus on protecting human-centric and community-centric systems against manipulation through misinformation, disinformation, and mal-information. Privacy issues will also be critical, requiring investigation of models for secure and privacy-preserving computation in precision agriculture, social networks, and transportation systems.

### Request Description

To achieve this vision, K-State is requesting the development of the K-State Cybersecurity Institute (KCI). To support both education and research, a dedicated security laboratory must be built to hold ongoing research, projects, competitions, and physical models of cyber-physical infrastructures. Funding is required for acquisition and renovation of the facility, new equipment, offices, and furniture.

### Request Goals and Expected Outcomes

The goal of KCI will be to produce a 21st century cybersecurity workforce equipped with state-of-the-art knowledge and experience derived from cutting-edge research and hands-on projects. KCI will create and deliver cybersecurity education starting in high schools through graduate school by integrating cybersecurity courses into the existing Cyber Pipeline program. To produce highly trained cybersecurity researchers, KCI will shift existing MS and PhD computer science programs to focus on security of safety-critical infrastructure, artificially intelligent systems, and cyber-social systems. Industry sponsorship of internships and educational/research projects will be key.

### Appropriations Subcommittee

Commerce, Justice, Science, and Related Agencies  
Energy and Water Development, and Related Agencies  
Homeland Security

### Request Type

Funding Request  Bill Language Request