Critical infrastructure are the assets, systems, and networks, whether physical or virtual, so vital to the United States that their incapacitation or destruction would have a debilitating effect on security, national economic security, public health, or safety, or any combination thereof.

Modern control systems for critical infrastructure such as power grids, transportation systems, and communication networks are cyberphysical systems consisting of both software-enabled control systems and hardware execution components.

Cyberattacks on these electromechanical systems can have a significant impact on the secured operation of the overall control system.

TEXAS TECH faculty members reach for engaging ways to challenge students. Students will be engaged through interesting and challenging problems sets. The industry and government relationship will provide opportunities for field trips to observe cybersecurity in action and to meet the professionals in the field. Of most interest is sponsoring the students to participate in National cybersecurity competitions, such as the NYU-Poly Cybersecurity Awareness Week (CSAW) Competitions.

Put our services to the test, contact us for if you have any questions today.

Email: cybercritical@ttu.edu or www.orgs.ttu.edu/cybercritical
The interdisciplinary curriculum builds on the foundation provided by a recent National Science Foundation Scholarship for Service program Capacity Building track project at Texas Tech University for developing research and education in cybersecurity across the Departments of Electrical and Computer Engineering, Industrial Engineering, Mechanical Engineering, and Computer Science, as well as the School of Law.

**EQUIP YOURSELF** to combat the growing threat towards our national assets.

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**What can this certificate in cybersecurity for critical infrastructure do for me?**

Provide a wide variety of undergraduate / graduate electives, depending upon enrollment status, from which two courses are selected for the certificate.

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</table>

**What do I do first?** Contact a representative of the Cybercritical Project team. They can answer any questions and put you on the path to an exciting and engaging certificate program.

**THREE CORE COURSES**

- Cybersecurity for Information Systems
- Industrial and Networked Control Systems
- Introduction to Critical Infrastructure

- Select two electives from above either in your home department or other participating project departments

**SAMPLE CURRICULUM**

- μ-Controllers Laboratory
- Control Theory I
- Non-Linear Dynamics
- Control of Dynamic Systems Laboratory
- Feedback Control of Dynamic Systems
- Control of Dynamic Systems Laboratory
- Non-Linear Dynamics

“[The] United States [is] facing the possibility of a ‘cyber-Pearl Harbor’ and [is] increasingly vulnerable to foreign computer hackers who could dismantle the nation’s power grid, transportation system, financial networks and government” —Defense Secretary Leon E. Panetta

The U.S. needs critical human resources to combat growing cybersecurity threats, especially for our nation’s critical infrastructure.

**HYBRID ONLINE with Complete SUPPORT** In today’s world, you have access to an ocean of information. You’re connected 24/7. Sometimes it can be overwhelming. Let the faculty help you navigate through the seemingly perilous world of online education. Although this degree is fully online, we want to make it clear, you’re not on your own.