



**The Cybersecurity & Industrial Infrastructure Security Apprenticeship Program (CIISAp) –  
Building the Next Generation of Industrial Cyber Defenders**

*December 14, 2021*

The future depends on cybersecurity.

It's about more than the Internet. The systems that bring electricity, fuel, and water to millions of Americans count on smart devices. Industrial equipment, supply chain logistics, and remote work depend on secure networks.

Today, cybersecurity jobs that pay \$90,000 per year remain vacant, because there aren't enough experienced workers. These jobs often require familiarity with both cybersecurity and the operating technologies – turbines, pumps, and industrial equipment – that need to be secured. Industry surveys show that 56% of companies report being unable to execute on existing security plans due to workforce shortages, and training programs meet only 68% of the demand.

Every vacancy leaves our nation's industries and infrastructure exposed and at risk. That's why our organizations came together as founding members of the Cybersecurity & Industrial Infrastructure Security Apprenticeship Program (CIISAp).

We each bring differing perspectives to this challenge. Workforce training, education, equipment manufacturing, research and engineering, innovation, and front line operations. We share a commitment to creating an expedited pathway to cybersecurity professions.

We believe the right model should enable someone to start from zero experience and learn as they go, while earning. Those who have some experience should be able to start at a more advanced step. And everyone who graduates should have operational experience on current, cutting-edge technologies in real-world industrial and infrastructure systems.

To make this vision possible nationwide, we brought together organizations with strong regional ties, certification expertise, educational excellence, and demand for cybersecurity jobs. The founding members of CIISAp are:

Capitol Technology University  
ICS Village, Inc.  
Idaho State University (ISU)

MISI Academy  
Regional Economic Development for Eastern Idaho (REDI)  
SANS Institute  
Siemens Energy



In the coming months, we will collectively design and run an apprenticeship program that links rigorous academic classes and educational training with real-world job rotations at leading industrial companies.

Employers, starting with Siemens Energy, will interview and hire apprentices. Apprentices will begin employment by attending classes and trainings developed and led by nonprofit apprenticeship sponsors and academic institutions. Employers will pay for tuition and equipment needed for training. The program will be organized in two regions, the eastern and western U.S.

In the Eastern U.S., MISI Academy will serve as the apprenticeship sponsor, aligning academic programs with employer workforce needs, as well as recruiting employers and apprenticeship candidates. Capitol Technology University will develop and provide the academic curriculum for the apprenticeship program.

In the Western U.S., the nonprofit Regional Economic Development for Eastern Idaho (REDI) will serve as the apprenticeship sponsor, and Idaho State University will lead the academic programming.

Nationwide partners, SANS, GIAC and ICS Village, Inc. will provide additional specialized experiential training options and offer certification pathways to apprentices in both regions. Apprentices will have the opportunity to earn industry recognized certifications upon completion of the four-year program, having completed four years of work experience in parallel with two years of classroom experience



The first apprentice cohort will begin with the start of the academic year 22-23, in fall of 2022. By design, the program offers entry-level access to cybersecurity careers, with in-class training, on-the-job experience, access to mentorship, and opportunities to gain industry recognized certifications. During the apprenticeship, students will receive a progressive wage which increases as students clear academic and experience based milestones.

We recognize that this challenge is bigger than any of our organizations alone, and bigger than our founding members. That's why CIISAp is built to grow. We invite future partners – nonprofits, academic institutions, and cybersecurity employers – to join in our efforts. We ask that participating employers commit to providing mentorship, rotational roles aligned with the academic program, and competitive pay for new apprentices.

We believe that by establishing and scaling up an entry-level pathway into cybersecurity, we can prevent disastrous cyberattacks, and protect a prosperous future. Together, we will train the guardians of today's industries and tomorrow's innovations.

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Additional details:

For prospective CIISAp apprentices please see opportunities for fall 2022 [HERE](#). Interested employer organizations, academic institutions, and non-profits, should reach out to [john.ellis@siemens-energy.com](mailto:john.ellis@siemens-energy.com).

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