



NSF Project Embeds Employability Skills into Technical Instruction

Necessary Skills Now (NSN) is a project of the National Science Foundation's Advanced Technological Education (ATE) program designed to enhance employability skills instruction in technician education. The project is led by CORD in partnership with three ATE centers of excellence: The Center for System Security and Information Assurance (CSSIA), the South Carolina ATE National Resource Center (SC ATE), and the Florida Advanced Technological Education Center (FLATE.) The partners collaborated to identify practical solutions that could respond to increasing feedback from employers who cited a critical lack of employability skills in today's technical workforce.

Because the ATE program supports technician education at two-year colleges, the NSN partners were well-aware that community and technical college faculty understand the woes of employers but have no room in their curriculum to add content. The vision behind NSN is that faculty and employers would team up to develop curriculum modules integrating the employability skills in high demand by industry with the technical content already being taught in a course.

Two disciplines were targeted for development: Advanced Manufacturing (mechatronics) and Cybersecurity. Within each discipline, 12 subject matter experts (SMEs) were selected—6 faculty and 6 employers, for a total of 24 SMEs. Employers provided authentic industry scenarios to set the context for an integrated content module and faculty served as instructional designers. Teams of employers and faculty members developed workplace-relevant, classroom-ready modules that address one or more of

six employability skill categories. The skills were identified by the project partners through research and validated by a national advisory board of employers from both targeted sectors. The skills include:

teamwork, problem-solving, written and verbal communication, dependability/work ethic, and planning and organizing.

A Closer Look at the Cybersecurity Modules

Topics include:

- Product Analysis
- Incident Response
- Developing a Security Awareness Campaign
- Security Policies
- Physical Security



The *Incident Response Module At-a-Glance*:

Employability Skills: Teamwork, Problem Solving, Written Communications

The Scenario: A college CISO receives notice of a potential data breach finding copies of several students' credentials on a well-known black-hat website.

Activity: Student teams 1) review the organization's incident response policies, procedures, framework, and roles and responsibilities; 2) analyze the data and its impact, 3) develop an incident response questionnaire, and 4) complete an investigation report form documenting the breach.

In 2018, NSN is pilot testing modules and delivering faculty workshops to share its integrated curriculum development template and process for partnering with employers to create content. ***Incident Response* is available for [download now](#)**; the remaining modules in cybersecurity and advanced manufacturing will be posted this summer.

Learn More at www.necessaryskillsnow.org