Expanding Educational Opportunities for Nondestructive Testing Technicians

A dynamic partnership including the American Society for Nondestructive Testing (ASNT), the American Welding Society (AWS) Foundation, Chattanooga State Community College (CSCC), the National Center for Welding Education and Training (Weld-Ed), and Lorain County Community College (LCCC) has received a National Science Foundation Advanced Technological Education (NSF-ATE) grant for a three-year project to evaluate and standardize nondestructive testing (NDT) education in academic settings, increase general NDT awareness, and begin laying academic and experience roadmaps for the many career paths of NDT.

The project is based on a thorough assessment of the workforce needs for NDT Level I, II, and III technicians. Industry will be extensively involved in the project with two national industry associations taking lead roles. Project deliverables will be valuable to community colleges adapting and adopting new NDT courses and programs.

The goal that can change the trajectory of thousands

Expand educational opportunities for nondestructive testing professionals. With stackable certificates and degrees, proficient NDT technicians will be able to shape their careers to be most meaningful for them and their professional aspirations.

How partnership will meet this goal

Start where it makes sense – codify the skills required for NDT Level I technicians. There’s no better way to impact the likelihood of success of this endeavor than to fully understand the needs of our target audience. From there we will identify the present outcomes for NDT associates degree programs and explore tracks that path to and from NDT for the student to have the most robust education experience possible.

Project deliverables will be valuable to community colleges adapting and adopting new NDT courses and programs. Project will deliver comprehensive adaptable and adoptable best practices to assist community colleges in the design of the most meaningful NDT courses and programs preparing today’s workforce and beyond.

• Conduct NDT Level I, II, and III competencies analysis
• Develop competency models for NDT Level I, II, and III technicians
• Competency model validation by technical educators and industry partner institutions
• Identify student learning outcomes for an NDT associate degree
• Thorough review of existing college NDT program offerings
• Document resources required to implement an NDT courses and program

• Update and promote NDT teaching resources available at nde-ed.org

• Refinement of NDT Level I, II, and III technicians Industry Skills Report

• Augment existing Weld-Ed Module 7 on Nondestructive Testing

• Add NDT display to AWS Careers in Welding Mobile Exhibit

• Create NDT career pathways video series targeting a variety of populations

• Expand NDT awareness campaigns for students

Global Impact

NDT is the inspection of assemblies, structures, and components to find defects, corrosion, and damage without harming the item being inspected. Bridges, airplanes, buildings, amusement park rides, and pipelines are a few of the many things inspected using NDT. There will always be a need for NDT professionals to create a safer world. A solid foundation of technical education will allow the career agility and preparedness to pursue many paths within the NDT field. As the skilled workforce becomes increasingly more competitive, NDT professionals have a greater need to access and complete the most comprehensive education opportunities possible to meet the rising demand.

If you have questions, please contact any of the partnership contacts below.

Tracie Clifford
Chattanooga State Community College
Tracie.Clifford@ChattanoogaState.edu

Heather Cowles
American Society for Nondestructive Testing
hcowles@asnt.org

Michael Fox
Weld-Ed
mfox@lorainccc.edu

Rick Polanin
American Welding Society
foundation@aws.org
Project supported by National Science Foundation grant #1801010 ending June 2021. Any opinions, findings and conclusions or recommendations expressed in this material are those of the author(s) and do not necessarily reflect the views of the National Science Foundation.