

Evaluate Current NCFI Course Offerings and Develop Recommendations for Prerequisites and Post Curriculum Evaluations

Summary

Training provided to an existing workforce inherently is provided to students with varied backgrounds and preparation. This project is developing a pre- and post-training assessment to measure the knowledge and skills a student brings into the classroom, as well as the knowledge and skills they acquire during the training. This project is being developed specifically for the National Computer Forensics Institute (NCFI) and includes a CyberRange for safely training students on the handling and analysis of dangerous software.

Problem addressed

The National Computer Forensics Institute (NCFI) is in a unique position to facilitate the training of state and local officers from around the United States. However, this position carries unique challenges, one of which is the varied skill sets of those nominated for training. NCFI needs a platform to guide prospective students in selecting appropriate courses for their knowledge level. Additionally, if training materials lack a realistic reflection of procedures in the field, resources are used ineffectively as officers take more time to adapt and apply their training.

Approach

The Leahy Center at Champlain College is constructing a skills assessment platform for prospective NCFI students. Pre-training tests will benchmark knowledge and identify gaps. Post-training exams will assess newfound competencies. Results will be shared with participating universities college credit consideration. The Leahy Center is also developing a cyber range to provide realistic incident training scenarios in a safe but realistic environment.

Results

Pre-Training Assessments: The Leahy Center reviewed NCFI classes to document core competency requirements. Electronic pre-assessment tests were created using relevant competency groupings for three courses. Live testing of assessments are planned for January 2023 NCFI classes. **Post-Training Exam:** Using results from pre-assessments, a post-training exam is being designed to assess progress. A grading rubric will be created to accurately assess competency in the completed course material. Results will be available to higher education institutions for NCFI students to be considered for college credits. **CyberRange:** The Leahy Center is building a CyberRange and is prepared to host and manage the CyberRange infrastructure once it is operational. The operational CyberRange will provide remotely accessible lab environments, full on-call support, and training for instructors and researchers.

Anticipated Impact for DHS

By partnering with The Leahy Center – an academic institution specialized in training – NCFI will gain access to content and methodologies proven to prepare students for success in courses and beyond. These curated assessments and training platforms will strengthen student learning to further enhance their skills and effectiveness in the field. This will ultimately assist in keeping NCFI students at the forefront of the cybersecurity landscape.