

Department of Defense Request for Funding for Cyber Registered Apprenticeship Program

BLUF: This proposal seeks to establish a DoD Cyber Registered Apprenticeship program to enable the Department of Defense (DoD), partnered with a National Center of Academic Excellence in Cybersecurity (NCAE-C) to directly contribute to the advancement of the cyber workforce and strengthen national defense capabilities. The Cyber Registered Apprenticeship program should encompass a comprehensive cyber curriculum aligned with the DoD Directive 8140 work roles. Specifically, 511 - Cyber Defense Analyst, 521 - Cyber Defense Infrastructure Support Specialist and 531 – Cyber Defense Incident Responder. The program shall include distinct learning pathways for each work role, mentor training to prepare cyber professionals for guiding apprentices, and targeted support for 20 apprentices over a 12-month period for on-the-job training. Upon approval of this grant solicitation, the approved and selected the NCAE-C will develop within 6-months a curriculum that is focused on aligning national cyber workforce needs.

1. Summary

As the threat landscape evolves, the Department of Defense (DoD) faces a critical need for highly skilled cyber professionals to fulfill specialized work roles defined in Directive 8140. However, the availability of comprehensive, role-specific training remains limited. Furthermore, mentoring plays a key role in workforce development but is often underutilized or inconsistently implemented.

NCAE-C institutions have a proven track record in delivering innovative cyber education and workforce programs. This proposal builds on their expertise to address the DoD's urgent needs by creating a structured, scalable program that aligns with Directive 8140 work roles, integrates professional mentorship, and prepares apprentices for immediate deployment in mission-critical roles.

2. Goals and Objectives:

Goals

- Develop a paid cyber registered apprenticeship program in coordination with DoD CIO Workforce Innovation Directorate.
- Develop a role-specific cyber curriculum aligned with DoD 8140 within 6 months.
- Establish tailored learning pathways for each DoD 8140 work role targeted by the program (i.e. 511, 521, 531).
- Train 10 cyber professionals as mentors to support apprentices.
- Prepare 20 apprentices to successfully enter and excel in their designated DoD work roles within 12 months.
- Collaborate with DoD CIO Workforce Innovation Directorate on providing on-the-job training through practical learning experiences.

Program Objectives

- Deliver customized virtual training modules for 20 apprentices across targeted work roles.
- Provide virtual mentor training, including workshops and certifications, to enhance support for apprentices.
- Ensure all curriculum and program elements are aligned with DoD 8140 work role competencies and standards.
- Integrate on-the-job training with DoD Cyber Components within the 12-months of the program.
- Conduct quarterly performance assessment of apprentice.
- Track and measure apprentice outcomes, such as return on investment, certification completion and workforce readiness.

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- Identify Continuing Education Units (CEU) for training modules that apprentice may use towards a degree program.

3. Scope and Approach

This program will focus on key four elements:

- **Cyber Curriculum Development:**
 - Create role-specific learning pathways for each DoD 8140 work role identified.
 - Develop virtual coursework integrating technical skills, practical applications, and DoD work role-specific competencies.
- **Mentor Training:**
 - Design and deliver mentor workshops to prepare cyber professionals for mentoring apprentices effectively.
 - Include tools and resources for mentors to support apprentices in achieving learning milestones.
- **On-the-Job Training:**
 - Provide hands-on, real-world training experiences aligned with DoD Cyber Components based on operational needs.
- **Apprenticeship Implementation:**
 - Recruit, train, and support 20 apprentices to complete the program within 1 year.

4. Innovation and Impact

The program's tailored training pathways and mentor-led training approach address a critical gap in cyber workforce development. By aligning directly with DoD 8140, it ensures relevance and immediate applicability, accelerating the readiness of cyber professionals to meet mission-critical demands.

5. Target Beneficiaries

The program will directly serve 20 paid apprentices, with long-term benefits extending to the DoD, academia, the cyber community, and national security.

6. Program Implementation

The development of this program will commence upon grant approval. Program should include the following with \$250,000 budget execution.

Program Timeline:

Phase	Activity	Timeline (upon grant approval)
Phase 1: Curriculum Design	Develop role-specific learning pathways for DoD 8140 work roles (identified above).	Months 1-6
Phase 2: Program Launch	Recruit and onboard 20 apprentices.	Months 7 - 8

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Phase 3: Mentor Training	Identify and train 10 cyber professionals as mentors as aligned to their work roles.	Months 8 - 9
Phase 4: Apprenticeship Training	Deliver training, mentorship, and practical experiences.	Months 9 – 21 (12-month duration)
Phase 5: Evaluation	Assess program outcomes and document lessons learned.	Upon completion of 12-month program.

Roles and Responsibilities

- **NCAE-C Program Development Team:** Designs pathways and aligns curriculum to DoD 8140 work roles. Develops and delivers training for mentors.
- **Mentors:** Mentors apprentice throughout the program.
- **NCAE-C Program Coordinator:** Oversees apprentice recruitment, training, and program logistics. Coordinates with DoD CIO Workforce Innovation Directorate Program manager.
- **DoD CIO Workforce Innovation Directorate Program Manager:** Oversees the overall DoD Cyber Registered Apprenticeship Program and the coordination with on-the-job training experiences with apprentice and DoD Components.

Resources

- Cyber lab facilities and virtual environments for hands-on training.
- Access to DoD-recommended tools, frameworks, and guidelines.

7. Budget

Program development and execution should include a budget execution of \$250,000.

Cost Effectiveness

- This program leverages existing resources and expertise to deliver a high-impact training solution tailored to the DoD's priorities.

8. Post Award Evaluation Plan

Metrics and KPIs

- Curriculum development completed and approved within 6 months.
- 100% alignment of training content to DoD 8140 competencies.
- Program completion rate of 90% or more for apprentices and 80% or more certification success rate (if applicable).
- Number of mentor-mentee interactions and feedback on mentorship effectiveness.

Methods

- Quarterly progress reports, surveys, and focus groups with apprentices and mentors.
- Data analysis on certifications, employment outcomes, and program impact.

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9. Sustainability and Scalability

- **Sustainability:** The program will establish a foundation for ongoing training and mentorship, with potential expansion through partnerships with additional NCAE-C institutions and DoD.
- **Scalability:** The modular design of the curriculum allows for easy adaptation to additional DoD work roles and scaling to train larger cohorts in the future.

10. Conclusion

This proposal aligns with DoD 8140 priorities and addresses critical workforce development needs by delivering targeted, role-specific training pathways and robust mentorship for 20 apprentices. By leveraging NCAE-C designations and institutional expertise, the Department of Defense is prepared to execute this innovative program within the required timeline and contribute to national security.