CYBERSECURITY & AI CAREER PATHWAYS

A Strategic Initiative for Student Success in the Digital Economy

Administrative Briefing Document

EXECUTIVE SUMMARY

The Portales High School Cyber & AI Career Initiative addresses a critical opportunity: preparing students for high-demand, high-wage careers in cybersecurity and artificial intelligence without requiring traditional four-year degrees. With 3.5 million unfilled cybersecurity positions globally and average starting salaries of $65,000-$85,000, this program provides students with direct pathways to economic mobility while addressing workforce shortages in critical infrastructure protection.

THE OPPORTUNITY

Labor Market Dynamics

The cybersecurity workforce gap presents an unprecedented opportunity for our students:

METRIC	DATA
Global Unfilled Positions	**3.5 million**
US Workforce Shortage	**750,000+ positions**
Average Entry-Level Salary	**$65,000 - $85,000**
Job Growth Rate (2023-2033)	**32% (vs 3% average)**
Remote Work Capability	**70% of positions**

Alternative Education Pathways

Industry data demonstrates that traditional four-year degrees are no longer mandatory for cybersecurity careers:

- **52% of cybersecurity professionals** entered the field without a computer science degree
- **Industry certifications** (CompTIA Security+, Network+) are often valued equally or higher than degrees
- **Average certification cost: $856** vs average 4-year degree cost: $35,000-$140,000

PROGRAM STRUCTURE

Core Components

1. Interactive Career Exploration Platform

A comprehensive web-based resource (phs-cyber-ai-hub.com) providing:

- Eight distinct cybersecurity career domains with detailed role descriptions
- Salary data, day-in-the-life scenarios, and skill requirements
- Personalized learning pathways based on student interests
- Local employment context (ENMU, Cannon AFB, remote opportunities)

2. Certification-First Approach

Students pursue industry-recognized certifications in a structured sequence:

1. **CompTIA IT Fundamentals+** (Months 1-2): Foundation concepts
2. **CompTIA Network+** (Months 3-4): Network fundamentals
3. **CompTIA Security+** (Months 5-6): Entry-level qualification for most positions

3. Hands-On Learning Labs

- Virtual environments for safe practice of security concepts
- Home lab setup guidance using existing hardware
- Project-based learning with portfolio development

STUDENT BENEFITS

Economic Advantages

- **Zero student debt:** Total certification cost under $1,000
- **Rapid entry to workforce:** 6-12 months vs 4+ years
- **Higher starting salaries:** $65,000 vs $44,000 average for bachelor's degree holders
- **Geographic flexibility:** Remote work enables living in Portales while earning metropolitan salaries

Career Development

- **Clear advancement pathways:** Entry-level to senior positions mapped
- **Continuous learning culture:** Skills-based progression, not tenure-based
- **Industry connections:** Direct pathways to local and national employers

IMPLEMENTATION STRATEGY

Phase 1: Launch (Immediate)

4. Deploy web platform and distribute student handouts
5. Conduct assembly presentations for grades 9-12
6. Establish after-school cyber club
7. Parent information sessions

Phase 2: Integration (Months 1-3)

8. Incorporate cybersecurity modules into existing computer classes
9. Partner with ENMU for dual credit opportunities
10. Establish mentorship program with Cannon AFB IT personnel
11. Create certification study groups

Phase 3: Expansion (Months 4-6)

12. Launch summer boot camp program
13. Develop employer partnerships for internships
14. Implement certification exam funding program
15. Track and report initial student outcomes

SUCCESS METRICS

Year 1 Goals

- **Student Engagement:** 50+ students actively participating
- **Certification Achievement:** 20+ students earning IT Fundamentals+
- **Career Placement:** 5+ graduates entering cyber/IT positions
- **Community Impact:** 100+ parents/community members informed

Long-Term Outcomes (3-5 Years)

- Establish PHS as regional leader in cyber education
- Create pipeline of qualified workers for local employers
- Demonstrate alternative pathway success through alumni achievements
- Secure industry sponsorships for program sustainability

RESOURCES REQUIRED

Minimal Investment, Maximum Impact

- **Infrastructure:** Existing computer lab (no additional hardware required)
- **Software:** Free and open-source tools (VirtualBox, Kali Linux, online platforms)
- **Curriculum:** Free resources (Professor Messer, Cybrary, SANS Cyber Aces)
- **Staff Time:** 1-2 hours/week for program coordination
- **Certification Funding:** $856/student (potential for grants/sponsorships)

RISK MITIGATION

Addressing Concerns

"Students still need college"

This program complements, not replaces, traditional education. Students can pursue degrees later with employer tuition assistance, entering college with real experience and clear goals.

"Cybersecurity is too technical"

Modern cybersecurity emphasizes problem-solving and critical thinking over programming. Many roles require no coding knowledge.

"Parents won't support non-college paths"

Data shows parents prioritize career stability and earning potential. When presented with salary data and job security statistics, parent support increases significantly.

SUPPORT AVAILABLE

Implementation Assistance

- **Website Platform:** Fully developed and ready to deploy
- **Curriculum Guidance:** Detailed learning paths and resource lists provided
- **Student Materials:** Handouts, presentations, and guides prepared
- **Teacher Training:** Professional development sessions available
- **Ongoing Support:** Regular updates and consultation as needed

RECOMMENDATION

The Portales High School Cyber & AI Career Initiative represents a low-risk, high-reward opportunity to provide students with direct pathways to economic mobility. With minimal resource requirements and proven industry demand, this program can position PHS as an innovative leader in career preparation while addressing critical workforce needs.

Immediate next steps:

16. Review and approve program launch
17. Identify faculty champion/coordinator
18. Schedule student assembly presentation
19. Announce program to parents and community

Every student deserves a pathway to success.
This program provides that pathway.

For additional information or questions:
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