

CYBER SECURITY

CAREER PATHWAY

Web & Digital Interface Designers • Computer Programmers • Web Developers • Computer Systems Analysts • Information Security Analysts • Software Developers • Computer & Information Research Scientists

	CAREER TECHNICAL COURSE NAME & SUBJECT CODE	RECOMMENDED ACADEMICS
7		
8		
9		
10		
11	Networking*	
	Fundamentals of Operating Systems	
	Cybersecurity	
12	Cyber Defense & Reinforcement*	
	Application of Artificial Intelligence	
	Information Technology Capstone	

INDUSTRY CREDENTIAL OPPORTUNITIES

- Certiport Information Technology Specialist Computational Thinking - **1 Point**
- Certiport Information Technology Specialist Cybersecurity - **1 Point**
- CompTIA Fundamentals - **6 Points**
- EC-Council Ethical Hacking Essentials (EHE) - **3 Points**
- EC-Council Network Defense Essentials (NDE) - **3 Points**
- EC-Council Digital Forensics Essentials (DFE)- **3 Points**
- Google IT Support Professional Certificate - **4 Points**
- Google Analytics - **3 Points**
- Google Ads - **3 Points**
- OSHA - 10-Hour Training* - **1 Point** (College Credit-CTS001-1 Credit Hour)
- CPR / First Aid - **1 Point**
- Ohio Driver's License - **1 Point**
- Lean Six Sigma Yellow Belt - **3 Points**
- Lean Six Sigma Green Belt - **6 Points**
- Leadership Excellence - Student - **3 Points**

POSTSECONDARY OPPORTUNITIES

*Indicates statewide articulated credit. Please reference course descriptions for semester hours and agreement number on the postsecondary articulated credits. Additional college credit may be available through bi-lateral agreements. Please see a school counselor for details on available bi-lateral agreements.

BHCC ADULT EDUCATION	HOURS

POTENTIAL PLACEMENT & INCOME –

May 2025 State Occupational Employment and Wage Estimates for Ohio

- Computer Programmers | **$93,010**
- Web & Digital Interface Designers | **$94,540**
- Computer Systems Analysts | **$108,170**
- Computer Occupations | **$107,140**
- Software Developers | **$119,860**
- Information Security Analysts | **$117,710**
- Computer & Information Research Scientists | **$126,370**
- Computer & Information Systems Managers | **$169,360**

BUCKEYE HILLS CAREER CENTER

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CYBER SECURITY CAREER PATHWAY

SUBJECT CODE **145035**

11th GRADE

COLLEGE CREDIT

CTAG CTIT002

3 CREDIT HOURS

NETWORKING

Students will install, operate, maintain, and troubleshoot a network. Students will learn to manage, configure, and troubleshoot network infrastructure and media. Students will discuss common network topologies and communication protocols.

SUBJECT CODE **145135**

11th GRADE

FUNDAMENTALS OF OPERATING SYSTEMS

Students will perform desktop client administrator duties by providing support for users in various work environments including professional offices, small businesses, work groups, departments, and/or corporate information services (IS). Students will learn to install, configure, and update commercial and open-source operating systems.

SUBJECT CODE **146005**

11th GRADE

CYBERSECURITY

Students will learn the components of cybersecurity and the role each plays in preventing, detecting and mitigating vulnerabilities and attacks. Components include the security of the network infrastructure, security of the systems, and the prevention, detection, and mitigation of common vulnerabilities and attacks. Throughout this course, students will examine and implement security safeguards for desktop, network, and application security.

SUBJECT CODE **146010**

12th GRADE

COLLEGE CREDIT

CTAG CTCYBR001

3 CREDIT HOURS

CYBER DEFENSE & REINFORCEMENT

Students will learn the process of systematic defense for information technology systems. They will apply knowledge and skills required to secure network resources including infrastructure, operating systems, data, and applications. Students will apply the knowledge of disaster recovery and business continuity.

SUBJECT CODE **145130**

12th GRADE

APPLICATION OF ARTIFICIAL INTELLIGENCE

This course will prepare students to apply artificial intelligence, machine learning, and neural networks to common workflows, processes, and problems in programming and design. Students will analyze the broader societal, technological, and ethical impacts and implications of its usage and development. Students will learn how to construct prompts and queries and how to critically analyze generated responses.

SUBJECT CODE **145015**

12th GRADE

INFORMATION TECHNOLOGY CAPSTONE

The capstone course provides opportunities for students to apply knowledge, attitudes and skills that were learned in their information technology program in a more comprehensive and authentic way. Capstones often include project/problem-based learning opportunities that occur both in and away from school. Under supervision of the school and through community partnerships, students may combine classroom learning with work experience. This course can be delivered through a variety of delivery methods including cooperative education or apprenticeship.

Buckeye Hills Career Center | 351 Buckeye Hills Road | Rio Grande, OH 45674 | 740.245.5334 | buckeyehills.net

Career-technical education does not discriminate on the basis of race, color, national origin, sex, disability, or age for participation in any program or activity. Lack of English language proficiency will not be a barrier to admission and participation in career-technical education programs or courses.