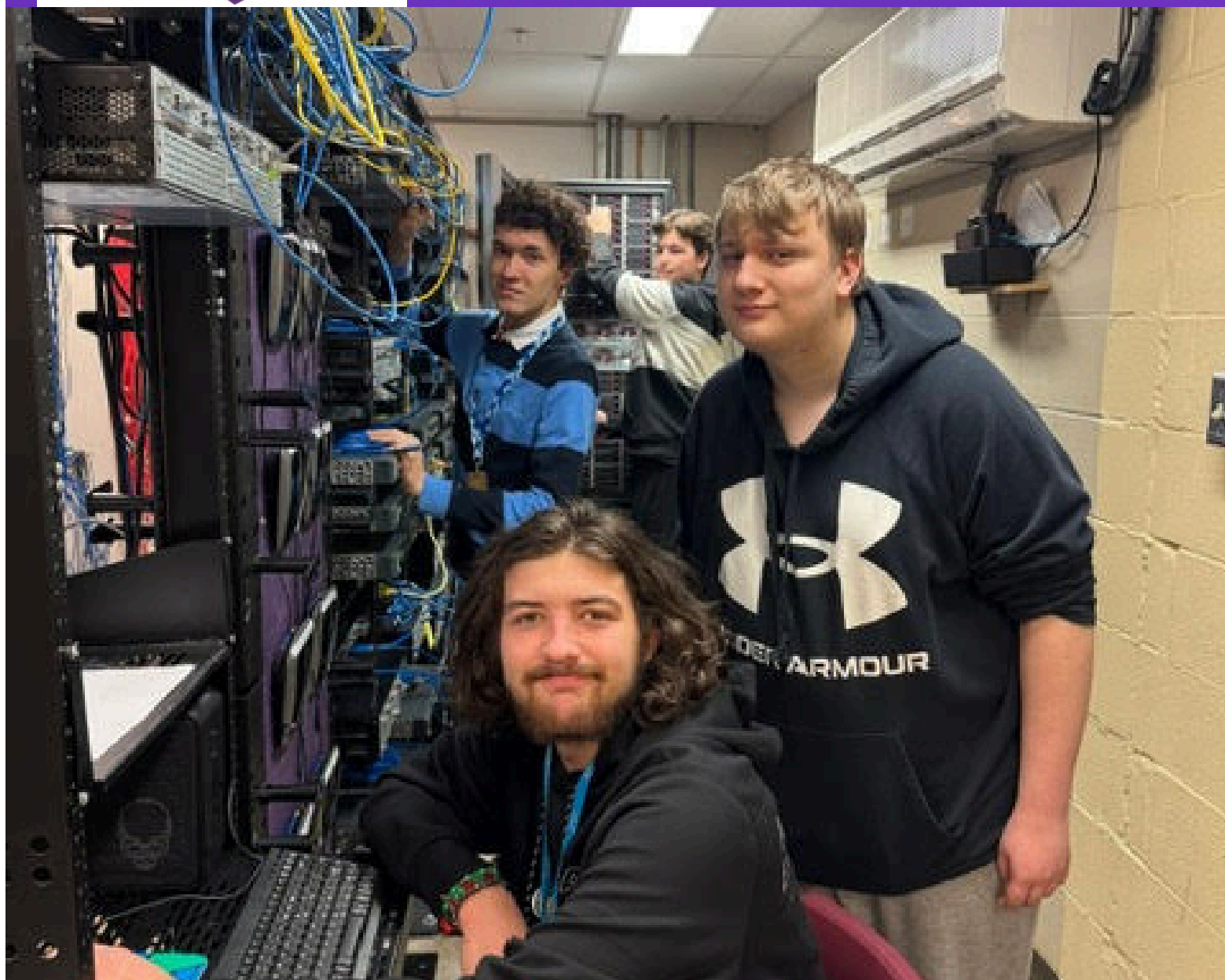




# CAREER & TECHNICAL EDUCATION



# CYBERSECURITY



**JACKSON  
HIGH SCHOOL**  
330-837-3501



# CYBERSECURITY



## Cybersecurity

This advanced program is designed for students with a keen interest in cybersecurity and network security. It introduces students to the fundamental and advanced concepts of network infrastructure security, monitoring, and the skills required for cybersecurity operations. Students develop expertise for entry-level roles in security operations centers (SOCs) and network security specialist positions, preparing them for certifications such as CompTIA A+, CompTIA Network+, CompTIA Security+, Cisco Certified CyberOps Associate, and Cisco Certified Network Associate (CCNA). Through hands-on labs, simulations, and interactive coursework, students gain critical problem-solving skills to tackle real-world security challenges.

For More Information  
330-837-3501

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**JACKSON**  
**HIGH SCHOOL**

## Curriculum

This is a 2 year program

**Junior Year** - 3 credits

**Computer Hardware** - This course provides hands-on experience with computer hardware installation, configuration, and maintenance. Students work with components like motherboards, CPUs, storage drives, and memory, learning to assemble systems, troubleshoot issues, and ensure hardware reliability through labs and practical exercises.

**Computer Software** - This course covers the installation, configuration, and troubleshooting of operating systems like Windows, macOS, and Linux. Students gain hands-on experience managing system settings, setting up virtual machines, and applying security practices, preparing them for careers in IT support and systems administration.

**Introduction to Networking** - This course introduces the architecture, functions, and components of computer networks. Students learn to build simple LANs, configure basic network protocols, and understand IP addressing and subnetting. Hands-on labs with Cisco Packet Tracer provide real-world networking experience, emphasizing the OSI model, Ethernet, and TCP/IP fundamentals, preparing students for advanced networking topics.

**Senior Year** - 3 credits

**Cybersecurity Defense and Reinforcement** - This course prepares students for cybersecurity operations roles by covering threat monitoring, intrusion detection, incident response, and analytics. Students gain hands-on experience with security operation center (SOC) tools like security information and event manager (SIEM) systems, learning to detect and respond to cyber threats. It also prepares students for entry-level SOC analyst roles and the Cisco CyberOps Associate certification.

**Switching, Routing and Wireless Essentials** - This course covers routing, switching, and wireless local area network (WLAN) configuration in small-to-medium business networks. Students learn to configure and troubleshoot routers, switches, virtual local area networks (VLANs), and secure wireless networks. Hands-on labs and Cisco Packet Tracer simulations develop skills in network design, implementation, and security for real-world applications.

**Network Security** - This course teaches students to secure network infrastructure using firewalls, ACLs, VPNs, and intrusion prevention systems (IPS). Hands-on labs focus on implementing security protocols, configuring remote access, and managing device security. Aligned with the NIST Cybersecurity Framework, it prepares students for roles as network security specialists.

**Enterprise Networks, Security and Automation** - This advanced course explores enterprise network design, security, and automation. Students learn wide area network (WAN) technologies, quality of service (QoS), software-defined networking (SDN), virtualization and network programmability. Hands-on labs focus on securing and automating modern, scalable networks, preparing students for careers in network engineering and management.