

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.

