Career & Technical Education
Cybersecurity

Certification(s)

Level 1
- Fundamentals of Computer Science

- Cisco CCNA

Level 2
- Internetworking Technologies I
- Computer Science I
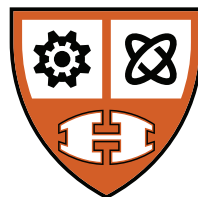- AP Computer Science Principles

Student Organization

Level 3
- Networking with Lab
- AP Computer Science A

Level 4
- Cybersecurity Capstone
- Practicum in Information Technology

TECHNOLOGY STUDENT ASSOCIATION

CAREER & TECHNICAL EDUCATION **HUTTO ISD**
CYBERSECURITY

Course Information – Cybersecurity

Course Title	Credits	Prerequisites	Course Description
Fundamentals of Computer Science	1.0	None	Fundamentals of Computer Science is intended as a first course for those students just beginning the study of computer science. Students will learn about the computing tools that are used every day. Students will foster their creativity and innovation through opportunities to design, implement, and present solutions to real-world problems. Students will collaborate and use computer science concepts to access, analyze, and evaluate information needed to solve problems.
Internetworking Technologies I	1.0	None	The Internetworking Technologies I course is normally comprised of the courses called Cisco CCNA R&S: Introduction to Networks (CCNA 1) and Cisco CCNA R&S: Routing and Switching Essentials (CCNA 2). The Introduction to Networks course introduces the concept of networking, using various analogies to help the student understand the movement of packets throughout the Internet, and the protocol standards used. The Routing and Switching course moves the student into the theory of "moving packets."
Computer Science I	1.0	Algebra I	By using computer science knowledge and skills that support the work of individuals and groups in solving problems, students will select the technology appropriate for the task, synthesize knowledge, create solutions, and evaluate the results. Students will learn digital citizenship by researching current laws and regulations and by practicing integrity and respect. Students will gain an understanding of the principles of computer science through the study of technology operations, systems, and concepts.
AP Computer Science Principles	1.0	None	The course introduces students to the foundational concepts of computer science and challenges them to explore how computing and technology can impact the world. With a unique focus on creative problem solving and real-world applications, AP Computer Science Principles prepares students for college and career.
Networking with Lab	2.0	None	In Networking, students will develop knowledge of the concepts and skills related to data networking technologies and practices to apply them to personal or career development. To prepare for success, students will have opportunities to reinforce, apply, and transfer knowledge and skills to a variety of settings and problems.
AP Computer Science A	2.0 (Math & LOTE)	Computer Science I or AP Computer Science Principles	AP Computer Science A is an introductory college-level computer science course. Students cultivate their understanding of coding through analyzing, writing, and testing code as they explore concepts like modularity, variables, and control structures.
Cybersecurity Capstone	1.0	None	In the Cybersecurity Capstone course, students will develop the knowledge and skills needed to explore advanced concepts related to the ethics, laws, and operations of cybersecurity. Students will examine trends and operations of cyberattacks, threats, and vulnerabilities. Students will develop security policies to mitigate risks. The skills obtained in this course prepare students for additional study toward industry certification. A variety of courses are available to students interested in the cybersecurity field.