

# Cybersecurity

# STEM

Creekview High School  
Business & Industry Endorsement

This four year plan can be used as an example to help plan your high school career.

Subject	9th Grade	10th Grade	11th Grade	12th Grade
Language Arts	English	English	English	English
Math	Math	Math	Math	Math
Science	Science	Science	Science	Science
Social Studies	Social Studies	Social Studies	Social Studies	Social Studies
<b>CTE Courses</b>	Foundations of Cybersecurity <b>(1 Credit)</b>	AP Computer Science Principles <b>OR</b> Computer Science I <b>(1 Credit)</b>	AP Computer Science A <b>(1 Credit)</b>	Cybersecurity Capstone <b>(1 Credit)</b>
Additional Elective				
Additional Elective				
Additional Elective				

<b>Additional Graduation Requirements</b> <ul style="list-style-type: none"> <li>Foreign Language (2 Credits)</li> <li>Physical Education (1 Credit)</li> <li>Fine Arts (1 Credit)</li> </ul>	<b>Possible Industry Based Certifications</b> <ul style="list-style-type: none"> <li>Oracle Certified Associate Java SE 8</li> <li>Oracle Certified Database Associate</li> <li>Cisco Certified Entry Networking Technician (CCENT)</li> <li>CompTIA A+, Network+, Security+, and IT Fundamentals</li> </ul>
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Occupations	Median Wage	Annual Openings	% Growth
Information Security Analysts	\$91,915	814	29%
Network and Computer System Administrators	\$82,597	2,814	19%
Computer System Analysts	\$87,568	5,937	29%

The Cybersecurity program of study includes the occupations and educational opportunities related to planning, implementing, upgrading, or monitoring security measure for the protection of computer networks and information. This program of study may also include exploration into responding to computer security breaches and virus and administering network security measures.

# Cybersecurity

## Creekview High School

### Recommended Course Sequence

#### **Foundations of Cybersecurity**

In this course, students will develop the knowledge and skills needed to explore fundamental concepts related to the ethics, laws, and operations of cybersecurity. Students will examine trends and operations of cyberattacks, threats, and vulnerabilities. Students will review and explore security policies designed to mitigate risks. The skills obtained in this course prepare students for additional study in cybersecurity. A variety of courses are available to students interested in this field. Foundations of Cybersecurity may serve as an introductory course in this field of study.



#### **AP Computer Science Principles**

In this course, Develops beginning skills and concepts associated with programming methodology, programming languages, data types, data structures, algorithms and applications of computing. The Principles 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.

#### **Computer Science I**

This course, designed to foster students' creativity and innovation by presenting opportunities to design, implement and present meaningful programs through a variety of media. Students will collaborate with one another, their instructor and with various electronic communities to solve the problems presented throughout the course. Data analysis will include the identification of task requirements, planning search strategies and the use of computer science concepts to access, analyze, and evaluate information needed to solve problems. By using computer science knowledge and skills that supports the work of individuals and groups in solving problems, students will select the technology appropriate for the task, synthesize knowledge, create a solution, and evaluate the results. Students will learn to become good digital citizens by practicing integrity and respect throughout the Computer Science I course. Students will gain an understanding of the principles of computer science through the study of technology operations, systems, and concepts.



#### **AP Computer Science A (Math or LOTE)**

This course, develops beginning skills and concepts associated with programming methodology, programming languages, data types, data structures, algorithms and applications of computing. The Principles 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.



#### **Cybersecurity Capstone**

In this 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. Cybersecurity Capstone may serve as a culminating course in this field of study.