

Cybersecurity

Business Marketing & Finance

Newman Smith 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
CTE Courses	Foundations of Cybersecurity (1 Credit)	Internetworking Technologies I (1 Credit)	Internetworking Technologies II (1 Credit)	Cybersecurity Capstone (1 Credit)
Additional Elective				
Additional Elective				
Additional Elective				

Additional Graduation Requirements <ul style="list-style-type: none"> • Foreign Language (2 Credits) • Physical Education (1 Credit) • Fine Arts (1 Credit) 	Possible Industry Based Certifications <ul style="list-style-type: none"> • Oracle Certified Associate Java SE 8 • Oracle Certified Database Associate • Cisco Certified Entry Networking Technician (CCENT) • CompTIA A+, Network+, Security+, and IT Fundamentals
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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

Newman Smith 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.



Internetworking Technologies I

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." The concepts of routing and switching "packets" to the correct destination is covered, and how a network administrator can direct and/or streamline this process through device configuration and deployment.



Internetworking Technologies II

The Internetworking Technologies 2 course is normally comprised of the courses called Cisco CCNA R&S: Scaling Networks (CCNA 3) and Cisco CCNA R&S: Connecting Networks (CCNA 4) The CCNA 3 course covers the architecture, components, and operations of routers and switches in larger and more complex networks. Students learn how to configure routers and switches for advanced functionality. The CCNA 4 course discusses the Wide Area Network (WAN) technologies and network services required by converged applications in a complex network. The course enables students to understand the selection criteria of network devices and WAN technologies to meet network requirements.



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.