

Cybersecurity

STEM

Ranchview High School
Business & Industry or STEM 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)	Computer Maintenance (1 Credit)	Networking/Lab (1 Credit)	Career Preparation (2 Credits)
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+, Network+, Security+, and IT Fundamentals
-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

Occupations	Median Wage	Annual Openings	% Growth
Computer Network Architects	\$111,633	1,082	23%
Computer Systems Analysts	\$87,568	5,937	29%
Computer Network Support Specialists	\$68,037	1,824	19%

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

Ranchview High School



Recommended Course Sequence

Foundations of Cybersecurity

In the Foundations of Cybersecurity 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.



Computer Maintenance

In this course, students will gain knowledge and skills needed to enter a career in architecture or construction or prepare a foundation toward a postsecondary degree in architecture, construction science, drafting, interior design, or landscape architecture. Architectural Design I include the knowledge of the design, design history, techniques, and tools related to the production of drawings, renderings, and scaled models for nonresidential or residential architectural purposes.



Networking

In this course, 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.



Career Preparation

This course, provides opportunities for students to participate in a learning experience that combines classroom instruction with paid business and industry employment experiences and supports strong partnerships among school, business, and community stakeholders.

Web Development

Ranchview High School
Business & Industry Endorsement

Information Technology



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	Principles of Information Technology (1 Credit)		Web Design (1 Credit)	Practicum in Information Technology (2 Credits)
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 • WD Certified Web Design Certification • Microsoft Technology Associate Introduction to Programming Certifications
-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

Occupations	Median Wage	Annual Openings	% Growth
Web Developers	\$67,912	1,079	39%
Web Administrators, Computer Occupations	\$85,197	1,616	20%
Software Developers	\$104,499	6,311	30%

The Web Development program of study explores the occupations and educational opportunities associated with designing, creating, and modifying websites. This program of study may also explore integrating websites with other computer applications, and converting written, graphic, audio, and video components to compatible web formats by using software designed to facilitate the creation of web and multimedia content.

Web Development

Ranchview High School



Recommended Course Sequence

Principles of Architecture

In this course, students will develop computer literacy skills to adapt to emerging technologies used in the global marketplace. Students will implement personal and interpersonal skills to prepare for a rapidly evolving workplace environment. Students will enhance reading, writing, computing, communication, and reasoning skills and apply them to the information technology environment.



Web Design

Studies web technologies and design, students learn to make informed decisions and apply the decisions to the field of information technology. Students implement personal and interpersonal skills to prepare for a rapidly evolving workplace environment. The knowledge and skills acquired and practiced will enable students to successfully perform and interact in a technology-driven society. Students enhance reading, writing, computing, communication, and critical thinking and apply them to the information technology environment.



Practicum in Information Technology

In this course, students will gain advanced knowledge and skills in the application, design, production, implementation, maintenance, evaluation, and assessment of products, services, and systems. Knowledge and skills in the proper use of analytical skills and application of IT concepts and standards are essential to prepare students for success in a technology-driven society. Critical thinking, IT experience, and product development may be conducted in a classroom setting with an industry mentor, as an unpaid or paid internship, as part of a capstone project, or as career preparation.