Utah Career and Technical Education
Career Pathway Chart
2022-2023 School Year

Cybersecurity CAREER PATHWAY
Computer Science & Information Technology
CAREER CLUSTER

Career Cluster: Computer Science & Information Technology

Career Pathway: Cybersecurity

JUNIOR HIGH / MIDDLE SCHOOL	
College and Career Awareness	
Computer Science Investigations	Python 1, Intro
Creative Coding	Python 2, Intro

HIGH SCHOOL		
SUPPORTING COURSES: Suggested high school courses that support the Career Pathway (Courses DO NOT count towards the Pathway)		
Current Issues	Math 1050	Secondary Math 3
Law Enforcement *	Secondary Math 2	
EXPLORER COURSES: Choose one or more of the following courses.		
Computer Programming 1 *	Exploring Computer Science	Web Development 1 *
Computer Science Principles *	Information Technology, Intro *	
Database Development *	Linux Fundamentals *	
CONCENTRATOR COURSES: To be a concentrator you must pass one of the following courses AND one explorer course.		
Principles of Cyber Defense and Ethics *		
COMPLETER COURSES: To be a completer you must pass a concentrator course and enough courses to equal 3.0 credits in this Pathway.		
Cybersecurity Forensics *		
CTE Internship	Apprenticeship	
POSTSECONDARY: There are many options for education and training beyond high school.		
Utah System of Higher Education: ushe.edu (Utah's public colleges and universities)	UtahMajors.org: Majors Guide	

* concurrent enrollment course   + recommended explorer course

HIGH SCHOOL TO POSTSECONDARY EDUCATION AND TRAINING
There are several options for education and training beyond high school, depending on your career goals.

COLLEGE 12 4 or more

1-2 Year Certificate	2-Year Associate Degree	4-Year Bachelor's Degree
> Computer Technician > Cybersecurity Operations > Security Specialist	> Computer Network Support > Cybersecurity Technical Writer > Security Architect > Vulnerability Analysis	> CTE Teacher > Computer and Information Systems Manager > Security App. Programmer > Security Engineer

Career and Technical Education provides all students access to high-quality, rigorous career-focused programs that result in attainment of credentials with labor market value. Credentials of Value

Utah CTE classes are open to all qualified students without regard to race, color, national origin, sex, disability, or age.

Student Testimonial

"**Getting a degree will help me to pursue** my goal of working as a computer programmer at a large company. CTE classes prepared me by showing me what I would actually be doing in the different job fields and how I would apply the information that I learned in class."

Aaron Montoya
Jordan High School

LEARN MORE ABOUT OCCUPATIONS AND WAGES

Computer Science & Information Technology

UtahCTE.org: Fact Sheet

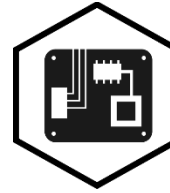Department of Workforce Services
Utah Occupational Explorer

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are the Career and Technical Student Organizations (CTSO) for students in the Cybersecurity Career Pathway.

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CTE Learning that works for Utah

Utah Career and Technical Education
Career Pathway Chart
2022-2023 School Year

Information Technology Systems
CAREER PATHWAY
Computer Science & Information Technology
CAREER CLUSTER

Career Cluster: Computer Science & Information Technology

Career Pathway: Information Technology Systems

JUNIOR HIGH / MIDDLE SCHOOL	
College and Career Awareness	
Computer Science Investigations	Python 1, Intro
Creative Coding	Python 2, Intro

HIGH SCHOOL		
SUPPORTING COURSES: Suggested high school courses that support the Career Pathway (Courses DO NOT count towards the Pathway)		
Math 1050	Secondary Math 2	Secondary Math 3
EXPLORER COURSES: Choose one or more of the following courses.		
Exploring Computer Science	Network Fundamentals *	
Computer Programming 1 *	Information Technology, Intro *	Web Development 1 *
Computer Science Principles 1 *		
Database Development *	Robotics 1	Robotics Technology
CONCENTRATOR COURSES: To be a concentrator you must pass the following course AND one explorer course.		
Computer Systems 1	Cloud Computing 1	Geographical Information Systems, Intro
COMPLETER COURSES: To be a completer you must pass a concentrator course and enough courses to equal 3.0 credits in this Pathway.		
Computer Systems 2	Cloud Computing 2	Geographic Information Systems Remote Sensing *
CTE Internship	Apprenticeship	
POSTSECONDARY: There are many options for education and training beyond high school.		
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* concurrent enrollment course   + recommended explorer course

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COLLEGE 1 2 4 or more

1-2 Year Certificate	2-Year Associate Degree	4-Year Bachelor's Degree
> Computer Service Technician > Data Center Technician > Service Desk Analyst	> Computer Network Technician > Computer Systems Manager > Database Administrator > IT Coordinator	> CTE Teacher > Computer and Information Systems Manager > Computer Network Architect > Network Engineer

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Student Testimonial

"This program helped me earn many industry-level certifications including CompTIA, IT Strata Fundamentals, IC3, Microsoft Technical Associate (MIT), OS Fundamentals, and Security and Academy of Information Technology certifications."

Parker Kingsford
West Jordan High School

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Computer Science & Information Technology

UtahCTE.org: Fact Sheet

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Utah Occupational Explorer

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Utah Career and Technical Education
Career Pathway Chart
2022-2023 School Year

Programming & Software Development
CAREER PATHWAY

Computer Science & Information Technology
CAREER CLUSTER

Career Cluster: Computer Science & Information Technology

Career Pathway: Programming & Software Development

JUNIOR HIGH / MIDDLE SCHOOL	
College and Career Awareness	
Computer Science Investigations	Python 1, Intro
Creative Coding	Python 2, Intro
Digital Literacy	

HIGH SCHOOL		
SUPPORTING COURSES: Suggested high school courses that support the Career Pathway (Courses DO NOT count towards the Pathway)		
Business Leadership 1 *	Physics	Secondary Math 3
Math 1050	Secondary Math 2	
EXPLORER COURSES: Choose one or more of the following courses.		
AP Computer Science Principles	Robotics 1	Robotics Technology
Computer Programming 1 *	Mobile Development Fundamentals	
Computer Science Principles *	Exploring Computer Science	Information Technology, Intro
CONCENTRATOR COURSES: To be a concentrator you must pass one of the following courses AND one explorer course.		
Computer Programming 2 *	Database Development *	Game Development Fundamentals 1
COMPLETER COURSES: To be a completer you must pass a concentrator course and enough courses to equal 3.0 credits in this Pathway.		
AP Computer Science		Computer Programming, Advanced *
Algorithms and Data Structures *		Game Development Fundamentals 2
CTE Internship		Apprenticeship
POSTSECONDARY: There are many options for education and training beyond high school.		
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HIGH SCHOOL TO POSTSECONDARY EDUCATION AND TRAINING
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COLLEGE 24 or more

1-2 Year Certificate	2-Year Associate Degree	4-Year Bachelor's Degree
> Entry Level Programmer	> Computer Systems Analyst > Game Play Programmer > Software Developer	> CTE Teacher > Software Engineer > Sys Software Programmer

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Student Testimonial

"My goal is to become a video game designer or programmer. The classes I took in high school taught me how to use the programs that I would be pursuing in my career field and have given me a taste of what programming and design are like."

Jenny Whitecar
Syracuse High School

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Computer Science & Information Technology

UtahCTE.org: Fact Sheet

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**Utah Career and Technical Education
Career Pathway Chart**
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Web Development
CAREER PATHWAY
Computer Science & Information Technology
CAREER CLUSTER

Career Cluster: Computer Science & Information Technology

Career Pathway: Web Development

JUNIOR HIGH / MIDDLE SCHOOL	
College and Career Awareness	
Computer Science Investigations	Python 1, Intro
Creative Coding	Python 2, Intro

SUPPORTING COURSES: Suggested high school courses that support the Career Pathway (Courses DO NOT count towards the Pathway)		
Business Leadership 1 *	Secondary Math 2	World Civilization
Math 1050	Secondary Math 3	World Geography

EXPLORER COURSES: Choose one or more of the following courses.

Computer Science Principles *	Digital Media 1 *	Exploring Computer Science	Web Development 1 *
Database Development *	Entrepreneurship *	Information Technology, Intro *	

CONCENTRATOR COURSES: To be a concentrator you must pass one of the following courses AND one explorer course.

HTML 5 Application Development Fundamentals *
Web Development 2

COMPLETER COURSES: To be a completer you must pass a concentrator course and enough courses to equal 3.0 credits in this Pathway.

UX/UI and Quality Assurances	
Web Development Capstone	
CTE Internship	Apprenticeship

POSTSECONDARY: There are many options for education and training beyond high school.

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* concurrent enrollment course   + recommended explorer course

HIGH SCHOOL TO POSTSECONDARY EDUCATION AND TRAINING
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COLLEGE 2 4 or more	1-2 Year Certificate	2-Year Associate Degree	4-Year Bachelor's Degree
	> Graphic Artist > Web Analyst > Web Technician	> Web Developer	> CTE Teacher > Full Stack Developer > UI/UX Designer

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Student Testimonial

"My goal is to go to Utah Valley University and obtain an associate degree in computer technology with the focus on Web design. CTE courses have provided experience in several areas that would not be available without CTE."

Zachary Crocker
Springville High School

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FBLA | SkillsUSA | TSA

are the Career and Technical Student Organizations (CTSO) for students in the Web Development Career Pathway.

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