




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	Law Enforcement *	Secondary Math 2	Secondary Math 3
EXPLORER COURSES: Choose one or more of the following courses.			
AP Computer Science Principles	Data Science	Network Fundamentals *	
Computer Programming 1 *	Exploring Computer Science	Math 1050	
Computer Science Principles *	Information Technology, Intro *	Web Development 1 *	
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.			
Cyber 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.			
	Certificate	2-Year Associate Degree	4-Year Bachelor's Degree
	<ul style="list-style-type: none"> > Computer Technician > Cybersecurity Operations > Security Specialist 	<ul style="list-style-type: none"> > Computer Network Support > Cybersecurity Technical Writer > Security Architect > Vulnerability Analysis 	<ul style="list-style-type: none"> > 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.

Advice to Students

“Take a wide variety of CTE classes because high school is your time to explore your interests. Taking these classes will help guide you on your future career. Put forth the effort and time it takes to get the certifications because they can be a valuable asset and it is cheaper and easier to earn them now.”

Alea Maxwell
 Future Cybersecurity Specialist

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Computer Science & Information Technology

UtahCTE.org: [Fact Sheet](#)

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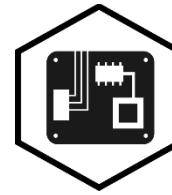
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are the Career and Technical Student Organizations (CTSO) for students in Cybersecurity Career Pathway.

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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)			
Secondary Math 2	Secondary Math 3		
EXPLORER COURSES: Choose one or more of the following courses.			
3D Print Technology	Data Science	Linux Fundamentals *	Robotics Technology
AP Computer Science Principles	Database Development *	Network Fundamentals *	Unmanned Aerial Systems
Computer Programming 1 *	Exploring Computer Science	Math 1050	Unmanned Aerial Systems Lab: Design, Build, Maintain
Computer Science Principles *	Information Technology, Intro *	Robotics 1	Web Development 1 *
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.			
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.			
	Certificate	2-Year Associate Degree	4-Year Bachelor's Degree
	<ul style="list-style-type: none"> > Computer Service Technician > Data Center Technician > Service Desk Analyst 	<ul style="list-style-type: none"> > Computer Network Technician > Computer Systems Manager > Database Administrator > IT Coordinator 	<ul style="list-style-type: none"> > CTE Teacher > Computer and Information Systems Manager > Computer Network Architect > Network Engineer

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Advice to Students

"I am grateful to all of my CTE teachers who have passions for the different types of classes they teach. My father has always told me, and my siblings, that the CTE courses offered in high school are a once in a lifetime opportunity."

Taevin Hunter
 Future IT Specialist

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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 2	Secondary Math 3
EXPLORER COURSES: Choose one or more of the following courses.			
3D Print Technology	Exploring Computer Science	Robotics Technology	
AP Computer Science Principles	Information Technology, Intro	Unmanned Aerial Systems	
Computer Programming 1 *	Math 1050	Unmanned Aerial Systems Lab: Design, Build, Maintain	
Computer Science Principles *	Mobile Development Fundamentals	Web Development 1	
Data Science	Robotics 1		
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.			
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.			
	Certificate	2-Year Associate Degree	4-Year Bachelor's Degree
		> Entry Level Programmer	> Computer Systems Analyst > Game Play Programmer > Software Developer

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Advice to Students

"I would highly recommend the CTE Pathway program to students. It is a great opportunity to earn college credit at a much more affordable price and gives you an advantage over anyone graduating from a traditional pathway."

Jaren Woodbury
 Future Software Developer

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

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[Utah-FBLA-PBL.org](https://utah-fbla-pbl.org) | [UtahSkillsUSA.org](https://utahskillsusa.org) | [UtahTSA.org](https://utahtsa.org)
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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	Secondary Math 3	
EXPLORER COURSES: Choose one or more of the following courses.			
Computer Science Principles *	Digital Media 1 *	Information Technology, Intro *	Web Development 1 *
Computer Programming 1 *	Entrepreneurship *	Marketing 1 *	
Database Development *	Exploring Computer Science	Math 1050	
CONCENTRATOR COURSES: To be a concentrator you must pass one of the following courses AND one explorer course.			
UX/UI and Quality Assurances	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.			
Web Development, Advanced	Web Development Projects *		
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.

	Certificate	2-Year Associate Degree	4-Year Bachelor's Degree
	<ul style="list-style-type: none"> > Graphic Artist > Web Analyst > Web Technician 	<ul style="list-style-type: none"> > Web Developer 	<ul style="list-style-type: none"> > CTE Teacher > Full Stack Developer > UI/UX Designer

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Advice to Students

“Take advantage of every opportunity. Start planning your courses now. Learn from your teachers, parents, leaders, friends, and others around you. It’s never too early to learn and plan. Enjoy high school.”

Travis Cook
 Future Web Developer

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

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