



## Career Cluster: Digital 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		
<b>SUPPORTING COURSES:</b> Suggested high school courses that support the Career Pathway (Courses DO NOT count towards the Pathway)		
Law Enforcement *	Secondary Math 2	Secondary Math 3
<b>EXPLORER COURSES:</b> Choose one or more of the following courses.		
Computer Programming 1 *	Data Science	Math 1050 *
Computer Science Principles *	Exploring Computer Science *	Web Development 1 *
Computer Science Principles (AP) *	IT and Cybersecurity, Intro *	
Data Analytics *	Linux Fundamentals *	
<b>CONCENTRATOR COURSES:</b> To be a concentrator you must pass one of the following courses AND one explorer course.		
AP CK – Cyber: Networking	Network Fundamentals *	Principles of Cyber Defense and Ethics *
<b>COMPLETER COURSES:</b> To be a completer you must pass a concentrator course and enough courses to equal 3.0 credits in this Pathway.		
AP CK – Cyber: Security	Cyber Forensics *	
CTE Internship	<a href="#">Apprenticeship</a>	
<b>POSTSECONDARY:</b> There are many options for education and training beyond high school.		
Utah System of Higher Education: <a href="https://ushe.edu">ushe.edu</a> (Utah's public colleges and universities)		UtahMajors.org: <a href="#">Majors Guide</a>

\* 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.			
	<b>Certificate</b>	<b>2-Year Associate Degree</b>	<b>4-Year Bachelor's Degree</b>
	> 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.

### 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

### LEARN MORE ABOUT OCCUPATIONS AND WAGES

#### Digital Technology

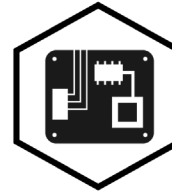
Department of Workforce Services  
[Utah Occupational Explorer](#)

### FBLA | SkillsUSA | TSA

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

[FBLA-PBL.org](#) | [SkillsUSA.org](#) | [TSAweb.org](#)  
[Utah-FBLA-PBL.org](#) | [UtahSkillsUSA.org](#) | [UtahTSA.org](#)

[Utah FBLA flyer](#) | [SkillsUSA Utah flyer](#) | [Utah TSA flyer](#)



## Career Cluster: Digital Technology

# Career Pathway: Information Technology Systems

JUNIOR HIGH / MIDDLE SCHOOL			
College and Career Awareness			
Computer Science Investigations	Python 1, Intro	Robotics Technology	
Creative Coding	Python 2, Intro		
HIGH SCHOOL			
<b>SUPPORTING COURSES:</b> Suggested high school courses that support the Career Pathway (Courses DO NOT count towards the Pathway)			
Network Fundamentals *	Secondary Math 2	Secondary Math 3	
<b>EXPLORER COURSES:</b> Choose one or more of the following courses.			
3D Print Technology	Data Analytics *	Linux Fundamentals *	Web Development 1 *
Computer Programming 1 *	Data Science	Math 1050 *	
Computer Science Principles *	Exploring Computer Science *	Robotics 1	
Computer Science Principles (AP) *	IT and Cybersecurity, Intro *	UAS: Drones, Intro *	
<b>CONCENTRATOR COURSES:</b> To be a concentrator you must pass the following course AND one explorer course.			
Cloud Computing 1 *	Computer Systems 1	Geographical Information Systems, Intro *	
<b>COMPLETER COURSES:</b> To be a completer you must pass a concentrator course and enough courses to equal 3.0 credits in this Pathway.			
Cloud Computing 2 *	Computer Systems 2 *	Geographical Information Systems Remote Sensing	
CTE Internship	<a href="#">Apprenticeship</a>		
<b>POSTSECONDARY:</b> 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			
There are several options for education and training beyond high school, depending on your career goals.			
	<b>Certificate</b>	<b>2-Year Associate Degree</b>	<b>4-Year Bachelor's Degree</b>
	<ul style="list-style-type: none"> <li>&gt; Computer Service Technician</li> <li>&gt; Data Center Technician</li> <li>&gt; Service Desk Analyst</li> </ul>	<ul style="list-style-type: none"> <li>&gt; Computer Network Technician</li> <li>&gt; Computer Systems Manager</li> <li>&gt; Database Administrator</li> <li>&gt; IT Coordinator</li> </ul>	<ul style="list-style-type: none"> <li>&gt; CTE Teacher</li> <li>&gt; Computer and Information Systems Manager</li> <li>&gt; Computer Network Architect</li> <li>&gt; Network Engineer</li> </ul>

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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

### LEARN MORE ABOUT OCCUPATIONS AND WAGES

#### Digital Technology

Department of Workforce Services  
[Utah Occupational Explorer](#)

### FBLA | SkillsUSA | TSA

are the Career and Technical Student Organizations (CTSO) for students in Information Technology Systems Career Pathway.

[FBLA-PBL.org](https://www.fbla-pbl.org) | [SkillsUSA.org](https://www.skillsusa.org) | [TSAweb.org](https://www.tsa-web.org)  
[Utah-FBLA-PBL.org](https://www.utah-fbla-pbl.org) | [UtahSkillsUSA.org](https://www.utahskillsusa.org) | [UtahTSA.org](https://www.utahtsa.org)

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## Career Cluster: Digital Technology


# Career Pathway: Programming & Software Development

JUNIOR HIGH / MIDDLE SCHOOL			
College and Career Awareness			
Computer Science Investigations	Digital Literacy	Python 2, Intro	
Creative Coding	Python 1, Intro	Robotics Technology	
HIGH SCHOOL			
<b>SUPPORTING COURSES:</b> Suggested high school courses that support the Career Pathway (Courses DO NOT count towards the Pathway)			
Entrepreneurship *	Physics *	Secondary Math 2	Secondary Math 3
<b>EXPLORER COURSES:</b> Choose one or more of the following courses.			
3D Print Technology	Computer Science Principles (AP) *	Exploring Computer Science *	Robotics 1
AR/VR * + (Augmented Reality and Virtual Reality)	Data Analytics *	IT and Cybersecurity, Intro *	UAS: Drones, Intro *
Computer Programming 1 *	Data Science	Math 1050 *	Web Development 1 *
Computer Science Principles *	Engineering Principles 1	Mobile Development Fundamentals	
<b>CONCENTRATOR COURSES:</b> To be a concentrator you must pass one of the following courses AND one explorer course.			
Computer Programming 2 *	Computer Science HL 1 (IB)	Database Development *	
Computer Science A (AP)	Computer Science SL 1 (IB)	Game Development Fundamentals 1	
<b>COMPLETER COURSES:</b> To be a completer you must pass a concentrator course and enough courses to equal 3.0 credits in this Pathway.			
Algorithms and Data Structures *	Computer Science HL 2 (IB)	Game Development Fundamentals 2	
Computer Programming, Advanced *	Computer Science SL 2 (IB)		
Computer Programming Capstone	Engineering Capstone		
CTE Internship		<a href="#">Apprenticeship</a>	
<b>POSTSECONDARY:</b> 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

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

### LEARN MORE ABOUT OCCUPATIONS AND WAGES

#### Digital Technology

Department of Workforce Services  
[Utah Occupational Explorer](#)

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[FBLA-PBL.org](#) | [SkillsUSA.org](#) | [TSAweb.org](#)  
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## Career Cluster: Digital Technology


### Career Pathway: Web Development

JUNIOR HIGH / MIDDLE SCHOOL		
College and Career Awareness		
Computer Science Investigations	Python 1, Intro	
Creative Coding	Python 2, Intro	
HIGH SCHOOL		
<b>SUPPORTING COURSES:</b> Suggested high school courses that support the Career Pathway (Courses DO NOT count towards the Pathway)		
Secondary Math 2	Secondary Math 3	
<b>EXPLORER COURSES:</b> Choose one or more of the following courses.		
Computer Programming 1 *	Entrepreneurship *	Math 1050 *
Computer Science Principles *	Exploring Computer Science *	Web Development 1 *
Computer Science Principles (AP) *	IT and Cybersecurity, Intro *	
Digital Media 1 *	Marketing 1 *	
<b>CONCENTRATOR COURSES:</b> To be a concentrator you must pass one of the following courses AND one explorer course.		
UX/UI and Quality Assurances	Web Development 2	
<b>COMPLETER COURSES:</b> 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	<a href="#">Apprenticeship</a>	
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\* 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"> <li>&gt; Graphic Artist</li> <li>&gt; Web Analyst</li> <li>&gt; Web Technician</li> </ul>	<ul style="list-style-type: none"> <li>&gt; Web Developer</li> </ul>	<ul style="list-style-type: none"> <li>&gt; CTE Teacher</li> <li>&gt; Full Stack Developer</li> <li>&gt; UI/UX Designer</li> </ul>

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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

### LEARN MORE ABOUT OCCUPATIONS AND WAGES

#### Digital Technology

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[Utah Occupational Explorer](#)

### FBLA | SkillsUSA | TSA

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

[FBLA-PBL.org](#) | [SkillsUSA.org](#) | [TSAweb.org](#)  
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