




## 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			
<b>SUPPORTING COURSES:</b> 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
<b>EXPLORER COURSES:</b> 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		
<b>CONCENTRATOR COURSES:</b> 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	
<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 Computer Science	Computer Programming, Advanced *		
Algorithms and Data Structures *	Game Development Fundamentals 2		
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.			
	Certificate	2-Year Associate Degree	4-Year Bachelor's Degree
		> Entry Level Programmer	> Computer Systems Analyst > Game Play Programmer > Software Developer

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

"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

#### Computer Science & Information Technology

UtahCTE.org: [Fact Sheet](#)

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

### FBLA | SkillsUSA | TSA

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

[FBLA-PBL.org](https://fbla-pbl.org) | [SkillsUSA.org](https://skillsusa.org) | [TSAweb.org](https://tsaweb.org)  
[Utah-FBLA-PBL.org](https://utah-fbla-pbl.org) | [UtahSkillsUSA.org](https://utahskillsusa.org) | [UtahTSA.org](https://utahtsa.org)  
[Utah FBLA flyer](#) | [SkillsUSA Utah flyer](#) | [Utah TSA flyer](#)