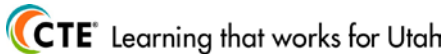


Utah Career and Technical Education Career Pathway

2018-2019 School Year



Career Cluster: Information Technology																																														
Career Pathway: Information Technology Systems																																														
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Information Technology Systems is:

- > High skill
- > High wage
- > High demand

Sample Occupations Requiring:

High School Diploma

- > N/A

Certificate

- > N/A

Assoc. or Technical Degree

- > Computer Network Support Specialist

Baccalaureate Degree

- > Career and Technical Education Teacher
- > Computer Network Architect
- > Computer and Information Systems Manager
- > Computer Systems Analyst
- > Database Administrator
- > Network and Computer Systems Administrator

Graduate or Prof. Degree

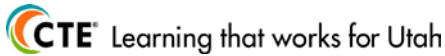
- > Computer and Information Research Scientist

Utah Business and Industry Facts

In 2017, Forbes named Utah "cloud computing's new capital." Forbes ranked six Utah tech companies in the top 100 and three of the Utah tech companies were ranked in the top 20—Qualtrics (No.6), Domo (15), Pluralsight (20), Workfront (58), Health Catalyst (64), and InsideSales (92).

Utah Career and Technical Education Career Pathway

2018-2019 School Year



CTSO Information
 Career and Technical Student Organizations (CTSO) align with the national Career Clusters® and the Utah CTE Career Pathways.

Students who participate in the Programming and Software Development Career Pathway choose among the following CTOS, depending upon what is available at their school:
 FBLA | SkillsUSA | TSA

Workforce Trends
 Demand continues for programmers who can help organizations keep up with changing technology. Prospects are best for those who have the knowledge of various programming languages.

In Utah, the average annual employment growth rate for software developers is 5.9 percent through the year 2024.

Career Cluster: Information Technology

Career Pathway: Programming & Software Development

CORE CODE	FOUNDATION COURSES (required)	CREDITS
Choose 1.00 credit from the following courses:		
35.02.00.00.035	Computer Science Principles	1.00
35.02.00.00.030	Computer Programming 1	.50
35.02.00.00.036	PLTW Computer Science and Software Engineering	1.00
Choose 1.00 credit from the following courses:		
35.02.00.00.041	AP Computer Science	1.00
35.02.00.00.032	Computer Programming 2	.50
35.02.00.00.040	Computer Programming 3	1.00
35.02.00.00.045	Gaming Development Fundamentals	.50
ELECTIVE COURSES		
35.02.00.00.037	Algorithms and Data Structures	1.00
35.02.00.00.021	Database Development	1.00
32.02.00.00.220	Entrepreneurship	.50
35.02.00.00.007	Exploring Computer Science 1	.50
35.02.00.00.008	Exploring Computer Science 2	.50
35.02.00.00.046	Gaming Development Fundamentals 2	.50
35.02.00.00.005	Introduction to Information Technology	.50
35.02.00.00.048	Mobile Development Fundamentals	.50
41.00.00.00.030	Workplace Skills	.50
3.00 credits for completion		

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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.

Programming & Software Development is:

- > High skill
- > High wage
- > High demand

Sample Occupations Requiring:

High School Diploma
 > N/A

Certificate
 > N/A

Assoc. or Technical Degree
 > Web Developer

Baccalaureate Degree
 > Career and Technical Education Teacher
 > Computer Programmer
 > Computer Systems Analyst
 > Computer Systems Engineers/Architect
 > Software Developer
 > Video Game Designer

Graduate or Prof. Degree
 > Software Engineer

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 using in my career field, and have given me a taste of what programming and design are like.”

Jenny Whitecar

HIGH SCHOOL TO POSTSECONDARY EDUCATION AND TRAINING

There are a number of options for education and training beyond high school, depending on your career goals.

12th Grade	1-Year Certificate	2-Year Associate or Technical Degree	4-Year Bachelor's Degree	More Graduate or Prof. Degree
Certificates are awarded upon the successful completion of a brief course of study, usually one year or less. Upon completion of a course of study, a certificate does not require any further action to retain. In high school a variety of certificates can be earned.		An academic degree is an award for the completion of a program or course of study over multiple years at postsecondary education institutions. In 2015-2016, 73 percent of secondary students who concentrated in a CTE Career Pathway placed in postsecondary education, advanced training, military service or employment (October 1-December 31).		

Utah Business and Industry Facts

Silicon Slopes was formed to promote Utah's growing technology community and is home to more than 5,000 tech companies that has generated 142,500 jobs.

From Ogden to Provo, technology companies dot the landscape. Pluralsight, Insidesales.com, Qualtrics, Vivint, Entrata, HealthCatalyst all started in Utah.

CTE Skill Certificates
 Competency-based student assessments, measured by core standards and competencies needed to be successful in the workforce.

In 2016-2017, 105,691 CTE skill certificates were awarded to high school students. Students' knowledge and performance is demonstrated as part of the Skill Certificate process.

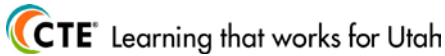
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Utah Career and Technical Education Career Pathway

2018-2019 School Year



<p>CTSO Information Career and Technical Student Organizations (CTSO) align with the national Career Clusters® and the Utah CTE Career Pathways.</p> <p>Students who want to participate in the Web Development Career Pathway choose among the following CTSOs, depending upon what is available at their school: FBLA SkillsUSA TSA</p> <p>Workforce Trends The World Wide Web has changed the way we communicate and consume information. With more than 1 billion websites the need for Web developers is high.</p> <p>In Utah, the average annual employment growth rate for Web developers is 5.5 percent and for computer and information systems managers is 4.5 percent through the year 2024.</p>	<h3 style="margin: 0;">Career Cluster: Information Technology</h3> <h4 style="margin: 0;">Career Pathway: Web Development</h4> <table border="1" style="width: 100%; border-collapse: collapse; margin: 10px 0;"> <thead> <tr style="background-color: #00a651; color: white;"> <th style="width: 15%;">CORE CODE</th> <th style="width: 55%;">FOUNDATION COURSES (required)</th> <th style="width: 15%;">CREDITS</th> <th style="width: 15%;"></th> </tr> </thead> <tbody> <tr> <td>35.02.00.00.060</td> <td>Web Development 1</td> <td style="text-align: center;">.50</td> <td rowspan="4" style="text-align: center; vertical-align: middle;">1.50 credits</td> </tr> <tr> <td colspan="3" style="text-align: center;">Choose 1.00 credit of the following courses:</td> </tr> <tr> <td>35.02.00.00.055</td> <td>HTML5 App Development Fundamentals</td> <td style="text-align: center;">.50</td> </tr> <tr> <td>35.02.00.00.065</td> <td>Web Development 2</td> <td style="text-align: center;">.50</td> </tr> <tr> <td>35.02.00.00.067</td> <td>Web Development Capstone</td> <td style="text-align: center;">1.00</td> <td></td> </tr> <tr style="background-color: #00a651; color: white;"> <th colspan="4" style="text-align: center;">ELECTIVE COURSES</th> </tr> <tr> <td>35.02.00.00.021</td> <td>Database Development</td> <td style="text-align: center;">1.00</td> <td rowspan="8" style="text-align: center; vertical-align: middle;">1.50 credit</td> </tr> <tr> <td>37.01.00.00.001</td> <td>Digital Marketing</td> <td style="text-align: center;">.50</td> </tr> <tr> <td>32.02.00.00.220</td> <td>Entrepreneurship</td> <td style="text-align: center;">.50</td> </tr> <tr> <td>35.02.00.00.090</td> <td>Geographic Information Systems (GIS) Remote Sensing</td> <td style="text-align: center;">1.00</td> </tr> <tr> <td>35.02.00.00.005</td> <td>Introduction to Information Technology</td> <td style="text-align: center;">.50</td> </tr> <tr> <td>35.02.00.00.048</td> <td>Mobile Development Fundamentals</td> <td style="text-align: center;">.50</td> </tr> <tr> <td>41.00.00.00.030</td> <td>Workplace Skills</td> <td style="text-align: center;">.50</td> </tr> <tr> <td colspan="4" style="text-align: center;">3.00 credits for completion</td> </tr> </tbody> </table> <p style="font-size: small; margin-top: 5px;">Foundation courses taken beyond the required credits can be used as elective credit. Visit UtahCTE.org to learn how to earn industry certification in this Career Pathway.</p> <p style="text-align: center; margin-top: 5px;">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.</p>	CORE CODE	FOUNDATION COURSES (required)	CREDITS		35.02.00.00.060	Web Development 1	.50	1.50 credits	Choose 1.00 credit of the following courses:			35.02.00.00.055	HTML5 App Development Fundamentals	.50	35.02.00.00.065	Web Development 2	.50	35.02.00.00.067	Web Development Capstone	1.00		ELECTIVE COURSES				35.02.00.00.021	Database Development	1.00	1.50 credit	37.01.00.00.001	Digital Marketing	.50	32.02.00.00.220	Entrepreneurship	.50	35.02.00.00.090	Geographic Information Systems (GIS) Remote Sensing	1.00	35.02.00.00.005	Introduction to Information Technology	.50	35.02.00.00.048	Mobile Development Fundamentals	.50	41.00.00.00.030	Workplace Skills	.50	3.00 credits for completion				<p>Web Development is: > High skill > High wage > High demand</p> <p>Sample Occupations Requiring: High School Diploma > N/A Certificate > N/A Assoc. or Technical Degree > Web Developer Baccalaureate Degree > Career and Technical Education Teacher > Computer and Information Systems Manager > Computer Programmer > Database Administrator > Graphic Designer > Multimedia Artists and Animators > Software Developer Graduate or Prof. Degree > Web Developer</p>
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