

CTE DIRECTIONS

Career and Technical Education News and Information Educator Edition

November 2011

Message from Mary Shumway and Gary Wixom – STechnologyEM Careers



Over the last few years, we have heard a lot about Science, Technology, Engineering and Mathematics (STEM) occupations. There is no question that STEM occupations are critical to the United States economic competitiveness. Although the number of STEM related occupations represents a small percentage of the total job market, those jobs tend to be occupations that are closely tied to innovation, economic growth and productivity, which are essential elements for any economy to be successful.

Even though STEM jobs will be a small percentage of the jobs available in the future, it is a very important percentage, and we need to make sure that we have enough students prepared to move into these occupations. STEM jobs refer to jobs that are available in Science, Technology, Engineering and Mathematics (STEM). However, when the term "STEM" is used, most often people immediately think of Science, Engineering and Math. What happened to the "Technology"?



The "Technology" category includes any occupation that requires technical skill, and makes up nearly 50 percent of all STEM occupations. Here are some of the areas that fit into the Technology sector: Accountants, Automotive Technicians, Biotechnology Technicians, Chemical Technicians, Drafting Technicians, Dietetic Technicians, Electronic Technicians, Farm and Ranch Managers, CNC Technicians, Composite Technicians, Mechatronic Technicians, Graphic Designers, Computer and Software Technicians, and the areas of Information Technology. Opportunities in the Technology sectors will continue to increase over the next few years.

Students who are interested in pursuing careers in "Technology" need to get started in high school by taking science and math courses. Sometimes the thought of taking these courses make students think twice about going down this path. However, even those who struggle in these subjects can still be successful in STEM careers. There are many ways to build skills in math and science. Students should look for programs that offer mentoring or tutoring in these subjects. Student organizations can also help, so think about joining a Career and Technical Student Organization (CTSOs), DECA, FBLA, FCCLA, FFA, HOSA, SkillsUSA, and TSA. Also, there are courses that can be taken in the evening or the summers that will help build the basic skills that are necessary to be "College and Career" ready.

During the next five years, the demand for students who have the background to move into Science, TECHNOLOGY, Engineering, and Mathematics careers will increase. Wages paid for these occupations will continue to lead wages in all occupations. Take advantage of these opportunities. Think about choosing a CTE Pathway that will lead to an exciting STechnologyEM career.

Read more about the demand for TECHNOLOGY occupations in the [STEM Georgetown University Executive Summary](#).

Career Highlight – Certificates Can Qualify You for Well-Paid Careers

CTE certificate programs – sometimes in conjunction with licensing exams – prepare workers for a diverse range of occupations. Here are just a few of those **occupations that are in demand**, along with both **national and state median annual earnings**. (NOTE: "median" is the middle value of a given set of numbers, listed as a distribution from low to high.)

Occupation	Utah	Nat'l
Aircraft Mechanics & Service Technicians	\$54,974	\$51,390
Architectural & Civil Drafters	\$40,747	\$44,490
Audio & Video Equip. Technicians	\$36,733	\$38,050
Heating, Air Conditioning, & Refrigeration Mechanics/Reps	\$41,184	\$39,680
Insurance Sales Agents	\$53,518	\$45,430

Occupation	Utah	Nat'l
Library Technicians	\$26,642	\$28,820
Licensed Practical Nurses	\$39,000	\$39,030
Real Estate Sales Agents	\$41,330	\$40,150
Sound Engineering Technicians	\$41,142	\$47,490
Surgical Technicians	\$35,547	\$38,740

Wanted: Skilled Workers!



Did you see the story about [Career and Technical Education](#) on the CBS Evening News? Reporter Elaine Quijano visited with John McGlade, president and CEO of [Air Products](#) and last year's [SkillsUSA CEO Champion of the Year](#), about the role of career and technical education in preparing students to enter the world of work. McGlade says 4,000 of his 7,500 U. S. employees are skilled workers. His global company designs and builds high-tech hydrogen equipment and devices and hires about 550 U.S. workers a year. McGlade is worried he won't be able to find skilled workers in the future. Of the 550 U.S. workers he hires each year 360 are technically skilled positions that require two years of college or advanced certification. The U.S. Department of Labor forecasts that by the year 2012 there will be a shortfall of nearly 3 million skilled workers in America. Watch the full CBS Evening News story [here](#).

Supercomputing Competition

On March 28, 2012 the first annual [Supercomputing Competition](#) will be held at the University of Utah as part of the Salt Lake Valley Science and Engineering Fair. This event will provide high school participants with a chance to become familiar with supercomputing. High school students across the state are encouraged to apply for the opportunity to participate in this competition. Eight teams will be selected to compete in the Supercomputing Competition. Six to ten students and one mentor will comprise each team. Each team will execute [three challenges](#). Applications are due December 15, 2011. Visit [uhssc.org](#) to [apply](#).



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Uintah Basin Region – Health Science Career Day

On Wednesday, October 6, one-hundred and thirty high school students in the Uintah Basin Region attended a Health Science Career Day event on the campus of [Uintah Basin Applied Technology College](#) (UBATC). The event was sponsored by the Utah Center for Rural Health and the Uintah Basin Region CTE Career Pathways department. Students rotated through five interactive workshops—respiratory therapy, laboratory services, radiology, nursing, casting and suturing—and learned about healthcare occupations. Each student had the opportunity to practice proper hand-washing techniques, type their own blood, view an ultrasound, take blood pressure, give shots using oranges, mold casts, and suture using chicken wings. Ashley Regional Medical Center, UBATC Nursing Department, Weber State University Respiratory Therapy Department, and Southern Utah University pre-med students were at the event to talk with students about postsecondary opportunities. *“This was such a great event, the kids really were in engaged and enjoyed it,”* said JoJo Gale, Uintah Basin CTE Pathways Coordinator.



CTE Month – February 2011

Each year CTE students, teachers, and administrators celebrate CTE during the month of February. This year’s theme is **Career and Technical Education: Preparing Students for College and Career!** You can pick a day, a week, or the entire month to spotlight your CTE programs.

The goals of CTE Month are:

- Talk to students about the importance of choosing a [CTE Pathway](#).
- Increase student awareness of careers, education, and training.
- Strengthen student engagement through the SEOP process.
- Increase parent involvement and awareness of CTE programs.
- Discuss postsecondary options—training, certificates, and degrees.

Details about CTE Month activities will be announced on Facebook and Twitter. Visit [UtahCTE.org](#) to join our communities today! Tell us what you plan to do in your district, school, or classroom during CTE Month. Email us at UtahCTE@schools.utah.gov.

Did You Know?

- Students using the [National Research Center Math-in-CTE model](#), which uses highly integrated CTE and academic teaching methods and courses, scored significantly higher on two national math assessments than students using traditional teaching methods.
- A ratio of one CTE class for every two academic classes minimizes the risk of students dropping out of high school.
- More than half of jobs created by the year 2018 are projected to require some form of postsecondary education. [College Means 1, 2, 4, or More!](#) Today’s definition of “college” includes **1-year** (certification, etc.), **2-year** (associate degrees), **4-year** (bachelor’s degrees) or **more** (professional degrees).

State of Education Address

Superintendent Larry K. Shumway delivered the State of Education Address on Tuesday, October 11 at Woodrow Elementary School. [Watch](#) and/or [read](#) the third annual State of Education Address.

“I have confidence in Utah teachers. Teachers are the strength of Utah’s schools and to teachers goes the credit for our state’s successes...”

Thank you to all our great public school employees for all you do.”

Superintendent Larry K. Shumway

Calendar

November: FBLA National Fall Conferences	November 10: Utah State Charter School Board meeting 250 East 500 South – Salt Lake City, UT
November 4: Utah State Board of Education meeting 250 East 500 South – Salt Lake City, UT	November 10-11: Utah State Turkey Show – Logan, UT
November 4: Utah Association of Family and Consumer Sciences (UAFCS) Conference – Midway, UT	November 11: Utah School Counselors Association (USCA) Fall Conference – Salt Lake Community College Miller Conference Center – Sandy, UT
November 6-12: National HOSA Week	November 17-19: ACTE Annual Convention and Career Tech Expo – St. Louis, MO

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