

Office of College and Career Readiness



Career-Connected Learning

March 28,
2019



Show-Me Success



**All students will graduate
ready for success.**

Access, Opportunity, Equity

Teachers and Leaders

Efficiency and Effectiveness

CONTINUOUS IMPROVEMENT SYSTEM

THEORY OF ACTION:

Improved student
learning for every
student in every school.





OCCR Mission

The mission of the DESE Office of College and Career Readiness is to guide and support schools in preparing success-ready students.



Success-ready Student

A success-ready student has the knowledge, skills, behavior and experiences to achieve personal goals and contribute in all facets of life.

Connecting Careers and Education...

a national story!

White House Proposes Merging Education And Labor Departments



June 21, 2018

President Trump, flanked by Education Secretary Betsy DeVos and Labor Secretary Alexander Acosta, answers questions in August 2017 at Trump National Golf Club in Bedminster, N.J. Thursday, the White House announced plans to merge the two departments.

Donald Trump Signs First Major Education Policy Bill of His Presidency

July 31, 2018

The Strengthening Career and Technical Education for the 21st Century Act (\$1.2 Billion)

Reauthorization of the 2006 Carl D. Perkins Career and Technical Act

“Provides greater access to better training and more jobs. “



Workforce Legislation in 2018

- **32 states** and the District of Columbia introduced workforce development legislation
- **28 bills** passed across 17 states
- Half of those efforts focused on financial incentives for students and institutions targeting high-demand fields.

Florida Governor Ron DeSantis



- Jan. 31, 2019
- Signed Executive Order directing state Dept. of Education and state Dept. of Economic Opportunity to coordinate programming to ensure students are trained to meet market demands

NC education initiative addresses qualified workforce deficit

[Email](#)[Share](#)[Share](#)[Tweet](#)[Save](#)[Print](#)[Order Reprints](#)

TRENDING

COMMERCIAL REAL ESTATE

[Cracker Barrel prepares another Triad location](#)



TRANSPORTATION

[\(GALLERY\) These were the hottest cars in the U.S.](#)



In Dubai, Sununu Discussed Education, Workforce Training

By SARAH GIBSON • FEB 13, 2019



Tweet



Share



Google+



Email

New Hampshire



New Hampshire Governor Chris Sununu.

CREDIT ALLEGRA BOVERMAN FOR NHPR

Governor Chris Sununu is back from a five-day trip to city of Dubai, in the United Arab Emirates. The trip revolved around a gathering of leaders called the World Government Summit.

According to the governor's office, Sununu spent the first part of his Dubai trip working on New Hampshire issues, notably the state budget, which he will announce this Thursday.

Pennsylvania



PA Gov. Tom Wolf. Photo: AL DÍA Archives.

Gov. Wolf stresses workforce development, education in 2019 budget

Kentucky Governor Puts New Collaborative in Motion

- Aligns and integrates elementary and secondary education, postsecondary education and adult education
- Engages employers in Kentucky's workforce development system



Gov. Lee's first legislative push is to improve the state's workforce



Tennessee Governor Bill Lee

“We have the opportunity to help students discover quality career paths and gain skills that are needed right now in the workforce by emphasizing career and technical education.”

Oklahoma Governor Mary Fallin Speaks on Education and Workforce

- “Oklahoma businesses, educators and government need to come together and better educate the Oklahoma workforce and address a skills gap that leaves open jobs unfilled.”



Kansas Governor Creates Advisory Group to Improve Education

Enhance early childhood education

Create relationships between education and business community

Develop partnerships to address workforce needs in Kansas



Iowa Governor Sets Ambitious Goals Transforming Education and the Workforce

- The Governor's 2018 **Future Ready Iowa** Summit, included leaders from
 - ❑ business and industry
 - ❑ education
 - ❑ nonprofits
 - ❑ elected officials
 - ❑ students and others
 - ❑ focused on expanding work-based learning and instruction



Why is this such an important topic?

Global Competition

- Trade, transportation and technology have created a global market for goods, services and jobs.
- Results -
 - Global economy
 - Global workforce
 - Global competition

Gallup World Poll

In surveying millions of people around the world, Gallup has determined that the #1 desire of people, consistent across all cultures and continents, is what Gallup calls “a **good job**”.

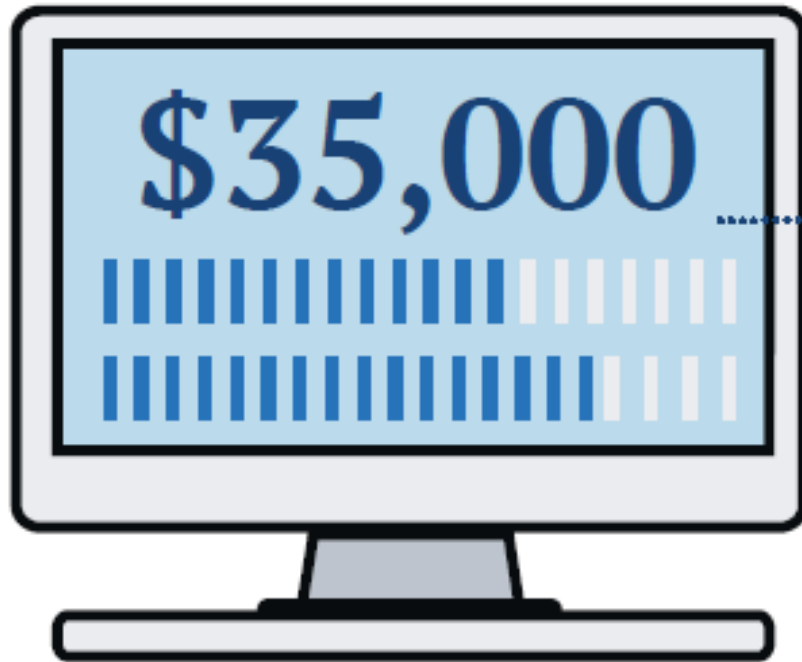
The Gallup Organization (2016)

Good Job

A “**Good Job**” is defined as a job that offers 30 or more hours per week, consistent employment, and getting paid enough to cover expenses.

Only about **43%** of the jobs in the U.S. qualify as “Good Jobs” using this definition.

What is a good job?



In defining a good job, we have chosen **\$35,000** (\$17 per hour for a full-time job) as the minimum earnings for those under age 45 and **\$45,000** (\$22 per hour for a full-time job) for workers age 45 and older.

MCKINSEY GLOBAL INSTITUTE

JOBS LOST, JOBS GAINED: WORKFORCE TRANSITIONS IN A TIME OF AUTOMATION

DECEMBER 2017

EXECUTIVE SUMMARY





“Routine” Jobs Vanishing

- Robotics taking over “routine” jobs
- “Routine” jobs are any jobs that are repetitive in nature, where someone can develop an algorithm to program a computer or robot to perform the task

(cab drivers/truck drivers/home health care assistants)

Unemployment and Underemployment

- **30 to 45%** of working-age people around the world are unemployed, inactive, or underemployed
 - US + 15 European Union countries = **285 million** adults not in the labor force
 - Add Japan, Brazil, China and India and the total is approximately **850 million** unemployed, inactive or underemployed

Automation

- Up to **44%** of current low-skill jobs in the United States could be automated by 2030, however...
- Highly specialized jobs will emerge in which people must operate and maintain the machines that are taking their places.
- Workers who improve their education levels will find opportunities in the new labor market.

Why are we talking about Career-Connected Learning in Missouri?

Missouri

How big is the non-BA workforce?



Missouri Jobs: Less than a Bachelor's Degree

Jobs by educational attainment

Educational attainment	Number of workers	Workers with good jobs	Median earnings	Median earnings of workers with good jobs
Non-BA Workers				
Less than high school	137,000	23,000	\$21,000	\$52,000
High school graduate	625,000	183,000	\$29,000	\$53,000
Some college	546,000	203,000	\$31,000	\$55,000
Associate's degree	216,000	99,000	\$36,000	\$55,000
All non-BA workers	1,524,000	508,000	\$30,000	\$54,000

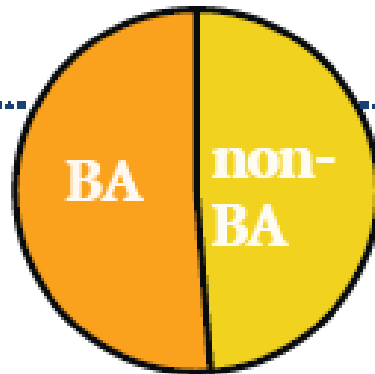
Missouri

Who has the good jobs? BA vs. non-BA

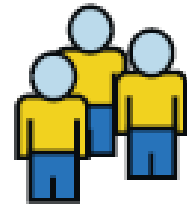


51%

522,000 workers with good jobs have at least a BA



49%



508,000 workers without a BA have good jobs

Missouri Jobs Report: All levels of education

Jobs by educational attainment

Educational attainment	Number of workers	Workers with good jobs	Median earnings	Median earnings of workers with good jobs
Non-BA Workers				
Less than high school	137,000	23,000	\$21,000	\$52,000
High school graduate	625,000	183,000	\$29,000	\$53,000
Some college	546,000	203,000	\$31,000	\$55,000
Associate's degree	216,000	99,000	\$36,000	\$55,000
All non-BA workers	1,524,000	508,000	\$30,000	\$54,000
BA+ Workers				
Bachelor's or higher	784,000	522,000	\$51,000	\$67,000
All workers	2,308,000	1,029,000	\$35,000	\$60,000



Gov. Parson's priorities from Day 1:

- **Infrastructure**
- **Workforce Development**
 - **Best in Midwest** Initiative – Summer 2018
 - **Talent for Tomorrow** initiative – Summer 2018



Best in Midwest

- Restructured the Department of Economic Development
 - Creating a new strategy for economic development in Missouri
 - Focusing on:
 - ❖ helping businesses grow
 - ❖ job creation
 - ❖ providing workers better access to job training



Talent for Tomorrow

- Changing Missouri's approach to meeting state workforce needs
 - Engaged business, industry, economic developers, educators
 - ❖ Assessed Missouri's current workforce
 - ❖ Assessed how well it matches our needs
 - ❖ Reviewed regional strengths and needs
 - ❖ Brainstormed solutions

Governor's Economic Conference

September 5-7, 2018

KCMO

Missouri's Workforce and Economy

- **13 Neighboring states:** Arkansas, Illinois, Indiana, Iowa, Kansas, Kentucky, Michigan, Minnesota, Nebraska, Ohio, Oklahoma, Tennessee, Wisconsin
- **Missouri ranks:**
 - **9th** out of 14 in “Top States for Business” (CNBC)
 - **11th** out of 14 in growth (US N&WR)
 - **12th** out of 14 in productivity of workforce (US BEA)
 - **12th** out of 14 in GDP over the past 5 years (US BEA)
 - **13th** out of 14 in quality/availability of workforce (CNBC)





“Opportunity Clusters” in Missouri

Industries identified through **Best in Midwest** and **Talent for Tomorrow** that represent areas of growth and competitive advantage for Missouri

- Aerospace and Defense
- Agribusiness
- Automotive and Transportation
- Energy Solutions
- Entertainment and Media
- Financial Services
- Healthcare and Life Sciences



“Cross-Cluster” Priorities in Missouri

Identified because they provide support services that are relevant for all or nearly all of the “Opportunity Clusters”

- Education
- Healthcare
- Manufacturing

Educator Panel at Governor's Economic Conference

"Connecting K-12 Education & Economic Development"

- Discussed our change in focus at DESE
 - From **Top 10 by 20**
 - To **All Missouri students will graduate ready for success**



Superintendent Panelists

Dr. Kelvin Adams	St. Louis Public Schools
Dr. Mark Bedell	Kansas City Public Schools
Dr. Jim Jones	Blair Oaks Public Schools
Dr. John Jungmann	Springfield Public Schools
Dr. John Link	Jackson Public Schools
Dr. Jeremy Tucker	Liberty Public Schools
Dr. Lori VanLeer	Washington Public Schools

Educator Panel at Governor's Economic Conference

“Connecting K-12 Education & Economic Development”

- Discussion Topics:
 - What has been the most important connection between K-12 education and economic/development in your area in the past three years?
 - In preparing success-ready students, what has been your district's greatest success, and what has been your greatest challenge in the past three years?

Governor Parson's

State of the State Address

January 16, 2019

State of the State Address

“We don’t promote our state, our resources, and our people as best we should, and **we have not prepared our state well enough for the future**...and every Missourian deserves better.”

State of the State Address

“...let me be crystal clear, **cultivating and training our workforce for the high-demand jobs** and investing in critical infrastructure are the priorities we must address this session.”

State of the State Address

“We must consider making necessary changes to our education programs and update the training pipelines to ensure economic growth in Missouri.”

State of the State Address

“Missouri’s high school graduation rate is higher than most states. That is something we should all be proud of...however, we fall behind other states when we look at post-secondary education.”

State of the State Address

“We are well into the 21st century...and yes, **extra levels of education are needed to meet the demands of our workforce.**”

State of the State Address

“...a higher level of education should not simply mean getting college degrees....”

Missouri Governor Mike Parson, January 16, 2019

State of the State Address

“We must also start integrating EMPLOYER and industry-led input into the needs and demands of the workforce, like **increasing Industry Recognized Credentials as part of our high school curriculum.**”

**Recent “Career Connected”
Legislative Action Relating
to
Missouri’s Schools**

New Legislative Committees

Special Committee on Career Readiness

Committee Chair: Jason Chipman (R – Steelville)

Members: Dirk Deaton (R – Noel), Don Mayhew (R – Crocker), Andrew McDaniel (R - Deering), Rocky Miller (R- Lake Ozark), Suzie Pollock (R – Lebanon), Nate Tate (R – St. Clair), Alan Green (D – Florissant), Wiley Price (D – St. Louis, Maria Chappelle-Nadal (D – University City)

SB 743 and HB 1606

- Now in Section 167.902 RSMo
 - DED is to annually identify "critical needs" occupations and give info to state board of education.
 - The State Board shall compile information regarding careers, salaries, IRCs, etc. and give to schools so they can provide information to students by Nov. 1 each year.

HB 1415 and HB 1606

- Now in Section 137.910 RSMo
 - Establishes a **Career Readiness Course Task Force**. Members will be identified by Oct. 31, 2018.
 - The task force is to present a report regarding the viability of a Career Readiness Course for 8th and 9th graders by Dec. 1, 2019 to the President Pro Tem of Senate, Speaker of the House, Joint Committee on Education, and State Board of Education.

HB 3 – Special Session

- Now in Section 161.261 RSMo
 - Subject to appropriation, DESE shall establish a **STEM Career Awareness Program** to increase awareness of these types of careers for students in grades 6-8 beginning in the 2019-2020 school year.
 - DESE shall solicit proposals by Jan. 1, 2019 and select a provider by March 1, 2019.

HB 3 - Special Session - Now 170.018 RSMo

- Signed by Governor Parson on October 30, 2018
 - Districts may allow a **Computer Science** course to count for a Math or Science credit for graduation, with certain restrictions.
 - DESE shall convene a work group to develop and recommend **rigorous academic performance standards** for **Computer Science** in grades K-12 to be implemented in the 2019-2020 school year.
 - DESE adopting a **Computer Science “endorsement”** for teachers
 - Authorizes a **Computer Science Education Fund** to help pay for PD for teachers

Why the focus on Computer Science?

- Skill in most demand and fastest growing occupation
- “There is no job that does not require a working understanding of coding, both for pure programming, specific applications, and working with computers.”
- “...like the spread of general literacy through the 17th and 18th centuries, computer literacy is a prerequisite for almost all work.”

Computer Science in Missouri

- Missouri currently has over **11,200** unfilled Computer Science jobs
- There were **1,138** Computer Science college graduates in 2015
- **631** AP Computer Science exams taken by HS students in 2017
- Average salary for the unfilled jobs is **\$82,500**

Career Connected Learning

- Agreement is unanimous among business and education stakeholders that students as young as middle and high schools need to begin to think about and prepare for careers.
- Students must understand what jobs are in demand, what are high-growth, what training and education are required, and what workplace skills are essential.

Career Connected Learning

- The skills gaps between what employers require and what individuals have are pervasive across all areas of the workforce.
- Businesses must be an integral part of educational program development at the secondary and post-secondary level for local communities and their local economies to survive.

Why Career Connected Learning?

- Motivates students to take rigorous courses
- Increases awareness of opportunities in the career field
- Encourages “Real World” learning
- Makes a connection between school and work
- Organizes their coursework with a focus

Why Career Connected Learning?

- Makes learning relevant for Missouri's students
- Provides thousands of Missouri students with the skills to be employed
- Enhances the workforce for Missouri's businesses and industries
- Keeps Missouri a productive and desirable place to work and live



Career Pathways



- 60 percent of Americans believe that K–12 education systems should be responsible for preparing students for the workforce.
- 1. Pew Research Center. 2016. “The State of American Jobs.” Retrieved from <http://www.pewsocialtrends.org/2016/10/a06/the-state-of-american-jobs/>



The Missouri Career Pathways Vision

All Missouri students will:

1. **Graduate from high school success ready** *with an individual career and academic plan (ICAP)* and work-based learning experience,
2. **Attain a credential** of certification with value in the regional and global labor market(s), and
3. **Launch a career** in an occupation earning a family living wage with opportunity to advance to higher levels of education and employment.



Activities to achieve the Vision

- Identify high demand occupations in the regions
- Connect employers with educators
- Connect educators with post-secondary programs
- Support districts in providing career awareness, exploration, and preparation (ICAP) for “all” students



Activities to achieve the Vision

- Promote work based learning experiences and STEAM activities
- **Coordinate and facilitate teacher externships to enhance relevancy in the classroom**
- Facilitate workshops, and training
- Promote and provide professional development and resources for teaching professional/essential skills



Pathways for Teacher Externship Grants

Connect educators to business & industry workplace skills

- Math Skills
- Communication Skills
- Technology Skills
- Science Skills
- Professional Skills (4 C's)

Broaden awareness of career opportunities for students

Integrate work place skills into instruction



Thinking Outside “Their” Box



Since 2013-14, over **1300** teachers, counselors and administrators have participated in externships and work based learning



DESE Career Pathways Staffing

Steve Bryant State Program Manager and South Central Region
steve.bryant@dese.mo.gov

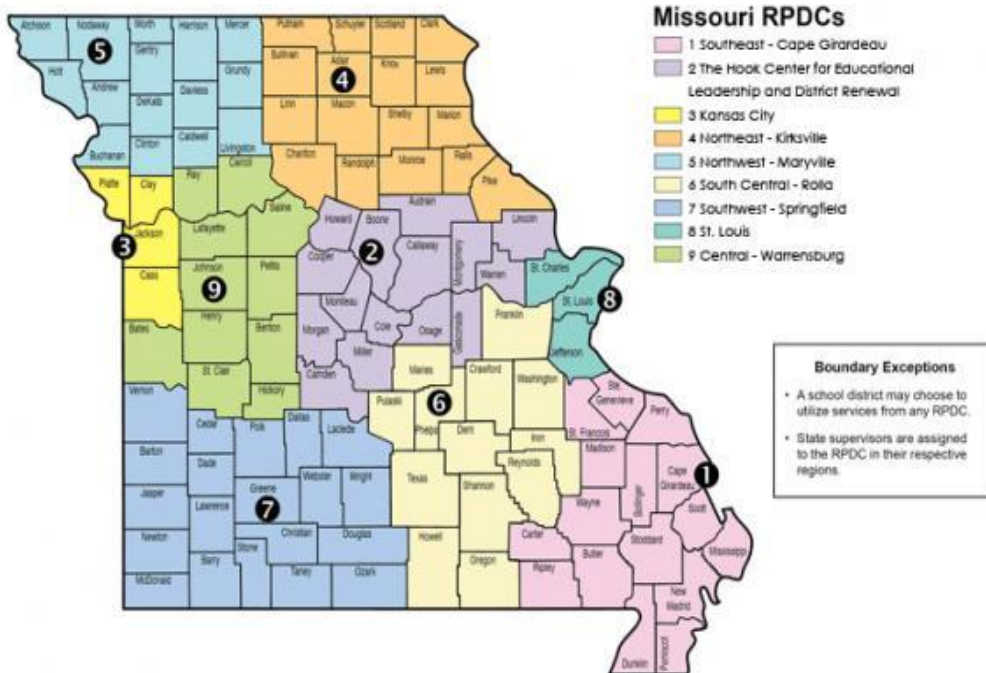
Roberta Carson Mid-Missouri Regional Director roberta.carson@dese.mo.gov

Shonda Gray St. Louis Regional Director
shonda.gray@dese.mo.gov

Ann Starlin-Horner Kansas City Regional Director
ann.starlin-horner@dese.mo.gov



RPDC Locations





Pathways RPDC Staffing

Four Pathways Consultants

- located in the NW, NE, SW, and SE Regional Professional Development Centers (RPDC)
- assisting in connecting educators with employers for externships
 - NW – Allyson Graham, agraham@nwmissouri.edu
 - NE - Polly Matteson, pmatteson@truman.edu
 - SW - Marci Dowdy, mdowdy@missouristate.edu
 - SE – Jim Welker, jlwelker@semo.edu

Missouri Comprehensive School Counseling Program



- K-12 CURRICULUM (GLE's *Social/Emotional *Career and *Academic Development)
- INDIVIDUAL STUDENT PLANNING (**ICAP**, transitions, decision making, goals)
- RESPONSIVE SERVICES (individual/small group counseling and crisis response)
- SYSTEM SUPPORT (consultation, management and evaluation)

9 Career Advisors – ICAP and Missouri Connections training

The **Individual Career & Academic Plan (ICAP)**, is a plan of study to guide students through the coursework and activities for achieving personal career goals, post-secondary planning and providing individual pathway options. An **ICAP** is a multi-year process, beginning no later than the eighth grade, that intentionally guides students and families in the exploration of career, academic and multiple post-secondary opportunities to include *direct access to the workforce *military *tech school/area career center *vocational training (apprenticeship), *2 year college and *4 year college. An ICAP is a “roadmap” to help students develop the awareness, knowledge, attitudes, and skills to create their own meaningful pathways to be success ready graduates.



Elementary Grades 3-5



Middle School Grades 5-8



High School Grades 8-12



Adult/College

Career Development
Curriculum
& GLEs



ICAP

Individual Career
and Academic Plan



K-12 Career Development



STEAM
Events



STEAM Events

7/8
grade



- Regional located
- Hands-on events
- Nontraditional careers



DESE School Counseling Staff

Rene Yoesel School Counseling Program Mgr. rene.yoesel@dese.mo.gov

Chrissy Bashore Assistant Director chrissy.bashore@dese.mo.gov

Amber Ernst Supervisor amber.ernst@dese.mo.gov



Counseling RPDC Staffing

Nine Career Advisors

- ❑ located in the nine RPDC's in Missouri
- ❑ assisting MS and HS counselors in implementing individual career and academic plans (ICAP), programs of study (POS), and MO Connections



School Counseling RPDC Staffing continued

- Region 1 – Marisa Bowen mlbowen@semo.edu
- Region 2 – Jeffery Beiswinger beiswinger@missouri.edu
- Region 3 – Gwen Poss poss@umkc.edu
- Region 4 – Polly Matteson pmatteson@truman.edu
- Region 5 – Allyson Graham agraham@nwmissouri.edu
- Region 6 – Jackie Marling marlingj@mst.edu
- Region 7 – Marci Dowdy mdowdy@missouristate.edu
- Region 8 – Michelene Carbol mcarbol@edplus.org
- Region 9 – Jay Webster bayonne2705@gmail.com



Initiatives That Support Career-Connected Learning

2017-18 CTE Data Points

- 65% of all high school students took at least one CTE course or program.
- 8,767 high school students received an industry-recognized certificate or credential.
- Follow-up of 2017 secondary graduates of CTE programs show that 95% are employed, continuing education or serving in the military, and 66.1% are in the area related to their CTE program of study.

CTE Program Areas

CTE Program Area	Contact
Agriculture Education	Leon Busdieker - Director
Business, Marketing and IT	Lori Brewer - Director
Family Consumer Sciences and Human Services	Theresa Struempf - Director
Health Sciences	Shelly Wehmeyer - Director
Skilled Technical Sciences	Oscar Carter - Director
Technology and Engineering	Matt Johnson - Director

Career and Technical Student Organizations (CTSOs)

- CTSOs are an intra-curricular component of CTE programs.
- CTSOs extend teaching and learning through:
 - Innovative programs
 - Business and community partnerships
 - Leadership experiences at the local, state and national levels.

Career and Technical Student Organizations (CTSOs)

- CTSOs assist in helping our nation address key challenges:
 - Workforce development
 - Student achievement
 - Economic Vitality
 - Global competitiveness
 - Intra-curricular component of all CTE programs

Missouri CTSOs and 2017-18 Membership

Collegiate DECA = 204

DECA = 7,458

FBLA = 25,178

FCCLA = 9,670

FFA = 25,178

HOSA = 3,725

PAS = 294

PBL = 285

SkillsUSA = 11,530

TSA = 6,179

Young Farmers/Young Wives
= 506

Total Participation = 72,202


CTE Certificate

- Legislation was passed in 2016 by the 98th Missouri General Assembly (SBs. 620 & 582)
- State Board of Education, in consultation with the CTE Advisory Council, established minimum requirements for a career and technical education (CTE) certificate. Approved by State Board of Education in June 2017
- CTE certificate will be earned by students in addition to his or her high school graduation diploma.

Focus on Improving Worker Skills

- Statewide WorkKeys for prisoners by their release
- Encourage employers to recognize new Career & Technical Education Certificates
- Expand the Advanced Manufacturing Technician program
- Expand paid internships and apprenticeship programs
- Expand adult high school throughout the state

WorkKeys®


Missouri
Career Education
ESSENTIAL SKILLS FOR ALL STUDENTS



**Advanced Manufacturing
Technician Program
AMT Missouri**

CTE Certificate

- Students must meet all requirements in order to receive the CTE certificate.
- Schools support student efforts to accomplish these requirements through the development and monitoring of the Individual Career and Academic Plan (ICAP).

CTE Certificate

- Students entering high school in school year 2017-2018 and thereafter shall be eligible to earn a CTE certificate.

CTE Certificate Requirements

- Meet all graduation requirements.
- Qualify as a Career and Technical Education (CTE) concentrator.
- Maintain a minimum Grade Point Average (GPA) of 3.0 on a 4.0 point scale in the CTE area of concentration.

CTE Certificate Requirements

- Pass an approved Technical Skill Assessment (TSA) and/or earn an approved Industry Recognized Credential (IRC).
- Complete a minimum of 50 hours of appropriate work-based learning experiences aligned with the CTE area of concentration.
- Maintain at least a 95% attendance record overall for grades 9-12.

CTE Certificate Requirements

- Demonstrate attainment of soft-skills/business skills.
- Achieve a score at or above the state standard on any department-approved measure(s) of college and career readiness.*

* Schools are to use the .75 student weighted measures described in the Assessment Scores Matrix, as the state standard. This matrix is found in Appendix C of the MSIP 5 Comprehensive Guide to the Missouri School Improvement Program, 2016.

CTE Certificate Requirements

Information is available on the DESE website at:

<https://dese.mo.gov/college-career-readiness/career-education/career-and-technical-education-certificate>.

Work-Based Learning

Sustained interactions with industry or community professionals in real workplace settings, to the extent practicable, or simulated environments at an educational institution that foster in-depth, firsthand engagement with the tasks required in a given career field, that are aligned to curriculum and instruction.

Types of Work-Based Learning

- Cooperative Career Education
- Pre-apprenticeship – must lead to a registered apprenticeship
- Registered Apprenticeships
- Clinical settings
- Internships
- School-based enterprises
- CTE program-based work experience
- Entrepreneurial experiences
- Simulated workplace

Apprenticeships for High School Students

- Provide a foundation for career success
- Provide skilled workers for business/industry

Apprenticeships for High School Students

- **YOUTH** are exposed to career pathways and prepared for success in the workplace and further education after high school.
- **SCHOOLS** find a new way to engage students that connects careers with post-secondary education, increasing the potential for success during and after high school.

Apprenticeships for High School Students

- **BUSINESSES** are provided with a pipeline of workers to meet their skill needs and fresh talent recruited from a new pool of future employees.

Two Types of High School Apprenticeships

- **Pre-apprenticeship Program** – prepares students to enter an apprenticeship program after high school.
- **Registered Youth Apprenticeship Program** – students begin an apprenticeship during high school, meaning they are employed by a business as an apprentice while still a student.

Missouri Registered Youth Apprenticeships

- 12 Schools
- 75 Students
- 30 Business Partners



Contact

Blaine Henningsen – blaine.henningsen@dese.mo.gov

Dennis Harden – dennis.harden@dese.mo.gov

Steve Bryant – steve.bryant@dese.mo.gov