Career & Technical Education (CTE) in Colorado
College was once seen as steak while career and technical education was seen as hamburger. Today, college is still steak but CTE has become lobster. In the ideal K-12 school setting, all student's would be engaged in high quality 'surf n’ turf.'

Michael Armbruster
Colorado Career Cluster Model

Management and Administration
- Administrative Services
- Business Information Technology
- Corporate/General Management
- Human Resource Management
- Operations Management

Finance
- Accounting
- Banking Services
- Corporate Finance
- Insurance
- Securities & Investments

Government & Public Administration
- Foreign Service
- Governance
- Legal Services
- Planning
- Public Management & Administration
- Regulation
- Revenue & Taxation

Marketing
- Marketing Communications
- Marketing Management
- Marketing Research
- Merchandising
- Professional Sales/Sales Management

Education & Training
- Administration and Administrative Support
- Professional Support Services
- Teaching and Training

Hospitality, Human Services & Education (+)
- Lodging
- Recreation, Amusements & Attractions
- Restaurants, Food & Beverage Services
- Travel & Tourism

Human Services
- Consumer Services
- Counseling & Mental Health Services
- Early Childhood Development
- Family & Community Services
- Personal Care Services

Health Science
- Biotechnology Research & Development* 
- Diagnostic Services
- Health Informatics
- Supportive Services
- Therapeutic Services

Health Science, Criminal Justice & Public Safety
- Corrections & Security
- Correction Services
- Emergency & Fire Management Services
- Law Enforcement Services
- Security & Protective Services

Health, Safety & Environmental Management
- Health, Safety & Environmental Assurance
- Logistics & Inventory Control
- Manufacturing Production
- Maintenance, Installation & Repair
- Production/Process Technology
- Quality Assurance

Agriculture, Food & Natural Resources
- Animal Science*
- Agricultural Systems
- Food Products & Processing Systems*
- Natural Resource & Environmental Systems*
- Plant Science*
- Power, Structural & Technical Systems*

Energy
- Electromechanical Generation & Maintenance*
- Electrical Energy Transmission & Distribution*
- Energy Efficiency & Environmental Technology*
- Fossil Energy Extraction, Processing & Distribution*
- Renewable Energy Production*

CTSOs = FACS (Science, Technology, Engineering & Math) See also CTE affliiated pathways noted by * 

STEM, Arts, Design & Information Technology
- Audio/Video Technology & Film
- Journalism & Broadcasting
- Performing Arts
- Printing/Publishing
- Visual & Design Arts

Information Technology
- Information Support and Services
- Interactive Media
- Network Systems & Telecommunications*
- Programming & Software Engineering*

SkillsUSA, FCCLA

CTSOs - TSA, CCCC, SKILLSUSA, FECLA

Business, Marketing & Public Administration

Hospitality, Human Services & Education (+)

Agriculture, Natural Resources & Energy
CTSOs = FFA

Transportation, Distribution & Logistics
- Facility & Mobile Equipment Maintenance
- Health, Safety & Environmental Management
- Logistics, Planning & Management Services
- Planning, Management & Regulation
- Sales & Service
- Transportation Operations
- Transportation/Systems Infrastructure
- Warehousing & Distribution Center Operations

Law, Public Safety, Corrections & Security
- Corrections Services
- Emergency & Fire Management Services
- Law Enforcement Services
- Security & Protective Services

CTSOs = FCCLA - SKILLSUSA - STEM affiliated pathway

Postsecondary & Workforce Readiness (PWR)
Entrepreneurial
- Critical Thinking & Problem Solving, Creativity & Innovation, Inquiry & Analysis, Real World Skills Taking

Personal
- Initiative, Self-Discipline, Personal Responsibility & Self-Management, Adaptability & Flexibility, Learning Style Awareness

Civic
- Core Competencies: Foundation, Collaboration & Teamwork, Communication, Global & CTE Awareness

Professional
- Work & Work Environment, Career Literacy, Grill & Resilience, Work Ethic, Employability & Reliability

Academic

Alternative Cooperative Education (ACE) CTSOs (SG)

Public Safety
- Law, Justice & Corrections
- Correction Services
- Emergency & Fire Management Services
- Law Enforcement Services
- Security & Protective Services

CTSOs = FCSA, SKILLSUSA, FECLA

CTSOs - TSA, CCOS, SKILLUSA, FECLA

Health Science
- Biotechnology Research & Development*
- Diagnostic Services
- Health Informatics
- Supportive Services
- Therapeutic Services

Law, Public Safety, Corrections & Security
- Corrections Services
- Emergency & Fire Management Services
- Law Enforcement Services
- Security & Protective Services

CTSOs = HOSA & "SKILLUSA

* STEM affiliated pathway

+ FACS Core & World Of Work (WOW)

Updated October 2016 - www.coloradostateplan.com + www.cccs.edu
Colorado Career Clusters

- Management and Administration: 14
  - Finance
  - Government
- Agriculture, Food & Natural Resources: 30
  - Energy
  - Agriculture, Natural Resources & Energy
- STEM (Science, Technology, Engineering & Math): 26
  - Information Technology: 9
  - Arts, A/V Technology and Communication: 6
- Marketing: 14
- Finance
- Government
- Hospitality, Human Services & Education
- Human Services
- Education & Training
- Hospitality & Tourism
- Business, Marketing & Public Administration
- Combine Exploratory ‘Wheel’: 61
- Health Science
  - Health Science, Criminal Justice & Public Safety
- Law, Public Safety, Corrections & Security
- Law, Public Safety, Corrections & Security
- Architecture
- Skilled Trades & Technical Sciences
- Manufacturing
- Transportation, Distribution & Logistics
- Revised January 9, 2012
  www.coloradostateplan.com/counselors.htm
Where are we
MS CTE Journey in Colorado

Year 1
2011-2012
25 Programs

Year 2
2012-2013
47 Programs

Year 3
2013-2014
80 Programs
13,396 total enrollment

Year 4
2014-2015
88 Programs
20,460 total students served

Year 5
2015-2016
117 Programs
25,455 total students served

Year 6
2016-2017
131 Programs
29,741 total students served

Year 7
2017-2018

Year 8
2018-2019

____ Programs
_______total students served
Cool Data Tidbit!

- 29,741 Total MS Students were enrolled in CTE programs in 17-18 school year.
- 4,551 MS students enrolled in a 16-17 MS CTE program continued into a high school CTE program in 17-18.
- 1,242 MS students enrolled in a 16-17 MS CTE program continued into a high school program in 17-18 within the same career cluster.
- 3,792 MS students in the 16-17 enrollment continued into a high school program in 17-18 in a different career cluster.
- 5,021 MS Students who were enrolled in a MS CTE program in the 8th grade, did not pursue any CTE in 9th grade.

**NOTE:** for bullets 3 and 4—some students participate in more than 1 CTE program so they may fall under both bullets, and that is why that equals more than the 4,551 in the 2nd bullet.
Career & Technical Education (CTE) in Colorado

Postsecondary Workforce Readiness (PWR)
In 2009, the State Board of Education and Colorado Commission of Higher Education adopted a description of "Postsecondary and Workforce Readiness" (PWR). Per statute, this description must be revisited every six years and both the Colorado State Board of Education and Colorado Commission on Higher Education need to approve any revisions.

**Description**

"Colorado high school graduates demonstrate the knowledge and skills (competencies) needed to succeed in postsecondary settings and to advance in career pathways as lifelong learners and contributing citizens."


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**Competencies**

<table>
<thead>
<tr>
<th>Entrepreneurial</th>
<th>Personal</th>
<th>Civic</th>
</tr>
</thead>
<tbody>
<tr>
<td>★ Critical thinking and problem solving</td>
<td>★ Initiative and self direction</td>
<td>★ Core academic foundation</td>
</tr>
<tr>
<td>★ Creativity and innovation</td>
<td>★ Personal responsibility and self-management</td>
<td>★ Collaboration and teamwork</td>
</tr>
<tr>
<td>★ Inquiry and analysis</td>
<td>★ Adaptability and flexibility</td>
<td>★ Communication</td>
</tr>
<tr>
<td>★ Informed risk-taking</td>
<td>★ Self-awareness of learning preferences, strengths, and areas for growth</td>
<td>★ Global and cultural awareness</td>
</tr>
</tbody>
</table>

**Professional**

- ★ Time and work management
- ★ Career literacy
- ★ Grit and resilience
- ★ Work ethic: dependable and reliable

**Academic**

- ★ Apply skills and knowledge
- ★ Critical thinking and problem solving
- ★ Inquiry, analysis, and evaluation
- ★ Discernment

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*MCC* Meaningful Career Conversationalist

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Career & Technical Education (CTE) in Colorado

Individual Career & Academic Planning
Or Meaningful Career Conversations

ICAP QUALITY INDICATORS AND PROMISING PRACTICES

Students use these indicators (or tools) to explore, experience, engage in, and excel in their pathways through high school and into the world beyond. ICAP teams use them to help define and refine ICAP practices. These ICAP elements can be modified for developmental levels.

- Self-Awareness
- Career Awareness
- Postsecondary Aspirations
- Postsecondary Options
- Environmental Expectations
- Academic Planning
- Employability Skills
- Financial Literacy
Career & Technical Education (CTE) in Colorado
Work Based Learning

http://coloradostateplan.com/educator/work-based-learning/wbl-resources/
Each

Equity is when every student has what they need to succeed.
Vision

With Career Education in mind, Middle School CTE programs are exploratory in nature, focused on connection to career possibilities and assist students to obtain connection to self while experiencing an all-encompassing wheel of career cluster exposure.

Mission

To introduce students to their interests resulting in obtaining relevance for learning with an increase in their engagement which in turn supports High School program recruitment and retention, inevitably increasing graduation rates and Postsecondary enrollment rates.

Benefits

- Early exposure to careers and the World of Work
- Access to Career & Technical Student Associations (CTSA)
- Potential for CTE (Career & Technical Ed) reimbursement
- Alignment to Individual Career & Academic Plan (ICAP) preparedness
- Increased Postsecondary/Wide-Range Readiness (PWR) bystrong School Culture

http://coloradostateplan.com/educator/middle-school-cte/