

Colorado Vocational Act

Thirty-Third
Annual Report

2003



COLORADO COMMUNITY
COLLEGE SYSTEM



COLORADO VOCATIONAL ACT 2003

COLORADO COMMUNITY COLLEGE SYSTEM



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A LETTER FROM THE PRESIDENT

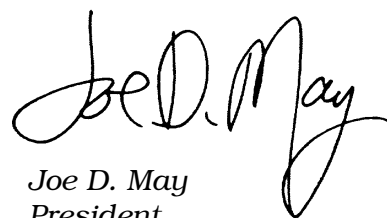
Unique in the nation as the only state that combines administration of its secondary and postsecondary career and technical education under a single system, Colorado was recognized this year by a federal audit team of the U.S. Department of Education as a model for vocational education administration in the United States. In that light, this report containing the basic accountability information concerning career and technical education in the public school districts of Colorado in the 2002–2003 school year, is respectfully submitted to the Colorado General Assembly in compliance with the State Assistance Vocational Act (commonly referred to as the Colorado Vocational Act) of 1970 as revised.

The General Assembly provided \$19,374,279 in FY 02–03 to assist more than 160 school districts in funding 1,300 secondary career and technical education programs. A primary objective of the Colorado Community College System (CCCS) is to ensure that, through school districts and private sector cooperation, high quality career and technical education programs are available to all secondary students who want, need, and can benefit from such programs.

In 02–03, just over 98,000 secondary students were enrolled in state approved career and technical education programs. Forty-five percent (45.1%) of all secondary students in grades 9 through 12 in Colorado were enrolled in career and technical education. Ninety-one percent of the students contacted who completed career and technical education programs in 2001–2002 were employed in jobs directly related to their career and technical training or continuing their education. The unemployment rate of youth who have completed a career and technical education program in Colorado (3.6%) in 2001–2002 is about one-fifth the rate of youth (16–19) in general (17.20%, Bureau of Labor Statistics).

The career and technical education programs offered through Colorado's high schools are an important part of the comprehensive delivery system of career and technical education in the state. These programs are fundamental to the economic vitality and future development of local communities and the State of Colorado. In addition, these programs make a vital contribution to the school to work transition for the majority of students who do not pursue a baccalaureate degree upon graduation from high school.

Your comments on this publication are welcome.



Joe D. May
President

Colorado Community College System



INFORMATION AND FACT SHEET

CVA FACTS

The thirty-third Annual Report is submitted to the Colorado General Assembly in compliance with the Colorado Vocational Act of 1970. This act provides State funds to assist local school districts in providing career and technical education programs. Career and technical education is charged with preparing people for jobs and further education.

During the 2002–03 school year, the General Assembly appropriated \$19,374,279 for the Colorado Vocational Act. Entitlements for school districts under the Act were greater than the appropriations; therefore, it was necessary to prorate the reimbursement to each district to approximately 81.98 percent of its entitlement.

COLORADO FACTS

In Colorado high schools during FY 02–03, just over 98,000 (duplicated headcount) students were enrolled in career and technical education (CTE) programs that were approved and supported under the authority of the Colorado Vocational Act.

The number of programs funded in 02–03 under the Colorado Vocational Act was 1,300.

Colorado Vocational Act programs are offered in 280 high schools and other attendance centers within more than 160 school districts and 11 other institutions throughout the state.

Statistics for 02–03 Colorado Vocational Act programs indicate that 91.0 percent of secondary career and technical education graduates either obtained a job related to their training or continued their education.

Of the just over 98,000 students in CVA approved programs, 29.73 percent were identified as disadvantaged and 8.14 percent as disabled.

Minority students represent 27.43 percent of the enrollment in programs under the Colorado Vocational Act.

Career and technical education and academics are linking in Colorado schools to demonstrate that CTE classes are challenging both technically and academically, integrating core skills directly into the curricula to best prepare our students for the workplace or further education. Career and technical education is about helping students, workers, and

lifelong learners fulfill their working potential. The advantage of this integration is that career-oriented students may begin to appreciate the practical applications of academics and may improve in these areas as a result.

Technology education is an academic subject in its own right. The mission of technology education is to help students learn how to appropriately use, assess, and apply technology to make decisions effectively and contribute to a rapidly changing technological society. Understanding and properly using technology is now a part of a student’s overall general education.

Of the total job openings between 2000 and 2010, the Bureau of Labor Statistics (BLS) projects that 70 percent will require no postsecondary education. An additional 9 percent will require an associate’s degree or postsecondary vocational award, and only 21 percent will require a bachelor’s degree or higher. Of the thirty occupations that will grow the fastest between 2000 and 2010, 70 percent do not require a college education.

Career-related education is a good way of teaching all of the other skills that are valued by employers: academic skills, computer skills, and basic work behaviors. Teaching these skills in a vocational context may be effective in engaging some students in learning who would not otherwise be so engaged. Learning within a career-related context can help students see the relevance of what they are studying, as well as help them gain confidence in their ability to perform in school and on the job.

Colorado’s unemployment rate recently has approached levels not seen since 1966, averaging 5.8 percent (Colorado Department of Labor & Employment, 2003). This remarkable shift in unemployment numbers, however, is not uniform statewide; Saguache County experienced a 16.2 percent average unemployment rate in 2001 while Las Animas County enjoyed a 1.6 percent rate. Employment opportunities also vary by employment sector.

A study completed by the Colorado Community College System (“Summary of Studies of Major Growth Industries in Colorado with Implications for Workforce Development,” CC of C, July, 1998) points to emerging industry needs for workers in the following areas: biotechnology, manufacturing, telecommunications, and business services. Most of the needs identified in this research point to high-end, high-tech skills.



In information technology, there is a need for optoelectronics engineers, laser optics technicians, software & hardware engineers, and programmers. In biomedical manufacturing, qualified biomedical engineers and biomedical technicians are in short supply. The results of this research can be married to another study conducted for the Metro Denver Network ("MDN Tech Vision," Taratec Corporation, July, 1998). This study also points to expanded employment opportunities in these high-tech fields: biomedical products and devices, computer storage and peripherals, software for the telecommunications industry, and equipment for communications infrastructure. Both reports conclude that the worker of the future will need a strong background in academic subject matter as well as thorough, relevant training with new technologies.

COLORADO OPPORTUNITIES

Colorado is in a unique position with its coordinated Colorado Community College System to expand the opportunities for our students to meet the changing workforce needs. Expanded career and technical education programs need to be made available in school districts across the state. Secondary vocational directors are being encouraged to articulate classes with similar postsecondary classes and programs, allowing students to earn college credits while attending high school. By the 2004 school year, approved vocational (CTE) credits will be electronically transcribed to any Colorado community college. The classes must be taught with identical competencies to be approved into this "escrow credit" system. This will reduce student costs and enable seamless transfer of credit from high school to community colleges. Increased cooperation with the business community can lead to lower cost and higher-quality programs that are designed to meet changing workforce needs. Legislative support is needed to direct funding to programs for students not seeking baccalaureate degrees.

DEFINITIONS

A career and technical education program is a sequence of courses that are directly related to the preparation of individuals in paid and unpaid employment in current or emerging occupations requiring other than a baccalaureate or advanced

degree. Such programs include competency-based applied learning that contributes to a person's academic knowledge, higher order reasoning & problem-solving skills, work attitudes, general employability skills, and the occupational-specific skills necessary for economic independence as a productive and contributing member of society.

A secondary (high school) career and technical student is a student of high school age enrolled in a state-approved career and technical education program offered through a high school, an area vocational center, or a community college.

Employed related means employed in an occupation in which the skills required for entry level employment are directly related to the career and technical training program, or enlisted in the military full-time. Includes Core FCS program completers because they are considered to have 100 percent placement related to training.

Employed unrelated means employed in an occupation in which the skills required for entry-level employment are not directly related to the career and technical training program.

Full-time equivalent (FTE) is one student attending six hours per day for 180 days.

In the labor force includes students who are employed related, employed unrelated, and unemployed.

Unemployed means not currently employed and seeking employment.

Continuing education means pursuing additional academic or career and technical education at either the secondary or postsecondary level.

Other means not in the labor force (includes deceased, disabled, or ill) and not continuing education.

Completer is a student who has completed all of the objectives stated in the Colorado Community College System Program Approval Document for a specific career and technical education program.



ENROLLMENT AND PLACEMENT TRENDS

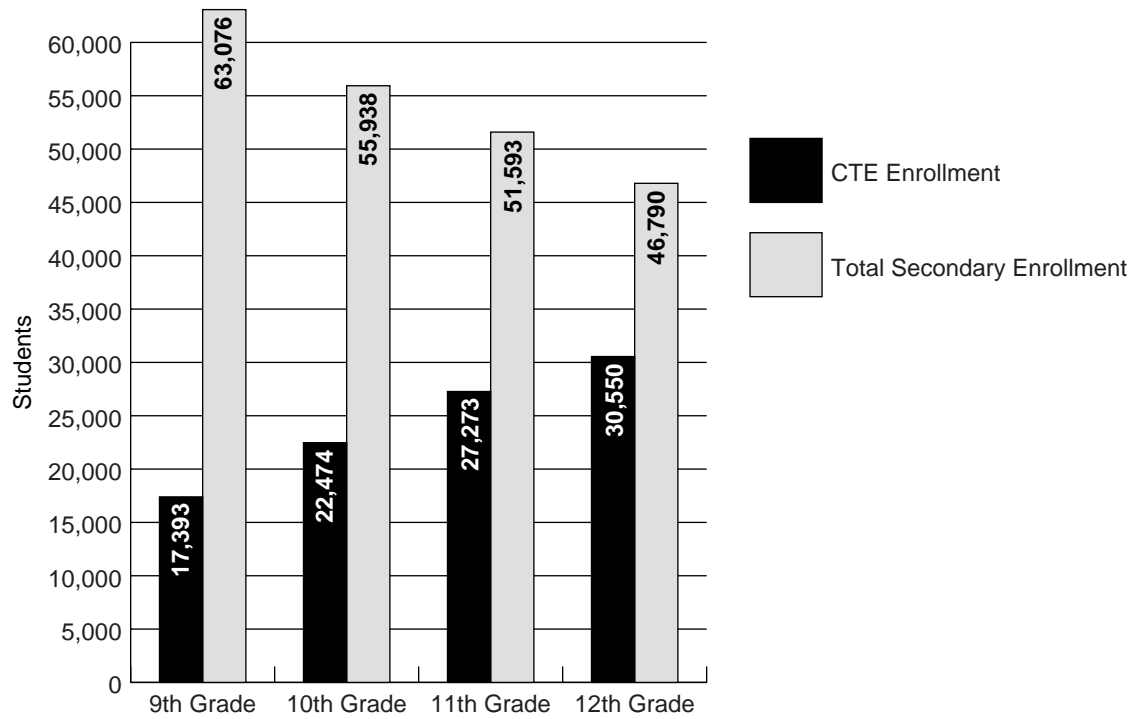
For FY 2003, total CTE enrollments were 98,024 (duplicated headcount). These enrollments represent 85,800 students (unduplicated headcount)—or 40 percent of the total 9–12 grade secondary enrollment in the state (217,397). In the 12th grade, as students approach graduation and anticipate entering the labor force, participation in CTE programs is more than 65 percent. The majority of career and technical education programs are one-year or two-year programs. A notable exception is agricultural production which is a four-year program.

During the last three years, for those students available for the labor force, the percentage obtaining jobs has remained relatively consistent at about 96 percent. In the 2003 “Student Follow-Up Study of 2002 Completers”, 87.9 percent of those students seeking jobs obtained positions in fields related to their CTE training. The comparable figures for 2001 and 2002 are 72.0 percent and 78.8 percent, respectively.

CTE Program Area	2000–01		2001–02		2002–03	
	Enrollment	Percent Employed	Enrollment	Percent Employed	Enrollment	Percent Employed
Agriculture Education	3,938	98%	4,152	98%	4,508	95%
Business Education	36,535	94%	36,816	96%	43,312	98%
Family and Consumer Science Education	13,823	100%	12,381	100%	14,089	100%
Family and Consumer Science Occupations	4,349	97%	4,639	98%	6,081	97%
Health Occupations	838	85%	1,018	97%	1,165	94%
Marketing Education	7,431	97%	7,181	99%	8,288	98%
Multi-Occupational Cooperative Education	374	100%	370	94%	342	97%
Alternative Cooperative Education (ACE)	6,440	94%	6,331	92%	6,471	92%
Technical Education	3,880	94%	3,785	95%	5,603	92%
Trades and Industrial Education	6,405	96%	6,750	98%	8,165	95%
Total CTE Enrollments	84,013	96%	83,423	97%	98,024	96%
Total Secondary (9–12) Enrollments	207,858		212,989		217,397	



2002-03 COLORADO SECONDARY CTE ENROLLMENT BY GRADE*

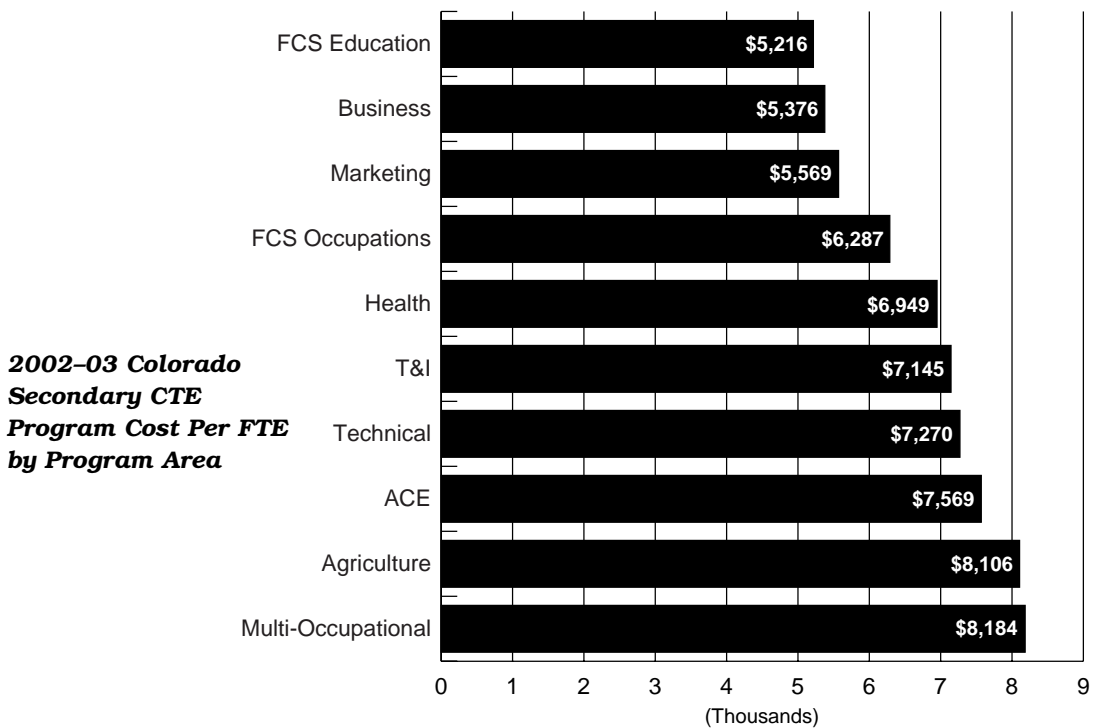
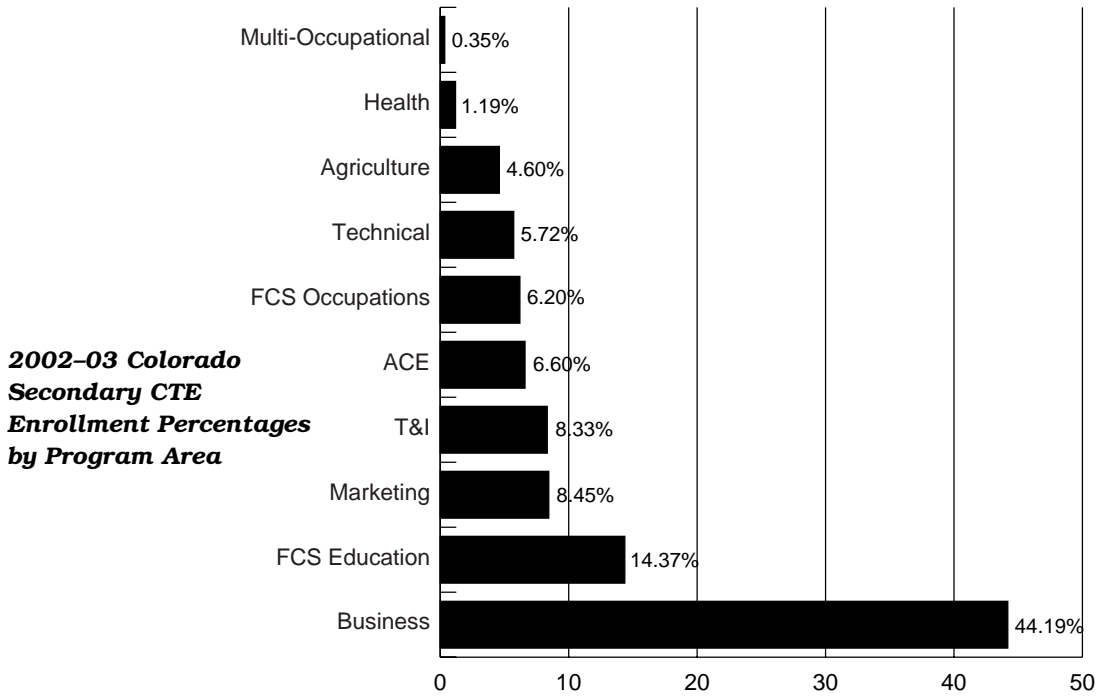


*Graph does not include secondary CTE students in the "special" grade category.



ENROLLMENT AND COSTS BY PROGRAM AREA

The graphs below illustrate that 81.94% of all career and technical enrollment is concentrated in five program areas: Business, Family and Consumer Science Education, Marketing, Trades and Industrial (T&I), and Alternative Cooperative Education (ACE). Family and Consumer Science Education is the program area with the lowest average full-time-equivalent (FTE) cost, while Multi-Occupational has the highest average FTE cost.





ENROLLMENT AND FINANCIAL HIGHLIGHTS

When FTE enrollment is considered, three program areas account for almost two-thirds (60.01%) of career and technical education enrollment: Business (36.46%), Trades and Industrial (13.30%), and Family and Consumer Science Education (10.25%).

CTE Program Area	Enrollment	FTE* Enrollment	Total Cost of Programs (\$)	Cost Per FTE (\$)
Agriculture Education	4,508	797.18	\$6,461,756	\$8,106
Business Education	43,312	3,977.23	\$21,380,599	\$5,376
Family and Consumer Science Education	14,089	1,118.17	\$5,832,749	\$5,216
Family and Consumer Science Occupations	6,081	635.10	\$3,992,655	\$6,287
Health Occupations Education	1,165	259.59	\$1,803,842	\$6,949
Marketing Education	8,288	919.87	\$5,122,791	\$5,569
Multi-Occupational Cooperative Education	342	56.71	\$464,131	\$8,184
Alternative Cooperative Education (ACE)	6,471	1,131.10	\$8,561,296	\$7,569
Technical Education	5,603	564.15	\$4,101,374	\$7,270
Trades and Industrial Education	8,165	1,451.00	\$10,373,540	\$7,145
TOTAL	98,024	10,910.10	\$68,094,733	\$6,241

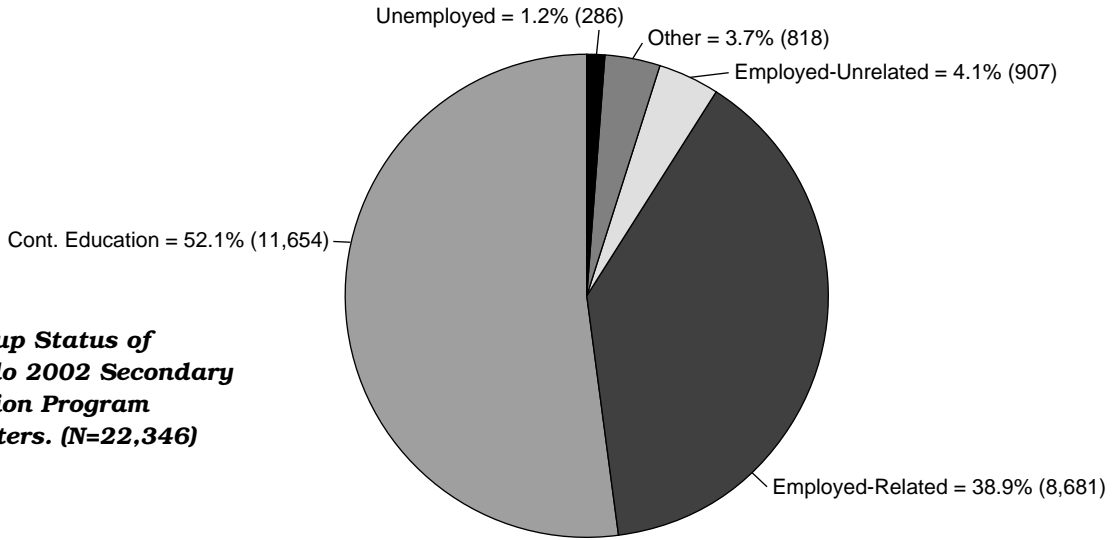
*A full-time equivalent student (FTE) is one student attending six hours a day for 180 days.



PLACEMENT RATES OF COMPLETERS OF CTE PROGRAMS

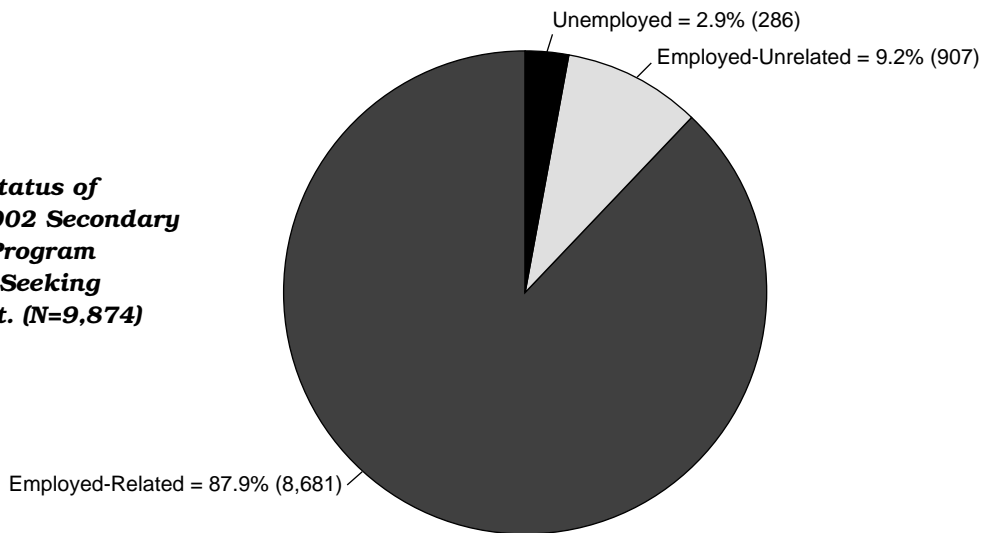
The aggregate placement rates for all career and technical education programs operated under the Colorado Vocational Act reflect the effectiveness of these programs in terms of secured employment. Of those students contacted who completed a secondary CTE program, 38.9 percent were employed in a job related to their training; 4.1 percent were employed in a job unrelated to their training, and 1.2 percent were unemployed. An additional 52.1 percent of the students contacted indicated they were continuing their education and 3.7 percent were neither in school nor in the labor force (e.g., due to health status, by choice, etc.).

Follow-up Status of Colorado 2002 Secondary Education Program Completers. (N=22,346)



The pie chart below reflects placement rates for those seeking employment. More than 97 percent of those seeking employment found a job, while the unemployment rate was 3.6 percent, considerably below the general youth (ages 16–19) 2001 unemployment rate of 14.8 percent in Colorado. Overall, an impressive 87.9 percent of those seeking employment were employed in jobs related to their training, compared to 78.8 percent for 2001 completers.

Follow-up Status of Colorado 2002 Secondary Education Program Completers Seeking Employment. (N=9,874)



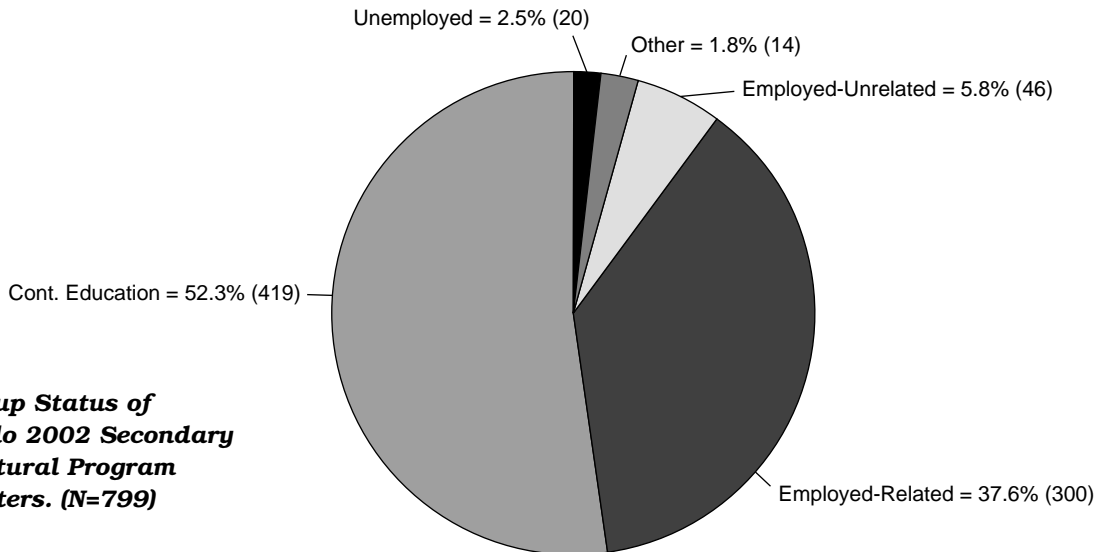


AGRICULTURE

AGRICULTURE EDUCATION consists of training in agriculture occupations, including production agriculture, supplies and services, mechanics, ornamental horticulture, aquaculture, agribusiness, marketing, farm and ranch management, forestry, wildlife, and natural resources. Production agriculture and ornamental horticulture are the two primary programs offered at the secondary school level, while the other areas are integrated into these programs. Vocational agricultural education is usually a four-year program in Colorado high schools. Of the total high school CTE students, 4.6 percent are involved in vocational agricultural education. Agribusiness (including inputs, farm and ranch production, and processing) generates 105,000 jobs, 4.4% of the state's total, and contributes \$15.9 billion annually to Colorado's economy. Colorado ranks 17th nationally in cash receipts from farm marketings, outranked in the west only by California. Ninety-five percent of students contacted who were seeking employment found a job.

	2000-01	2001-02	2002-03
Enrollment	3,938.00	4,152.00	4,508.00
Completers	737.00	924.00	1,049.00
FTE Enrollment	812.81	796.48	797.18
Number of Programs	98.00	99.00	100
Total Cost of Programs	\$6,445,681	\$6,366,834	\$6,461,756
Cost Per FTE	\$7,930	7,994	8,106

Program Title	Number of Programs	Total Enrollment	FTE Enrollment	Total Cost of Programs (\$)	Cost Per FTE (\$)
Agricultural Power Machinery	1	21	5.00	\$35,281	\$7,062
Animal Health	1	46	10.99	\$113,185	\$10,303
Landscaping	1	24	7.44	\$117,108	\$15,740
Nat. Resource Management	2	29	12.97	\$73,118	\$5,638
Ornamental Horticulture	7	331	109.75	\$696,283	\$6,344
Production Agriculture	87	4,014	639.59	\$5,310,676	\$8,303
Wildlife and Wildlands Management	1	43	11.44	\$116,105	\$10,147



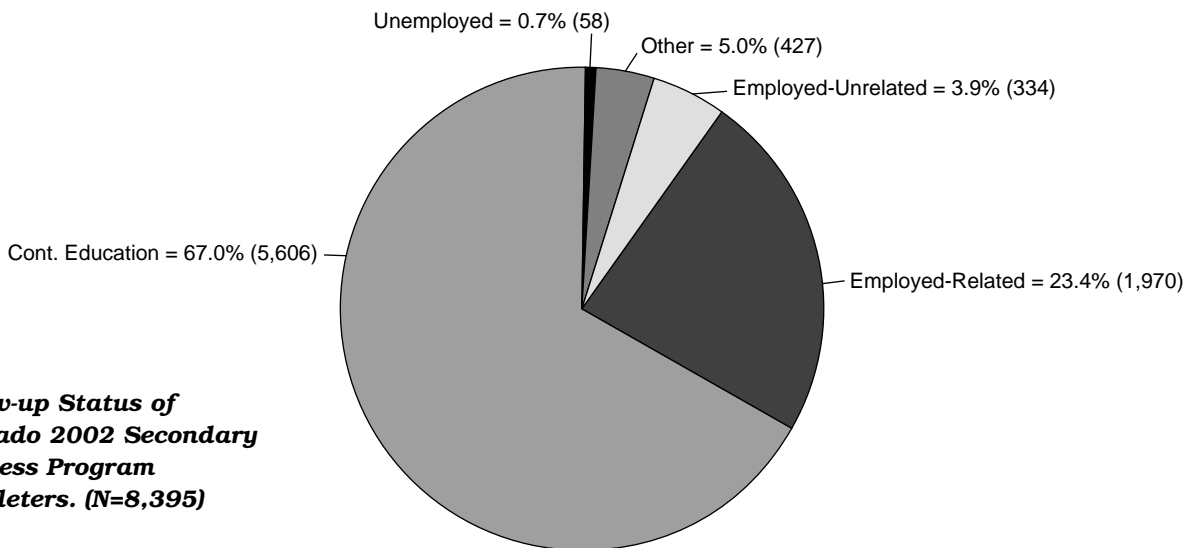


BUSINESS

BUSINESS EDUCATION is the largest career and technical program area in Colorado with consistently high enrollments in the areas of office administration, accounting, information technology, and management. This area also encompasses innovative educational partnerships with Oracle, Microsoft, CIW, and Sun Microsystems. The curriculum in business education follows a flexible program concept. Several occupational options are included under the secondary core program providing opportunities that are related to student interests and job market demands. Colorado is a major center for business, finance, government, and corporate headquarters, with a high number of positions in the office business area. For all business education programs, 98 percent of students contacted who were seeking employment found a job.

	2000-01	2001-02	2002-03
Enrollment	36,535.00	36,816.00	43,312.00
Completers	9,309.00	9,852.00	11,299.00
FTE Enrollment	3,760.80	3,975.20	3,977.23
Number of Programs	276	299	306
Total Cost of Programs	\$19,689,700	\$21,347,072	\$21,380,599
Cost Per FTE	\$5,236	\$5,370	\$5,376

Business program costs and enrollments are reported under the Business Education Core, beginning 1992-93.



Follow-up Status of Colorado 2002 Secondary Business Program Completers. (N=8,395)

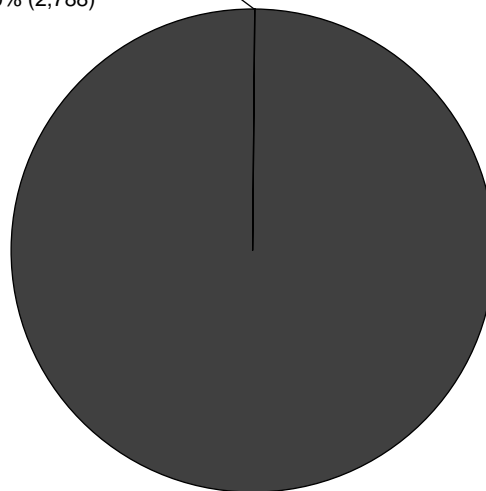


FAMILY AND CONSUMER SCIENCE EDUCATION

The FAMILY AND CONSUMER SCIENCE EDUCATION program is designed to equip students with entry level skills needed for balancing work and family. This program is based upon a job analysis study of the Colorado home manager and research of Colorado community members. Instruction focuses on: life management skills, relationships, parenting education, and teen health. One hundred percent of completers of the program are placed related to training and have met the objectives of problem-solving and decision-making skills which contribute to a healthy life style and success as a member of society.

	2000-01	2001-02	2002-03
Enrollment	13,823.00	12,381.00	14,089.00
Completers	4,147.00	3,527.00	3,616.00
FTE Enrollment	1,150.49	1,163.21	1,118.17
Number of Programs	163	162	157
Total Cost of Programs	\$5,251,867	\$6,091,115	\$5,832,749
Cost Per FTE	\$4,565	\$5,237	\$5,216

Employed-Related (Using Family and Consumer Science Core Skills) = 100% (2,788)



Follow-up Status of Colorado 2002 Secondary Family and Consumer Science Education Program Completers. (N=2,788)



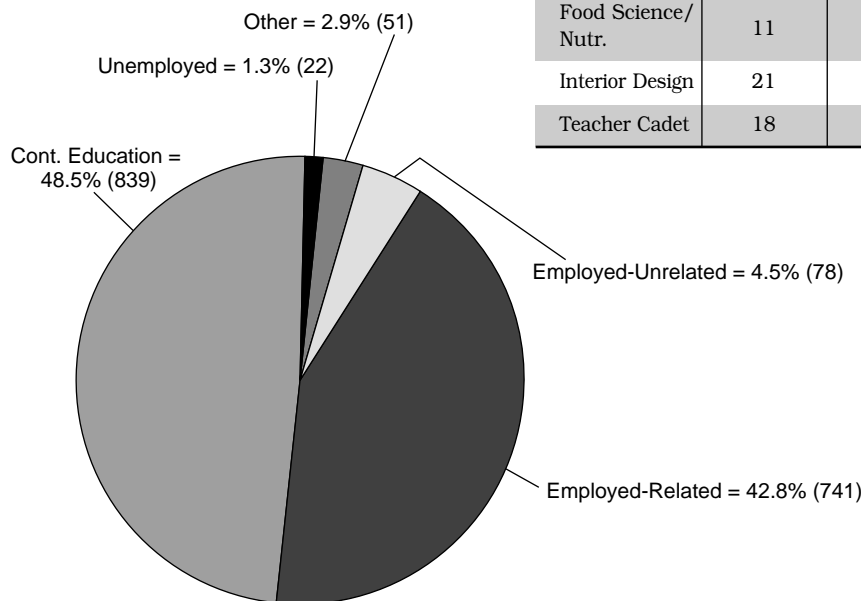
FAMILY AND CONSUMER SCIENCE RELATED OCCUPATIONS INCLUDING: CULINARY ARTS, EARLY CHILDHOOD PROFESSIONS AND INTERIOR DESIGN

FAMILY AND CONSUMER SCIENCE RELATED OCCUPATIONS prepare students for entry-level employment in careers working with children ages birth through eight, all phases of the food industry, interior design, and teaching. Inherent to Family and Consumer Science is the commitment to stay abreast of the advancements of technology so that the skills being taught are relevant in today's world. Population growth, rising incomes, and more leisure time have contributed to a growing demand for human-service oriented professions. The proportion of students placed in jobs related to their training in the wage-earning program is 43 percent. With the increase in the number of women entering the workforce or heading single parent households, the demand for child care services has increased. Of those contacted who were seeking employment, 97 percent found jobs.

	2000-01	2001-02	2002-03
Enrollment	4,349.00	4,639.00	6,081.00
Completers	2,237.00	2,112.00	2,954.00
FTE Enrollment	533.53	578.26	635.10
Number of Programs	130	154	193
Total Cost of Programs	\$3,585,937	\$3,646,577	\$3,992,655
Cost Per FTE	\$6,721	\$6,306	\$6,287

Program Title	Number of Programs	Total Enrollment	FTE Enrollment	Total Cost of Programs (\$)	Cost Per FTE (\$)
Care & Guidance Management & Service	2	55	13.63	\$131,305	\$9,633
Child Care Aide	41	667	122.68	\$939,898	\$7,661
Fashion Design	1	48	10.28	\$54,454	\$5,297
Food Management Production Service	10	363	102.98	\$938,034	\$9,109
FCS/Human Sciences, Other	35	1,521	129.38	\$902,303	\$6,974
Food Caterer	25	1,057	77.85	\$332,333	\$4,269
PRO-START	29	708	78.34	\$360,554	\$4,602
Food Science/Nutr.	11	819	74.91	\$228,562	\$3,051
Interior Design	21	748	16.97	\$82,402	\$4,856
Teacher Cadet	18	95	8.08	\$22,810	\$2,823

* High cost programs are closely monitored.



Follow-up Status of Colorado 2002 Secondary Family and Consumer Science Occupations Program Completers. (N=1,731)



HEALTH OCCUPATIONS AND CRIMINAL JUSTICE

Fast, fierce competition for managed care contracts, reimbursement cuts and pressure to maximize efficiency and reduce costs have led health care agencies to reorganize patient services, lower staffing levels and close departments. This situation coupled with a critical shortage of health care workers has led to predictions that health care jobs will go unfilled and patient care may suffer. The Colorado Department of Labor and Employment projects that almost one-half of the new jobs created during the next decade will be in the health services division of Colorado's economy.

Health Occupations programs in Colorado, including Med-Prep, continue to provide students with the principles and skills common to any health occupation with options for students to pursue education and training in nurse aide, physical therapist aide, rehabilitation aid, dental aid, occupational therapy aid, medical office aide and others. Med-Prep completers are immediately employable. Ninety-four percent of health occupations graduates who were contacted and were seeking employment found a job. Med-Prep appeals to minorities and men, as well as the traditional holders of health-related jobs, women.

Health care teams continue to consist of multi-skilled workers. Cross-training among team members is emphasized and valued. The increased use of out-patient facilities, home care, and community clinics has changed the way health care is delivered. Health occupations education programs continue to incorporate these changes, ensuring that graduates are capable of joining the workforce as immediate contributors.

	2000-01	2001-02	2002-03
Enrollment	838.00	1,018.00	1,165.00
Completers	409.00	629.00	682.00
FTE Enrollment	254.86	258.99	259.59
Number of Programs	28	32	31
Total Cost of Programs	\$1,800,736	\$1,819,715	\$1,803,842
Cost Per FTE	\$7,066	\$7,026	\$6,949

Program Title	Number of Programs	Total Enrollment	FTE Enrollment	Total Cost of Programs (\$)	Cost Per FTE (\$)
Fitness	3	97	20.33	\$136,345	\$6,707
Criminal Justice	3	132	25.49	\$114,122	\$4,477
Dental Assistant	2	26	8.35	\$69,841	\$8,364
Med-Prep	21	874	202.53	\$1,433,978	\$7,080
Dental Services	2	36	2.89	\$49,556	\$17,147

Follow-up Status of Colorado 2002 Secondary Health Occupations and Criminal Justice Program Completers. (N=455)



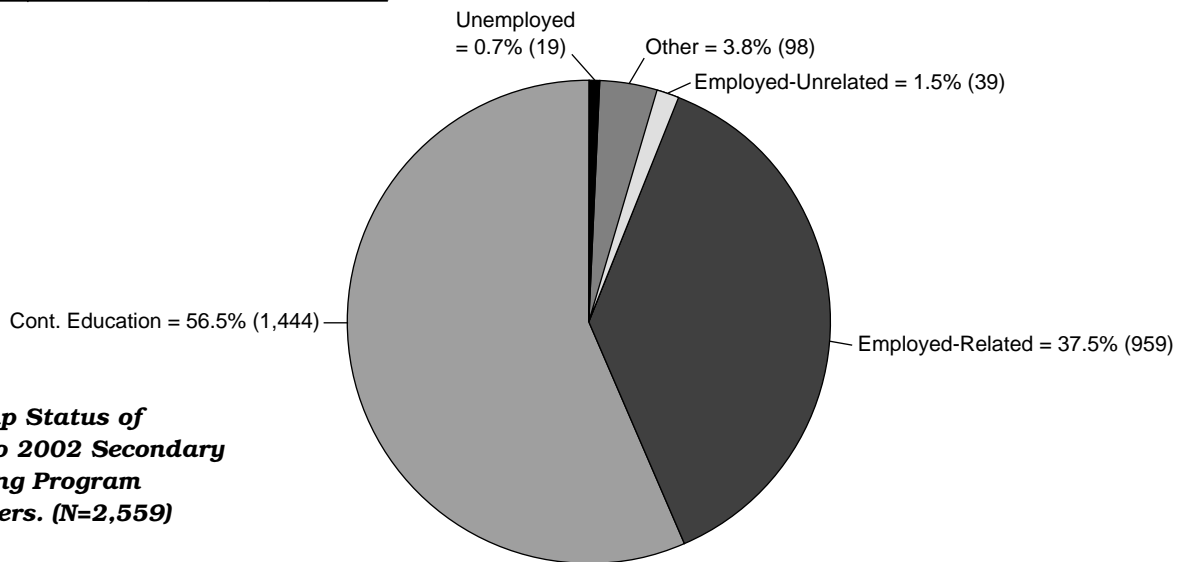


MARKETING

MARKETING EDUCATION is a cooperative career and technical education program in which schools and employers combine to develop competent workers in marketing concepts executed through the marketing functions and distribution of goods and services. Marketing Education programs are designed to teach marketing concepts and skills as well as the underlying business foundations required for the understanding and development of marketing. Marketing Education is defined by the National Marketing Education Standards (which make up the curriculum framework) and their corresponding performance indicators. The program offers opportunities to gain first-hand experience in fashion merchandising, advertising, general marketing, finance and credit, travel and tourism, transportation, distribution, and international marketing, including merchandising and sales in these areas. The more diverse opportunities are in the urban areas but the job demand for marketing occupations is statewide. This career and technical education program is vital to Colorado's wholesale, retail, and service-based economy. Of those contacted who were seeking employment, 98 percent found a job.

	2000-01	2001-02	2002-03
Enrollment	7,431.00	7,181.00	8,288.00
Completers	2,858.00	3,165.00	3,429.00
FTE Enrollment	935.06	929.40	919.87
Number of Programs	95	97	96
Total Cost of Programs	\$4,932,989	\$5,163,427	\$5,122,791
Cost Per FTE	\$5,276	\$5,556	\$5,569

Program Title	Number of Programs	Total Enrollment	FTE Enrollment	Total Cost of Programs (\$)	Cost Per FTE (\$)
Travel Services	5	155	26.34	\$121,319	\$4,606
Marketing and Distribution	91	8,133	893.53	\$5,001,472	\$5,597



Follow-up Status of Colorado 2002 Secondary Marketing Program Completers. (N=2,559)



MULTI-OCCUPATIONAL COOPERATIVE EDUCATION

MULTI-OCCUPATIONAL COOPERATIVE EDUCATION programs are cooperative career and technical education programs that offer training opportunities in a diversified range of occupations. The program is offered in small high schools that do not have sufficient enrollment to justify a specialized career and technical education program. The range of occupations served through this training vehicle may include agriculture, business, health, family and consumer science, marketing, technical, and trades and industry. Because the program is cooperative in nature, it is responsive to the local economy and job environment of the local area. Ninety-seven percent of the multi-occupational students who were contacted and were seeking employment had found jobs.

	2000-01	2001-02	2002-03
Enrollment	374.00	370.00	342.00
Completers	221.00	258.00	263.00
FTE Enrollment	56.69	56.72	56.71
Number of Programs	17	17	17
Total Cost of Programs	\$512,431	\$464,190	\$464,131
Cost Per FTE	\$9,039	\$8,184	\$8,184



Follow-up Status of Colorado 2002 Secondary Multi-Occupational Program Completers. (N=236)



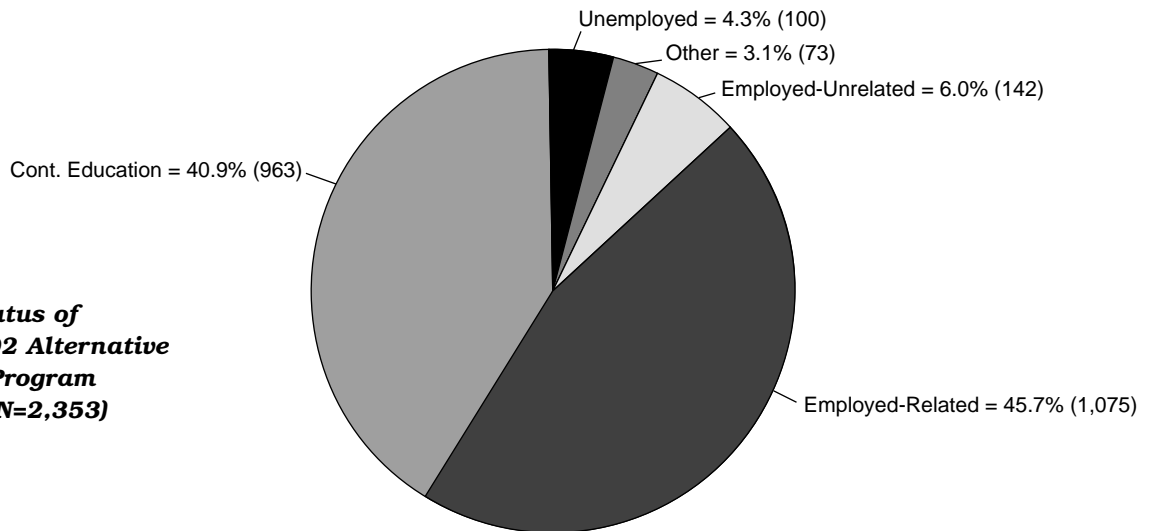
ALTERNATIVE COOPERATIVE EDUCATION

ALTERNATIVE COOPERATIVE EDUCATION is designed to provide students who are disadvantaged and/or disabled and/or at-risk with entry level job skills to enter the Colorado labor force. Two programs may be offered: ACE for at-risk students, or ACE/WES (Work Experience Study) for special education students. This hybrid program combines academic and career assessments, classroom sessions and work-site training to accommodate students needs. The classroom instruction covers academic standards with a career emphasis. Students are placed on the job at a predetermined local business training station, under a training plan agreed upon by the student, employer, parent, and ACE Coordinator. The ACE Controller works closely with the student and the employer to assure success on the job. Although general youth unemployment statistics are high for this population, ACE programs have succeeded in achieving a highly credible job-related employment rate (80 percent) for those seeking employment. Of those ACE students who were contacted and were seeking employment, 92 percent had found a job.

	2000-01	2001-02	2002-03
Enrollment	6,440.00	6,331.00	6,471.00
Completers	2,625.00	2,789.00	3,183.00
FTE Enrollment	1,072.40	1,152.01	1,131.10
Number of Programs	159	173	142
Total Cost of Programs	\$7,905,365	\$8,600,793	\$8,561,296
Cost Per FTE	\$7,372	\$7,466	\$7,569

Program Title	Number of Programs	Total Enrollment	FTE Enrollment	Total Cost of Programs (\$)	Cost Per FTE (\$)
Cosmetologist	10	544	204.53	\$1,261,579	\$6,168
Alternative Cooperative Education	129	5,790	911.08	\$7,247,441	\$7,955
Barber/Hair Stylist	2	7	3.38	\$8,372	\$2,480
Sign Language Interpreter	1	130	12.12	\$43,904	\$3,622

Follow-up Status of Colorado 2002 Alternative Cooperative Program Completers. (N=2,353)





TECHNICAL

TECHNICAL EDUCATION programs provide training in an array of rapidly changing, high technology occupations. Technician education in computer-assisted drafting, electronics and graphic design are the areas of primary emphasis at the secondary level, but there are other programs offered in areas where there is occupational demand — such as instrumentation technology, computer repair and maintenance, and engineering related technology. These programs support Colorado’s high technology industry development. The percentage of technical program completers who are employed related to their training is relatively low (12.9%) because a high proportion of the students enrolled in these programs continue their education at the postsecondary level. Students contacted in technical education programs who were seeking employment had a 92 percent success rate in securing jobs.

	2000-01	2001-02	2002-03
Enrollment	3,880.00	3,785.00	5,603.00
Completers	1,195.00	1,444.00	2,197.00
FTE Enrollment	545.67	575.51	564.15
Number of Programs	79	92	104
Total Cost of Programs	\$3,824,492	\$4,283,787	\$4,101,374
Cost Per FTE	\$7,009	\$7,444	\$7,270

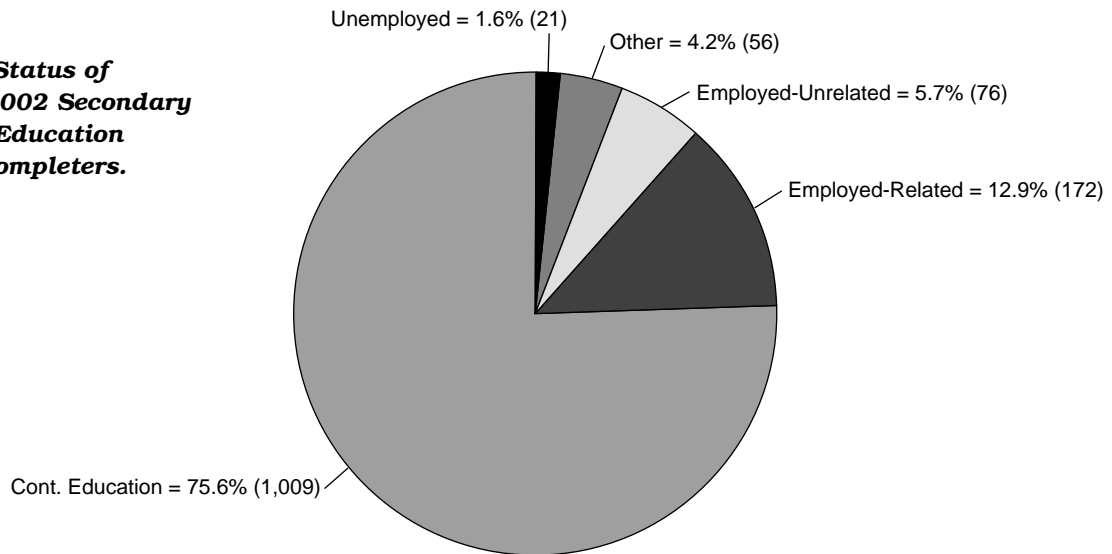
Program Title	Number of Programs	Total Enrollment	FTE Enrollment	Total Cost of Programs (\$)	Cost Per FTE (\$)
Communications Technology	5	380	58.55	\$490,297	\$8,374
Drafting & Design Technology	38	1,624	185.97	\$1,035,055	\$5,566
Electronic Technology	5	77	35.05	\$237,563	\$6,778
Electrical/Engineering Technology	30	2,419	178.48	\$1,506,389	\$8,440
Audiovisual Communications Technology	1	21	5.72	\$31,730	\$5,551
Mechanical Technology	1	43	11.17	\$114,917	\$10,286
Film/Video & Photography Arts	2	81	2.71	\$80,460	\$26,690
Heating & Air Conditioning	2	4	1.25	\$8,202	\$6,562
Industrial Production	13	717	52.89	\$360,207	\$6,811
Environmental	2	9	1.40	\$4,821	\$3,444
Theatre Technology	1	18	2.00	\$81,700	\$40,850
Computer Engineering Technology	4	210	28.96	\$149,527	\$5,163

** High cost programs are closely monitored.*



TECHNICAL

**Follow-up Status of
Colorado 2002 Secondary
Technical Education
Program Completers.
(N=1,334)**





TRADES AND INDUSTRY

TRADES AND INDUSTRIAL EDUCATION has the most diversified program base, offering a broad spectrum of programs tailored to the needs of students and industry. Students strengthen their academic abilities, develop manipulative skills, acquire technical knowledge, learn proper safety practices, and utilize facilities and equipment comparable to those in the work place. The programs emphasize realistic, applied education that parallels industry standards and technological advances. Since trade and industrial education cuts across many sectors of Colorado’s economy, it is vital to the overall economic development of the state and provides career and technical students with a significant advantage in obtaining entry-level employment. Changes in the workplace demand changes in educational programs and Colorado’s trade and industrial education programs are changing to prepare their graduates for the new workplace. Ninety-five percent of the trades and industrial students contacted who were seeking employment found jobs.

	2000-01	2001-02	2002-03
Enrollment	6,405.00	6,750.00	8,165.00
Completers	1,545.00	2,031.00	2,854.00
FTE Enrollment	1,345.51	1,446.08	1,451.00
Number of Programs	144	159	154
Total Cost of Programs	\$9,716,389	\$10,186,663	\$10,373,540
Cost Per FTE	\$7,221	\$7,044	\$7,145

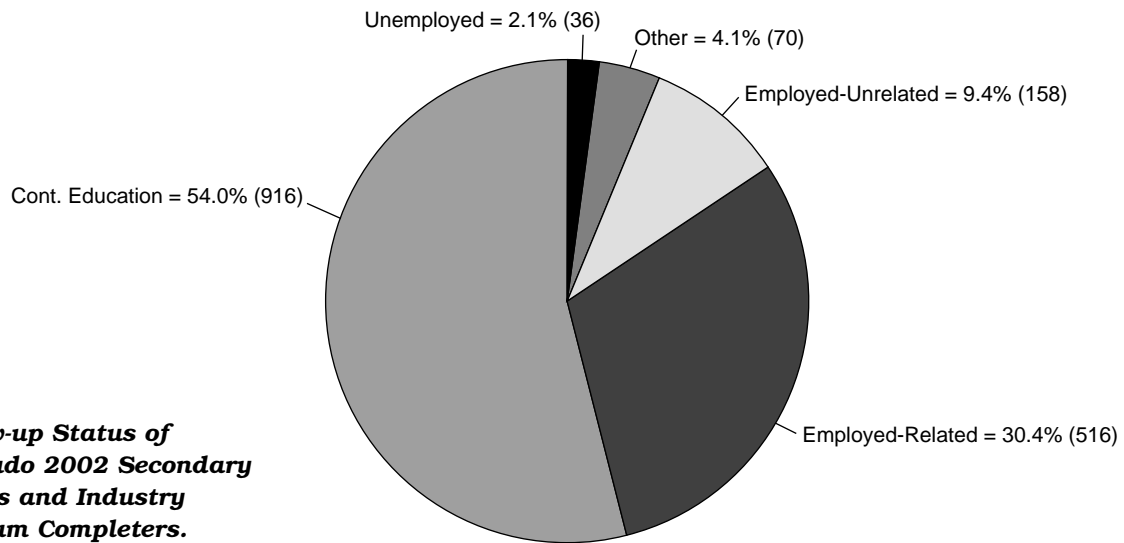
Program Title	Number of Programs	Total Enrollment	FTE Enrollment	Total Cost of Programs (\$)	Cost Per FTE (\$)
Auto Body & Repair	8	286	107.00	\$965,492	\$9,024
Auto Mechanics	40	2,018	487.70	\$3,255,021	\$6,674
Cabinetmaking	3	69	12.51	\$95,779	\$7,658
Commercial Art	5	224	90.47	\$578,264	\$6,392
Commercial Photography	2	96	17.06	\$188,276	\$11,036
Construction Trades	44	2,809	295.14	\$2,140,791	\$7,253
Electrician	1	14	4.0	\$16,113	\$4,077
Graphic Printing & Communication	4	124	35.30	\$437,652	\$12,398
Diesel Mechanics	1	4	8.74	\$31,142	\$3,565
Graphics/ Printing, Other	1	41	14.53	\$139,070	\$9,571
Industrial Equipment Maintenance & Repair	3	68	9.18	\$108,395	\$11,808
Machine Shop	6	257	45.00	\$301,112	\$6,691
Machinists Technology	1	53	23.17	\$181,148	\$7,818
Masonry/ Bricklaying	2	37	9.41	\$58,924	\$6,262
Mechanics & Repairers, Other	1	69	5.66	\$37,039	\$6,544
Small Engine Repair	2	49	19.71	\$100,725	\$5,110
Electrical/ Electronics Technology	1	47	11.00	\$46,733	\$4,248



TRADES AND INDUSTRY

Program Title	Number of Programs	Total Enrollment	FTE Enrollment	Total Cost of Programs (\$)	Cost Per FTE (\$)
Welding	17	685	116.67	\$813,974	\$6,977
Design and Visual Communication	11	1,190	139.58	\$877,889	\$6,289
Custodial Services	1	25	0	0	0

**High cost programs are closely monitored.*



Follow-up Status of Colorado 2002 Secondary Trades and Industry Program Completers. (N=1,696)



APPROPRIATIONS

The Appropriations for the Colorado Vocational Act reflect moderate increases in the fiscal years since 1971–72. The increases in appropriations have not kept pace with costs of operating vocational education programs. In 2001–02, program operation costs were \$79,028,269 compared to the 2002–03 amount of \$82,139,155, a 3.9 percent increase in costs.

FISCAL YEAR	ACTUAL COST	STATE SUPPORT FUNDING	PERCENTAGE
1971–72	\$11,160,434	\$ 6,500,000	58.24%
1972–73	\$13,391,725	\$ 6,500,000	48.54%
1973–74	\$16,788,834	\$ 8,600,000	51.22%
1974–75	\$20,475,475	\$ 9,620,000	46.98%
1975–76	\$23,132,088	\$ 9,538,200	41.23%
1976–77	\$26,289,575	\$10,303,696	39.19%
1977–78	\$27,784,458	\$11,004,354	39.61%
1978–79	\$29,677,929	\$10,997,128	37.05%
1979–80	\$29,965,435	\$11,766,926	39.27%
1980–81	\$32,651,304	\$11,966,122	36.65%
1981–82	\$35,808,522	\$12,768,357	35.66%
1982–83	\$37,817,246	\$12,788,295	33.79%
1983–84	\$40,822,618	\$13,560,640	34.01%
1984–85	\$41,209,437	\$14,053,569	34.10%
1985–86	\$44,070,066	\$14,323,398	32.50%
1986–87	\$46,404,834	\$14,279,071	30.76%
1987–88	\$49,837,325	\$14,565,338	29.23%
1988–89	\$49,897,054	\$14,399,570 ¹	28.86%
1989–90	\$50,834,645	\$14,266,581 ²	28.12%
1990–91	\$53,568,906	\$14,274,855 ²	26.65%
1991–92	\$55,382,927	\$14,845,849 ²	26.81%
1992–93	\$54,280,649	\$15,142,766 ²	27.90%
1993–94	\$52,859,708	\$15,142,766 ²	28.65%
1994–95	\$54,338,408	\$15,142,766 ²	27.87%
1995–96	\$57,871,793	\$15,142,766 ²	26.17%
1996–97	\$59,837,888	\$15,793,905 ²	26.39%
1997–98	\$62,216,667	\$16,346,692 ²	26.27%
1998–99	\$62,255,071	\$16,886,133 ²	27.12%
1999–2000	\$68,181,856	\$17,291,400 ²	25.36%
2000–01	\$71,311,685	\$17,792,850 ²	24.95%
2001–02	\$79,028,269	\$18,377,660 ²	23.25%
2002–03	\$82,139,155	\$19,374,279	23.10%

¹Excludes \$502,846 which was transferred to Colorado Department of Education for transportation expenses.

²Includes \$299,663 in 1989–90, \$209,803 in 1990–91, \$258,329 in 1991–92, \$211,246 in 1992–93, \$293,513 in 1993–94, \$279,705 in 1994–95, \$226,273 in 1995–96, \$131,500 in 1996–97, \$20,185 in 1997–98, \$15,905 in 1998–99, \$15,465 in 1999–00, \$37,085 in 2000–01, and \$10,377 in 2001–02 which was transferred to Colorado Department of Education for School Finance Act buyouts.



ABOUT THIS PUBLICATION

All data reported in this document pertain to Colorado Vocational Act programs only.

Sources:

Colorado Community College System Office

1999–00, 2000–01, 2001–02 Financial System
1999–00, 2000–01, 2001–02 Student Accounting System
1999–00, 2000–01, 2001–02 Follow-up/Placement Report
2000, 2001, 2002 Colorado Vocational Act Report

Resource Analysis,
Colorado Department of Agriculture

Planning and Evaluation Division,
Colorado Department of Education

Division of Employment Statistics,
Colorado Department of Labor

U.S. Department of Labor,
Washington, D.C.

U.S. Department of Commerce,
Washington, D.C.

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