

Colorado Vocational Act

Thirty-Second
Annual Report

2002



COLORADO COMMUNITY
COLLEGE SYSTEM



COLORADO VOCATIONAL ACT 2002

COLORADO COMMUNITY COLLEGE SYSTEM



STATE BOARD FOR COMMUNITY COLLEGES AND OCCUPATIONAL EDUCATION

Board Members

Jeannie G. Reeser, *Chair*
Lena A. Elliott, *First Vice Chair*
Andrew B. “Andy” Wyatt, *Second Vice Chair*
Stephen A. Chapman
Patricia A. Erjavec
Jerry L. Heimlicher
Barbara McKellar
Greg Romberg
Tamra J. Ward

Non-voting Members

Esther Williams, *SFAC Representative*
Erin McNulty, *SSAC Interim Representative*

Staff to the Board

Dr. Joe D. May, *System President and State Director for Vocational Education*
George Delaney, *Executive Vice President for Administration and Finance*
Dr. Mary Beth Susman, *Vice President for Education Services and Executive Director of CCC online*
Barbara McDonnell, *Vice President for Legal Affairs and Vocational Education Administration*
Don Williamson, *Vice President for Information Technologies*
Briggs Gamblin, *Executive Director of System Communications*

COMMUNITY COLLEGES OF COLORADO

Presidents

Dr. Berton L. Glandon, *Araphoe Community College*
Dr. Peter Angstadt, *Colorado Northwestern Community College*
Dr. Linda Bowman, *Community College of Aurora*
Dr. Christine Johnson, *Community College of Denver*
Dr. Thomas Gonzales, *Front Range Community College*
Bette Matkowski, *Lamar Community College*
Dr. John McKay, *Morgan Community College*
Dr. Bruce Perryman, *Northeastern Junior College*
James Rizzuto, *Otero Junior College*
Joseph A. Garcia, *Pikes Peak Community College*
Dr. Michael Davis, *Pueblo Community College*
Dr. Eric Reno, *Red Rocks Community College*
Dr. Frank Armijo, *Trinidad State Junior College*



A LETTER FROM THE PRESIDENT

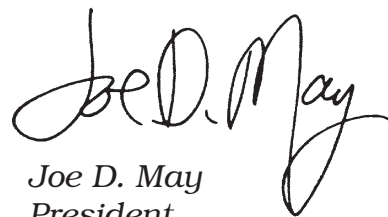
This publication presents the basic accountability information concerning career and technical education in the public school districts of Colorado in the 2001–2002 school year. The report is in compliance with the State Assistance for Vocational Education Act (commonly known as the Colorado Vocational Act) of 1970 as revised.

The General Assembly provided \$18,377,660 in FY 01–02 to assist more than 150 school districts in funding 1,284 secondary career and technical education programs. A primary objective of the Community Colleges of Colorado 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 01–02, nearly 84,000 secondary students were enrolled in state approved career and technical education programs. Nearly forty percent (38.97%) of all secondary students in grades 9 through 12 in Colorado were enrolled in career and technical education. Just over 88 percent (88.39%) of the students contacted who completed career and technical education programs in 2000–2001 were employed in jobs directly related to their career and technical training or continued their education. The unemployment rate of youth who have completed a career and technical education program in Colorado (3.5%) in 2000–2001 is about one-fourth the rate of youth (16–19) in general (16.09%, 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-second 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 2001–02 school year, the General Assembly appropriated \$18,377,660 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 80.18 percent of its entitlement.

COLORADO FACTS

In Colorado high schools during FY 01–02, nearly 84,000 students were enrolled in career and technical education programs that were approved and supported under the authority of the Colorado Vocational Act.

The number of programs funded in 01–02 under the Colorado Vocational Act was 1,284.

Colorado Vocational Act programs are offered in 271 high schools and other attendance centers within more than 150 school districts and 11 other institutions throughout the state.

Statistics for 01–02 Colorado Vocational Act programs indicate that 88.3 percent of high school career and technical education graduates either obtained a job related to their training or continued their education.

Of the nearly 84,000 students in CVA approved programs, 21.84 percent were identified as disadvantaged and 8.95 percent as disabled.

Minority students represent 26.31 percent of the enrollment in programs under the Colorado Vocational Act.

NATIONAL FACTS

In today's global economy, effective career and technical education is more essential than ever before. Meeting this challenge on the secondary level involves establishing and continuing quality programs that address student needs and those needs of the workplace.

Colorado's jobless rate recently has approached levels not seen since 1966, averaging 5.2 percent (U.S. Bureau of Labor & Statistics, September, 2002). This remarkable shift in unemployment numbers, however, are not uniform statewide; Costilla County experienced a 16.5 percent unemployment rate in June 1998 while Hinsdale County enjoyed a 0.9 percent rate. Employment opportunities also vary by employment sector.

A recent 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 these 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, and software and 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 recent 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.

The future looks bright for those with skills. Unfortunately, additional workers with literacy deficiencies enter the workforce; one in 10 of our 17-year olds is functionally illiterate. One half of all 18-year olds have failed to master basic language, mathematics, and analytic skills (*Investing in People*, U.S. Department of Labor, 1989). The challenge is ours in preparing secondary students to meet the workforce challenges of the next millennium.



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. High school programs that articulate with post secondary programs are being encouraged. 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 help broaden the flexibility of school districts' graduation requirements and 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 shall include competency-based applied learning that contributes to a person's academic knowledge, higher order reasoning and 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 vocational training program, or enlisted in the military full-time.

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 vocational 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 started in the Colorado Community College System Program Approval Document for a specific career and technical education program.



ENROLLMENT AND PLACEMENT TRENDS

The data reported indicate that career and technical enrollments, as a proportion of total 9–12th grade secondary enrollments, are about two-fifths. In the 12th grade, as students approach graduation and anticipate entering the labor force, participation in vocational programs is more than 58 percent. The majority of vocational programs are one-year or two-year programs. A notable exception is agricultural production which is a four-year program.

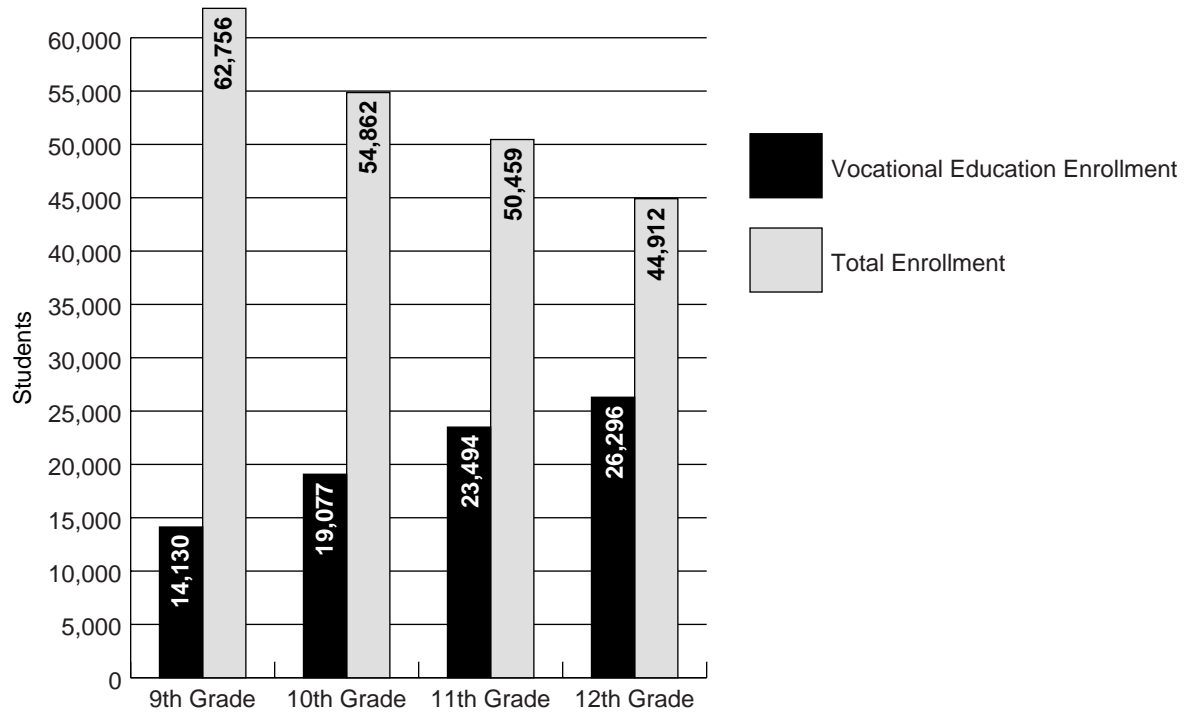
During the last three years, for those students available for the labor force, the percentage obtaining jobs has remained relatively consistent at about 97 percent. In the 2002 “Student Follow Up Study of 2001 Completers,” 78.8 percent of those students seeking jobs obtained positions in fields related to their vocational training. The comparable figures for 2000 and 2001 are 77.6 percent and 72.0 percent, respectively.

Vocational Education Program Area	1999–00		2000–01		2001–02	
	Enrollment	Percent Employed*	Enrollment	Percent Employed	Enrollment	Percent Employed
Agriculture Education	4,210	97%	3,938	98%	4,152	98%
Business Education	34,852	97%	36,535	94%	36,816	96%
Consumer and Family Studies Education	13,680	99%	13,823	100%	12,381	100%
Health Occupations	824	95%	838	85%	1,018	97%
Marketing Occupations	8,988	99%	7,431	97%	7,181	99%
Multi-Occupational Cooperative Education	466	98%	374	100%	370	94%
Alternative Cooperative Education (ACE)	6,587	94%	6,440	94%	6,331	92%
Technical Education	3,200	98%	3,880	94%	3,785	95%
Trades and Industrial Education	6,196	97%	6,405	96%	6,750	98%
Wage Earning Home Economics Education	3,577	97%	4,349	97%	4,639	98%
Total Vocational Enrollments	82,580	97%	84,013	96%	83,423	97%
Total Secondary (9–12) Enrollments	200,982		207,858		212,989	

*Estimated



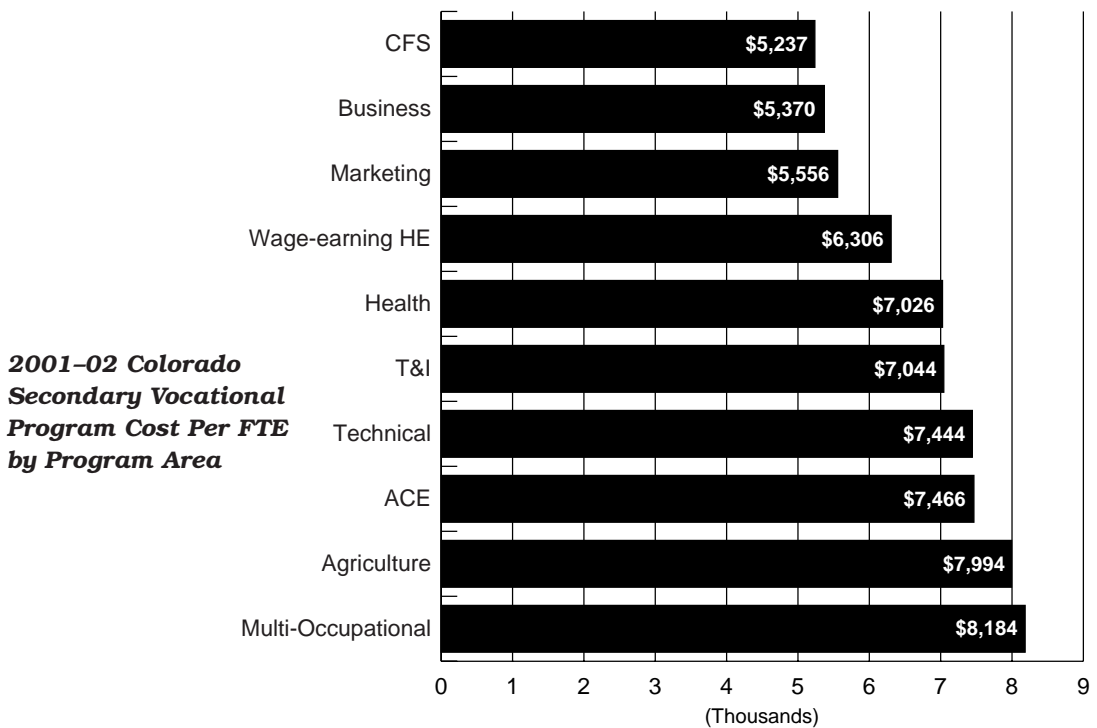
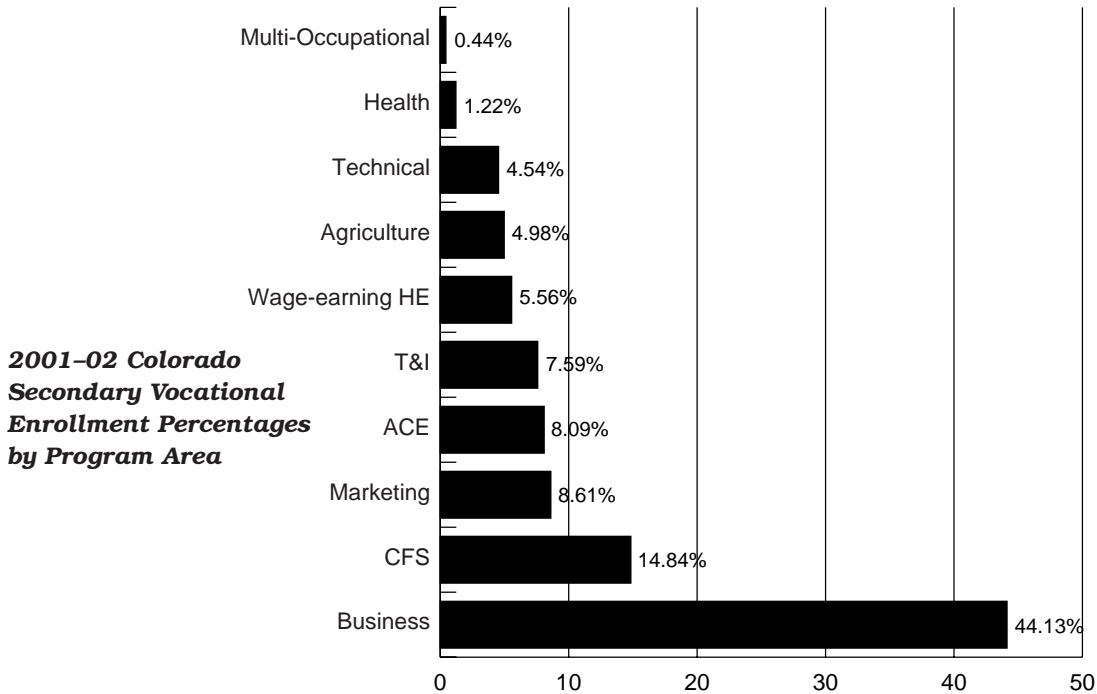
2001-02 COLORADO SECONDARY VOCATIONAL ENROLLMENT BY GRADE





ENROLLMENT AND COSTS BY PROGRAM AREA

The graphs below illustrate that 83.26% of all career and technical enrollment is concentrated in five program areas: Business, Consumer and Family Studies (CFS), Marketing, Alternative Cooperative Education (ACE), and Trades and Industrial (T&I). Consumer and Family Studies 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 (60.23%) of career and technical education enrollment: Business (36.36%), Trades and Industrial (13.23%), and Consumer and Family Studies (10.65%).

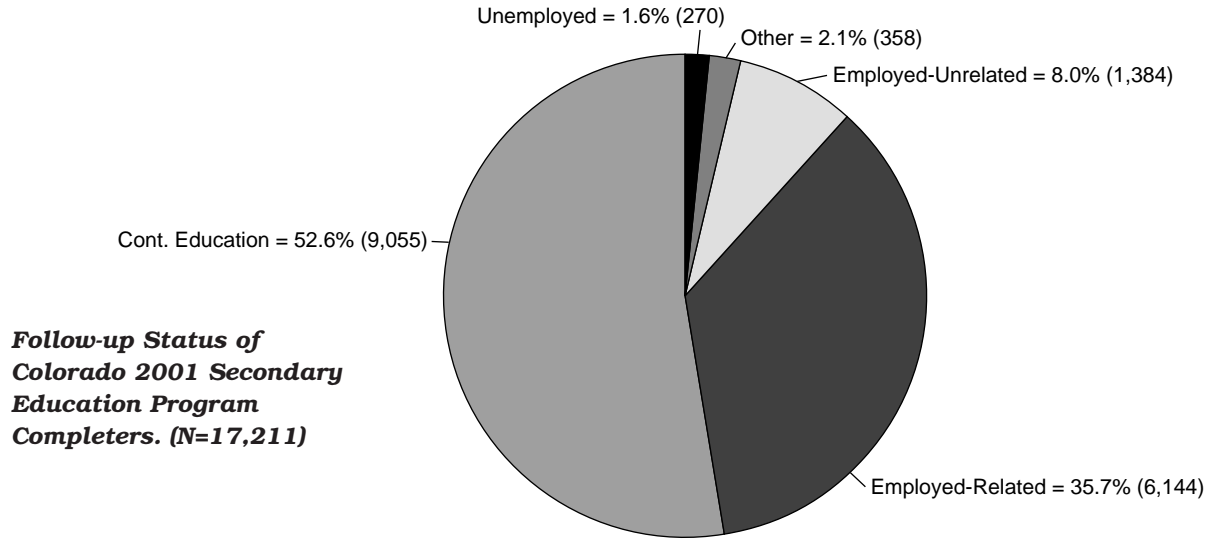
Vocational Education Program Area	Enrollment	FTE* Enrollment	Total Cost of Programs (\$)	Cost Per FTE (\$)
Agriculture Education	4,152	796.48	\$6,366,834	\$7,994
Business Education	36,816	3,975.20	\$21,347,072	\$5,370
Consumer and Family Studies Education	12,381	1,163.21	\$6,091,115	\$5,237
Health Occupations Education	1,018	258.99	\$1,819,715	\$7,026
Marketing Education	7,181	929.40	\$5,163,427	\$5,556
Multi-Occupational Cooperative Education	370	56.72	\$464,190	\$8,184
Alternative Cooperative Education (ACE)	6,331	1,152.01	\$8,600,793	\$7,466
Technical Education	3,785	575.51	\$4,283,787	\$7,444
Trades and Industrial Education	6,750	1,446.08	\$10,186,663	\$7,044
Wage Earning Home Economics Education	4,639	578.26	\$3,646,577	\$6,306
TOTAL	83,423	10,931.86	\$67,970,173	\$6,218

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

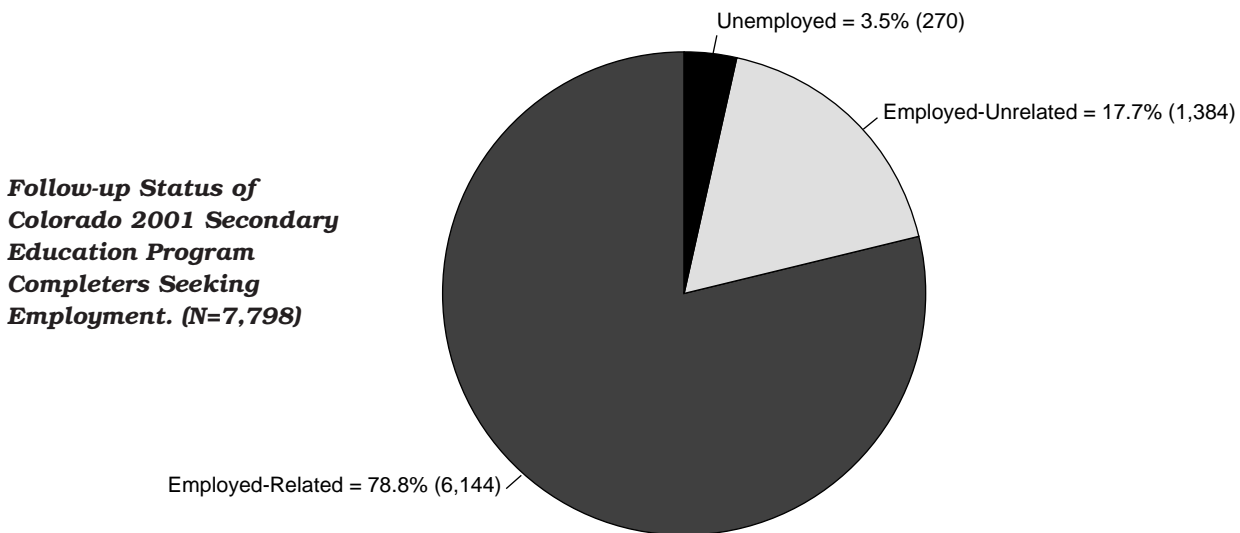


PLACEMENT RATES OF COMPLETERS OF VOCATIONAL EDUCATION

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 vocational education program, 35.7 percent were employed in a job related to their training; 8.0 percent were employed in a job unrelated to their training and 1.6 percent were unemployed. An additional 52.6 percent of the students contacted indicated they were continuing their education and 2.1 percent were neither in school nor in the labor force (e.g., due to health status, by choice, etc.).



The pie chart below reflects placement rates for those seeking employment. More than 96.5 percent of those seeking employment found a job, while the unemployment rate was 3.5 percent, considerably below the general youth (ages 16–19) unemployment rate of 14.8 percent in Colorado. Overall, an impressive 78.8 percent were employed in jobs related to their training, compared to 72.0 percent for 2000 completers.



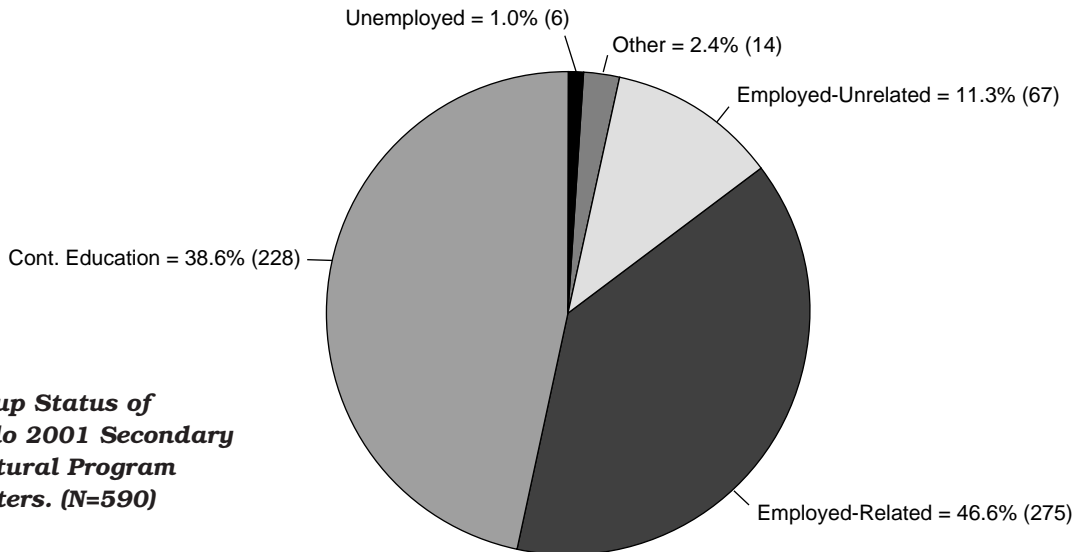


AGRICULTURE

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 vocational students, 4.9 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-eight percent of students contacted who were seeking employment found a job.

	1999-00	2000-01	2001-02
Enrollment	4,210.00	3,938.00	4,152.00
Completers	849.00	737.00	924.00
FTE Enrollment	859.30	812.81	796.48
Number of Programs	99.00	98.00	99.00
Total Cost of Programs	\$6,292,748	\$6,445,681	\$6,366,834
Cost Per FTE	\$7,323	\$7,930	7,994

Program Title	Number of Programs	Total Enrollment	FTE Enrollment	Total Cost of Programs (\$)	Cost Per FTE (\$)
Agricultural Power Machinery	1	27	9.02	\$44,757	\$4,962
Animal Health	1	38	7.77	\$87,474	\$11,258
Landscaping	1	22	7.44	\$117,108	\$15,740
Nat. Resource Management	2	30	11.78	\$67,991	\$5,771
Ornamental Horticulture	7	340	109.82	\$705,597	\$6,425
Production Agriculture	86	3,654	640.69	\$5,233,516	\$8,169
Wildlife and Wildlands Management	1	41	9.96	\$110,391	\$11,083



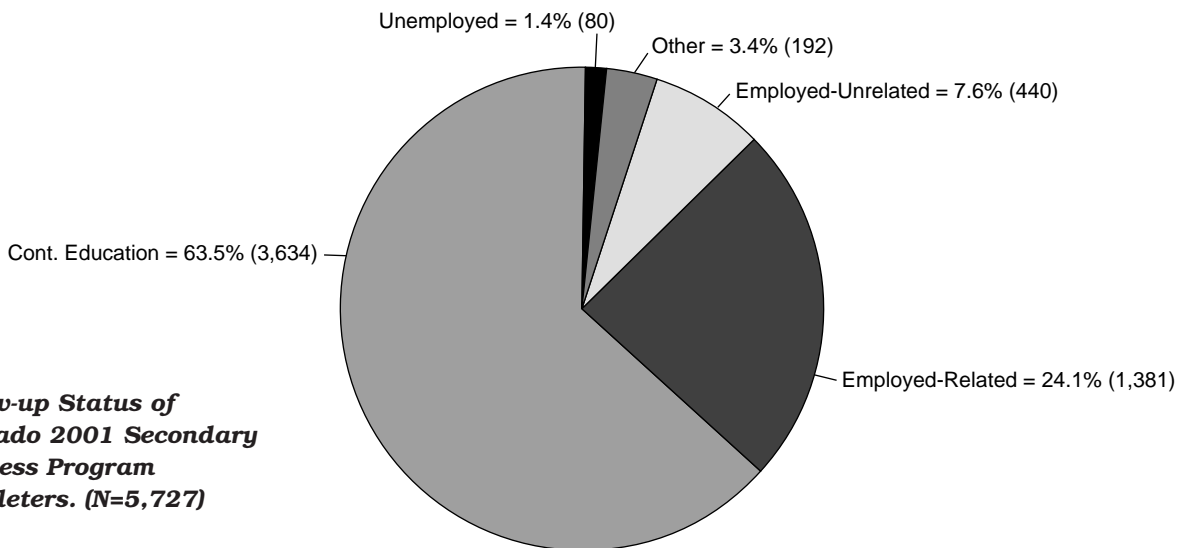


BUSINESS

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, 96.0 percent of students contacted who were seeking employment found a job.

	1999-00	2000-01	2001-02
Enrollment	34,852.00	36,535.00	36,816.00
Completers	5,482.00	9,309.00	9,852.00
FTE Enrollment	3,502.82	3,760.80	3,975.20
Number of Programs	267	276	299
Total Cost of Programs	\$17,943,568	\$19,689,700	\$21,347,072
Cost Per FTE	\$5,123	\$5,236	\$5,370

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



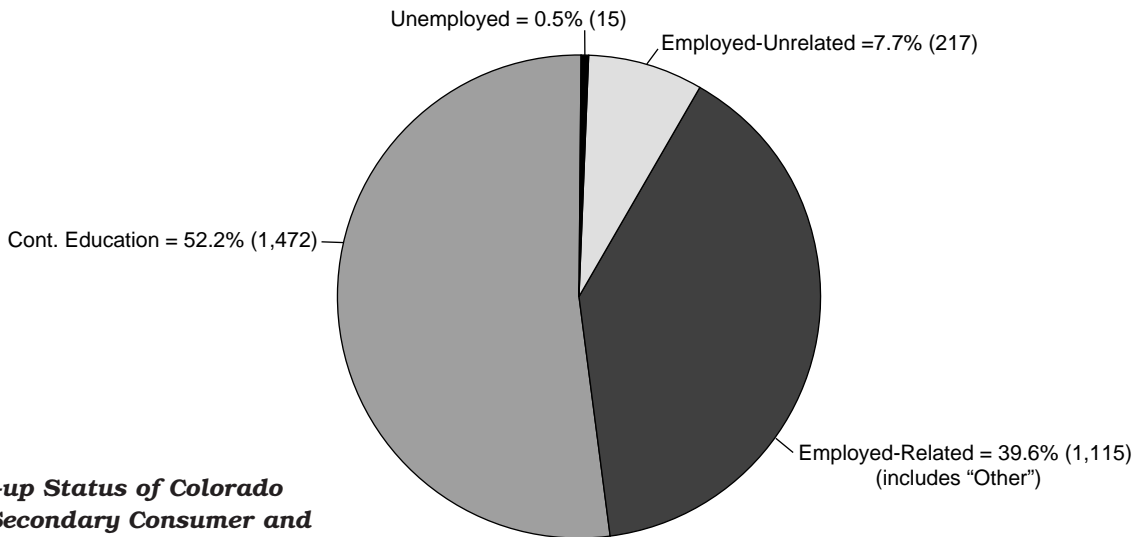
Follow-up Status of Colorado 2001 Secondary Business Program Completers. (N=5,727)



CONSUMER AND FAMILY STUDIES EDUCATION

The CONSUMER AND FAMILY STUDIES 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.

	1999-00	2000-01	2001-02
Enrollment	13,680.00	13,823.00	12,381.00
Completers	3,264.00	4,147.00	3,527.00
FTE Enrollment	1,164.72	1,150.49	1,163.21
Number of Programs	162	163	162
Total Cost of Programs	\$4,943,754	\$5,251,867	\$6,091,115
Cost Per FTE	\$4,245	\$4,565	\$5,237



Follow-up Status of Colorado 2001 Secondary Consumer and Family Studies Occupations Program Completers. (N=2,819)



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.

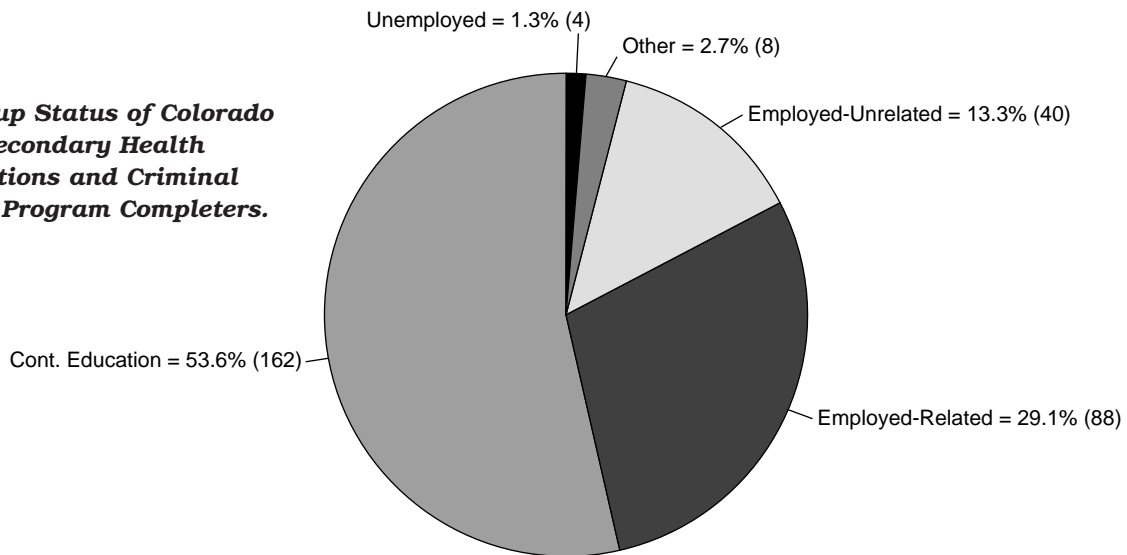
Health Occupations programs in Colorado, including Med-Prep, continue to provide students with the principles and skills common to any health occupation with options for students to pursue education and training in nurse aide, physical therapist aide, rehabilitation aid, dental aid, occupational therapy aid, medical office aide and others. Med-Prep completers are immediately employable. Ninety-seven 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.

	1999-00	2000-01	2001-02
Enrollment	824.00	838.00	1,018.00
Completers	497.00	409.00	629.00
FTE Enrollment	230.38	254.86	258.99
Number of Programs	27	28	32
Total Cost of Programs	\$1,839,701	\$1,800,736	\$1,819,715
Cost Per FTE	\$7,986	\$7,066	\$7,026

Program Title	Number of Programs	Total Enrollment	FTE Enrollment	Total Cost of Programs (\$)	Cost Per FTE (\$)
Fitness	3	117	20.33	\$136,345	\$6,707
Criminal Justice	2	67	19.72	\$114,516	\$5,807
Dental Assistant	3	20	7.45	\$64,253	\$8,625
Nursing Assistant	1	11	5.33	\$26,938	\$5,054
Med-Prep	20	788	203.27	\$1,428,107	\$7,026
Dental Services	2	15	2.89	\$49,556	\$17,147

Follow-up Status of Colorado 2001 Secondary Health Occupations and Criminal Justice Program Completers. (N=302)



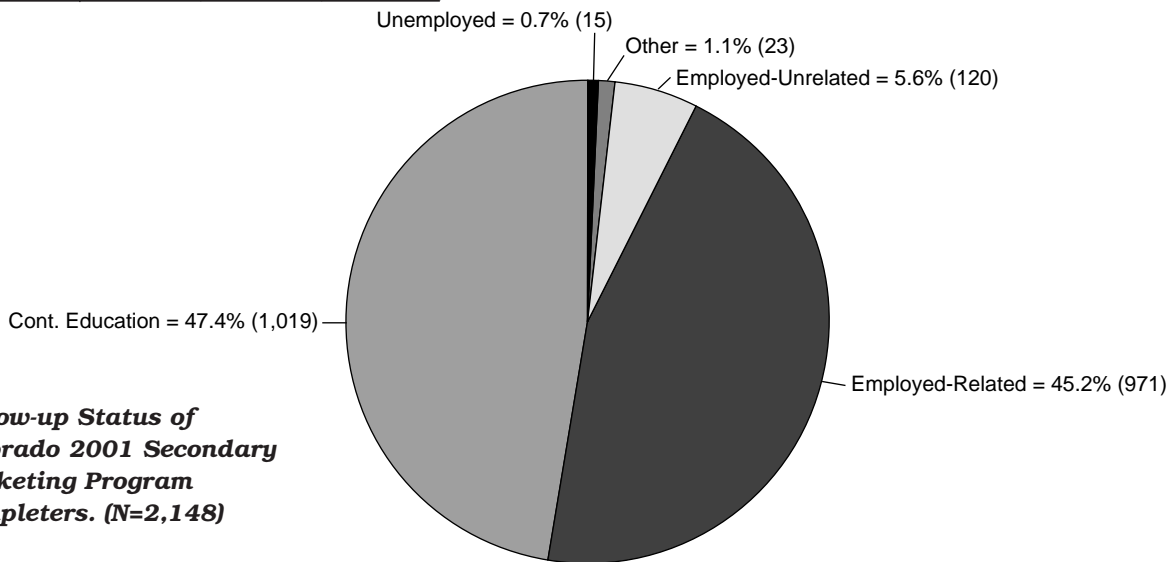


MARKETING

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, 99 percent found a job.

	1999-00	2000-01	2001-02
Enrollment	8,988.00	7,431.00	7,181.00
Completers	2,562.00	2,858.00	3,165.00
FTE Enrollment	883.09	935.06	929.40
Number of Programs	90	95	97
Total Cost of Programs	\$4,701,296	\$4,932,989	\$5,163,427
Cost Per FTE	\$5,323	\$5,276	\$5,556

Program Title	Number of Programs	Total Enrollment	FTE Enrollment	Total Cost of Programs (\$)	Cost Per FTE (\$)
Travel Services	7	107	25.89	\$127,283	\$4,916
Marketing and Distribution	90	7,074	903.51	\$5,036,144	\$5,574

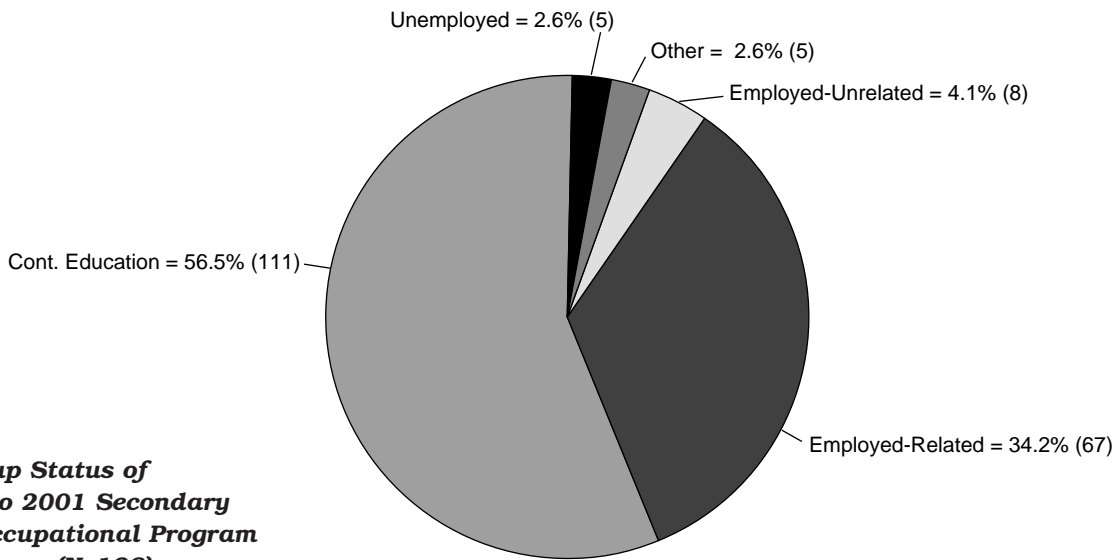




MULTI-OCCUPATIONAL COOPERATIVE EDUCATION

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, home economics, 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-four percent of the multi-occupational students who were contacted and were seeking employment found jobs.

	1999-00	2000-01	2001-02
Enrollment	466.00	374.00	370.00
Completers	302.00	221.00	258.00
FTE Enrollment	51.55	56.69	56.72
Number of Programs	17	17	17
Total Cost of Programs	\$495,612	\$512,431	\$464,190
Cost Per FTE	\$9,614	\$9,039	\$8,184



Follow-up Status of Colorado 2001 Secondary Multi-Occupational Program Completers. (N=196)



ALTERNATIVE COOPERATIVE EDUCATION

ALTERNATIVE COOPERATIVE EDUCATION is designed to provide students who are disadvantaged and/or disabled with entry level job skills to enter the Colorado labor force. The program is designed to accommodate the student with special needs. These special programs place students on the job at a pre-determined local business training station, under a training plan agreed upon by the student, employer, parent, and coordinator. Related classroom instruction is provided to meet the individual needs of the student. The coordinator of the program works closely with the employer and the student to assure success on the job. Although general youth unemployment statistics are high for these populations, this program has succeeded in achieving a highly credible job-related employment rate (76 percent) for those seeking employment. Of those alternative cooperative education students who were contacted and were seeking employment, 92 percent found a job.

	1999-00	2000-01	2001-02
Enrollment	6,587.00	6,440.00	6,331.00
Completers	1,945.00	2,625.00	2,789.00
FTE Enrollment	1,064.53	1,072.40	1,152.01
Number of Programs	157	159	173
Total Cost of Programs	\$7,819,567	\$7,905,365	\$8,600,793
Cost Per FTE	\$7,346	\$7,372	\$7,466

Program Title	Number of Programs	Total Enrollment	FTE Enrollment	Total Cost of Programs (\$)	Cost Per FTE (\$)
Cosmetologist	32	504	223.70	\$1,275,697	\$5,703
Alternative Cooperative Education	137	5,729	914.99	\$7,279,538	\$7,956
Barber/Hair Stylist	3	1	1.20	\$1,654	\$1,378
Sign Language Interpreter	1	97	12.12	\$43,904	\$3,622

Follow-up Status of Colorado 2001 Alternative Cooperative Program Completers. (N=1,573)





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 (15.0) 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 95 percent success rate in securing jobs.

	1999-00	2000-01	2001-02
Enrollment	3,200.00	3,880.00	3,785.00
Completers	776.00	1,195.00	1,444.00
FTE Enrollment	544.14	545.67	575.51
Number of Programs	66	79	92
Total Cost of Programs	\$3,853,312	\$3,824,492	\$4,283,787
Cost Per FTE	\$7,081	\$7,009	\$7,444

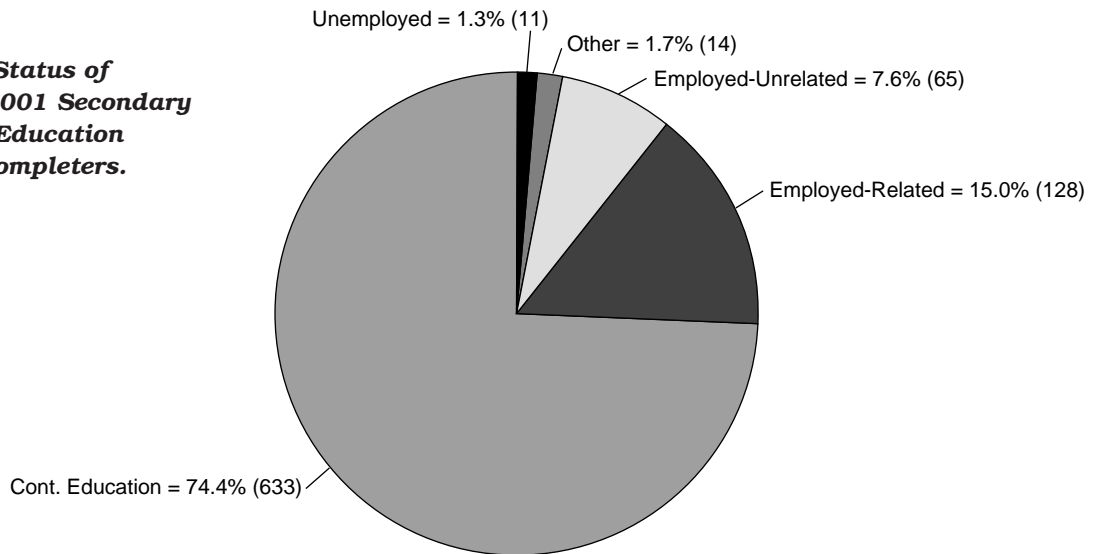
Program Title	Number of Programs	Total Enrollment	FTE Enrollment	Total Cost of Programs (\$)	Cost Per FTE (\$)
Communications Electronics	1	15	2.77	\$24,231	\$8,748
Communications Technology	3	68	21.19	\$177,085	\$8,357
Computer Installer/Repairer	4	110	33.09	\$146,138	\$4,416
Drafting & Design Technology	30	1,330	190.11	\$1,032,593	\$5,432
Educational/ Instructional Media	1	19	7.09	\$45,842	\$6,466
Electronic Technology	4	112	35.15	\$324,965	\$9,245
Engineering Related Technology	23	1,193	164.11	\$1,488,058	\$9,067
Radio/Television Production/ Broading	3	185	25.51	\$271,805	\$10,655
Mechanical Technology	1	45	7.28	\$88,153	\$12,109
Computer Maintenance	5	159	28.96	\$149,527	\$5,163
Film/Video & Photography Arts	1	40	2.71	\$80,460	\$26,690
Heating & Air Conditioning	1	1	1.25	\$8,202	\$6,562
Industrial Manufacturing	8	190	27.49	\$194,959	\$7,092
Industrial Production	5	293	25.40	\$165,248	\$6,506
Water Quality	1	12	1.40	\$4,821	\$3,444
Theatre Technology	1	13	2.00	\$81,700	\$40,850

* High cost programs are closely monitored.



TECHNICAL

***Follow-up Status of
Colorado 2001 Secondary
Technical Education
Program Completers.
(N=851)***





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-eight percent of the trades and industrial students contacted who were seeking employment found jobs.

	1999-00	2000-01	2001-02
Enrollment	6,196.00	6,405.00	6,750.00
Completers	1,496.00	1,545.00	2,031.00
FTE Enrollment	1,438.34	1,345.51	1,446.08
Number of Programs	146	144	159
Total Cost of Programs	\$10,117,344	\$9,716,389	\$10,186,663
Cost Per FTE	\$7,034	\$7,221	\$7,044

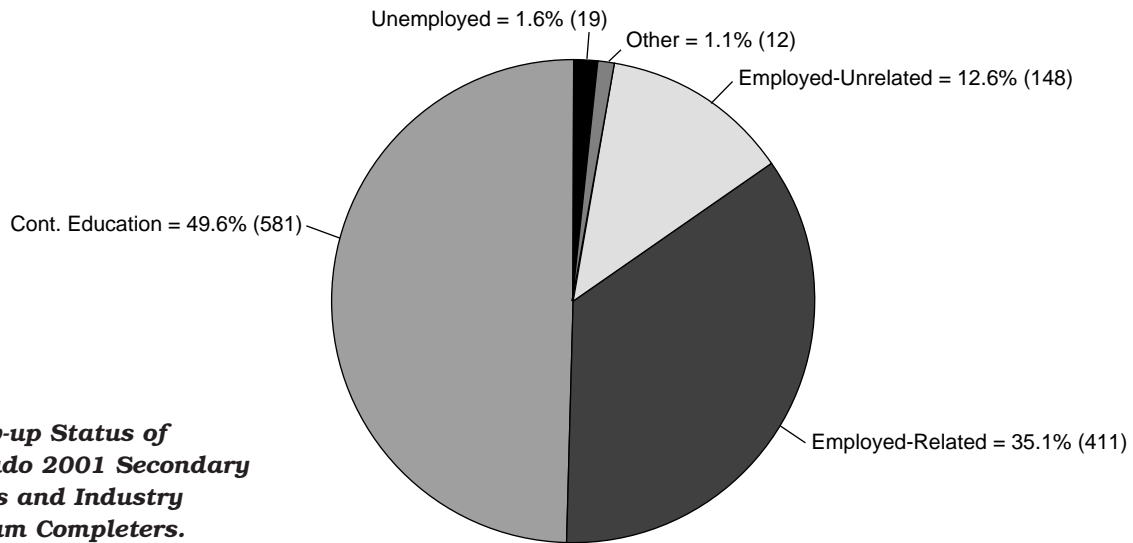
Program Title	Number of Programs	Total Enrollment	FTE Enrollment	Total Cost of Programs (\$)	Cost Per FTE (\$)
Auto Body & Repair	9	349	108.05	\$1,020,625	\$9,446
Auto Mechanics	36	1,825	470.46	\$2,987,074	\$6,349
Cabinetmaking	3	64	11.67	\$92,335	\$7,912
Commercial Art	8	252	90.45	\$572,231	\$6,327
Commercial Photography	2	86	26.29	\$232,652	\$8,849
Construction Trades	42	1,943	288.52	\$2,083,966	\$7,223
Electrician	1	7	7.07	\$26,517	\$3,751
Graphic Printing & Communication	11	120	35.30	\$437,652	\$12,398
Diesel Mechanics	1	5	5.43	\$22,345	\$4,115
Graphics/ Printing, Other	1	35	14.53	\$139,070	\$9,571
Industrial Equipment Maintenance & Repair	3	55	10.36	\$114,011	\$11,005
Machine Shop	6	312	52.76	\$364,753	\$6,913
Machinists/ Machinists Technology	1	106	24.55	\$176,725	\$7,199
Masonry/ Bricklaying	2	26	9.16	\$57,524	\$6,280
Mechanics & Repairers, Other	1	48	5.66	\$37,039	\$6,544
Small Engine Repair	2	58	17.16	\$90,901	\$5,297



TRADES AND INDUSTRY

Program Title	Number of Programs	Total Enrollment	FTE Enrollment	Total Cost of Programs (\$)	Cost Per FTE (\$)
Vehicle/Mobile Equip. Mech./Repair	2	36	5.49	\$46,453	\$8,461
Welding	17	512	121.20	\$808,595	\$6,672
Design and Visual Communication	11	911	141.97	\$876,195	\$6,172

**High cost programs are closely monitored.*



Follow-up Status of Colorado 2001 Secondary Trades and Industry Program Completers. (N=1,171)



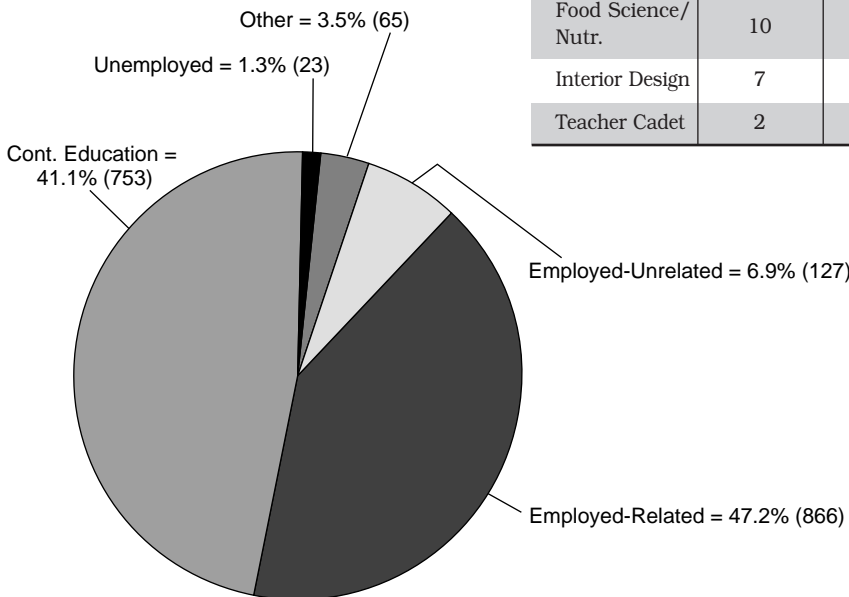
CONSUMER AND FAMILY RELATED OCCUPATIONS INCLUDING: CULINARY ARTS, EARLY CHILDHOOD PROFESSIONS AND INTERIOR DESIGN

CONSUMER AND FAMILY RELATED OCCUPATIONS prepare students for entry-level employment in careers working with children ages birth through eight, all phases of the food industry, and interior design careers. Inherent to Consumer and Family Studies 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 nearly half. 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, 98 percent found jobs.

	1999-00	2000-01	2001-02
Enrollment	3,577.00	4,349.00	4,639.00
Completers	1,511.00	2,237.00	2,112.00
FTE Enrollment	486.68	533.53	578.26
Number of Programs	111	130	154
Total Cost of Programs	\$3,442,880	\$3,585,937	\$3,646,577
Cost Per FTE	\$7,074	\$6,721	\$6,306

Program Title	Number of Programs	Total Enrollment	FTE Enrollment	Total Cost of Programs (\$)	Cost Per FTE (\$)
Care & Guidance Management & Service	2	60	10.52	\$112,074	\$10,653
Child Care Aide	47	628	110.52	\$875,989	\$7,926
Fashion Design	1	38	10.28	\$54,454	\$5,297
Food Management Production Service	10	359	63.57	\$684,827	\$10,773
Vocational Home Economics	29	1,521	129.38	\$902,303	\$6,974
Food Caterer	23	601	77.77	\$332,101	\$4,270
PRO-START	23	393	78.34	\$360,554	\$4,602
Food Science/ Nutr.	10	873	74.91	\$228,562	\$3,051
Interior Design	7	121	16.97	\$82,402	\$4,856
Teacher Cadet	2	45	6.00	\$13,311	\$2,219

* High cost programs are closely monitored.



Follow-up Status of Colorado 2001 Secondary Home Economics Occupations Program Completers. (N=1,834)



APPROPRIATIONS

The Appropriations for the Colorado Vocational Act reflect moderate increases in the fiscal years since 1971–72. The increases in appropriations, however, have not kept pace with costs of operating vocational education programs. In 2000–01, program operation costs were \$71,311,685 compared to the 2001–02 amount of \$79,028,269, a 9.8 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	27.12%
1999–2000	\$68,181,856	\$17,291,400	25.36%
2000–01	\$71,311,685	\$17,792,850	24.95%
2001–02	\$79,028,269	\$18,377,660	23.25%

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

² Includes \$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, and \$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

1998–99, 1999–00, 2000–01 Financial System
1998–99, 1999–00, 2000–01 Student Accounting System
1998–99, 1999–00, 2000–01 Follow-up/Placement Report
1999, 2000, 2001 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.

This report has been prepared by:

Vocational Education Administration,
Colorado Community College System
Julie Eddy, Coordinator of CTE Research
Lorrie Toni, Director of Vocational Education Administration
Jerry Lillard, Research
Barbara McDonnell, Vice President for Legal Affairs and Vocational Education
Larry Pearson, Director of Internal Audits

Special thanks to Darren Eurich, Designer, State of Colorado Department of Personnel & Administration IDF-Design, and the IDF-Print Shop/Quick Copy Centers who were instrumental in the production of this report. (03-8083815)

For additional copies of this document, contact:

Vocational Education Administration
Colorado Community College System
9101 E. Lowry Blvd.
Denver, Colorado 80230-6011
(303) 620-4000

The Community Colleges of Colorado do not unlawfully discriminate on the basis of race, color, creed, national origin or ancestry, sex, age, or handicap in admission or access to, or treatment or employment in, its educational programs or activities. Inquiries may be referred to the Director of Affirmative Action, 9101 E. Lowry Blvd., Denver, Colorado 80230-6011, (303) 620-4000.

COLORADO COMMUNITY COLLEGE SYSTEM

9101 E. Lowry Blvd., Denver CO 80230-6011
(303) 620-4000 • www.ccs.edu



Cover printed on recycled paper.