THE ANNUAL CONDITION OF

SECONDARY CAREER & TECHNICAL EDUCATION

Academic Year
2021-22

COMMUNITY COLLEGES & WORKFORCE PREPARATION

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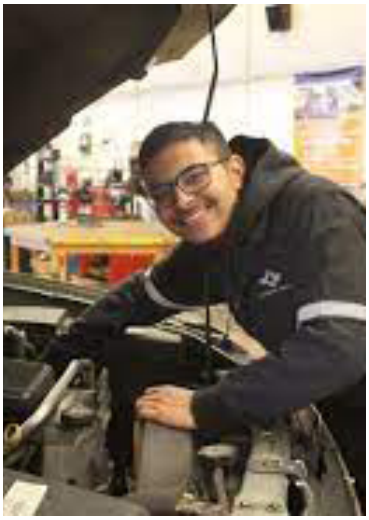
Executive Summary

The Iowa Department of Education's Bureau of Career and Technical Education compiles and publishes the Annual Condition of Secondary Career and Technical Education report. This year's report covers a five-year period of academic years (AY) 2018 - 2022 and contains eight chapters as follows:

Chapter 1: Introduction and Overview
Chapter 2: Secondary CTE Courses and CTE Programs
Chapter 3: Secondary CTE Enrollment and CTE Student Demographics
Chapter 4: Secondary CTE Human Resources
Chapter 5: Career and Technical Student Organizations
Chapter 6: Career and Academic Planning
Chapter 7: Work-Based Learning
Chapter 8: Regional Centers

Each chapter concludes with highlights that summarizes the information and data found in each chapter.



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Chapter 1. Introduction and Overview

On July 1, 2019, Iowa began implementing the Strengthening Career and Technical Education (CTE) for the 21st Century Act (Perkins V) of the federal Carl D. Perkins Act. Iowa's state plan was submitted to and approved by the Office of Career, Technical and Adult Education and covers academic years 2020-21 through 2023-24. The Bureau of Career and Technical Education worked with an advisory committee and several subcommittees to determine expectations for the four years covered by the state plan, thus meeting the Perkins V requirement for external input. In addition to developing a four-year plan, 2019-20 was spent completing the Comprehensive Local Needs Assessment (CLNA) required for each Perkins recipient (secondary consortiums/ districts and community colleges), and 2020-21 was focused on CLNA work on a regional basis.

CTE in Iowa includes organized educational programs offering a sequence of courses directly related to the preparation of individuals for employment in current or emerging occupations. These programs include competency-based, applied learning, which contributes to an individual's academic knowledge, higher-order reasoning and problem-solving skills, work attitudes, general employability skills, and occupational-specific skills. With Perkins V, Iowa is expanding programming for middle school students (grades 5-8); teacher preparation, retention and recruitment; and equity. Iowa is also reporting on a new program quality indicator of student participation in work-based learning.

At the secondary level, CTE programs are organized within six broad service areas: agriculture, food and natural resources; information solutions; applied sciences, technology, engineering and manufacturing, including transportation, distribution, logistics, architecture and construction; health sciences; human services and business, finance, marketing and management. Programs within these service areas are further aligned with the National Career Clusters™ Framework. This report focuses on secondary CTE courses, programs, students and faculty, drawing on five years of data (academic years 2018-2022).

Implementing State CTE Legislation in Iowa and Perkins V

One of the State Board of Education's priorities is that all students have equal access to robust career and technical education, work-based learning experiences and community college credit opportunities through an integrated system. Iowa CTE has its roots in the five broad directional recommendations of a legislatively mandated statewide secondary CTE task force. The task force recommendations include career guidance, high-quality CTE programming, work-based learning, teacher preparation and professional development and regional partnerships/regional centers. Implementation focuses on individual career and

academic plans (ICAP), district-wide career guidance and development, Regional Planning Partnerships (RPPs), multi-year plans, program approvals, fiscal responsibility and budgeting.

Individual Career and Academic Plan (ICAP) and Career Planning – Each district is required to have a team in place to work with students on career planning and submit a district plan to the appropriate RPP. Each district can choose state-approved career development software to use with students; reporting on the use of the chosen career development software is required. All eighth-grade students are required to have an ICAP in place and have it reviewed yearly.

RPPs – The 15 RPPs around the state are closely aligned with the community college regions. These partnerships have state maintenance of effort funding to assist with expanding career and technical education programs at the secondary level to align with labor market needs, work with the districts on professional development, determine if a regional career center is needed to provide equitable career courses for all students and review program approvals for all districts.

Standards and Benchmarks – The State Board-approved standards and benchmarks for all service areas of CTE education and program approvals are now mandatory for all CTE programs at high school and middle school grade levels. The state is in the fifth year of program reviews, with 20.0 percent of programs reviewed each academic year. Once the RPPs have reviewed and worked with the districts to identify goals, they are forwarded to the Iowa Department of Education for review and approval by the Director.

With the implementation of Perkins V, a comprehensive local needs assessment is completed once every two years by the federal funds' local recipients. The needs assessment includes a review of CTE student performance, program quality, labor market needs, educator development and special populations' access to programs of study. At the local level, the driving force is data-driven decision-making requiring school districts to review student performance, including those students who fall into the different special population categories. Using and analyzing enrollment and performance data, school districts engage a wide variety of stakeholders to develop their accountability framework under Perkins V, thus connecting the accountability framework to the local needs assessment. The results of this work are submitted as part of the local Perkins application for federal funds. In this regard, Perkins V strongly ties together the four Ps: planning, payment, program and performance. The current state effort around secondary CTE lays a good foundation for developing the four Ps within the Perkins V State Plan and its subsequent implementation across school districts.

Implementing Federal CTE Legislation in Iowa

Iowa receives over $13 million annually in Perkins funds. The Iowa Department of Education is the designated state eligible agency (SEA). It is responsible for distributing these funds to 89 local eligible agencies (LEAs), encompassing 15 community colleges, 44 Perkins consortia that each include multiple school districts and 30 individual school districts. Of the total funds received by Iowa, 85.0 percent is distributed to LEAs, while 15.0 percent is used for state CTE leadership and administration. The basis for how these funds are allocated, distributed and expended is outlined in Iowa's state plan as a requirement under Perkins V.

In the academic year 2020-21, the Department

began the collection and reporting of the newly established indicators of performance for Perkins V, which include:

- (1S1) Graduation rate
- (2S1) Academic Attainment in Reading/ Language Arts
- (2S2) Academic Attainment in Math
- (2S3) Academic Attainment in Science (new to Perkins V)
- (3S1) Percentage of CTE concentrators who, in the second quarter after exiting from secondary education, are in postsecondary education or advanced training, military service or a national service program or are employed
- (4S1) Percentage of concentrators in programs/ programs of study that lead to non-traditional fields
- An additional secondary indicator focuses on program quality. Iowa's program quality indicator is:
- (5S3) Participation in work-based learning (new to Perkins V)

Table 1-1 displays Iowa's state-level targets and performance for the Perkins V secondary accountability indicators. The 2019-20 academic year established the baselines for each performance indicator. Academic years 2020-21, 2021-22, 2022-23 and 2023-24 each contain a column for the State Determined Levels of Performance (SDLP) and corresponding actual performance. For the academic year 2021-22, Iowa met or exceeded all of the performance indicator SDLPs. Actual performance measured against corresponding SDLP for academic years 2022- 23 and 2023-24 is to be determined.

TABLE 1-1: STATE-LEVEL SECONDARY PERKINS ACCOUNTABILITY INDICATORS: TARGET & PERFORMANCE

	1S1		1S2		2S1		3S1	
Academic	Target	Actual	Target	Actual	Target	Actual	Target	Actual
2018	80.0%	81.0%	85.0%	80.6%	92.6%	92.1%	93.5%	89.0%
2019	80.0%	67.8%	85.0%	72.0%	92.5%	92.1%	93.5%	89.0%
2020	See Table 1-2							
2021	See Table 1-2							
2022	See Table 1-2							

	4S1		5S2		6S1		6S2	
Academic	Target	Actual	Target	Actual	Target	Actual	Target	Actual
2018	93.0%	88.8%	89.0%	86.8%	38.5%	42.3%	29.5%	34.5%
2019	93.0%	89.0%	89.0%	87.0%	38.5%	42.0%	29.5%	35.0%
2020	See Table 1-2							
2021	See Table 1-2							
2022	See Table 1-2							

TABLE 1-2: PERKINS V PERFORMANCE INDICATOR TARGETS

Performance Indicator Code	Performance Indicator	(Baseline) 2019-20	(Year 1, SDLPs*) 2020-2021(%)	Actual (%) 2020-2021	(Year 2, SDLPs) 2021-2022 (%)	Actual (%) 2021-2022
Secondary						
1S1	Four-Year Graduation Rate	92.50%	93.00%	96.20%	93.20%	94.80%
2S1	Academic Proficiency in Reading/Language Arts	65.70%	66.00%	74.60%	66.20%	68.81%
2S2	Academic Proficiency in Mathematics	61.70%	62.00%	65.80%	62.20%	61.10%
2S3	Academic Proficiency in Science	58.00%	58.20%	64.20%	58.50%	64.40%
3S1	Post-Program Placement	89.00%	89.50%	87.40%	90.00%	88.53%
4S1	Non-traditional Program Concentration	14.60%	14.60%	26.50%	15.00%	26.73%
5S3	Program Quality - Participated in Work-Based Learning	6.00%	7.00%	10.20%	8.00%	14.50%

Performance Indicator Code	Performance Indicator	(Baseline) 2019-20	(Year 3, SDLPs*) 2022-2023 (%)	Actual (%) 2022-2023	(Year 4, SDLPs) 2023-2024 (%)	Actual (%) 2023-2024
Secondary						
1S1	Four-Year Graduation Rate	92.50%	93.50%	TBD	93.70%	TBD
2S1	Academic Proficiency in Reading/Language Arts	65.70%	66.50%	TBD	66.70%	TBD
2S2	Academic Proficiency in Mathematics	61.70%	62.50%	TBD	62.70%	TBD
2S3	Academic Proficiency in Science	58.00%	58.70%	TBD	59.00%	TBD
3S1	Post-Program Placement	89.00%	90.50%	TBD	91.00%	TBD
4S1	Non-traditional Program Concentration	14.60%	15.20%	TBD	15.50%	TBD
5S3	Program Quality - Participated in Work-Based Learning	6.00%	9.00%	TBD	10.00%	TBD

Perkins V brings a greater focus on data and accountability and includes a few notable changes. It begins by explicitly defining who is included in the accountability system. It then outlines the process for setting performance targets, which includes broad consultation of stakeholders. Finally, a new initiative toward increasing opportunities for special populations is addressed, which emphasizes the disaggregation of data to identify the gaps and disparities in performance between groups

of students and notes on how to address them. If the state, or eligible grant sub-recipients, fails to meet at least 90.0 percent of the state-determined level of performance for any of the core indicators of performance described in 113(b)(2) for all CTE concentrators, the eligible agency shall develop and implement a program improvement plan. Sec. 123. [20 U.S.C. 2343].

Accountability details under Perkins V, Sec. 113. [20 U.S.C. 2323] include the following: 1) a secondary CTE concentrator is explicitly defined; 2) except for the nontraditional and postsecondary placement indicators, all other indicators are based on the accountability framework laid out under the Every Students Succeeds Act (ESSA) state plan; 3) for every indicator, performance has to be measured for different sub-populations, and these are the same listed in ESSA, with a couple of exceptions; 4) states consulted with stakeholders to develop the state-level target levels of performance for each indicator for academic years 2020-21, 2021-22, 2022-23 and 2023-24, as submitted and approved in Iowa's Perkins V state plan and 5) states will need to address performance gaps for all indicators, as well as gaps among the different sub-populations for each indicator and target federal funds to develop strategies for addressing these gaps. The longitudinal data and performance results shown in this report place Iowa in a favorable position to complete the accountability requirements under Perkins V.

Methodology

Data from multiple sources were used to generate this report. The data sources used for Chapters 2-4 include Student Reporting in Iowa (SRI), the Secondary CTE Reporting Application (SCTERA), the Iowa Basic Educational Data Survey (BEDS), the Iowa Board of Educational Examiners (BOEE) database and the Iowa Department of Education Community College Management Information System (MIS). SRI and SCTERA provide data on programs and the courses a student took or was taking in a given academic year, as well as student demographic data. Data from the BEDS, along with data from the BOEE database, provide information on K-12 CTE teachers. The MIS was used to gather information on community college faculty teaching college-credit contracted CTE courses to high school students.

Chapter 5 presents data on career and technical student organizations (CTSOs) that come from the Iowa Department of Education and the national CTSO offices. Chapter 6 uses career guidance data from the Consolidated Accountability and Support Application (CASA) and the Comprehensive School Improvement Plan. With SRI data, chapter 7 summarizes work-based learning courses and students who took these courses. Chapter 8 of this report also uses data gathered from a survey administered by the Division of Community Colleges and Workforce Preparation at the Iowa Department of Education for the purposes of obtaining information on regional centers.

The School Courses for the Exchange of Data (SCED) and the Classification of Instructional Programs (CIP) were used to calculate the number of secondary CTE courses and programs offered. The SCED code provides information about the course topic and course subject area.

For example, in chapter 7, work-based learning courses are identified by the last two digits of the five-digit SCED code. If the last two digits of a SCED code are 98 or 48, this course is usually a work-based learning course. Similar to the SCED code, the CIP code indicates what instructional program a CTE course belongs to. In this report, a unique SCED code in a given school district was identified as a secondary CTE course instance. A similar approach was used to identify secondary CTE program instances. The number of unique state student IDs was utilized to display unduplicated secondary CTE enrollment.

The Report Layout

The report is divided into two main sections: Section I presents five-year longitudinal data (2017-18 to 2021-22) on participation in secondary CTE courses and programs, secondary CTE enrollment patterns, CTE student characteristics and secondary CTE teacher resources. Section II briefly describes four aspects of CTE programming—career and technical student organizations (CTSOs), career and academic planning, work-based learning and regional centers—which are coming to the forefront as HF2392 moves to full implementation across public school districts in Iowa.

Chapter 2: Secondary CTE Courses and CTE Programs

Career and technical education's (CTE) direct and explicit focus on preparing students for specific ranges of occupations has resulted in a long history of interest and involvement in educational, occupational, and industrial classification systems by businesses and industry. The National Career Clusters™ Framework provides a way for schools to organize instruction and student experiences around 16 broad categories that encompass all occupations from entry through professional levels. The clusters are groupings of careers with similar skills or common themes based on industry groups. They help parents, employers and educational system employees understand how curriculum relates to the career opportunities students will choose and which schools must prepare them.

At the secondary level in Iowa's public school districts, CTE programs are organized within six service areas, as defined in Iowa Code section 256.11(5) (h). Iowa has made a conscious effort to align these service areas to the National Career Clusters™ Framework.

Iowa Code (Chapter 12) regarding secondary CTE courses and programs requires that every public school district offer and teach a minimum of three sequential CTE units within at least four of the six service areas. Each unit may consist of one or more courses, depending on classroom and lab time; however, the most common configuration is a (Carnegie) unit, which comprises two 0.50-unit courses. Three sequential "Carnegie" CTE units equal a basic CTE program. This report defines a course as a combination of a specific SCED code and a specific school district—a course instance. Similarly, a program is obtained by combining a specific CIP code and a specific school district—a program instance.

Additionally, secondary students in Iowa have access to college credit coursework through various means, most of which are at no (or low) cost to the student. Reported throughout this document are the data for college credit CTE courses contracted through one (or more) of Iowa's community colleges. This section summarizes all of the CTE courses and CTE programs taught during AY2018-22 for students in grades 9-12 in Iowa.

Figure 2-1 reports secondary CTE courses taught since AY2018. In AY2022, 9,643 secondary CTE courses were offered in Iowa, which is a 7.60 percent increase from the year before, it is worth noting that CTE course delivery in AY2020-21 was negatively impacted by the COVID pandemic. Figure 2.1 also reports the change of college credit contracted CTE courses. The proportion of college credit contracted CTE courses increased steadily; in AY2018, these courses only accounted for 30.60 percent of the total secondary CTE courses, whereas in AY2022, 36.90 percent of all secondary CTE courses were college credit contracted courses, which is a 31.0 percent increase.

TABLE 2-1: AVERAGE NUMBER OF CTE COURSES BY SCHOOL DISTRICT SIZE: AY18-AY22

High School Student Enrollment	AY2019	AY2020	AY2021	AY2021	AY2022	CAGR*
<100	19.0	17.5	18.7	18.8	21.3	2.9%
100-299	25.5	25.4	25.7	25.5	26.8	1.3%
300-499	33.6	33.2	33.5	34.3	36.3	2.0%
500-1249	35.2	35.3	37.7	34.5	37.9	1.9%
1250-3999	42.0	43.8	45.2	44.4	48.5	3.7%
>4000	62.8	64.0	62.8	58.8	67.6	1.9%
Total	**29.4**	**29.4**	**30.1**	**29.7**	**31.9**	**2.1%**

*Note: * CAGR=Compound Annual Growth Rate*

Table 2-1 displays the average number of CTE courses offered by school district size; Table 2-2 shows the average number of college credit contracted CTE courses by school district size. In this report, school district size was indicated by high school student enrollment. More information on high school enrollment can be obtained at https://educateiowa.gov/data-reporting/education-statistics-pk-12#Student_Enrollment.

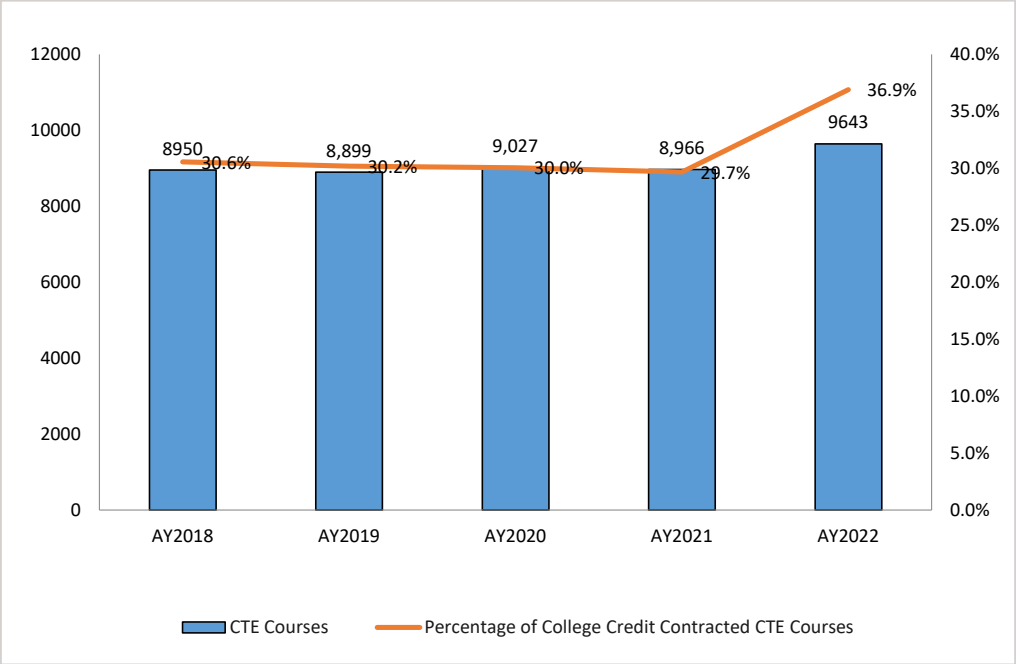
Compared to AY2021, the average number of CTE courses increased in all school districts. As to the average number of college credit contracted CTE courses, all school districts experienced an increase. The number of CTE courses and the number of college credit contracted CTE courses were positively correlated to school district size, as larger schools offered more of both high school and college credit contracted CTE courses (see Tables 2-1 and 2-2).

TABLE 2-2: AVERAGE COLLEGE CREDIT CTE COURSES BY SCHOOL DISTRICT SIZE: AY18-AY22

High School Student Enrollment	AY2018	AY2019	AY2020	AY2021	AY2022	CAGR*
<100	4.6	3.7	4.6	4.6	6.5	9.0%
100-299	6.3	6.0	7.1	6.8	8.4	7.5%
300-499	11.7	11.4	11.4	12.8	15.2	6.8%
500-1249	11.6	12.0	13.8	11.5	15.1	6.8%
1250-3999	17.3	18.1	18.4	19.3	24.6	9.2%
>4000	32.2	32.6	25.6	29.6	40.0	5.6%
Total	**6.5**	**9.0**	**9.9**	**9.9**	**12.3**	**22.3%**

**Due to error in calculation in last year's report, average number of college credit contracted courses offered by school district size for AY2018 was updated.*

FIGURE 2.1: NUMBER OF CTE COURSES AND PROPORTION OF COLLEGE CREDIT CONTRACTED CTE COURSES: AY2018-AY2022*



**Due to error in calculation in last year's report, percentage of college-credit contracted CTE courses for AY2018 was updated.*

Figure 2-2 displays the total number of secondary CTE programs (at least three units of sequential CTE coursework aligning with a CIP code) taught since AY2018. As shown in Figure 2-2, the number of CTE programs has decreased slightly since AY2018. Most of this slight decline can be explained due to more accurate reporting and clean-up of programs and course duplication.

FIGURE 2-2: NUMBER OF SECONDARY CTE PROGRAMS: AY18-AY22

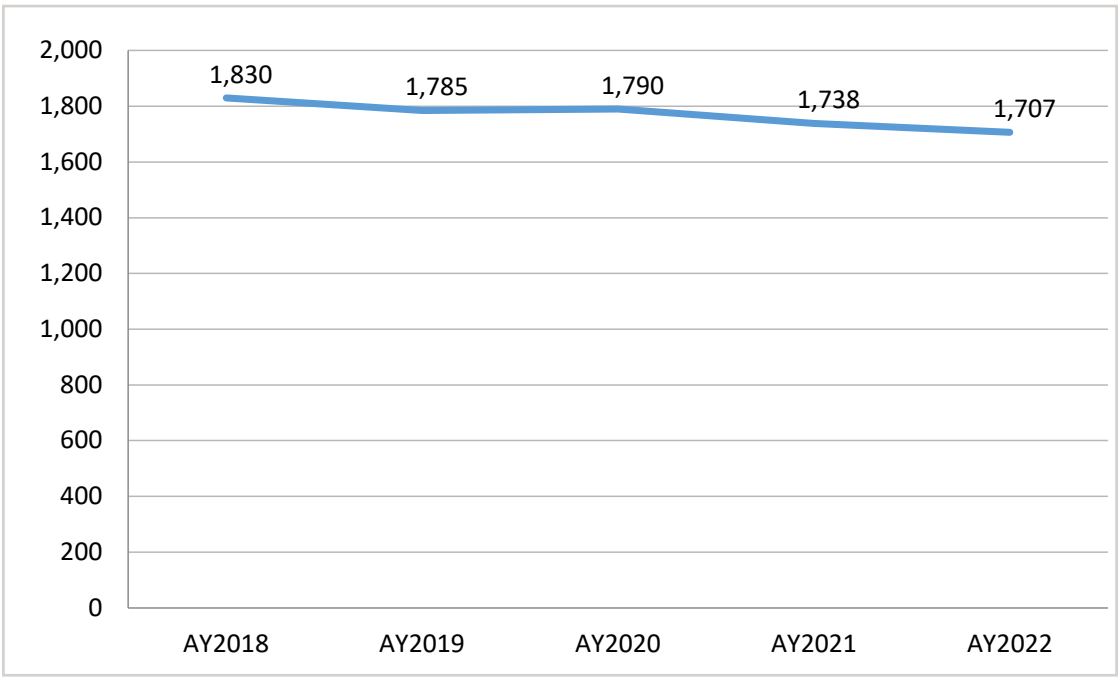


Table 2-3 presents the average number of CTE programs offered by school district size. In larger schools, more CTE programs were offered each academic year. For example, in AY2022, 14.2 secondary CTE programs were offered in school districts with more than 4,000 high school students, compared to 4.3 programs offered in districts with less than 100 high school students. Over the five-year period, the average number of CTE programs did not increase in school districts of any size. Statewide, the average number of secondary CTE programs has decreased by 1.7 percent since AY2018.

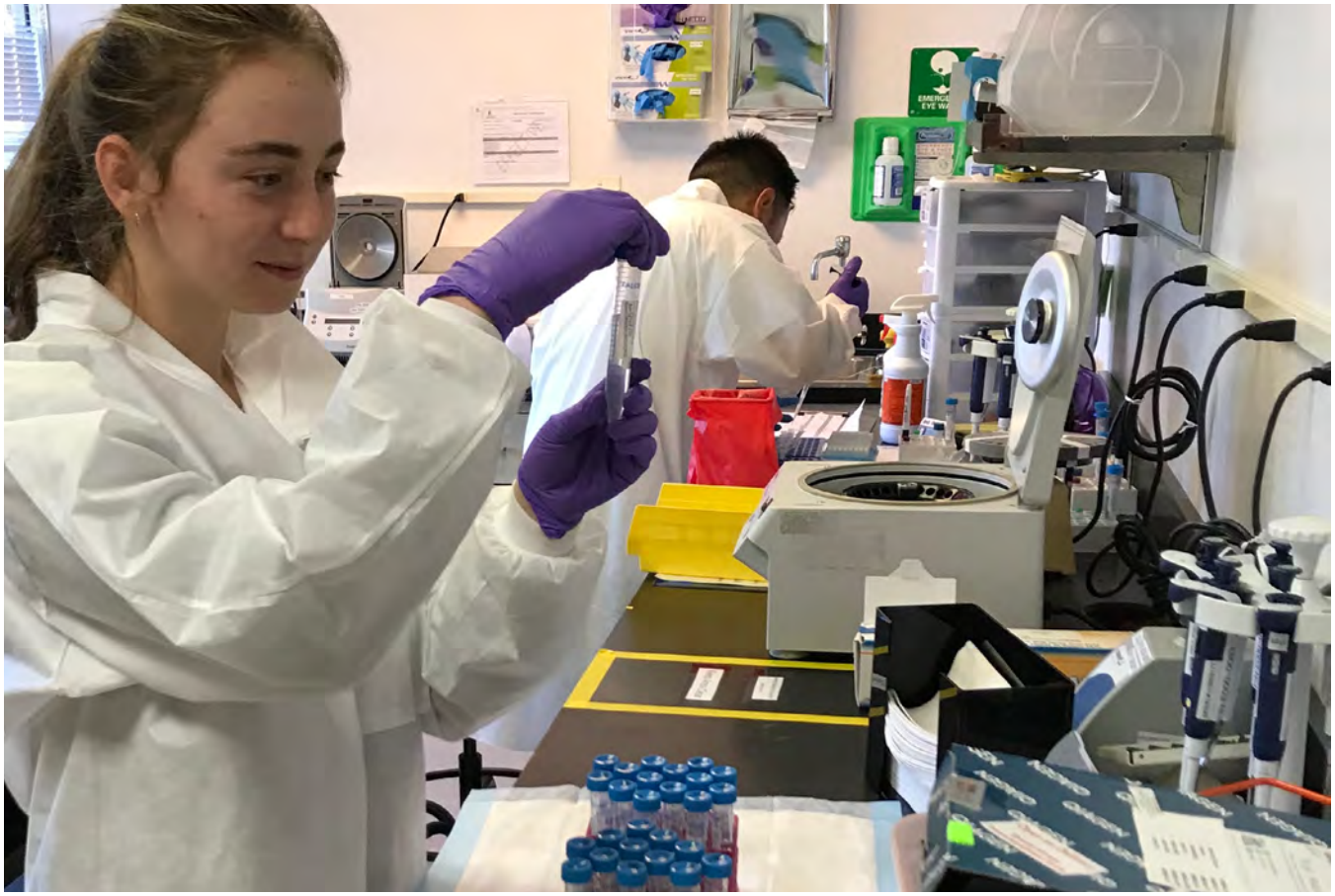
Table 2-4 breaks down CTE programs by service area and shows that Applied Science, Technology, Engineering and Manufacturing was the most common service area, with 544 programs taught in AY2022. By contrast, Information Solutions was the smallest service area, with 91 programs provided in the same year.

TABLE 2-3: AVERAGE NUMBER OF CTE PROGRAMS BY SCHOOL DISTRICT SIZE: AY18 - AY22

High School Student Enrollment	AY2018	AY2019	AY2020	AY2021	AY2022	CAGR*
<100	4.6	4.5	4.4	4.4	4.3	-1.7%
100-299	5.1	4.9	5.0	4.8	4.7	-2.0%
300-499	6.4	6.1	5.9	6.1	5.9	-2.0%
500-1249	7.3	7.5	7.8	7.1	6.7	-2.1%
1250-3999	9.4	9.1	9.4	9.4	9.4	0.0%
>4000	14.2	13.8	14.0	14.2	14.2	0.0%
Total	**6.0**	**5.9**	**5.9**	**5.8**	**5.7**	**-1.3%**

TABLE 2-4: NUMBER OF CTE PROGRAMS BY SERVICE AREAS: AY18 - AY22

Service Areas	AY17	AY18	AY19	AY20	AY21	CAGR *
Business, Finance, Marketing and Management	327	323	324	323	322	-0.4%
Agriculture, Food and Natural Resources	252	255	259	259	260	0.8%
Information Solutions	75	80	83	85	91	5.0%
Applied Science, Technology, Engineering and Manufacturing	672	620	595	559	544	-5.1%
Health Sciences	130	140	149	144	136	1.1%
Human Services/Family and Consumer Sciences	374	367	380	368	354	-1.4%
Total	**1,830**	**1,785**	**1,790**	**1,738**	**1,707**	**-1.7%**



Chapter Highlights

Over a five-year time period:

- The total number of offer and teach CTE courses increased, while the number of programs reported more or less held steady, with only minor shifts occurring up or down across state service areas.
- All school districts experienced growth in the average number of CTE courses for a state average of 2.10 percent.
- There was significant growth in the use of college credit contracted courses in secondary CTE programs—30.10 percent over a five-year period—and this growth is related to the size of the school districts, with larger districts offering and teaching more college credit contracted courses.
- At the service area level, CTE programs decreased in all but three service areas.

Chapter 3: Secondary CTE Enrollment and CTE Student Demographics

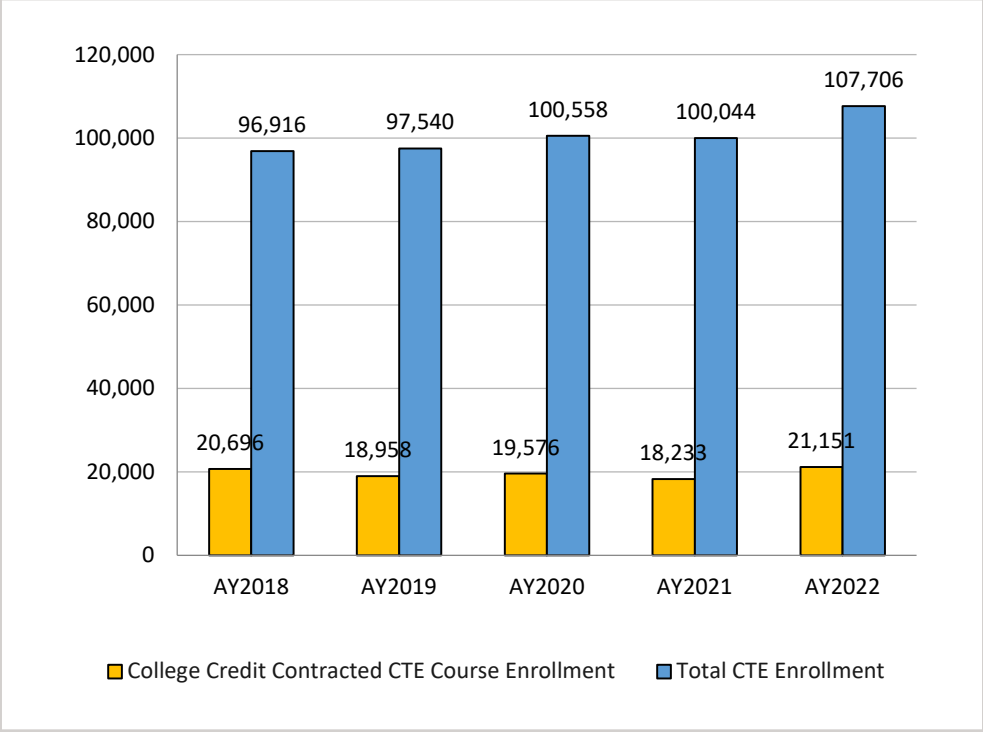
This chapter is divided into two sections: Section 1: Trends in Secondary CTE Enrollment and Section 2: Demographics of CTE Students.

Section 1: Trends in Secondary CTE Enrollment

The high school students that took at least one CTE course in a given academic year (AY) were identified as CTE students. It should be noted that while school districts are required to offer and teach a minimum of three units in at least four of the six service areas, high school students are free to determine the extent to which they will enroll and complete CTE courses and programs.

Figure 3-1 displays secondary CTE enrollment since AY2018. In AY2022, there were 107,706 students enrolled in at least one CTE course, which is the highest in the past five years. In addition, students who took at least one college credit contracted CTE course were identified as college credit CTE students. Figure 3-1 also presents the number of college credit contracted CTE students during the past five years.

FIGURE 3-1: SECONDARY CTE AND COLLEGE CREDIT CONTRACTED CTE ENROLLMENT: AY18 - AY22



In AY2022, 21,151 students (19.6 percent of total CTE enrollment) took at least one college credit contracted CTE course, a 16.0 percent increase from the previous year.

Over the past five years, the secondary CTE participation rate in Iowa was approximately 73.1 percent. As shown in Figure 3-2, the proportion of CTE enrollment in grades 9-12 increased from 68.6 percent in AY2018 to 73.1 percent in AY2022. The change in the secondary CTE participation rate follows the change in total secondary CTE enrollment.

Figure 3-3 displays CTE enrollment by school district size. In this report, school district size is indicated by high school student enrollment. Before AY2020, school districts with an enrollment of 100-299 high school students had the largest secondary CTE enrollment. Since AY2020, school districts where the high school enrollment was 1,250-3,999 students had the highest CTE enrollment (23,511 in AY2020 and 26,014 in AY2022).

FIGURE 3-2: SECONDARY CTE PARTICIPATION RATE: AY18 - AY22

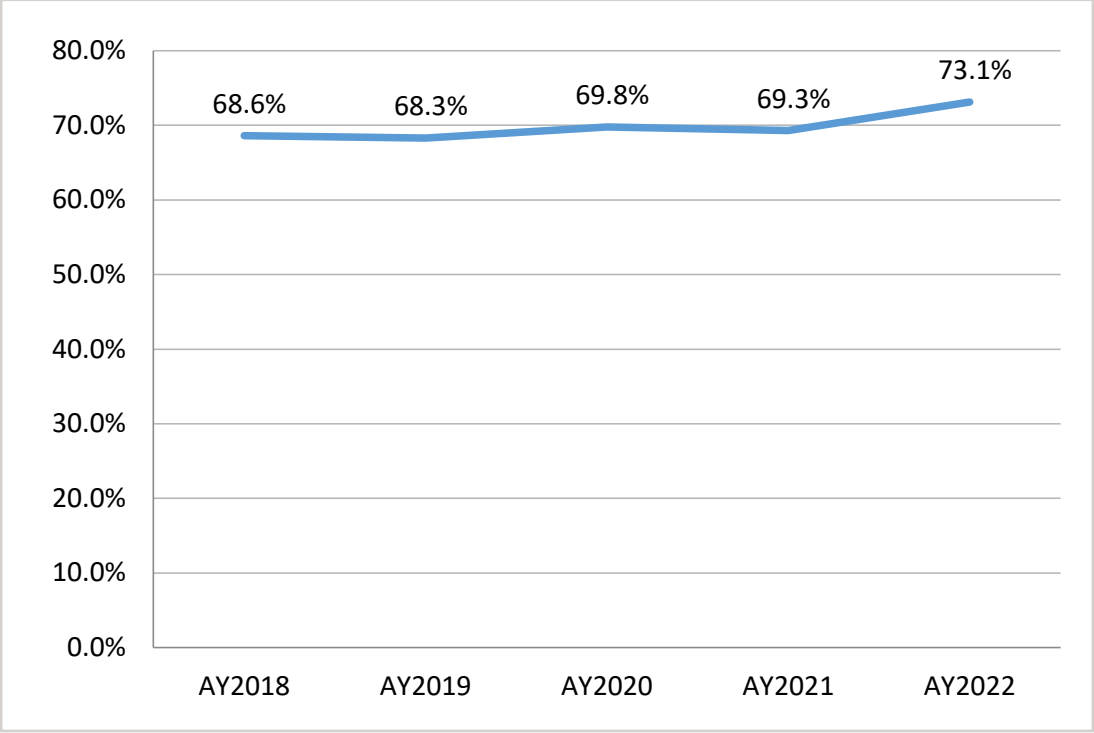


FIGURE 3-3: TOTAL COMBINED SECONDARY CTE ENROLLMENT BY SCHOOL DISTRICT SIZE: AY18 - AY22

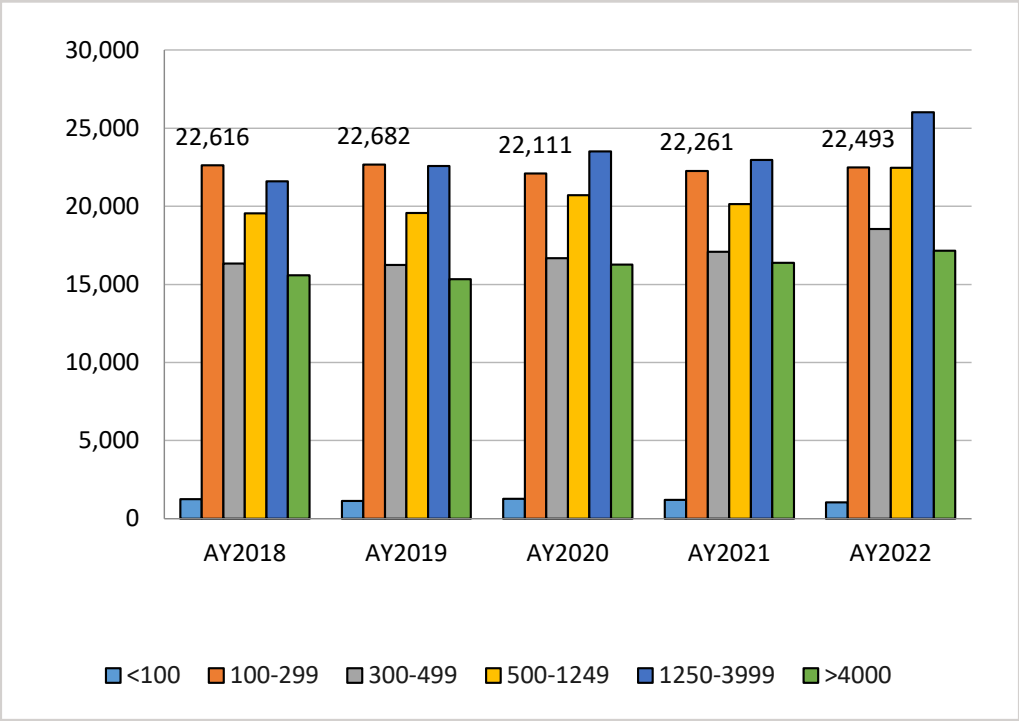


TABLE 3-1: SECONDARY CTE PARTICIPATION RATE BY SCHOOL DISTRICT SIZE: AY18-AY22

High School Student Enrollment	AY2018	AY2019	AY2020	AY2021	AY2022	Five-Year Average
<100	78.6%	75.9%	76.1%	79.4%	72.2%	77.5%
100-299	76.9%	77.1%	77.2%	78.8%	77.3%	77.5%
300-499	73.6%	73.4%	71.9%	74.6%	76.4%	73.4%
500-1,249	70.5%	71.0%	74.6%	70.7%	71.2%	71.7%
1,250-3,999	60.6%	62.0%	63.7%	61.5%	65.4%	62.0%
>4,000	60.9%	59.5%	62.5%	63.1%	60.9%	61.5%
Total	**68.2%**	**68.3%**	**69.7%**	**69.3%**	**69.8%**	**68.9%**

Table 3-1 summarize CTE participation rate by school district size. When observing the year-to-year average over the five-year period, school districts with an enrollment of 100-299 high school students had the highest secondary CTE participation rate in all years except for AY2018 and AY2021. School districts with a high school enrollment of 1,250-3,999 and those with a high school enrollment of more than 4,000 had comparatively lower CTE participation rates with a five-year average of 62.0 percent and 61.5 percent respectively, even though this group consisted of approximately 42.1 percent of total statewide secondary CTE enrollment. In AY2022, school districts with an enrollment of more than 4,000 high school students had the lowest participation rate at 61.5 percent.

TABLE 3-2: COLLEGE CREDIT CTE STUDENTS AS A PERCENTAGE OF TOTAL SECONDARY CTE ENROLLMENT BY SCHOOL DISTRICT SIZE: AY18-AY22

High School Student Enrollment	AY2018	AY2019	AY2020	AY2021	AY2022	Five-Year Average
<100	11.7%	12.7%	13.6%	14.8%	13.9%	13.3%
100-299	15.5%	15.3%	15.0%	14.5%	16.5%	15.4%
300-499	19.2%	18.2%	19.2%	17.9%	19.0%	18.7%
500-1,249	20.7%	19.0%	20.3%	18.5%	20.0%	19.7%
1,250-3,999	24.2%	20.1%	20.4%	21.6%	23.2%	21.9%
>4,000	29.6%	26.9%	23.9%	18.8%	18.9%	23.6%
State Total	**21.4%**	**19.4%**	**19.5%**	**18.2%**	**19.6%**	**19.6%**

FIGURE 3-4: SECONDARY ENROLLMENT BY GRADE LEVEL: AY18 - AY22

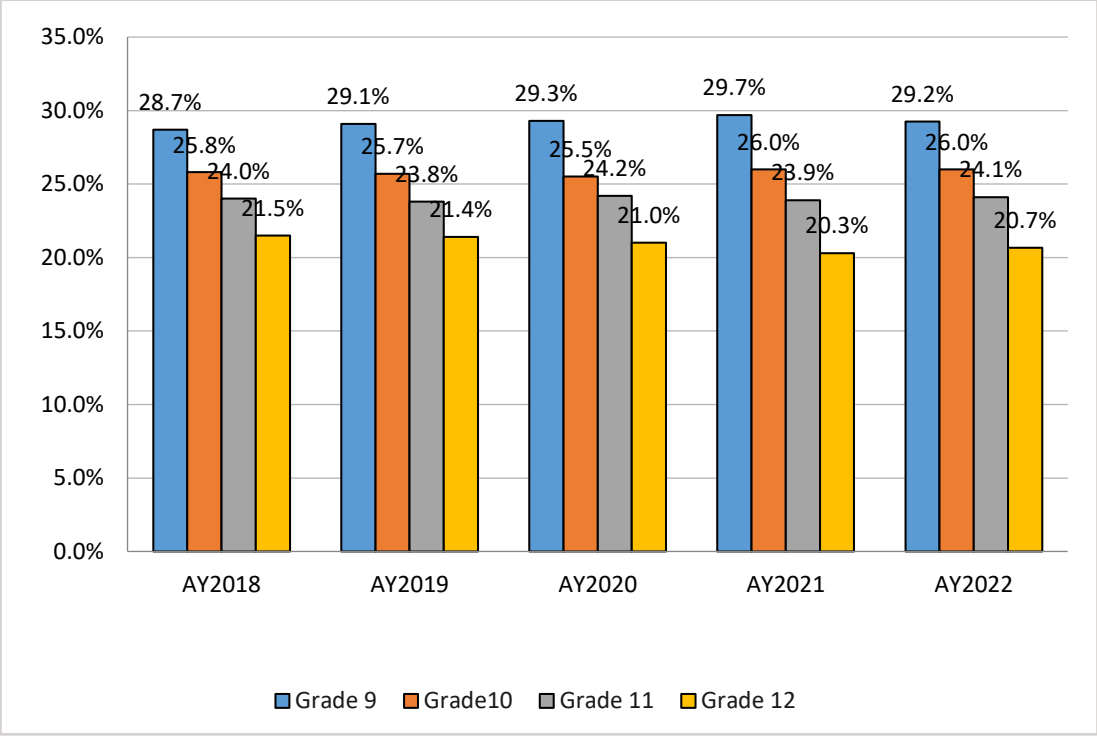


Table 3-2 summarizes the percentage of college credit CTE students out of total secondary CTE enrollment by school district size. It appears that this percentage is positively correlated to school district size. Students in larger school districts were more likely to have taken college credit contracted CTE courses. For example, in AY2022 school districts with less than 100 high school students saw only 13.3 percent of secondary CTE students enrolled in at least one college credit contracted CTE course, compared to 23.6 percent of CTE students in school districts with an enrollment of more than 4,000 high school students. It is also worth mentioning that, statewide, the percentage of college credit contracted CTE students increased to 19.6 percent.

Figure 3-4 presents secondary CTE enrollment by grade-level. The pattern of CTE enrollment by grade level held steady over the past five years. Ninth graders were the largest group, averaging 29.2 percent, followed by 10th graders, averaging 26.0 percent, and students in grades 11 and 12 accounted for 24.1 percent and 20.7 percent of total secondary CTE enrollment, respectively.

Table 3-3 summarizes enrollment by service area since AY2018. Over the past five years, more students enrolled in courses in the Human Services/Family Consumer Science service area than any other service area, and in AY2022, 64,883 students took at least one course in this service area. Students enrolling in courses in the Applied Science, Technology, Engineering and Manufacturing service area were also popular among high school students. In AY2022, 57,170 students took at least one course in this service area. The enrollment increased in all service areas from AY2021 to AY2022.

TABLE 3-3: SECONDARY CTE ENROLLMENT BY SERVICE AREA: AY18- AY22

Service Area	AY2018	AY2019	AY2020	AY2021	AY2022	CAGR*
Business, Finance, Marketing and Management	26,632	24,416	26,336	27,036	60,402	22.7%
Agriculture, Food and Natural Resources	16,134	15,787	16,718	17,203	21,145	7.0%
Information Solutions	15,746	15,894	14,901	14,377	15,041	-1.1%
Applied Science, Technology, Engineering and Manufacturing	31,763	31,692	32,091	31,446	57,370	15.9%
Health Sciences	3,684	3,876	4,407	4,023	8,446	23.1%
Human Services/Family and Consumer Sciences	49,767	51,395	54,408	57,170	64,883	6.9%

Note: Students can take CTE courses across different service areas and thus may be counted multiple times.
** CAGR=Compound Annual Growth Rate*

Section 1 Highlights

Over a five-year period:

- Overall enrollment in secondary CTE and overall secondary CTE participation rates went up and down during the five-year period. Students in smaller school districts were participating at relatively higher rates in secondary CTE.
- As to student participation in college credit contracted CTE courses, the participation rates were much lower for smaller school districts. The reverse relationship is true for larger school districts.
- CTE student enrollment by grade level declines after ninth grade, with the lower enrollment seen in subsequent grades.
- In general, enrollment of students in all state service areas showed an upward trend compared to the year before.

Section 2 - Demographics of Secondary CTE Students

Who are the students that take CTE coursework in Iowa's high schools? What are the demographics? How many are economically disadvantaged? This section describes the characteristics of secondary CTE students and covers the distributions and demographics of secondary CTE students across grades 9-12, as well as the number of CTE courses taken over the past five academic years.

Among all secondary CTE students, white students made up 74.4 percent of the student body in AY2022. Figure 3-5 displays the proportion of white students and the proportion of minority students enrolled in secondary CTE programs. The percentage of minority secondary CTE students increased steadily from 20.6 percent in AY2018 to 25.6 percent in AY2022. Hispanic students comprised the largest minority group, averaging 48.9 percent, followed first by Black students, averaging 23.0 percent, and then by students who reported two or more races, averaging 16.1 percent (see Table 3-4).

FIGURE 3-5: PROPORTION OF WHITE VS. MINORITY SECONDARY CTE STUDENTS: AY2018-AY2022

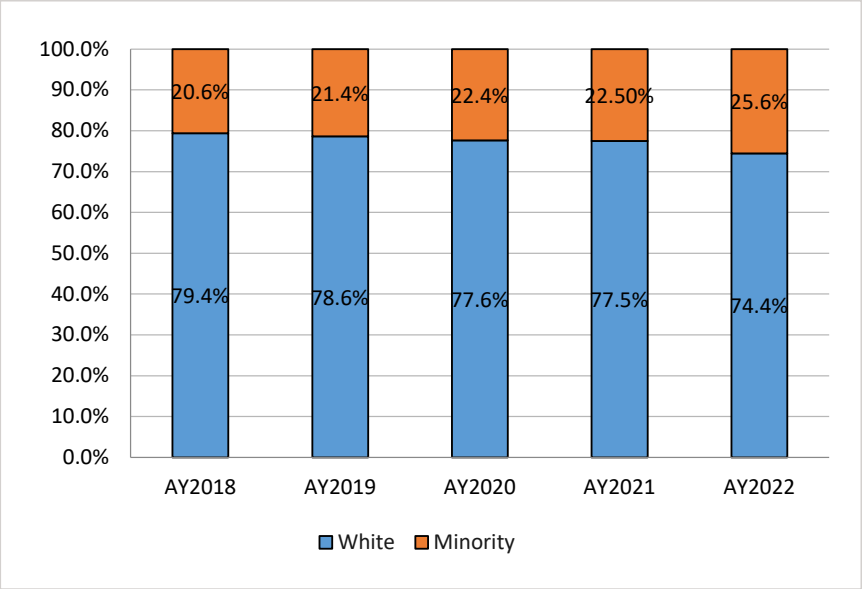


TABLE 3-4: DISTRIBUTION OF MINORITY SECONDARY CTE STUDENTS: AY2018-AY2022

Race/Ethnicity	AY18		AY19		AY20		AY21		AY22	
	N	%	N	%	N	%	N	%	N	%
Hispanic	9,531	47.7	9,973	47.8	10,732	47.7	10,775	42.2	12,497	48.9
Black	4,836	24.2	5,045	24.2	5,490	24.4	5,333	20.9	5,866	23.0
Two or More Races	2,761	13.8	3,024	14.5	3,337	14.8	3,581	14.0	4,117	16.1
Asian	2,306	11.5	2,274	10.9	2,317	10.3	2,287	9.0	2,397	9.4
Native American	325	1.6	328	1.6	341	1.5	297	1.2	316	1.2
Pacific Islanders	224	1.1	232	1.1	261	1.2	268	1.0	352	1.4
State	**19,983**		**20,876**		**22,478**		**22,541**		**25,545**	

Figure 3-6 summarizes the enrollment of secondary CTE students by gender. Over the past five years, there were more male CTE students than female CTE students. The proportion of female students in secondary CTE enrollment increased from 44.7 percent in AY2018 to 48.7 percent in AY2022.

The proportion of secondary CTE students who were eligible for the National School Lunch Program is shown in Figure 3-7. The percentage of eligible students fluctuated between 37.4 percent and 39.5 percent during the past five years and peaked in AY2020.

FIGURE 3.6: PROPORTION OF MALE AND FEMALE SECONDARY CTE STUDENTS: AY2018-AY202

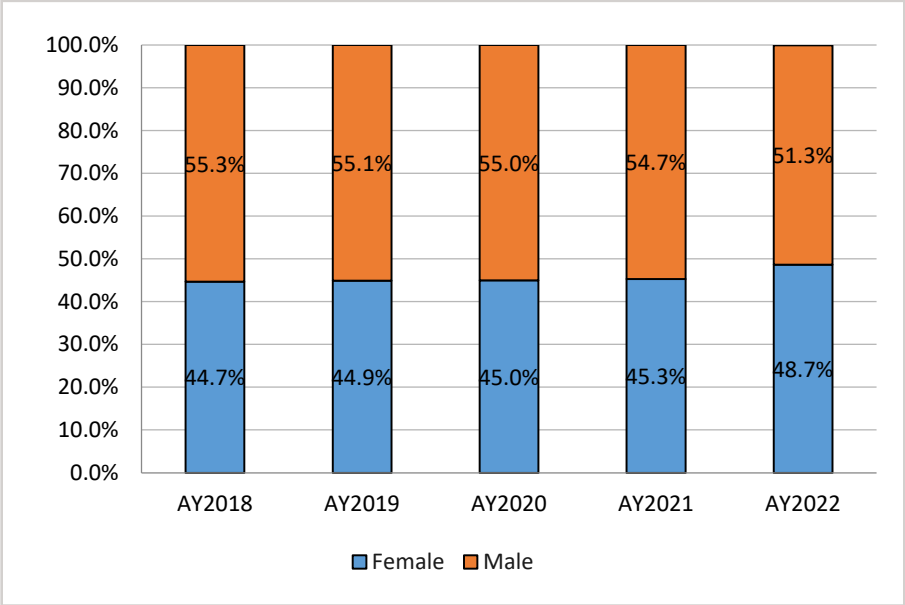
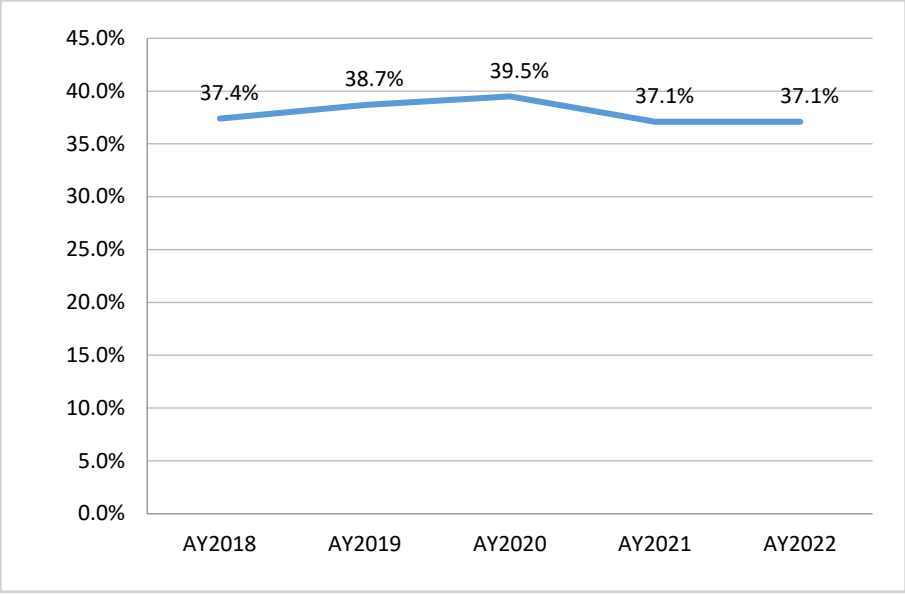


FIGURE 3.7: PROPORTION OF SECONDARY CTE STUDENTS WHO WERE ELIGIBLE FOR FREE OR REDUCED-PRICED MEALS PROGRAM:AY2018-AY2022



Trends in CTE Courses Taken by Secondary Students

Figure 3-8 displays the distribution of CTE course taking (both secondary and college credit contracted) per student since AY2018. In AY2018, 33.8 percent of students who participated in a CTE program took one CTE course in an academic year. Between AY2018 and AY2020, this group of students dropped to less than 35.0 percent; however, this group increased to 39.3 percent in AY2022. The proportion of students who took two CTE courses in an academic year was steady in the past five years at approximately 31.0 percent.

The average number of CTE courses taken per student has grown by 1.0 percent (compound annual growth rate). In AY2022, on average, secondary students enrolled in 2.44 CTE courses per academic year, which is a 20.2 percent increase from AY20201 (Figure 3-9).

FIGURE 3.8: DISTRIBUTION OF SECONDARY STUDENTS BY NUMBER OF CTE COURSES: AY2018-AY2022

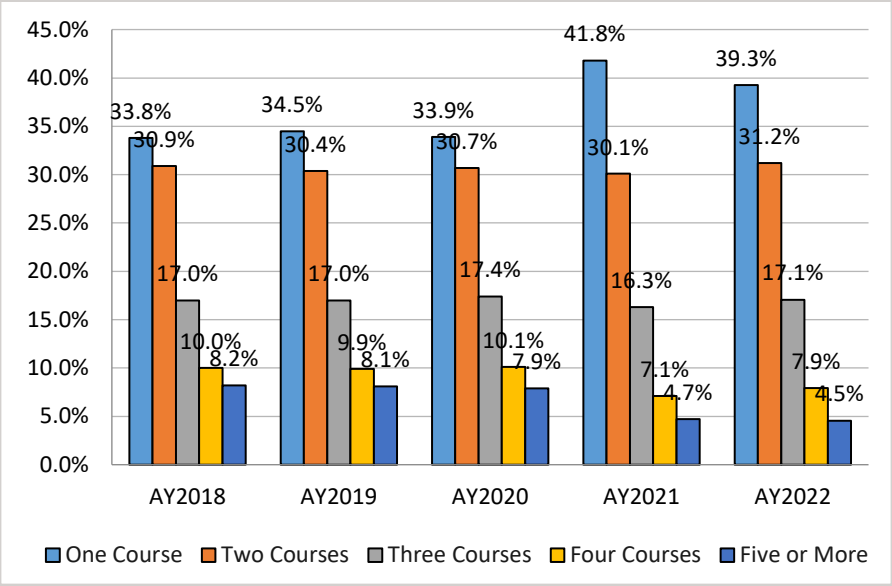
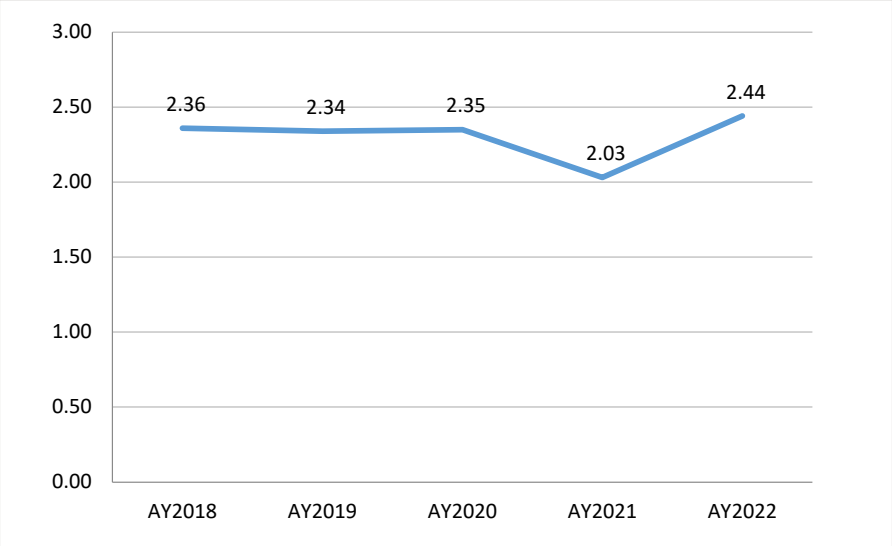


FIGURE 3.9: AVERAGE NUMBER OF CTE COURSES TAKEN BY SECONDARY STUDENTS: AY2018-AY2022



On average, students in 12th grade took more CTE courses per academic year than students in other grades (Figure 3-10).

Figures 3-10 through 3-13 demonstrate the following: Male secondary students took more CTE courses than female students; white secondary students took more CTE courses than minority students and the difference between secondary CTE students who were eligible for free and reduced-price meals and those who were not eligible was not statistically significant.

FIGURE 3.10: COMPARISON OF AVERAGE NUMBER OF CTE COURSES BY GRADE LEVEL: AY2018-AY2022

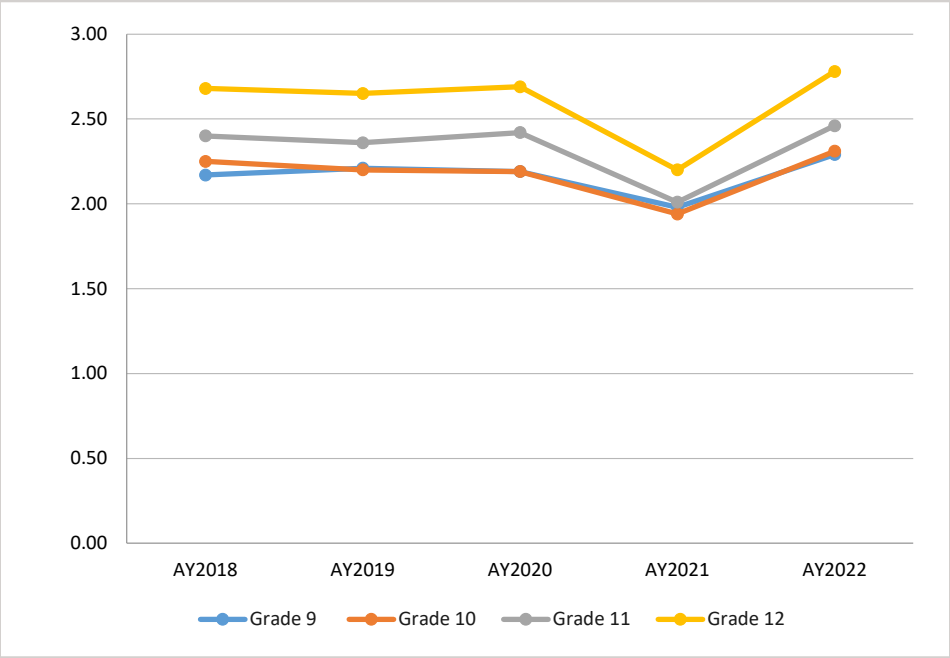


FIGURE 3-11: COMPARISON OF AVERAGE NUMBER OF CTE COURSES BY GENDER: AY2018-AY2022

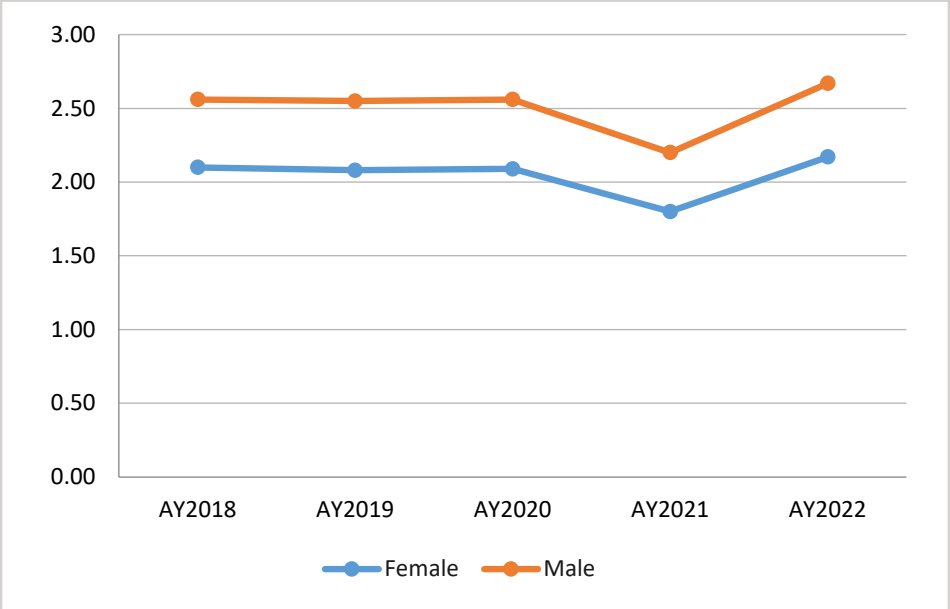


FIGURE 3-12: COMPARISON OF AVERAGE NUMBER OF CTE COURSES BY RACE/ETHNICITY: AY2018-AY2022

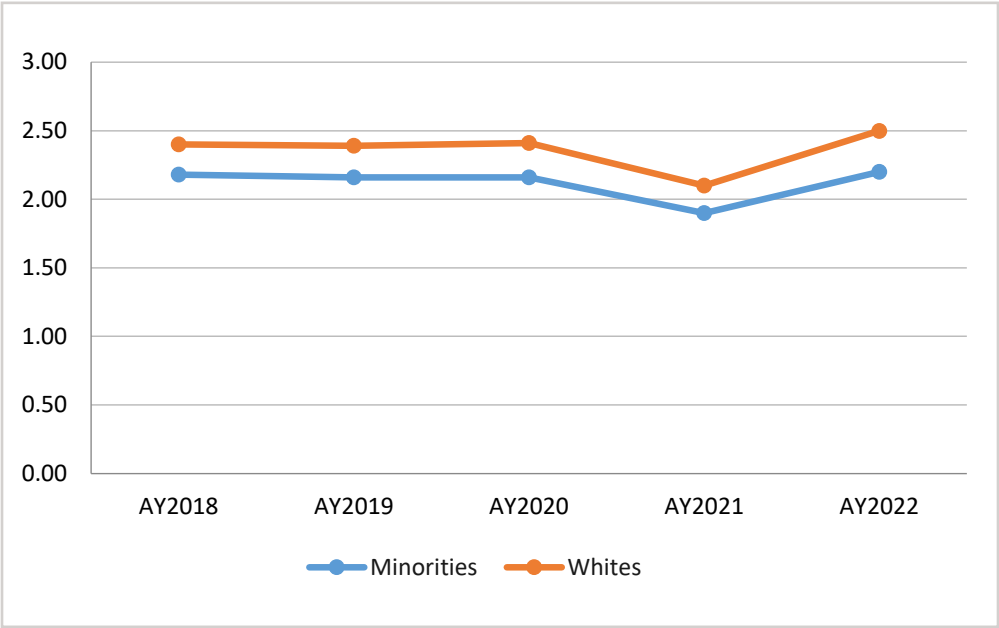
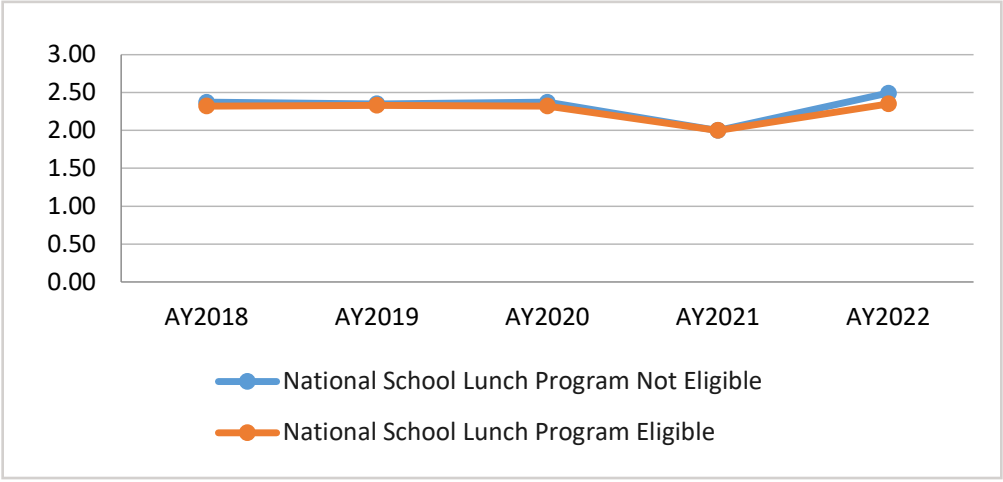


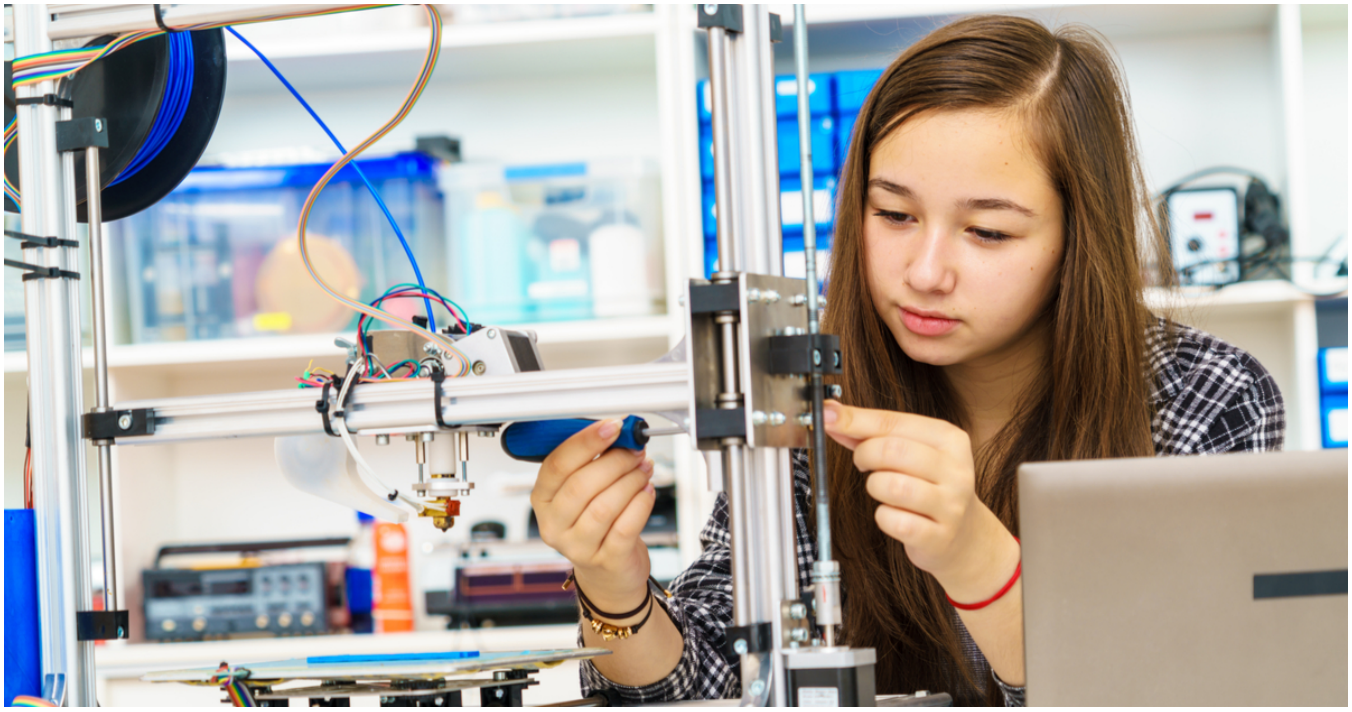
FIGURE 3-13: COMPARISON OF AVERAGE NUMBER OF CTE COURSES BY FREE OR REDUCED-PRICE MEALS PROGRAM ELIGIBILITY: AY2018-AY2022



Section 2 Highlights

Over a five-year time period:

- White students show a decline as a proportion of secondary CTE participation, while there was an increase for minority students.
- Hispanic and black students make up about 71.9 percent of overall minority secondary student CTE participation. CTE participation for other student population groups has held steady.
- The participation of male students has been higher than female students, but the proportion of female students has increased steadily.
- The proportion of secondary CTE students who were eligible for the National School Lunch Program remained steady. Of note, there is not a significant relationship between the proportion of secondary CTE students who were eligible for the National School Lunch Program and those who were not when it came to CTE course taking.



Chapter 4: Secondary CTE Human Resources

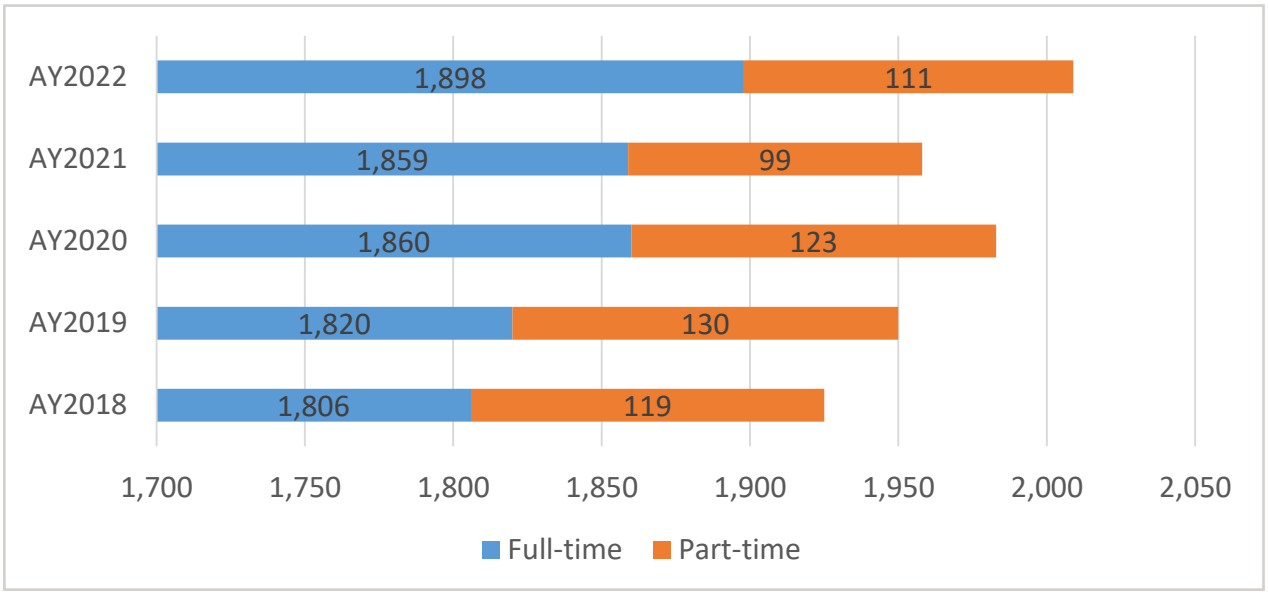
This chapter reports on secondary teachers and community college faculty responsible for teaching secondary CTE students. The first part of this chapter summarizes data available regarding secondary CTE teachers employed by school districts. Information on K–12 staff is collected from Iowa's public school districts through the Licensed Staff Detail report on the Basic Educational Data Survey (BEDS) at the beginning of each school year. For this report, the following information on CTE teachers for grades 9-12 from AY2018 to AY2022 was extracted from BEDS: race/ethnicity, gender, age, years of experience, base salaries and type of employment.

The second part of this chapter reports information on CTE faculty employed by Iowa's community colleges who teach college credit contracted CTE courses for high school students. The Community College Management Information System (MIS) was used to report on this data. Community college faculty who had at least one high school student in their college credit CTE courses in an academic year are identified as college credit contracted CTE teachers in this report. These instructors may be full-time, adjunct or part-time. For differentiating purposes, faculty employed by school districts are referred to as secondary CTE teachers, and faculty employed by community colleges are referred to as college credit contracted CTE faculty in this chapter.

Secondary CTE Teachers

Figure 4.1 displays the number of full-time and part-time CTE teachers employed by school districts since AY2018. The number of CTE teachers has grown by 4.4 percent from 1,925 in AY2018 to 2,009 in AY2022. The number of full-time CTE teachers increased from 1,806 to 1,898. The number of part-time CTE teachers decreased from 119 in AY2018 to 111 in AY2022.

FIGURE 4-1: NUMBER OF SECONDARY CTE TEACHERS BY EMPLOYMENT TYPE: AY2018 - 22



In terms of gender, female teachers have outnumbered male teachers (Figure 4.2). The number of female CTE teachers increased by 1.9 percent (compound annual change) from AY2018 to AY2022, while the number of male CTE teachers increased 0.2 percent (compound annual change). As to race/ ethnicity, the proportion of minority teachers increased slightly, from 1.5 percent in AY2018 to 2.0 percent in AY2022 (Table 4.1). It seems that secondary CTE teachers are younger and with less experience (Table 4.2). The average base salary of CTE teachers (including part-time teachers) has increased by 1.0 percent (compound annual growth) from $54,872 in AY2018 to $57,021 in AY2022.

FIGURE 4-2: NUMBER OF SECONDARY CTE TEACHERS BY GENDER:1 AY2018-2022

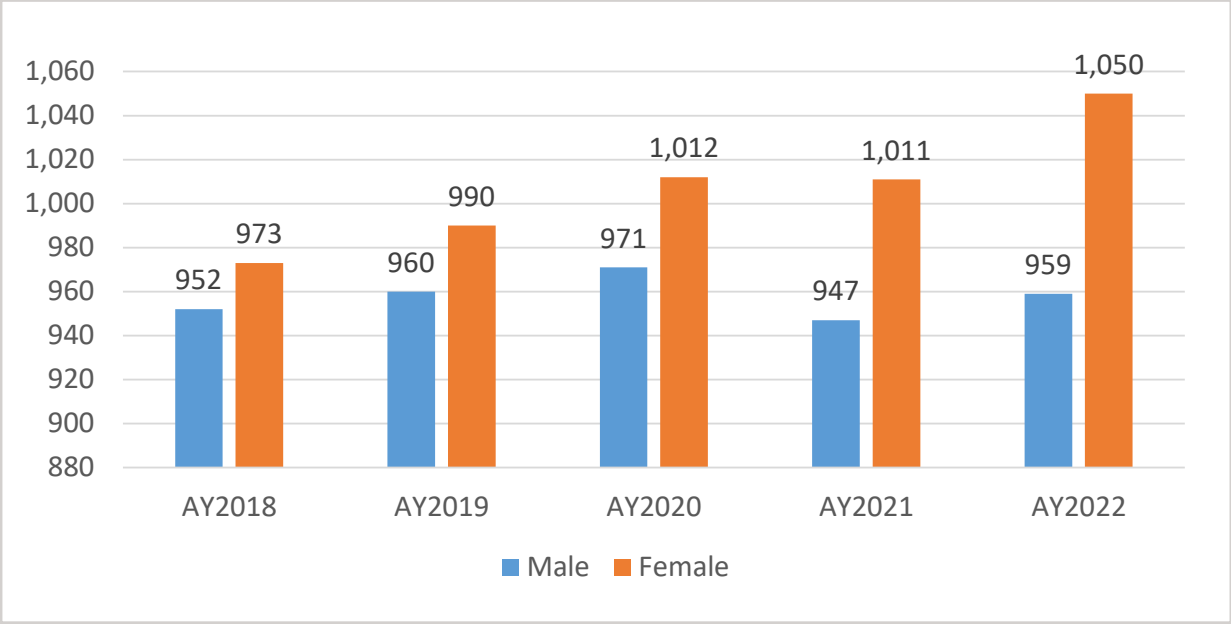


TABLE 4-1: SECONDARY CTE TEACHERS BY RACE/ETHNICITY: AY2018-2022

Race/Ethnicity	AY2018 (%)	AY2019 (%)	AY2020 (%)	AY2021 (%)	AY2022 (%)
Asian	0.2	0.2	0.3	0.3	0.2
Black	0.7	0.7	0.7	0.6	0.5
Hispanic	0.4	0.8	0.9	0.9	0.9
Two or More Races	0.1	0.2	0.2	0.2	0.2
American Indian/Alaskan Native	0.1	0.1	0.1	0.1	0.1
White	98.5	98.1	97.9	97.9	98.0
Total	**100**	**100**	**100**	**100**	**100**

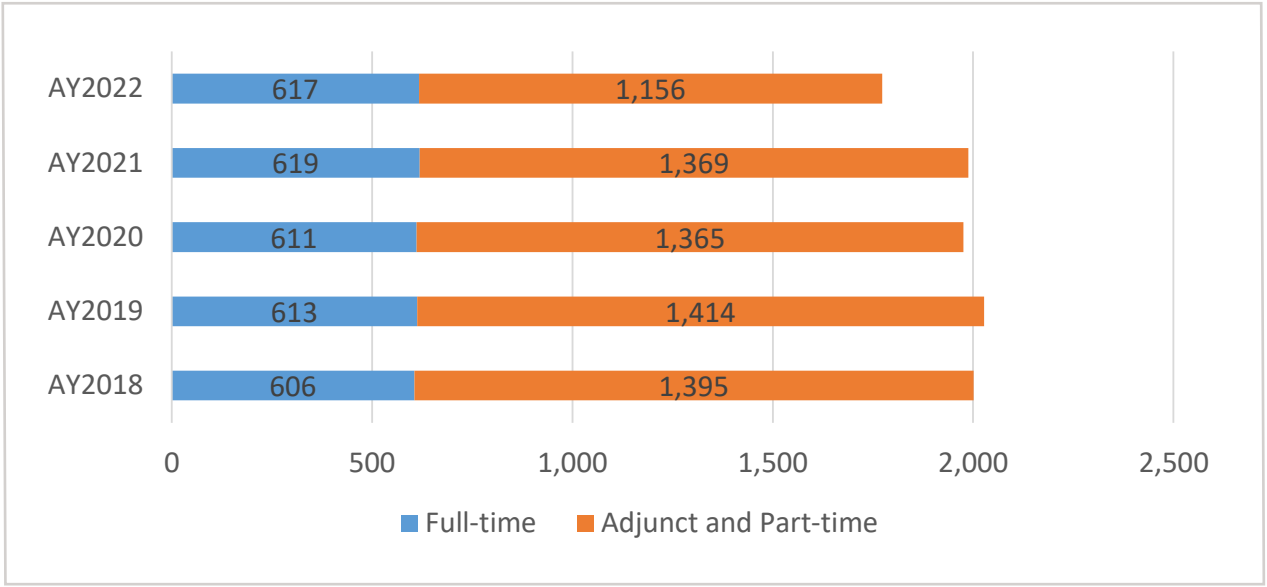
TABLE 4-2: AGE, BASE SALARY, TOTAL EXPERIENCE AND DISTRICT EXPERIENCE OF SECONDARY CTE TEACHERS: AY2018-2022

Year	Age (Years)	Base Salary	Total Experience (Years)	District Experience (Years)
AY2018	43.1	$54,872	14.6	10.5
AY2019	43.0	$55,163	14.2	10.2
AY2020	42.8	$55,925	14.1	10.3
AY2021	42.6	$56,734	13.8	10.0
AY2022	42.2	$57,021	13.3	10.0
		1.0%		**9.5**

Faculty Characteristics

Figure 4.3 displays the number of full-time, adjunct and part-time CTE faculty employed by community colleges and teaching college credit contracted CTE courses since AY2018. The number of community college CTE faculty teaching high school students decreased by less than one percent (annualized) from 2,001 in AY2018 to 1,773 in AY2022. Unlike secondary CTE teachers employed by school districts who were mainly full-time employees, approximately 65.2 percent of community college CTE faculty teaching high school students were adjunct or part-time. Although the proportion of full-time, community college CTE faculty was less than one third, the number of full-time CTE faculty increased by 0.5 percent (annualized) from 606 in AY2018 to 617 in AY2022.

FIGURE 4-3: NUMBER OF COLLEGE CREDIT CONTRACTED CTE FACULTY BY EMPLOYMENT TYPE: AY18-AY22



In terms of gender, female faculty have outnumbered males (Figure 4.4). While 2.8 percent did not report their race/ethnicity, white faculty were the largest group teaching college credit contracted CTE courses (see Table 4.3). There is little variation regarding age, averaging 49 years old, of community college CTE faculty teaching high school students. The average salary of these CTE faculty (including part-time instructors) increased with a compound annual rate of 0.4 percent from $30,340 in AY2018 to $31,869 in AY2022.

FIGURE 4-4: NUMBER OF COLLEGE CREDIT CONTRACTED CTE FACULTY BY GENDER: AY2018-22

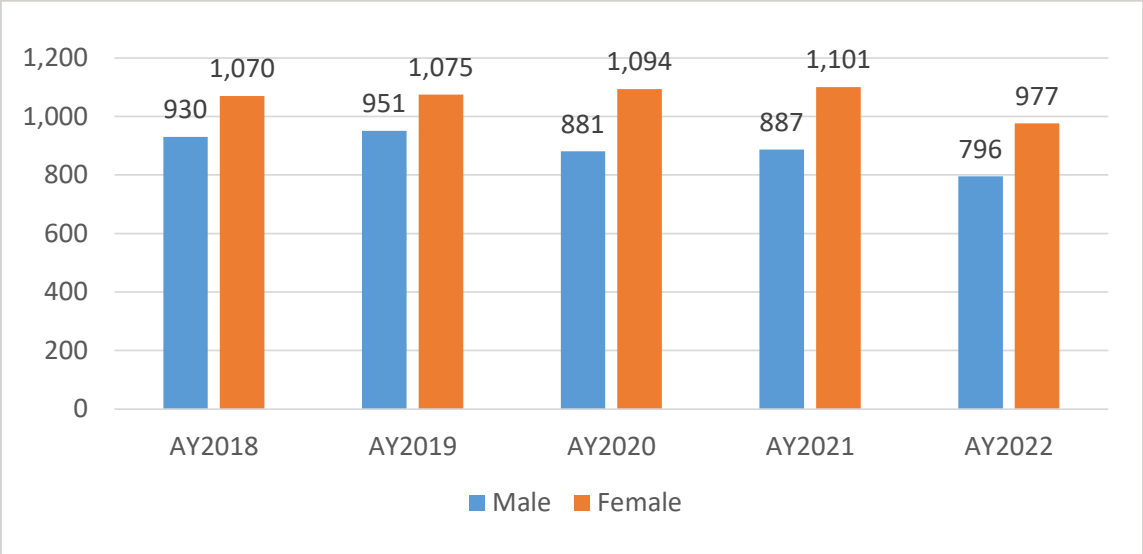


TABLE 4-3: COLLEGE CREDIT CONTRACTED CTE FACULTY BY RACE/ETHNICITY: AY2018-22

Race/Ethnicity	AY2018 (%)	AY2019 (%)	AY2020 (%)	AY2021 (%)	AY2022 (%)
Asian	1.5	1.7	1.8	2.0	1.8
Black	1.7	1.6	2.4	1.9	2.1
Hispanic	1.4	1.6	2.0	1.7	1.7
Two or More Races	0.8	0.7	0.8	1.0	1.0
American Indian/Alaskan Native	0.2	0.3	0.3	0.4	0.4
White	94.0	94.1	92.8	93.0	92.9
Total	**100**	**100**	**100**	**100**	**100**

Chapter Highlights

- Secondary CTE teacher characteristics have not changed significantly. The average CTE teacher is white and close to 43 years old.
- Secondary CTE teachers have experienced moderate salary increases.
- Community college CTE faculty teaching high school students are female, white, working as part-time or adjunct faculty and are close to 50 years old.

Chapter 5: Career and Technical Student Organizations

A career and technical student organization (CTSO) is an integral element of CTE programs designed to enrich, expand and elevate leadership development of secondary and postsecondary students through contextual instruction, applied learning and real-world application. CTSOs provide opportunities to assess and improve professional skills including leadership, goal-setting, problem-solving, decision-making and communication through participation in programming and events.

CTSOs are not "clubs", but rather an integral component of the CTE classroom curriculum and instruction. CTSOs are referred to as co- or intra-curricular activities, in which students apply their course instruction to hands-on demonstrations and competitions, as well as real-life and work experiences related to individual career interests.

The national CTSO website (CTSOs.org) states the following:

"CTSO's help guide students in developing a career path, a program of study and provide opportunities in gaining the skills and abilities needed to be successful in those careers through CTSO activities, programs and competitive events. In addition, students have opportunities to hold leadership positions at the local, state and national level and attend leadership development conferences to network with other students as well as business and industry partners."

CTSOs in Iowa

Table 5-1 describes the participant outcomes, CTE program focus and academic year 2021-22 membership for the secondary CTSOs supported by the Iowa Department of Education by providing limited financial support through Perkins V funding. The Department holds the state charter for each CTSO established within the state and provides technical assistance to CTSOs as needed. Active secondary CTSOs in Iowa include:

- Business Professionals of America (BPA)
- DECA

TABLE 5-1: MEMBERSHIP FOR EACH CTSO AT THE SECONDARY LEVEL IN AY2022

Student Organization	Participant Outcomes	CTE Programs	AY2022 Membership
IOWA BUSINESS PROFESSIONALS of AMERICA	Business Professionals of America (BPA) contributes to the preparation of global professionals through the advancement of leadership, citizenship, academic and technological skills.	Business, Finance, Marketing and Management/ Information Solutions/ Information Technology	457
IOWA DEPARTMENT OF EDUCATION DECA	The mission of DECA is to enhance the co-curricular education of students who have an interest in marketing, management and entrepreneurship.	Business, Finance, Marketing and Management/ Information Solutions/ Information Technology	485
FBLA·ΦBA	FBLA inspires and prepares students to become community-minded business leaders in a global society through relevant career preparation and leadership experiences.	Business, Finance, Marketing and Management	1330
Family, Career and Community FCCLA Leaders of America	The mission of FCCLA is to promote personal growth and leadership development through Family and Consumer Sciences education. Focusing on the multiple roles of family member, wage earner and community leader, members develop skills for life through character development, creative and critical thinking, interpersonal communication, practical knowledge and career preparation.	Family and Consumer Sciences/Human Services	1952
FFA	The National FFA Organization is dedicated to making a positive difference in the lives of students by developing their potential for premier leadership, personal growth and career success through agricultural education.	Agricultural, Food and Natural Resources	18595
hosa future health professions IOWA	The purpose of the HOSA organization is to develop leadership and technical HOSA skill competencies through a program of motivation, awareness and recognition, which is an integral part of the Health Science Education instructional program.	Health Science	630
SkillsUSA	SkillsUSA empowers its members to become world-class workers, leaders and responsible American citizens. It improves the quality of our nation's future skilled workforce through personal, workplace and technical skills grounded in academics.	Applied Science, Technology, Engineering and Manufacturing	354
TSA TECHNOLOGY STUDENT ASSOCIATION	The Technology Student Association (TSA) fosters personal growth, leadership and opportunities in technology, innovation, design and engineering. Members apply and integrate science, technology, engineering and mathematics (STEM) concepts through co-curricular activities, competitive events and related programs.	Applied Science, Technology, Engineering and Manufacturing/ Information Solutions/ Information Technology	5393

- Family, Career, and Community Leaders of America (FCCLA)
- Future Business Leaders of America (FBLA)
- National FFA Organization
- HOSA – Future Health Professionals
- SkillsUSA
- Technology Students Association (TSA)

Students participating in CTSOs are provided opportunities to develop and enhance their leadership and citizenship skills within the context of career and program interests while enhancing their occupational skills and future employability. These organizations provide students opportunities in a caring, encouraging educational environment to explore their leadership potential and enhance their understanding of community and civic responsibility.

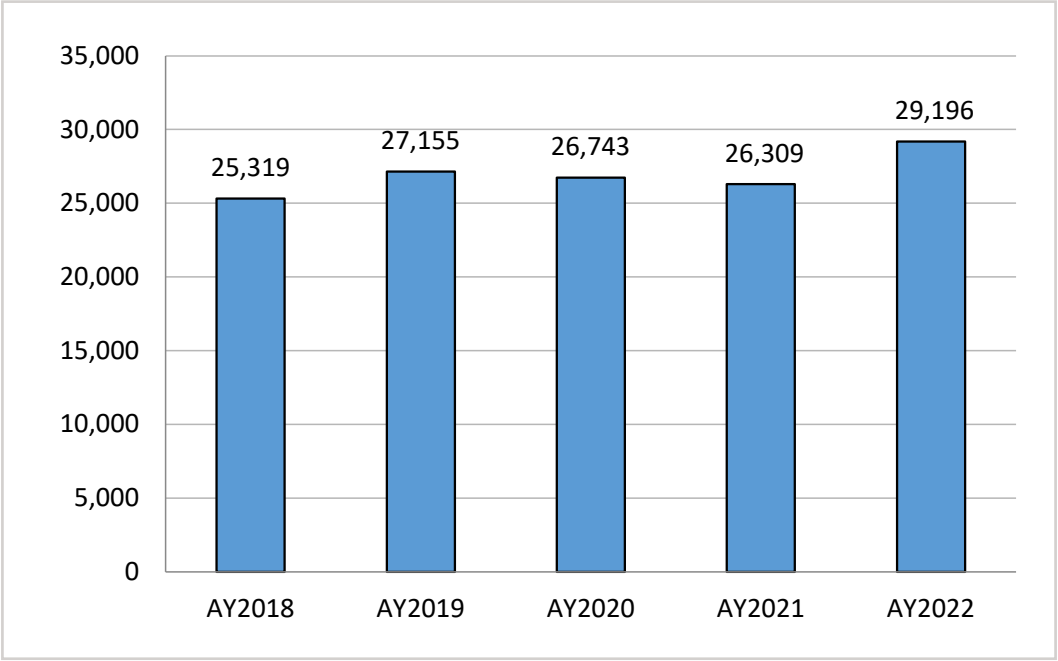
As Table 5-1 describes in the participant outcomes column, activities are designed to provide opportunities for student achievement in sound decision-making, positive professional appearances and skill attainment. These experiences are enhanced through the involvement of business, industry and labor in a climate of positive interaction and cooperation. For many CTE students, this is the only leadership opportunity they will experience during their educational careers. Communities, states and the nation benefit, as well as the individual and their families.

CTSO Membership in Iowa

CTSOs in Iowa currently serve 29,196 students at the secondary levels. Figure 5-1 displays the total number of CTSO memberships for the last five academic years. The total number of CTSO memberships increased dramatically by 2,887 (11 percent) during the AY2021 to AY2022 period.

AY2022 saw the return of in-person programming for all CTSOs, which drove an increase in overall membership and participation.

FIGURE 5-1: SECONDARY CTSO MEMBERSHIP IN IOWA: AY2018 - AY2022



AY2022 was also a focus year of onboarding educators into their CTSO to meet the requirement in the Perkins V State Plan for Iowa. Iowa set a growth target of 121 new chapters for AY2022 and exceeded that with 298 new chapters, marking 148.26 percent over target. These new chapters led to an increase in overall membership.

From AY2018 to AY2022 (See Figure 5-2), FFA had the largest increase in membership with a total of 3,133 additional student members, equal to 20.3 percent membership growth over five years. During the same period, HOSA saw growth of 390 students (162.5 percent) and SkillsUSA 106 students (42.7 percent). DECA saw the largest decrease over the five year period, dropping 34.9 percent (260 members).

FIGURE 5-2: SECONDARY CTSO MEMBERSHIP IN IOWA: AY2018 - AY2022

	BPA	DECA	FBLA	FCCLA	FFA	HOSA	SkillsUSA	TSA
AY2018	528	745	1,337	1,579	15,462	240	248	5,180
AY2019	546	606	1,349	2,825	15,512	228	213	5,876
AY2020	630	504	1,330	1,987	16,607	343	421	5,451
AY2021	454	379	872	1,511	16,597	221	168	6,107
AY2022	457	485	1,330	1,952	18,595	630	354	5,393
	(71)	(260)	(7)	373	3,133	390	106	213
	-13.4%	-34.9%	-0.5%	23.6%	20.3%	162.5%	42.7%	4.1%

Chapter Highlights

Over a five-year time period:

- Secondary CTSO membership experienced a dramatic increase in members in AY2022, representing a peak year of CTSO membership for Iowa.
- Of the three CTSOs that service business education, FBLA saw a return to pre-pandemic numbers with DECA nearing a similar return, but BPA only maintained numbers from AY2021.
- FFA saw the largest increase in membership with 3,133 additional student members participating in programming and experiences.
- HOSA saw the largest percentage growth, with involvement increasing 162.5 percent from AY2021.

Chapter 6: Career and Academic Planning

The Individual Career and Academic Plan (ICAP), as outlined in HF2392, is a series of high quality, career-related activities that provide a platform for students to engage in the development of self-reflection, career research and exploration of postsecondary opportunities. Activities include a four-year core curriculum plan, parent engagement, face-to-face meetings between students and counselors, identification of career and postsecondary goals, alignment of coursework to career considerations and an annual completion of the five essential components.

Through connection to the ICAP each year in grades 8-12, each Iowa student is encouraged to design, reflect and consider the steps needed to achieve their postsecondary goals. The holistic nature of the ICAP process ensures continuous feedback between internal and external stakeholders and provides a framework to develop students who exhibit highly marketable employability skills and are prepared to successfully transition into higher education, training programs or directly into the workforce. Iowa's career planning vision focuses on graduating students who are career and college ready with the academic, technical and employability skills to meet employer needs. With greater intention since the initial ICAP implementation in 2016, this process continues to grow and develop to support all of Iowa's public school district students.

The outlined ICAP requirements ensure that each student achieves the following:

- Prepare the student for successful completion of the core curriculum developed by the state board of education by the time the student graduates from high school.
- Identify the coursework and work-based learning needed in grades nine through 12 to support the student's postsecondary education and career options.
- Prepare the student to successfully complete, prior to graduation and following a timeline included in the plan, the five essential components.
- Prior to graduation, advise the student how to successfully complete the Free Application for Federal Student Aid (FAFSA).

The District Career and Academic Plan (DCAP) And District Team

Each school district in Iowa is required to have an established district team that develops, reviews and revises the DCAP each year. The members of the team are outlined in Iowa code and include, but are not limited to, a school administrator, a school counselor, teachers, including career and technical education teachers, special education educators and individuals responsible for coordinating work-based learning activities.

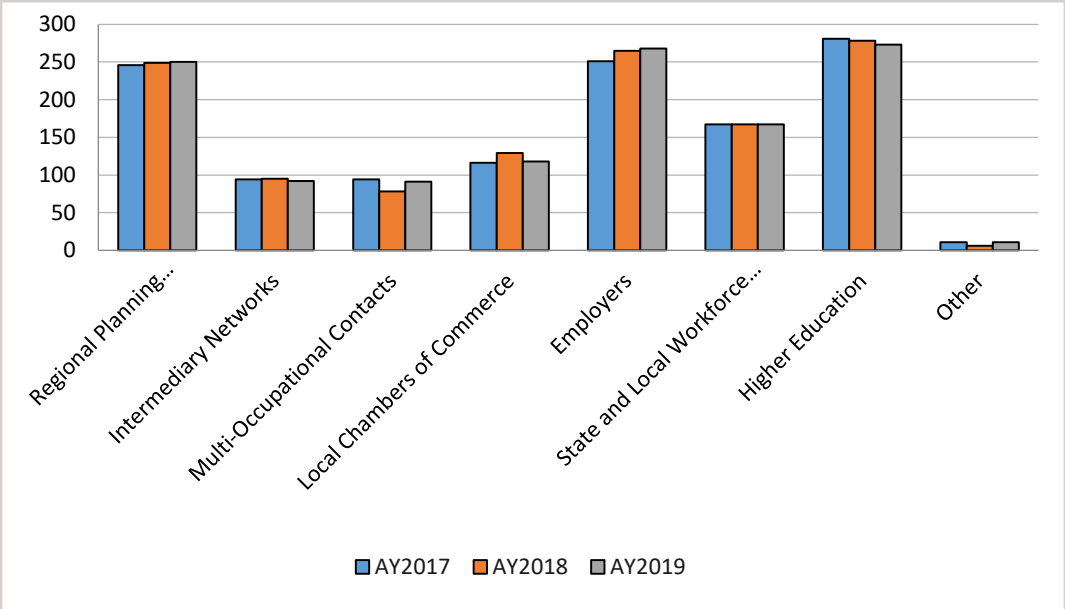
The DCAP is a roadmap for implementation of the individual career and academic planning process and provides a living context for how each district supports their student's ICAP. A student's ICAP process happens within the framework established by the district plan. The district plan is submitted each year by the district to the Regional Planning Partnership (RPP) in their service area for review and evaluation. Through the evaluation of the

DCAPs, the RPPs can help identify needs for additional professional development and training. At a minimum, the district plan shall include the following components:

- The activities to be undertaken in each grade level (8-12) to achieve the ICAP requirements
- Integration of the district plan with the district's comprehensive school improvement plan and school counseling program plan;
- Designates a team of educational practitioners to establish, implement, review, coordinate activities and regularly consults with representatives of employers, state and local workforce agencies, higher education institutions and postsecondary training programs to ensure activities are relevant and aligned with the labor and workforce needs of the region and state. (See figure 6-1)

In addition to the creation, revision and completion of the district plan, the DCAP team will also identify and utilize a state approved career information system (CIS) that best meets the needs of their students. During the 2022-23 school year, districts had 16 CIS options that met state established

FIGURE 6-1: EXTERNAL STAKEHOLDER ENGAGEMENT: AY2018- AY2022



standards. While the CIS is an essential component of the career planning process and has the capability of delivering all components, school districts are encouraged to continue using high-quality CTE curriculum, additional resources and to collaborate with external organizations that offer high-quality career planning and exposure opportunities.

While the CIS is an essential component of the career planning process and has the capability of delivering ICAP components including data collection for goal setting and reporting, school districts are encouraged to continue using high-quality CTE curriculum, additional resources and to collaborate with external organizations that offer high-quality career planning and exposure opportunities.

Continued Progress

As school districts continue to implement Division I of HF 2392, it is crucial to create partnerships that allow students to have a holistic and authentic career learning experience. Districts are encouraged to work to build and maintain strong relationships with external partners to increase high-quality career planning exposure to students to a variety of career interests and options.

In AY2022, three hundred and twelve (N-301) school districts* reported career planning outcomes. Stakeholder engagement continues to be a priority for school districts across the state and all are working with a variety of entities to increase relationships with business and industry.

**Iowa has 327 school districts; 23 of which whole grade share(A procedure used by school districts whereby all or a substantial portion of the pupils in any grade in two or more school districts share an educational program for all or a substantial portion of a school day under a written agreement pursuant to Iowa Code 256.13.) with other districts who reported career planning outcomes for 2022.*

Additions to ICAP 2022-23

At the close of the 2022 Legislative session, steps were taken to add two additional components to the State of Iowa's ICAP requirements. The enhancement to Iowa Code mandates school districts to include work-based learning and advisement to students on how to successfully complete the Free Application for Federal Student Aid (FAFSA) into their district plan to ensure that each students in grades 8-12 continues to develop and grow in their ICAP process.

As part of the district review process for DCAP, districts will need to consider how work-based learning and FAFSA advisement will be incorporated to best serve students' ICAP as well as how these additions will be tracked for CASA reporting for fall 2023.

Work-based learning's inclusion into the ICAP requirements is a welcome enhancement to the ICAP process and will continue to move Iowa forward as we work to support students in the postsecondary planning process. Work-based learning includes a continuum of structured activities utilizing the partnership between industry and education to engage student learning and is highly connected to the ICAPs process with hands-on application of each student's learning that surrounds the ICAP essential elements.

With the inclusion of FAFSA advisement into the ICAP requirements, Iowa joins several other states to promote FAFSA completion in an effort to support the many puzzle pieces of matching college intent with enrollment in pursuit of additional training and educational opportunities beyond high school.

Unique Career Exposure Opportunities

The College and Career Transition Counselor program started in Iowa in 2017 as a partnership

among Eastern Iowa Community College, Louisa Muscatine and Columbus Community Schools, with Mississippi Bend AEA providing support through its Future Ready division. For the 2022-23 school year, over 30 College and Career Transition Counselors (CCTCs)s are housed in 10 of Iowa's community colleges and support students in nearly 60 Iowa high schools.

CCTCs work directly through the community college and secondary schools to support college transition and career exploration through targeted connections with students and families during crucial time frames, including preparation, transition to enrollment and persistence through their postsecondary experience. The CCTCs work closely with students in grades 11 and 12 in partner high schools, throughout the summer after high school graduation and as part of the first-year support system for students coming out of this program at the coordinating community college. The positions are hosted at the community college and partner with at least one school district.

CCTCs work as a liaison between the community college and secondary schools to ensure students are supported in their career exploration and receive proper assistance in transitioning into additional training which can include apprenticeships, military opportunities, two-year colleges, four-year colleges and the world of work. CCTCs provide additional targeted support to school counseling programs in the college and career domain and work with a variety of stakeholders.

High-Quality Career Programming in 2022 and Beyond

Beginning in the spring of 2022, the Bureau of Career and Technical Education, Career and Academic Planning began sponsoring in-depth professional development opportunities for counselors and other stakeholders across the state. The Meaningful Career Conversation training was offered in both a virtual and in-person format at nine locations with over 200 educators trained. As follow-up, over 20 Iowa educators including K-12, Area Education Agencies (AEA) and higher education staff were trained to facilitate the Meaningful Career Conversation training. This facilitator training will continue to allow Iowa to provide this training to additional educators and any adult interested in learning how to conduct a meaningful career conversation with a student.

Beginning in the fall of 2022, the Bureau of Career and Technical Education, Career and Academic Planning continued to support school district work surrounding the ICAP. With the requirement that districts submit their DCAP, district teams were invited to participate in DCAP training workshops in several locations across the state. The workshops were offered in collaboration with the AEAs and Regional Planning Partnerships. The continued and sustained professional development provides the opportunity for districts to review, update and collaborate to improve their ICAP work for all students. Districts are able to take deeper dives into clarifying the roles and responsibilities of district team members, provide examples of quality district plans and outline strategies that increase engagement at all levels from counselors, instructors, CTE instructors and work-based learning coordinators to students, parents and external stakeholders.

Chapter Highlights

Career and academic planning:

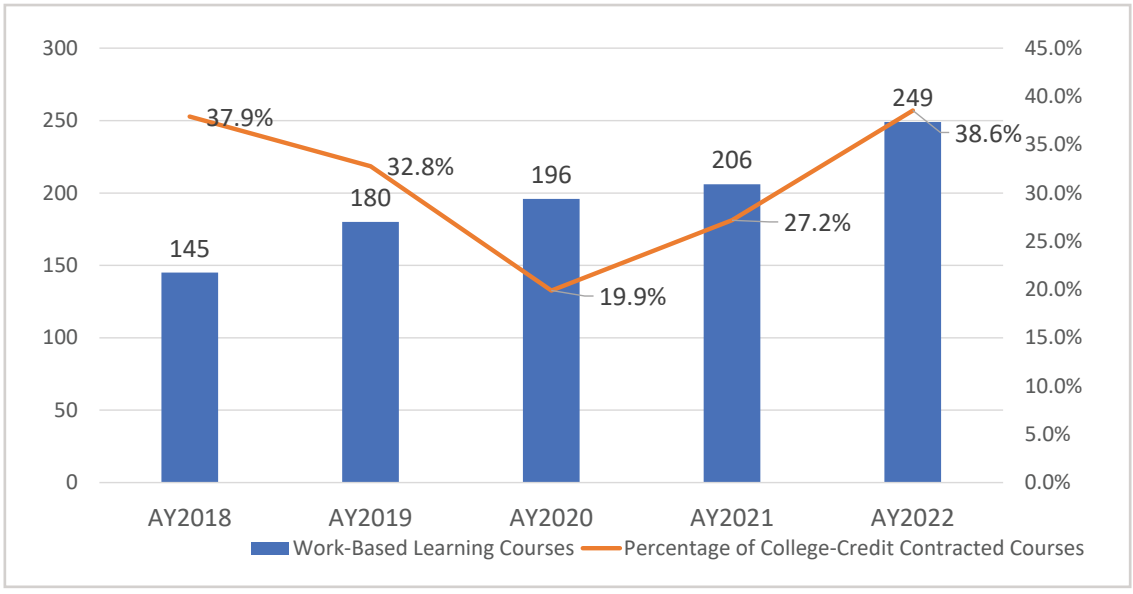
- In 2022, Iowa's school districts helped 141,930 students in grades 8-12 identify postsecondary and career goals.
- In the AY2022, three hundred and twelve (N-301) school districts reported career planning outcomes.
- FAFSA and work-based learning were both added to ICAP.
- School districts continue to create partnerships with stakeholders outside of the school system creating opportunities for students to have a holistic and authentic career learning experience.
- AY2022 over 200 Iowa educators were trained in Meaningful Career Conversations.

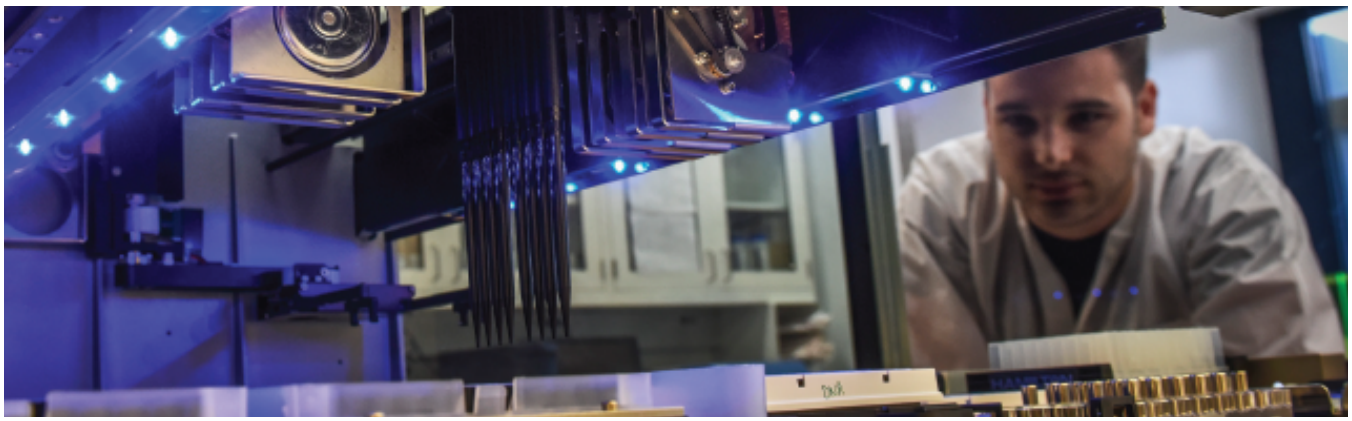
Chapter 7: Work-Based Learning

Work-based learning continues to grow as an educational strategy to enhance student learning and engagement. Work-based learning courses are offered as an opportunity for students to fully immerse in the professional setting to develop valuable skills and experiences aligning with the student's career goals. Work-based learning courses provide a capstone experience for students to engage in experiences providing an extension to their academic learning. These capstone experiences incorporate a series of goals agreed upon collaboratively between the student, industry partner and educator. Educators provide valuable training and support during the experience in partnership with industry partners to ensure students gain a valuable professional experience.

In AY2022, additional growth in work-based learning courses occurred as more districts offered work-based learning courses for students. In fact, there was a 38 percent increase in work-based learning courses with a total of 249 work-based learning courses in AY2022 (see figure 7-1). Student participation grew in AY2022 to 1,115 students completing high school work-based learning courses and 3,190 students completing community college work-based learning courses.

FIGURE 7.1: NUMBER OF WORK-BASED LEARNING COURSES AND PROPORTION OF COLLEGE-CREDIT CONTRACTED WORK-BASED LEARNING COURSES: AY2018-22





As districts continue to review programming, increase work-based learning course offerings and properly code work-based learning courses, future data will allow for disaggregation of the types of work-based learning courses offered to students. It should be noted that CTE courses may have an embedded work-based learning component, but these are not accounted for in the data presented below. In that sense, the data below should be considered the baseline of work-based learning activity within Iowa school districts.

Additional details on student participation in work-based learning courses are delineated by gender in Figure 7.2 and by race/ethnicity/minority in Figure 7.3.

FIGURE 7.2: WORK-BASED LEARNING STUDENTS BY GENDER: AY2018-22

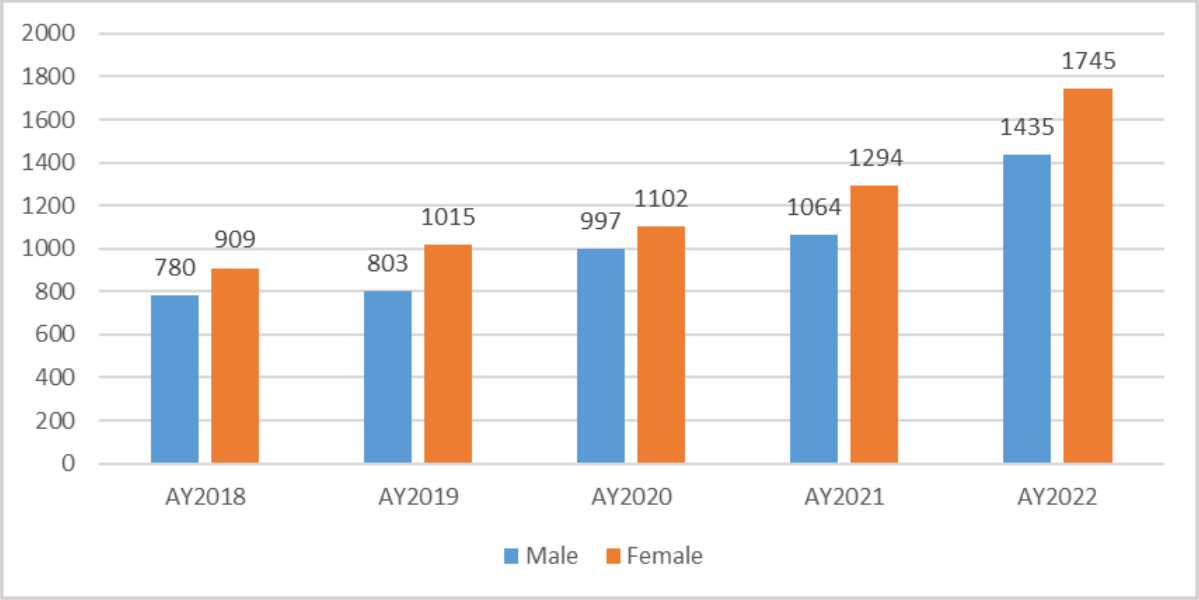
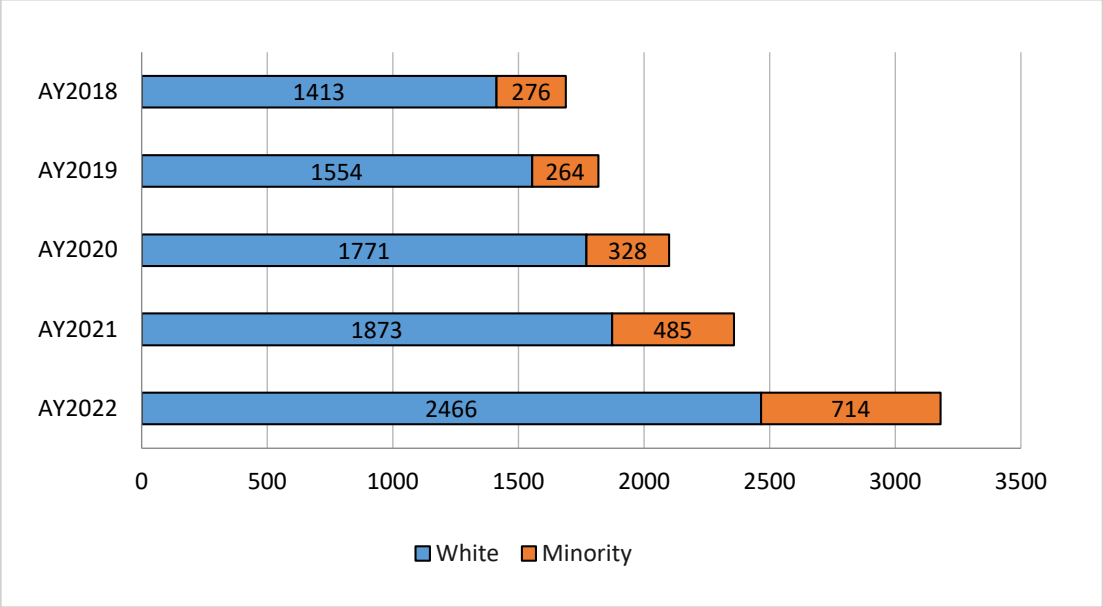


FIGURE 7.3: WORK-BASED LEARNING STUDENTS, WHITE VS. MINORITY: AY2018-22



Chapter 8: Regional Centers

Recommendation of the Secondary Career and Technical Education Task Force (HF2392):

"Through collaboration and regional partnerships, provide for increased and equitable access to high-quality CTE through a statewide system of regional centers."

With the implementation of CTE Redesign legislation (HF2392) beginning to take a foothold across Iowa, the state's 15 Regional Planning Partnerships (RPPs), through their strategic planning, have been tasked with coordinating the development of regional center facilities within each of their regions.

A regional center is a facility or "place" for the delivery of high-quality career and technical education (CTE) programming. The purpose of a regional center is to provide for increased and equitable access to a variety of high-quality CTE program opportunities for all high school students across the state of Iowa, regardless of which school district they reside. Maximizing the impact of collaboration by participating stakeholders and regional planning, regional centers have the ability to deliver high-quality advanced CTE coursework by internalizing the high capital costs to cohesively offer structured programming with access to state-of-the art equipment not otherwise available through individual school districts.

Regional centers must be a product of regional collaboration and partnerships. Secondary, postsecondary, community and business partners must collectively agree to arrangements which take into consideration the unique circumstances of their institutions and communities.

Regional centers must include at least four career academy programs and meet one of two participation requirements: 1) two school districts with a combined total of 120 participating students, or 2) a total of four school districts with no minimum enrollment expectation. In essence, a regional center becomes

a physical location where high school students may access numerous high-quality CTE programs.

In Iowa, the regional center structure has its basis in the many partnerships that currently exist between school districts and community colleges when delivering high-quality CTE programs. These partnerships typically use the college credit contracted course policy structure to put in place one or both of the above regional center conditions that are now in place as a result of CTE Redesign efforts. It should be noted that not all such partnerships lead to the establishment of a regional center, but many have already done so.

To gauge the current state of how regional centers are distributed across Iowa, in early 2023, a survey was administered by the Department to the 15 community colleges which gathered data regarding current regional center structure, the CTE programs offered and student enrollment. In fiscal year (FY) 2022, there were 24 regional centers providing 238 career academy programs to 6,682 high school students from 158 school districts (unduplicated) and 14 accredited nonpublic schools. Among the 24 regional centers, 11 are located on community college campuses.

Figure 8-1 shows the distribution of career academy programs by service area. Applied Science, Technology, Engineering and Manufacturing was the most significant service area with 90 career academy programs being offered, followed by Health Sciences with 40 programs, Information Solutions with 35 programs, Human Services/ Family and Consumer Sciences with 33 programs and Business, Finance, Marketing and Management with 32 programs. Agriculture, Food and Natural Resources was the smallest service area with only eight career academy programs being offered. Figure 8-2 displays a map of Iowa's current regional centers coded by RPP, with each mirroring the 15 community college regions. Table 8-1 provides more details on each of the regional centers.

FIGURE 8-1: DISTRIBUTION OF CAREER ACADEMY PROGRAMS BY SERVICE AREA IN FY22

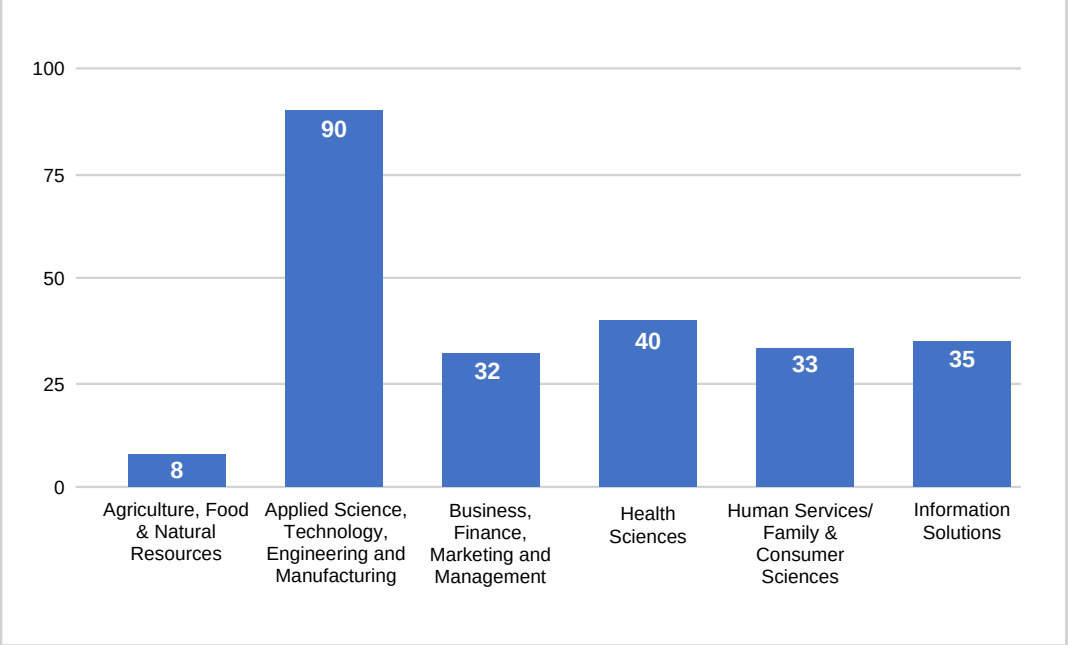
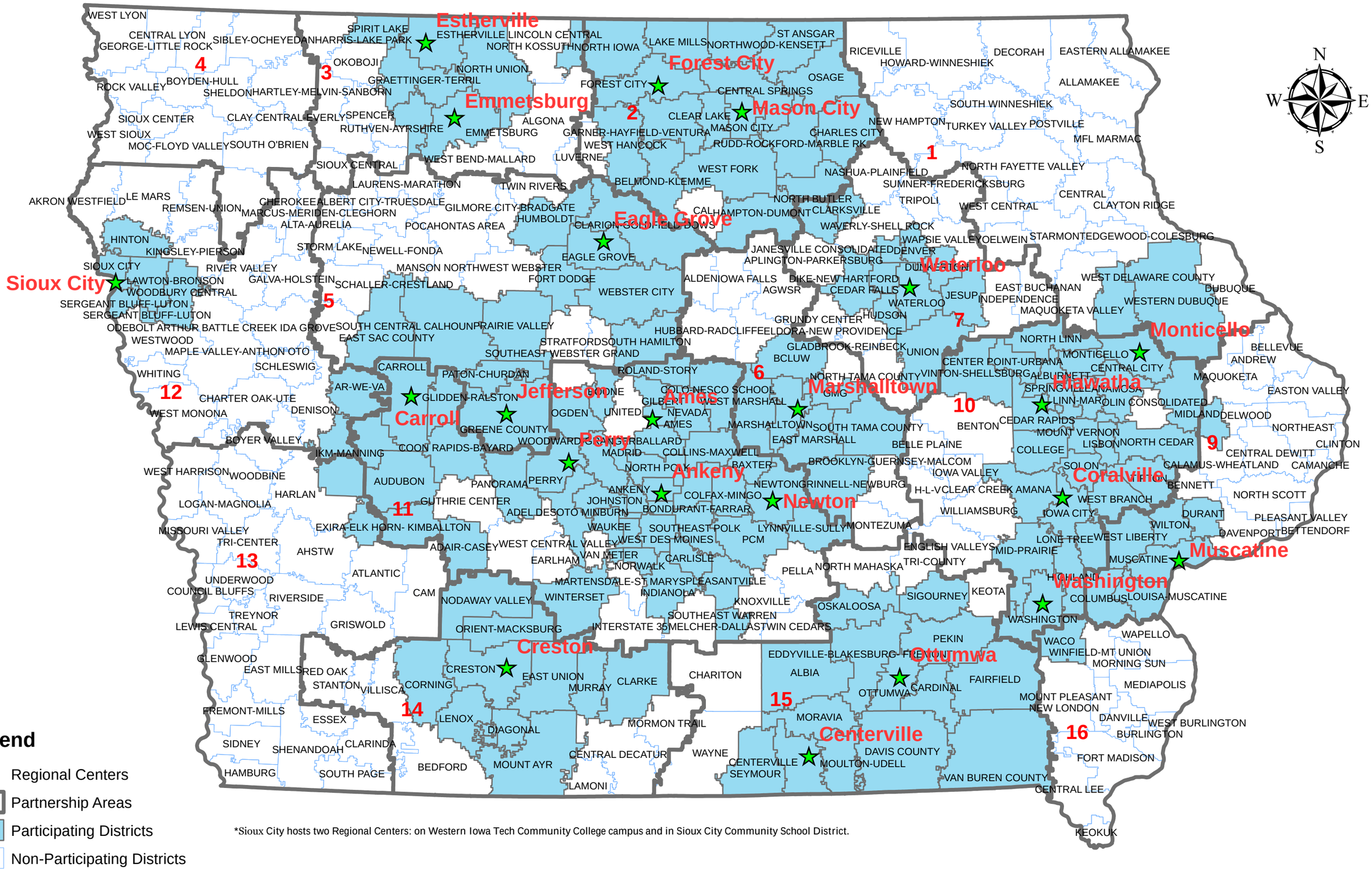


FIGURE 8-2: LOCATIONS OF REGIONAL CENTERS*



*Sioux City hosts two Regional Centers: on Western Iowa Tech Community College campus and in Sioux City Community School District.

TABLE 8-1: DISTRIBUTION OF CAREER ACADEMY PROGRAMS BY SERVICE AREA IN FY2022

RPP Region	Location	Number of K-12 Partners	Career Academy Programs Offered	Student Enrollment
1	NIACC - Forest City	4	Advanced Manufacturing, Construction, Information Technology, Health	30
1	NIACC - Mason City*	16	Automotive Technology, Diesel Technology, Heating and Air Conditioning Technology, Building Trades, Industrial Systems Technology, Industrial Mechanics and Maintenance, Welding	59
3	ILCC-Emmetsburg*	5	Ag Production, Auto Tech, Boats and Watercraft Tech, Construction Tech, Farm Equipment, Hotel & Restaurant Management, Powersports & Power Equipment Tech, Welding	15
3	ILCC-Estherville*	6	Aviation, Computer Programming, Criminal Justice, Electrical, Engineering Tech, Graphic Design, Human Services & Disability, HVAC	24
5	ICCC-Eagle Grove - North Central	5	Business, Computer Science, Engineering Technology, Health Sciences, Liberal Arts, Manufacturing Technology, Teacher Academy	47
5	ICCC-Jefferson - Greene County	8	Advanced Manufacturing - Welding, Agricultural Information Technology, Computer Science/Programming, Construction - Building Trades, Culinary and Hospitality, Health Care	22
6	IVCCD - Marshalltown*	7	Construction, Electro-Mechanical Systems Tech, Machine Tool Tech, Broadcast Technology, Computer Networking, Early Childhood, Paraeducator, Welding, Health Occupations	134
7	Waterloo Career Center	9	Early Childhood Education, Culinary, Hospitality and Tourism, Pre-Nursing, Advanced Manufacturing, Plumbing, Electrical, Construction, Marketing, Finance and Entrepreneurship, Cybersecurity, IT Web & Mobile, Digital Graphics, Digital Audio & Visual, Medical Lab Technician, EMT	1,390
8	EICC - Muscatine*	6	Welding, Advanced Manufacturing, Culinary, Healthcare 1, Healthcare 2, Networking for Systems & Security, K-12 Teacher Preparation, Business	95
10	KCC-Monticello	9	Advanced Manufacturing with Welding and Robotics, Architecture, Construction & Engineering (ACE), Automotive Technology, Computer Programming & Software Development (Coding), Dental, EMT, Engineering PLTW/CAD, Graphics Communication Tech, Liberal Arts, Patient Care	330
10	KCC-Hiawatha	9	Advanced Manufacturing with Welding and Robotics, Agriculture Science, Architecture, Construction & Engineering (ACE), Automotive Technology, Business Administration, Computer Programming & Software Development (Coding), Criminal Justice, Dental, Education, EMT, Graphics Communication Tech, Liberal Arts, Patient Care, Pre-Nursing, Pre-Professional, Social Work	289
10	KCC-Washington	5	Advanced Manufacturing with Welding and Robotics, Agriculture Science, Architecture, Construction & Engineering (ACE), Computer Network and Cybersecurity, Criminal Justice, Education, EMT, Liberal Arts, Patient Care, Welding	165
10	KCC-Coralville	7	Advanced Manufacturing with Welding and Robotics, Agriculture Science, Architecture, Construction & Engineering (ACE), Automotive Collision, Repair & Restoration, Automotive Technology, Computer Programming & Software Development (Coding), Dental, EMT, Graphics Communication Tech, Liberal Arts, Patient Care, Pre-Professional	467

**Indicates community college main campus*

*** Table continues on next page.*

RPP Region	Location	Number of K-12 Partners	Career Academy Programs Offered	Student Enrollment
11	DMACC - Ankeny*	13	Accounting, Auto Tech, Auto Collision, Business, Computer Programming, CAD Tech, Crim Justice, Culinary Arts, Fashion and Design, Diesel Tech, EMT, Health Occupations, Tool and Die, Visual Communication	245
11	DMACC-Newton	5	Building Trades, Business Administration, Baking, C.N.A., Health Occupations, Teacher Academy, Welding	141
11	DMACC-Carroll	23	Computer Programming, Auto Technology, Welding, Applied Engineering, Work-based Learning, Health Occ, Industrial Maintenance	196
11	DMACC-Perry	8	Auto Technology, Business, Computer Programming, Criminal Justice, Education, EMT, Health Occupations, Human Services, Education, Welding	83
11	DMACC-Southridge*	10	Auto Collision, Auto Technology, Business and Marketing, Criminal Justice, Health Occupations, Human Services, Teacher Academy, and Welding	175
11	DMACC-Ames	13	Auto Collision Repair, Automotive Technology, Building Trades, Business Academy, Criminal Justice, Culinary Arts, Health Occupations, Teacher Academy and Welding	174
12	Sioux City Career Academy	3	Accounting, Agriculture, Autobody Repair, Auto Technology, Biomedical Science, Certified Nurse Assistant, Computer Science, Construction, Culinary, Education, Engineering, Entrepreneurship, Fashion Design, Finance, Fire Science, Graphic Design, Interior Design, Marketing, Mobile Game/App Development, Pharmacy Tech, Police Science, Plumbing, Surgical Tech, Welding	2,125
12	WITCC - Sioux City*	5	Administrative Office Support - Business, Business, Mass Communication, Mobile Game and App Development, Admin. Office Support - Medical, Nursing, Pharmacy Technician, Cyber Security/ Digital Crime, Electromechanical Technician, Industrial Drafting, Manufacturing, Auto Technology, HVAC, Plumbing, Welding	164
14	SWCC-Creston*	11	Automotive Repair Technology, Carpentry & Building Trades, Collision Repair/Refinish, Electrical Technology, Information Technology Systems Networking, and Nurse Assisting	160
15	IHCC-Centerville*	5	Health Science Academy, Agriculture Academy, Construction Technology, Industrial Maintenance Academy	64
15	IHCC-Ottumwa*	10	Accounting Assistant/Business Specialist, Automotive Technology, Business Specialist/Office Management, Computer Software Development, Cybersecurity and Systems Administration, Diesel Technology, Electronics Core, Entrepreneurship, Industrial Maintenance, Interactive Media, Machine Technology, Welding, Phlebotomy Technician and Clinical Lab Assistant	88

**Indicates community college main campus*

In an effort to support the state's priority of establishing a statewide network of regional centers, the Career Academy Incentive Fund was established in 2019 through the reauthorization of the Secure an Advanced Vision for Education (SAVE) that extends a statewide penny sales tax for school infrastructure through January 2051. The fund provides targeted grants to support partnerships between school districts and community colleges that expand and increase equitable access to career academy programs, with a focus on programming efficiently delivered through regional centers. At least $1 million will be awarded annually, with potential growth up to $5 million annually to support career academy partnerships among community colleges, school districts and business and industry to increase student access to college programs, state-of-the-art equipment and career paths in Iowa's in-demand fields. As of FY2022, the Department has awarded 10 grants totaling $9.5 million. (see table 8-2)

The information presented in this chapter yielded the following findings: 1) Regional centers are clustered around the major metropolitan areas in Iowa, which typically have the larger school districts and the higher high school populations to make the regional center viable; 2) Regional centers are also established where school district sizes are small and located in the rural areas of Iowa; 3) There are many regions of Iowa where regional centers have not yet been established.

TABLE 8-2: CAREER ACADEMY INCENTIVE FUND GRANT RECIPIENTS AS OF FY2022

Grant Recipients	FY Awarded	Location	Awarded
North Iowa Area Community College (John V. Hanson Career Center)	2020	Forest City, Iowa	$1,000,000
Eastern Iowa Community College	2021	DeWitt, Iowa	$1,000,000
Waterloo Community School District (Waterloo Career Center)	2021	Waterloo, Iowa	$1,000,000
Indian Hills Community College	2021	Centerville, Iowa	$1,000,000
Des Moines Area Community College	2022	Templeton, Iowa	$1,000,000
Iowa Western Community College	2022	Missouri Valley, Iowa	$1,000,000
North Iowa Area Community College	2022	Charles City, Iowa	$1,000,000
Iowa Lakes Community College	2022	Spirit Lake, Iowa	$1,000,000
Indian Hills Community College (Phase 2 Expansion)	2022	Centerville, Iowa	$500,000
Western Iowa Tech Community College	2022	Denison, Iowa	$1,000,000

Chapter Highlights

- In FY2022, there were 24 regional centers providing 238 career academy programs to 6,682 high school students from 158 school districts and 14 accredited nonpublic schools. Among the 24 regional centers, 11 are located on community college campuses.
- Applied Science, Technology, Engineering and Manufacturing was the largest service area with 90 career academy programs being offered, followed by Health Sciences with 40 programs, Information Solutions with 35 programs, Human Services/Family and Consumer Sciences with 33 programs and Business, Finance, Marketing and Management with 32 programs. Agriculture, Food and Natural Resources was the smallest service area with only eight career academy programs being offered.
- In 2019 the Career Academy Incentive Fund was established to support the development of regional centers statewide. As of FY2022, the Department has awarded 10 grants totaling $9.5 million.

COMMUNITY COLLEGES & WORKFORCE PREPARATION

PROSPERITY THROUGH EDUCATION

The Division of Community Colleges and Workforce Preparation within the Iowa Department of Education administers a variety of diverse programs that enhance Iowa's educational system and help to prepare a skilled and knowledgeable workforce. Divided between two bureaus — the Bureau of Community Colleges and the Bureau of Career and Technical Education — the Division is committed to providing and supporting opportunities for lifelong learning. In addition to working with Iowa's 15 public community colleges on state accreditation, program approval, equity review, and data reporting, guidance is also provided in the areas of career and technical education, workforce training and economic development, adult education and literacy, military education, the state mandated OWI education program, the GAP Tuition and PACE programs and Senior Year Plus.