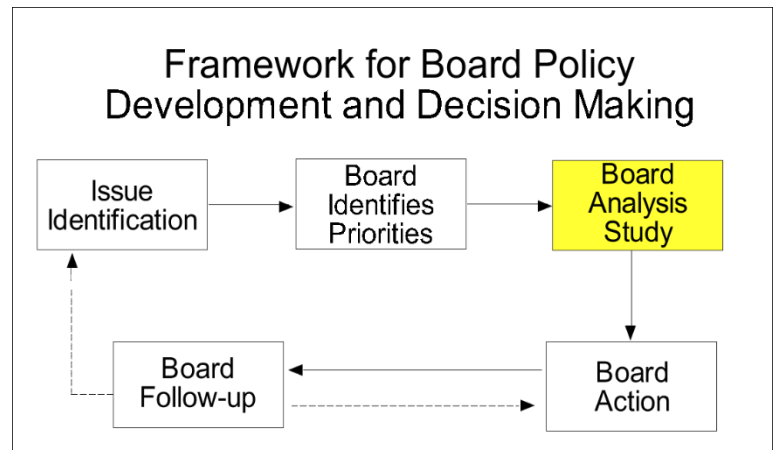


Iowa State Board of Education

Executive Summary

November 16, 2022



Agenda Item:

2022 Fall Enrollment Report

State Board Priority:

Preparing Learners for Tomorrow's Workforce

State Board Role/Authority:

The Annual Fall Enrollment Report for 2022 provides enrollment information for all of Iowa's community colleges and national data. This report is presented for information only as the State Board provides leadership and advocacy for the system of education in Iowa.

Presenter(s):

Jeremy Varner, Division Administrator
Vlad Bassis, Education Program Consultant

Attachment(s):

One

Recommendation:

It is recommended that the State Board hear and discuss this information.

Background:

This annual report provides data on fall 2022 enrollment at Iowa's community colleges, student demographics, programs, online enrollment, enrollment projections and comparisons to national community college enrollment data.

FALL ENROLLMENT

IOWA COMMUNITY COLLEGES

Released 2022



COMMUNITY COLLEGES &
WORKFORCE PREPARATION



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Published: 2022

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Executive Summary

The Iowa Department of Education collects enrollment information from all 15 community colleges. This report summarizes several aspects of community college enrollment.

- Total enrollment increased for the first time since 2010 by 0.6 percent, the enrollment of part-time students increased 1.8 percent and the enrollment of full-time students declined 1.7 percent. Nationwide, total enrollment decreased 0.4 percent, the enrollment of part-time students decreased 0.9 percent and the enrollment in full-time students increased 0.4 percent [1].
- Part-time enrollment remained larger than full-time enrollment and reached an all-time record high 65.9 percent of total fall enrollment.
- Enrollment of nontraditional college age students decreased 3.0 percent while the enrollment of traditional college age students increased 1.3 percent.
- Joint enrollment increased 4.2 percent. Nationally, joint enrollment increased 11.5 percent [1].
- Career and Technical Education (CTE) enrollment increased 3.2 percent.
- Although online enrollment and online credit hours dropped 4.0 percent and 5.1 percent respectively from last fall, those two numbers are still higher than the fall before the pandemic.
- The proportion of economically disadvantaged students decreased from 20.4 percent to 20.0 percent; the percentage of students with disabilities were the same as last fall at 3.0 percent.
- Compared to last fall, the proportion of minorities increased 0.7 percent to 24.5 percent, which is also higher than the fall before the pandemic. American Indians and white students experienced 0.7 percent and 0.1 percent decreases, respectively. Nationally, all race and ethnic groups experienced an increase, except for white students [1].
- The enrollment of male and female students both increased at 1.1 percent and 0.2 percent, respectively. Nationwide enrollment of male students increased 0.9 percent, while enrollment of female students decreased 2.0 percent [1].
- Similar to last year, students with no program of study comprised the largest group (41.8 percent) of total enrollment, followed by students in CTE programs (28.6 percent) and college parallel programs (27.8 percent).
- Percentages of new enrollments (20.2 percent of all) and new enrollments immediately after high school completion (7.3 percent of all) demonstrate continuous mild decline compared to last two fall semesters. Nationwide, new enrollments in community colleges went down by 1.5 percent [1]. Percentages of male students among immediate enrollees (48.0) are higher than in general enrollment (43.7); percentages of racial minorities (22.4) among immediate enrollees is a bit lower than that in general enrollment (24.5).

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Students


The COVID-19 pandemic has been negatively affecting the US economy. Previous research has indicated a countercyclical relationship between community college enrollment and local economic conditions, i.e., enrollment drops when the local economy gets better [2]; however, this countercyclical relationship does not occur simultaneously with economic crisis—rather, it manifests itself consecutively. As a result, a short-term crisis may not trigger higher enrollments [3]. In fall 2022, a total of 82,251 students enrolled in Iowa’s community colleges, a 0.6 percent increase in enrollment from last fall; this is the first increase in enrollment since 2011.

Figure 1 shows there was a year-to-year decrease in fall enrollment between 2010 and 2021. The decrease in 2020 enrollment is the largest in the last eight years, which was due to the COVID-19 pandemic. Despite the 0.6 percent increase, 2022 fall enrollment is still less than before the pandemic. The negative impact of the COVID-19 pandemic on enrollment has not only affected Iowa. According to recent data from the National Student Clearinghouse Research Center, nationally, community colleges have experienced a 0.4 percent decrease this fall [1].


FALL ENROLLMENT HIGHLIGHTS




Enrollment
82,251
students



0.6%
increase
from last fall

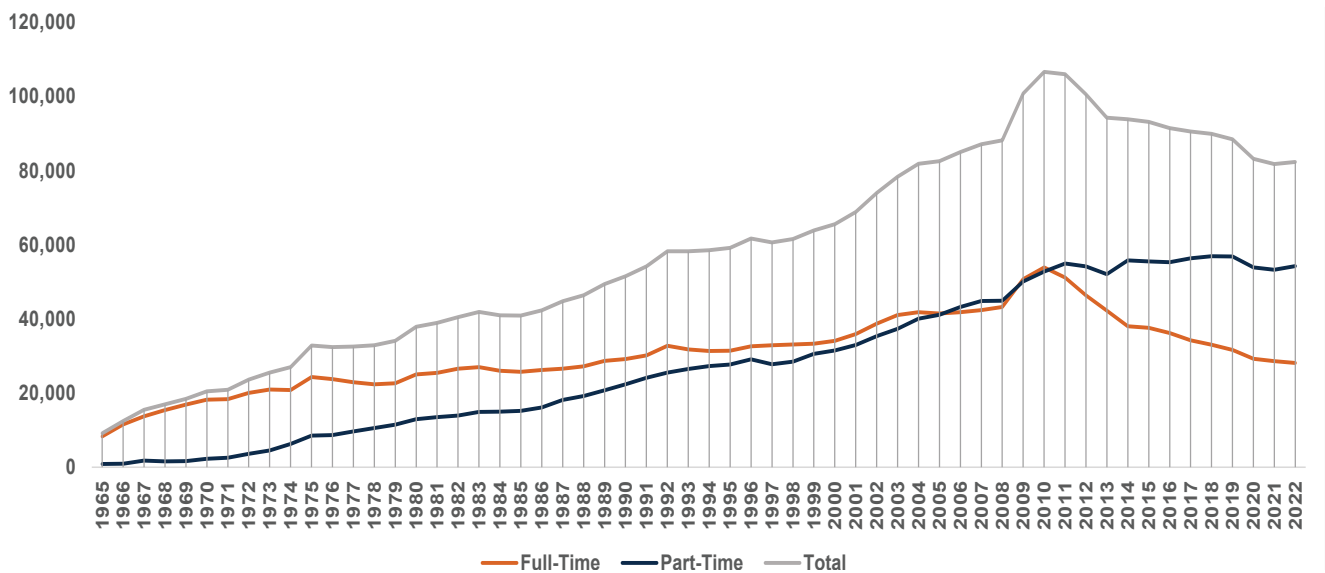


Enrollment
increased at **7** colleges
and decreased at **8**



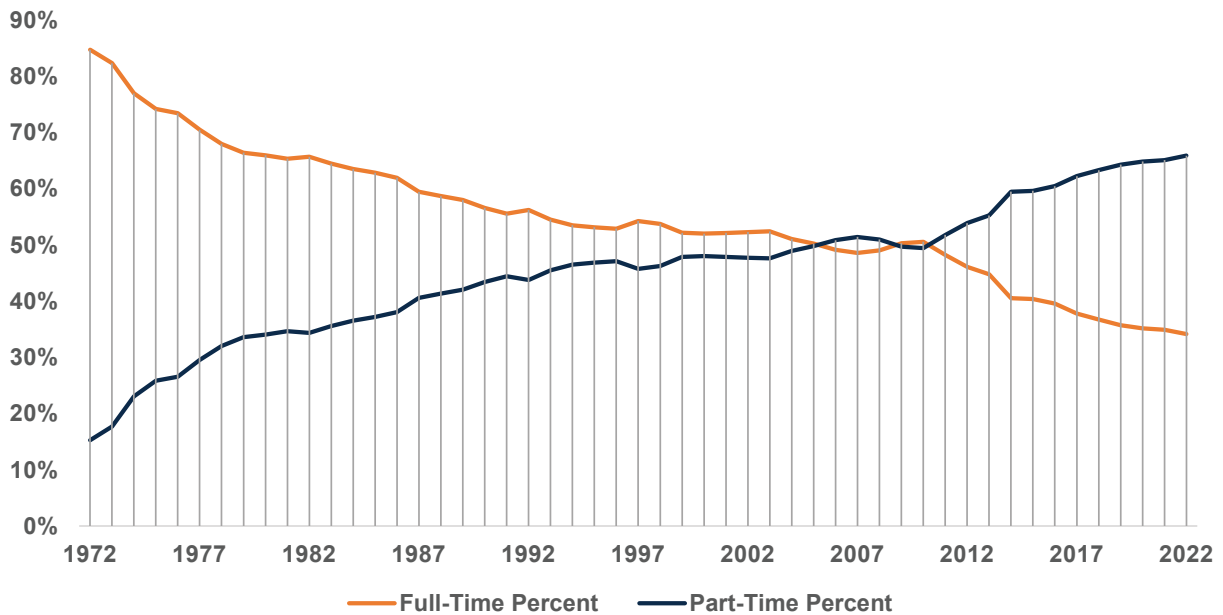
34.1%
of students enrolled
full time

FIGURE 1. FALL ENROLLMENT BY STATUS: 1965-2022



The proportion of full-time and part-time students did not change significantly. The number of full-time students (i.e., students who enrolled in more than 12 credit hours) as a percentage of total fall enrollment has steadily declined from 84.7 percent in 1972 to 34.1 percent in 2022 (Figure 2). This fall, enrollment of full-time students was 28,077 students, compared to 28,549 students (34.9 percent) last fall.

FIGURE 2. HISTORICAL ENROLLMENT OF FULL-TIME STUDENTS AND PART-TIME AS A PERCENT OF TOTAL ENROLLMENT: 1972-2022



While the percentage of full-time students has been decreasing since 1972, the percentage of part-time students has increased steadily over the years. In fall 2022, 54,174 students were enrolled as part-time students, which accounted for 65.9 percent of total enrollment, compared to 53,200 part-time students (65.1 percent of total enrollment) last fall. In terms of change from last fall, part-time enrollment increased 1.8 percent, and full-time enrollment decreased 1.7 percent. Nationwide, part-time and enrollment dropped 0.9 percent and full-time enrollment increased 0.4 percent [1]. Table 1 shows the full-time, part-time and total enrollment of each community college. This fall, the enrollment increased at seven colleges, and decreased at eight colleges.



TABLE 1. FALL 2022 ENROLLMENT BY COLLEGE

College	Total	Full-Time		Part-Time		Change from Last Year
		#	%	#	%	
Northeast Iowa	4,304	942	21.9%	3,362	78.1%	3.4%
North Iowa Area	2,479	1,179	47.6%	1,300	52.4%	-0.1%
Iowa Lakes	1,988	872	43.9%	1,116	56.1%	8.5%
Northwest Iowa	1,798	557	31.0%	1,241	69.0%	5.4%
Iowa Central	5,058	2,637	52.1%	2,421	47.9%	1.0%
Iowa Valley	2,442	1,246	51.0%	1,196	49.0%	-1.8%
Hawkeye	4,787	1,834	38.3%	2,953	61.7%	-5.9%
Eastern Iowa	7,145	1,931	27.0%	5,214	73.0%	-4.2%
Kirkwood	12,414	4,167	33.6%	8,247	66.4%	-1.5%
Des Moines Area	21,637	5,257	24.3%	16,380	75.7%	5.4%
Western Iowa Tech	5,151	1,634	31.7%	3,517	68.3%	-5.5%
Iowa Western	5,630	2,335	41.5%	3,295	58.5%	-1.0%
Southwestern	1,581	652	41.2%	929	58.8%	2.5%
Indian Hills	3,361	1,664	49.5%	1,697	50.5%	-0.7%
Southeastern	2,476	1,170	47.3%	1,306	52.7%	6.7%
Total	82,251	28,077	34.1%	54,174	65.9%	0.6%

Student Demographics

In fall 2022, 56.3 percent of students enrolled were female, 43.7 percent were male and 60 students did not report their sex (Figure 3). Female students have outnumbered male students nationally in higher education since 1980. In terms of change, male and female student enrollment increased 1.1 percent and 0.2 percent, respectively. Nationwide enrollment of male students increased 0.9 percent, while enrollment of female students decreased 2.0 percent [1].

This fall, the average age and median age is the same as last fall, at an average age of 21 and a median age of 19. Students who are under 18 (42.3 percent) and between 18 and 22 (38.1 percent) are the two largest age groups that Iowa’s community colleges are serving, followed by students who are between 23 and 26 (6.1 percent) and between 31 and 39 (5.5 percent). Other age groups in total comprised less than 10 percent of fall enrollment this year.

The percentages of traditional age (under 25 years) and nontraditional college age (25 years and older) students were 84.0 and 16.0 percent, respectively (Figure 3). Compared to last fall, there was a 1.3 percent

FALL ENROLLMENT HIGHLIGHTS



56.3%
of students
are female



19
median age
of students



24.5%
of students
are minorities

increase in the under 25 years age group, while the population of 25 years and older students decreased 3.0 percent. Figure 4 compares national data and Iowa data in terms of enrollment change by age, which shows Iowa lost more students ages 21-29 than the national average.

FIGURE 3. TRADITIONAL AND NONTRADITIONAL COLLEGE AGE

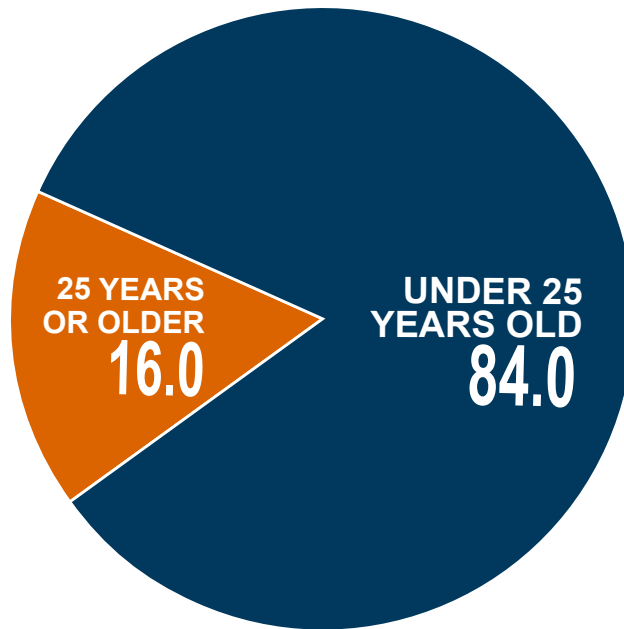
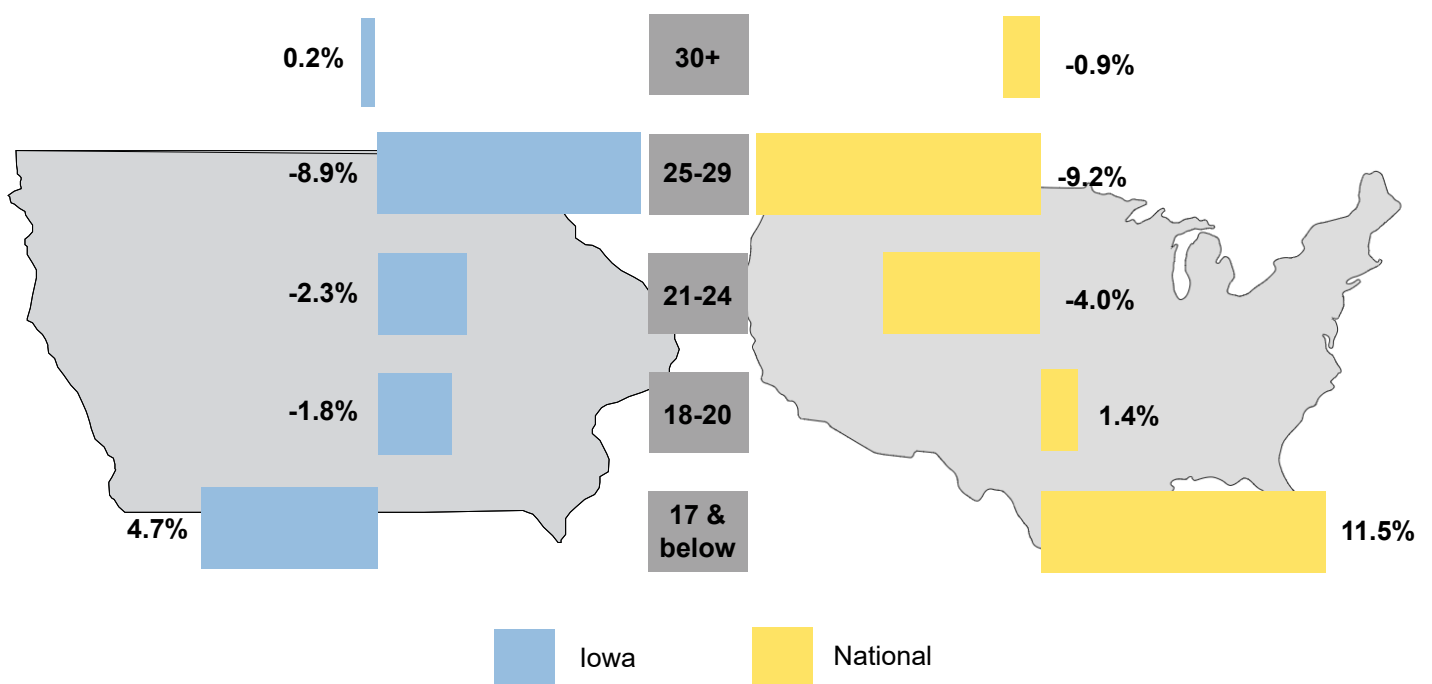
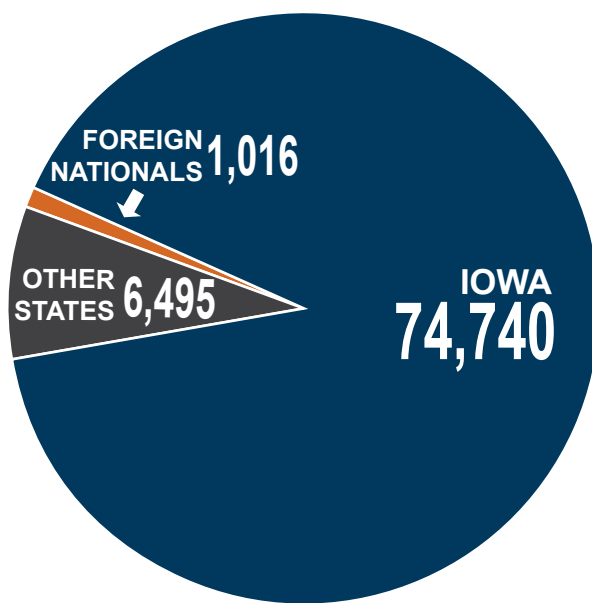


FIGURE 4. COMPARISON OF FALL 2022 NATIONWIDE AND IOWA ENROLLMENT CHANGE BY AGE



Around 90.9 percent of students enrolled in Iowa’s community colleges this fall were Iowans. Residents from other states accounted for 7.9 percent of enrolled students, and foreign nationals comprised 1.2 percent (Figure 5). This composition remained unchanged compared to last year.

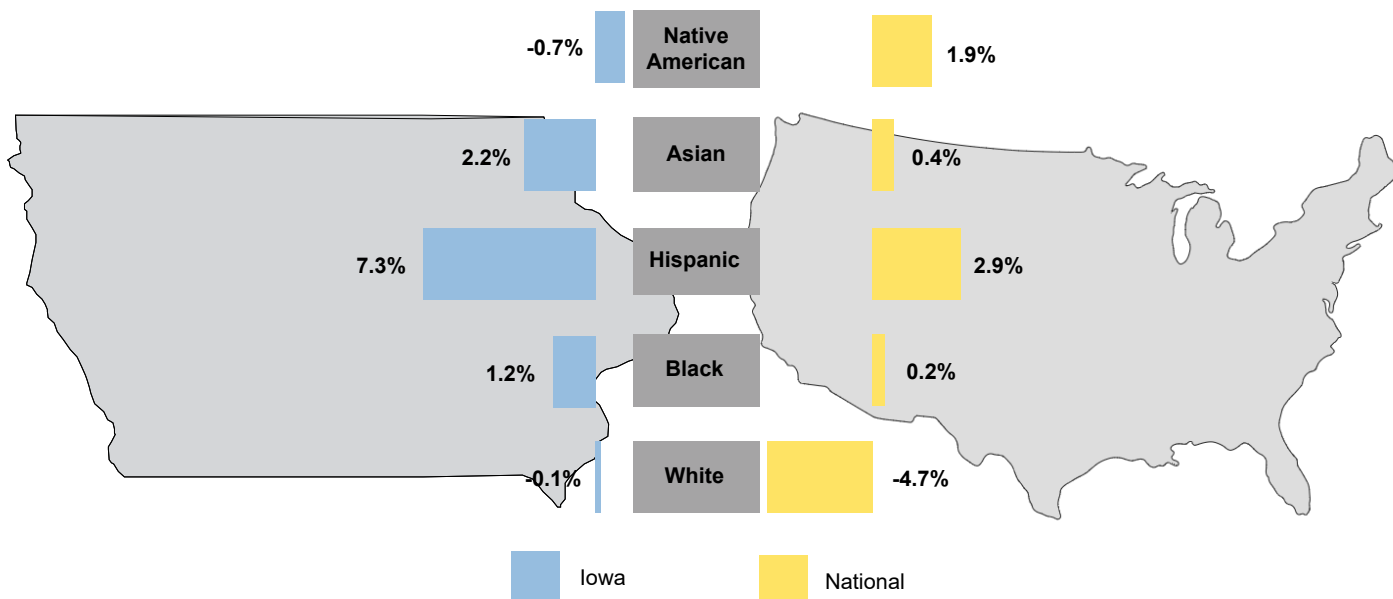
FIGURE 5. FALL 2022 ENROLLMENT BY RESIDENCY



This fall, among the 75,874 students who reported their race and ethnicity, 24.5 percent of students were racial/ethnic minorities, which is higher than last fall. Hispanic students were the second largest racial/ethnic group (10.4 percent), followed by Black (7.6 percent) and Asian (2.8 percent). A little over one percent indicated they were part of multiple racial and ethnic groups. Native American and Pacific Islander students respectively constituted 0.6 percent and 0.2 percent of enrollment. Figure 6 compares national data and Iowa data in terms of enrollment change by race/ethnicity. It shows that Iowa had a larger increase in Hispanic students than the national average, (i.e., 7.3 percent in Iowa versus 2.9 percent nationwide); and Iowa also experienced a smaller decrease in white students compared to the national average (0.1 percent versus 4.7 percent) [1].

This fall also demonstrated declines and gains in some categories of traditionally underserved populations. Students who were single parents represented 3.4 percent of the total enrollment (3.7 percent last year); the representation of economically disadvantaged students decreased to 20.0 percent from 23.5 percent last fall, while representation of students with disabilities increased by 0.2 percent.

FIGURE 6. FALL 2022 ENROLLMENT BY RACE AND ETHNICITY



Academics

Although the total enrollment increased this fall, credit hours registered went down slightly, 0.6 percent. Students attending Iowa’s community colleges this fall registered for 688,414 credit hours, compared to 692,356 credit hours last fall. On average, students enrolled in 8.4 credit hours in the

fall semester, which is also slightly fewer than last fall. Figure 7 displays the change of total credit hours and average credit hours registered per student in the last five years. The decreases in total credit hours and average credit hours, as indicated in the figure, align with the enrollment decline in recent years.

ACADEMIC HIGHLIGHTS



8.4
Average
number of
credit hours



Total credit hours
down
0.6%
since last year

FIGURE 7. TOTAL CREDIT HOURS (TOP) AND AVERAGE CREDIT HOURS REGISTERED: 2018-2022

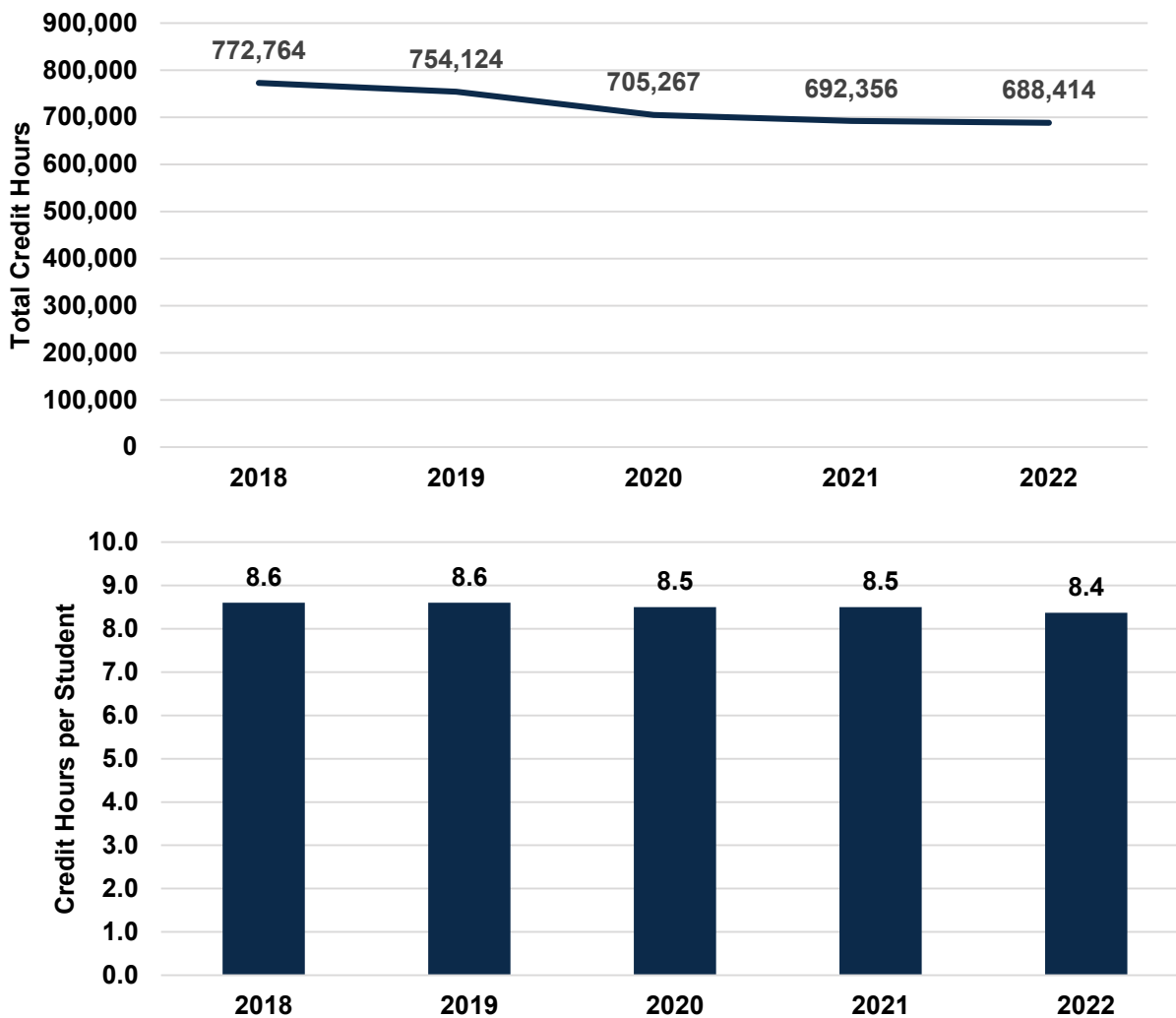


Table 2 summarizes the fall registered credit hours by college. Full-time students registered for 391,546 credit hours, accounting for 56.9 percent of total credit hours registered. This represents a slight decrease from last fall in which full-time students comprised 57.6 percent of total hours registered. The average course load for full-time students was 13.9 credit hours, compared to 14.0 credit hours last fall.

Part-time students registered for 296,869 credit hours, accounting for 43.1 percent of total credit hours, a 1.0 percent decrease from last fall. The average course load for part-time students remained virtually unchanged from last fall's 5.5 credit hours.

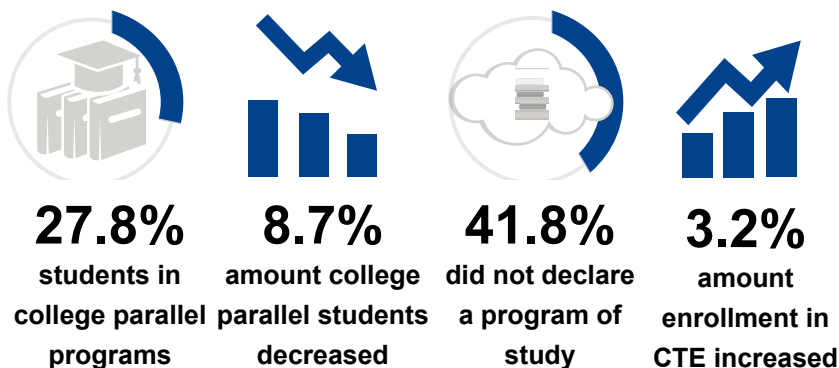
TABLE 2. SUMMARY OF FALL 2022 CREDIT HOURS BY COLLEGE

College	Total Hours	Credit Hours by Full-Time Students		Credit Hours Contributed by Part-Time Students		Average Course Load for Full-Time Students	Average Course Load for Part-Time Students
		#	%	#	%		
Northeast Iowa	31,592	13,611	43.1	17,981	56.9	14.4	5.3
North Iowa Area	23,636	16,781	71.0	6,855	29.0	14.2	5.3
Iowa Lakes	18,919	13,297	70.3	5,622	29.7	15.2	5.0
Northwest Iowa	15,150	8,745	57.7	6,405	42.3	15.7	5.2
Iowa Central	51,258	38,080	74.3	13,178	25.7	14.4	5.4
Iowa Valley	24,677	18,439	74.7	6,238	25.3	14.8	5.2
Hawkeye	42,701	26,544	62.2	16,157	37.8	14.5	5.5
Eastern Iowa	55,329	26,007	47.0	29,322	53.0	13.5	5.6
Kirkwood	105,506	57,217	54.2	48,290	45.8	13.7	5.9
Des Moines Area	159,835	72,517	45.4	87,318	54.6	13.8	5.3
Western Iowa Tech	42,785	23,427	54.8	19,358	45.2	14.3	5.5
Iowa Western	53,486	33,307	62.3	20,179	37.7	14.3	6.1
Southwestern	14,637	9,366	64.0	5,271	36.0	14.4	5.7
Indian Hills	24,884	17,312	69.6	7,573	30.4	10.4	4.5
Southeastern	24,022	16,898	70.3	7,124	29.7	14.4	5.5
Total	688,414	391,546	56.9	296,869	43.1	13.9	5.5

Program Type

Programs offered by community colleges are generally categorized as college parallel (transfer arts and sciences), career and technical education (CTE) or general studies (AGS). College parallel programs prepare students for matriculation into four-year colleges or universities; CTE programs prepare students for the workforce and AGS allows students to receive a two-year degree with a custom-selected set of courses not leading to a specific occupation or direct transfer. Students

PROGRAM TYPE HIGHLIGHTS

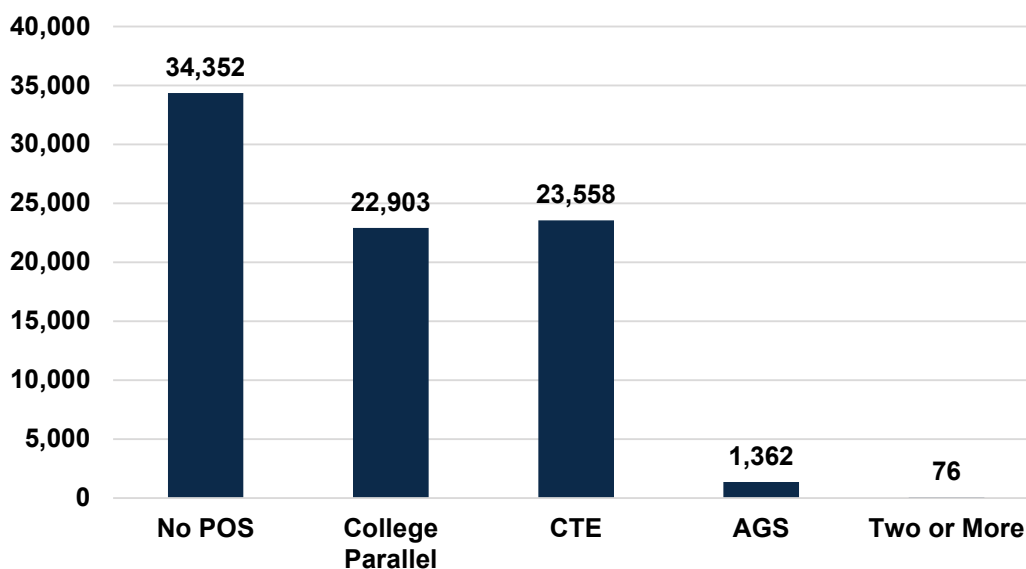


who declared two or more different types of programs were reported as a separate group. Students who were not eligible or were not willing to declare their programs of study for a variety of reasons (e.g., high school students taking college credits as joint enrollment) were identified as a group with no program of study.

As shown in Figure 8, students with no program of study comprised the largest group with 34,352 students, accounting for 41.8 percent of total enrollment, followed by CTE programs (23,558 students, accounting for 28.6 percent) and students in college parallel program (22,903 students, accounting for 27.8 percent). This fall, 1,362 students enrolled in AGS programs (1.7 percent) and 76 students declared two or more different types of programs.

As compared to last year, the number of students with no program of study increased 6.1 percent, students in CTE programs increased 3.2 percent and students with two or more programs increased from 19 to 76. The number of students in college parallel programs and AGS programs decreased 8.7 percent and 5.5 percent, respectively.

FIGURE 8. FALL 2022 ENROLLMENT BY PROGRAM TYPE



Note: No POS refers to students who were not eligible or not willing to declare program of study. Two or More refers to students who declared two or more different programs of study.

Transfer Major Programs

In December 2017, the Iowa Association of Community College Presidents unanimously approved an Iowa Department of Education proposal to establish an authorized process to permit community colleges to adopt transfer majors. This process has now been authorized through Iowa Administrative Code 281 21.3. These transfer majors are designed to guide students to take program-specific coursework within their associate of arts (AA) or associate of science (AS) studies that will transfer seamlessly into related majors at four-year

TRANSFER MAJOR HIGHLIGHTS



4,875

students enrolled
in transfer major
programs



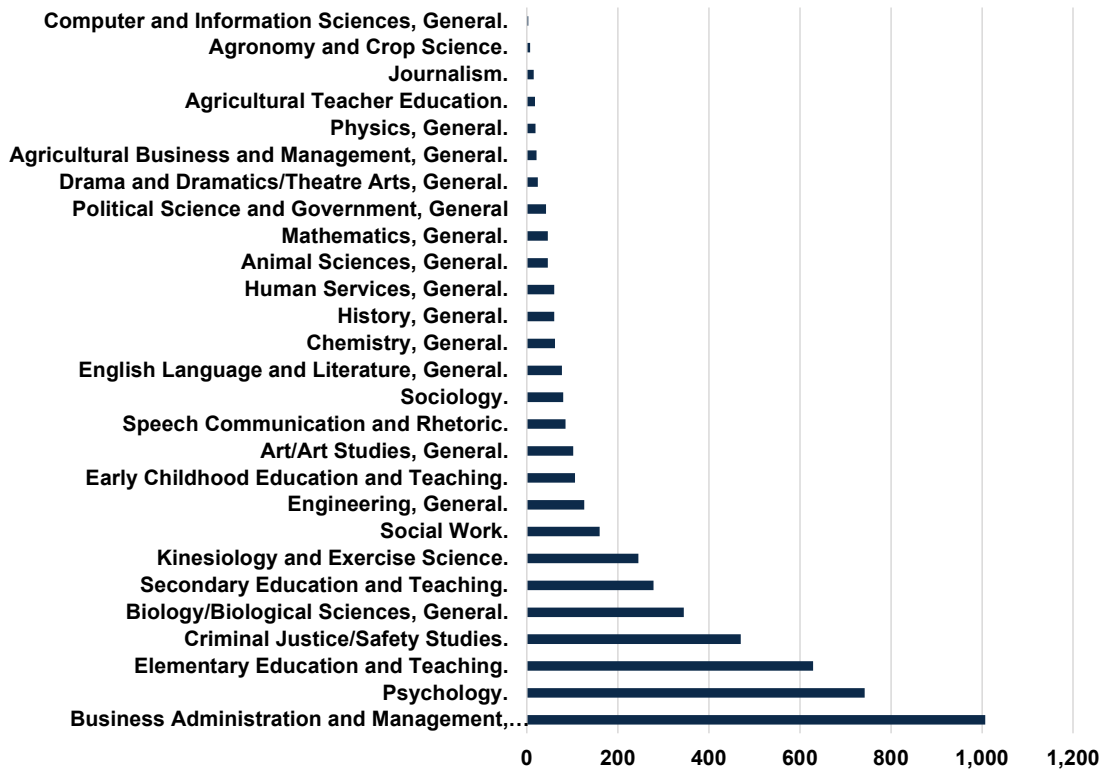
1,007

students in
business

institutions with the goal of:

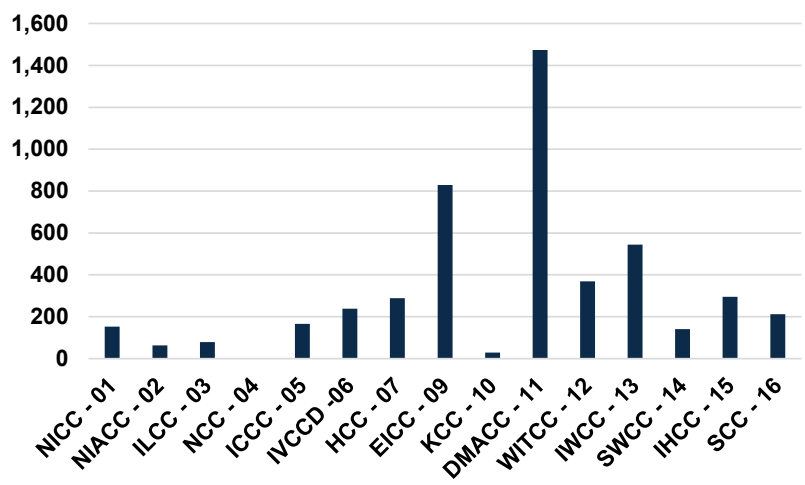
- improving communication and transfer efficiency among institutions;
- providing students with a defined pathway toward their academic goals;
- supporting a more data-informed assessment/articulation process;
- avoiding excessive credits and decreasing time to degree completion and
- making postsecondary education more affordable, thus reducing student debt.

FIGURE 9. DISTRIBUTION OF TRANSFER MAJOR STUDENTS BY DISCIPLINES



In fall 2022, there are 27 potential transfer major disciplines available to community college students, depending on which colleges are offering them. In the fall 2022 enrollment data, there are 4,875 enrolled transfer major students across 27 of these disciplines (Figure 9) and across 15 colleges (Figure 10). The most popular transfer major disciplines for these students include: business with 1,007 enrollments (20.7 percent); psychology with 742 enrollments (15.2 percent); elementary education and training with 629 enrollments (12.9 percent); and criminal justice with 470 enrollments (9.6 percent). These four disciplines represent 58.4 percent of fall 2022 transfer major enrollments.

FIGURE 10. DISTRIBUTION OF TRANSFER MAJOR STUDENTS BY COLLEGE



Career and Technical Education and Career Clusters

The Iowa Department of Education reports CTE programs by the 16 National Career Clusters Framework that aligns academic programs with occupational fields. Enrollment in CTE programs increased by 3.2 percent compared to fall 2021, comprising 28.6 percent of all enrollments (up by 0.7% from fall 2021). The demographic composition has slightly changed compared to fall 2021 as well. This fall, male students comprise 46.5 percent of CTE enrollments, 0.4 percent higher than last fall. The percentages of racial and ethnic minority students increased from 25.4 to 26.3 in CTE enrollments. While overall intensity (measured in credit hours) decreased this fall by 0.6 percent, intensity of CTE enrollment increased by 3.7 percent.

THREE LARGEST CAREER CLUSTERS



7,140
students in
health science



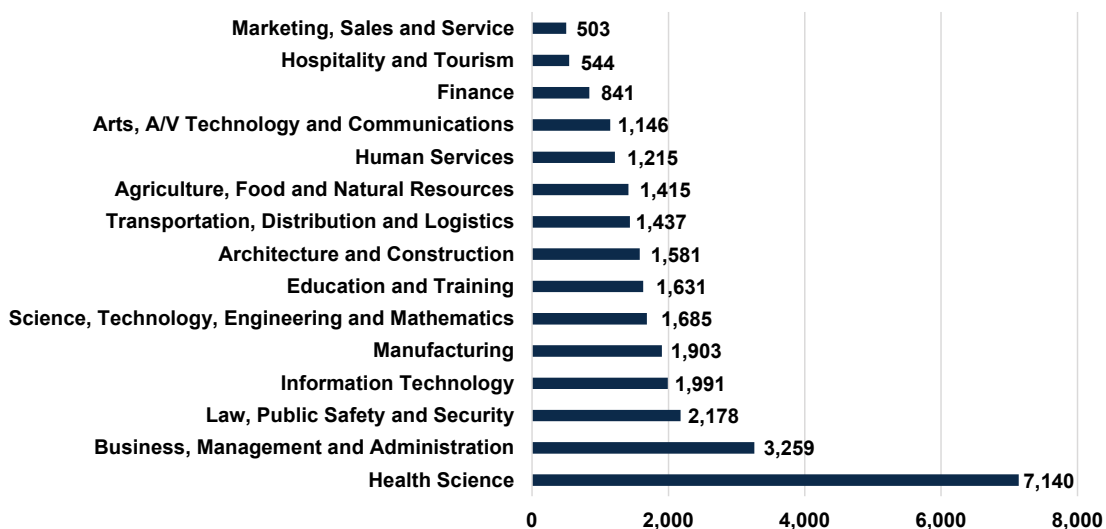
3,259
students in
business



2,178
students in
law, public safety
and security

Figure 11 displays the distribution of CTE enrollment by career clusters. Information on career clusters can be obtained from www.careerclusters.org. Historically, cluster categories with the largest enrollments have been health science; manufacturing; business, management and administration and manufacturing. This fall, the top three cluster categories with the largest enrollment are health science (7,140 students with a 2.1 percent decrease from last fall); business, management and administration (3,259 students with a 13.6 percent increase); and law, public safety and security (2,178 students with a 5.1 percent increase). Large increases in enrollment occurred in education and training (34.5 percent) and science, technology, engineering and mathematics (24.8 percent).

FIGURE 11. FALL 2022 CTE ENROLLMENT BY CAREER CLUSTER



Online Enrollment

Online enrollment at Iowa’s community colleges is broken down into two categories: online classes and blended classes. An online class is defined as instruction delivered completely on the internet. In a blended class, at least half of the instruction is delivered via the internet and the remainder of the class is delivered in a face-to-face context.

Table 3 summarizes the number of students enrolled in online and blended classes, and credit hours attributed to online and blended classes. In fall 2022, 39,576 students enrolled in at least one online course (a 4.0 percent decrease from last year) and 10,882 students enrolled in at least one blended course (a 3.2 percent increase from last year). Online course students registered for 226,169 credit hours. Compared to 238,345 credit hours last fall, this volume represents a 5.1 percent decrease. This fall, students registered for 47,757 credit hours in blended classes, compared to 47,168 credit hours last fall, representing a 1.2 percent increase.

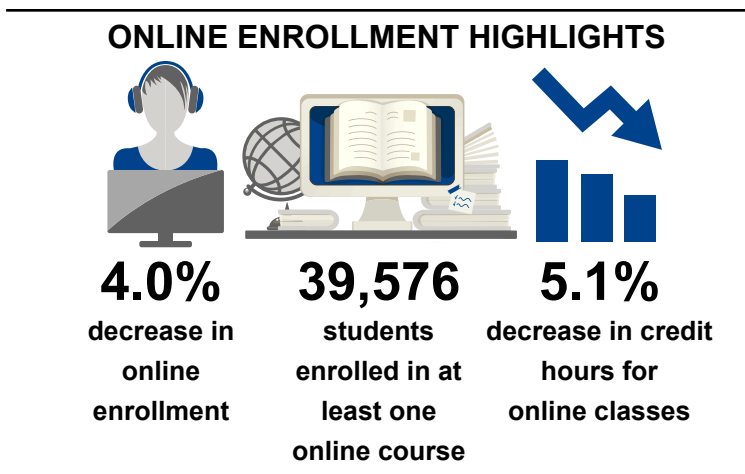


TABLE 3. FALL 2022 ONLINE AND BLENDED HOURS AND ENROLLMENT BY COLLEGE

College	Online Course			Blended Course		
	Hours	Headcount	% Change in Credit Hours	Hours	Headcount	% Change in Credit Hours
Northeast Iowa	9,986	1,758	3.6%	1,668	494	15.7%
North Iowa Area	8,266	1,602	5.4%	3,625	838	471.8%
Iowa Lakes	6,635	1,202	18.0%	550	126	-58.2%
Northwest Iowa	6,765	1,198	6.0%	132	44	-32.1%
Iowa Central	11,714	1,867	11.0%	1,379	251	-63.1%
Iowa Valley	7,677	1,521	2.3%	2,435	577	5.3%
Hawkeye	10,855	2,009	-6.0%	6,452	1,399	1533.3%
Eastern Iowa	21,903	3,296	-5.1%	2,816	474	-17.2%
Kirkwood	32,636	5,733	-10.3%	5,329	1,325	-43.9%
Des Moines Area	53,982	9,690	-18.3%	17,315	3,755	3.0%
Western Iowa Tech	16,226	2,814	1.8%	2,347	696	-34.9%
Iowa Western	20,361	3,296	0.4%	1,743	315	-26.4%
Southwestern	4,756	891	6.5%	113	36	-28.9%
Indian Hills	5,531	1,248	2.9%	935	381	150.7%
Southeastern	8,876	1,451	15.6%	920	171	-0.3%
Total	226,169	39,576	7.5%	47,757	10,882	-53.1%

Joint Enrollment

Iowa community colleges offer joint enrollment opportunities to high school students. Such students may earn high school credit simultaneously with college credit, which is applicable toward a one- or two-year award or to transfer to a four-year institution. There are three ways in which joint enrollment is provided to Iowa students: postsecondary enrollment options (PSEO), contractual agreements between high schools and community colleges and direct payment of tuition. Students may choose to participate in more than one joint enrollment program during an academic year.

This fall, 37,123 high school students (unduplicated headcount) participated in at least one joint enrollment program, compared to 35,634 participants last fall, which represents a 4.2 percent increase, compared to the 11.5 percent increase indicated by nationwide data [1]. Students participating in joint enrollment programs accounted for 45.1 percent of total enrollment.

High school students participating in joint enrollment programs this fall registered for 197,320 credit hours of classes, compared to 187,966 credit hours last fall, which represents a 5.0 percent increase. The number of credit hours attributed to joint enrollment programs this fall accounted for 28.7 percent of total registered credit hours, compared to 27.1 percent last fall. On average, students enrolled in 5.3 credit hours, which is the same as last fall.

In terms of joint enrollment type, 99.2 percent of high school students participated in joint enrollment through contractual agreements (Figure 12), 0.8 percent through direct payment of tuition and no student participated in jointed enrollment through PSEO. These percentages are consistent with last fall. The decline in PSEO enrollments is expected, as the rules for types of joint enrollment changed as of academic year 2017-2018 [5].

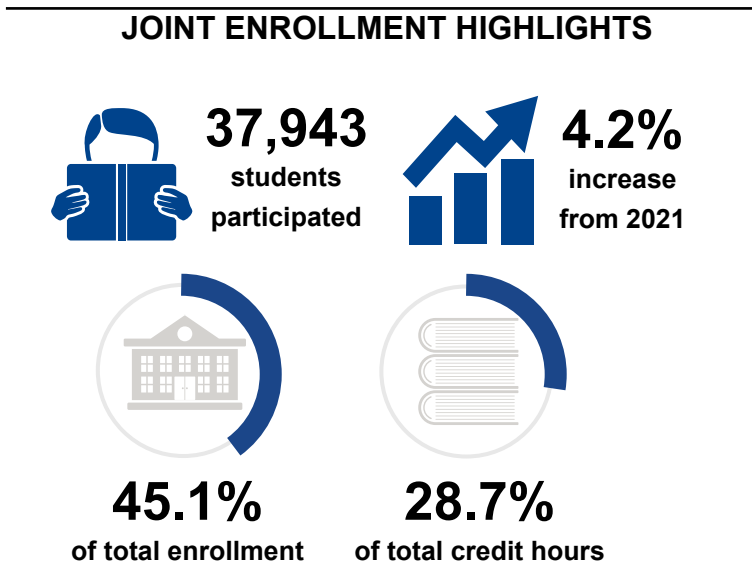
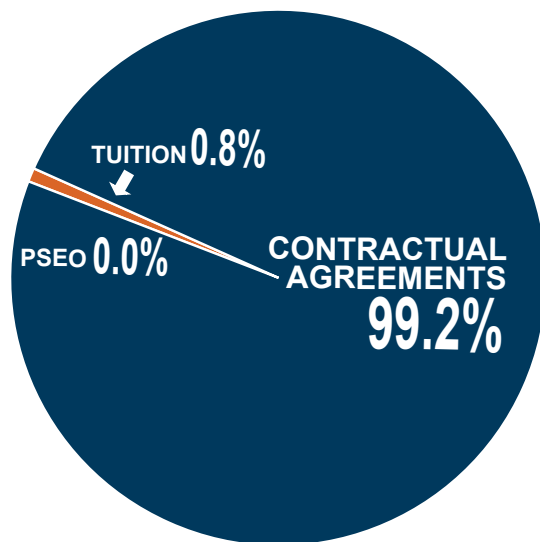


FIGURE 12. FALL 2022 JOINT ENROLLMENT BY OPTIONS



Immediate Enrollment

Every fall, Iowa community colleges enroll a large number of new non-high school students. This fall, they comprised 20.2 percent of total enrollment (0.5 percent less than last year), with 32.3 percent of them having previous joint enrolled experience (down 4.9 percent from last year). A sizable portion of the first-time, non-high school community college population is comprised of students directly out of high school. According to annually stable patterns, this cohort of “immediate enrollees” comprises one-quarter to one-third of all Iowa high school graduating classes, and around one-tenth of Iowa community colleges’ total fall enrollment. The COVID-19 pandemic seemed to impact the stability of those proportions, and this year’s immediate enrollee numbers continue last year’s downward trend with these students representing 7.3 percent of total fall 2022 enrollment, an 11.7 percent decline from last fall.

As every fall, a state identification number has been used to match Iowa high school students to community college enrollees. The matching procedure identified 5,967 students who entered Iowa’s community colleges directly after graduating from their Iowa high schools. Distributed by community college, they represent a range of 4.4 percent to 10.9 percent of the total fall enrollment (Figure 13).

Over 56.7 percent of immediate enrollees (3,383) took some college-level courses through joint enrollment opportunities while in an Iowa high school, a 9.2 percent decline from last fall. Distributed by college, those percentages range from 39.9 to 81.4 (Figure 14).

With the natural exception of age, the demographics of immediate enrollees is similar to all fall 2022 enrollees, though male students comprise a higher percentage of 48.0 (an increase of 0.6 percent compared to last fall), and racial minorities are somewhat lower at 22.4 percent (an increase of 0.7 percent compared to last fall). Most of the immediate enrollees (96.8 percent) are between 18 and 20 years old; 3.0 percent are under 18 and 0.1 percent are over 20 years old.

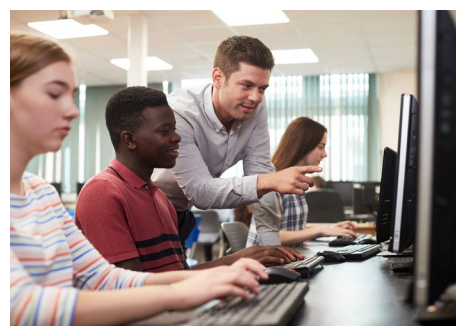
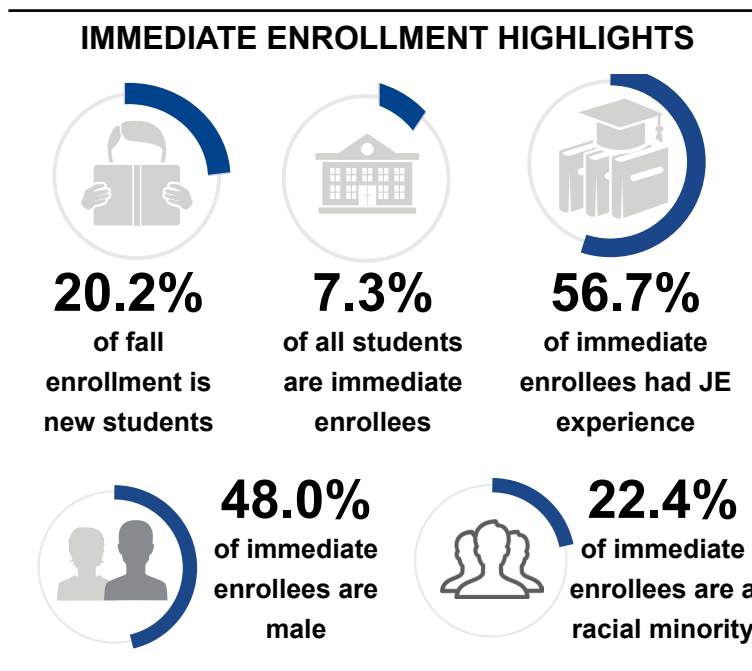


FIGURE 13. FALL 2022 SHARE OF IMMEDIATE ENROLLEES IN IOWA COMMUNITY COLLEGES

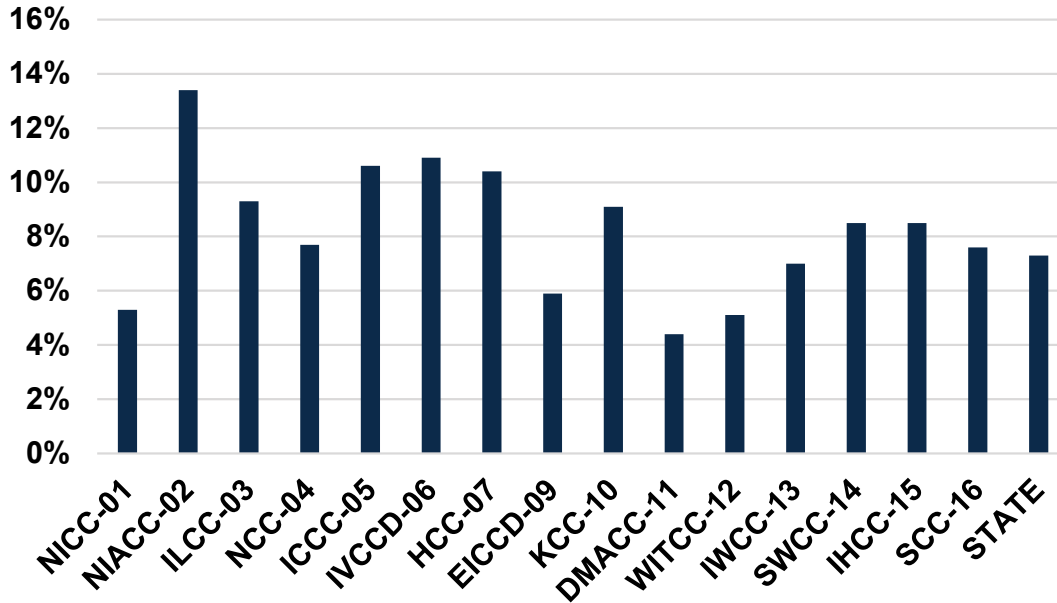
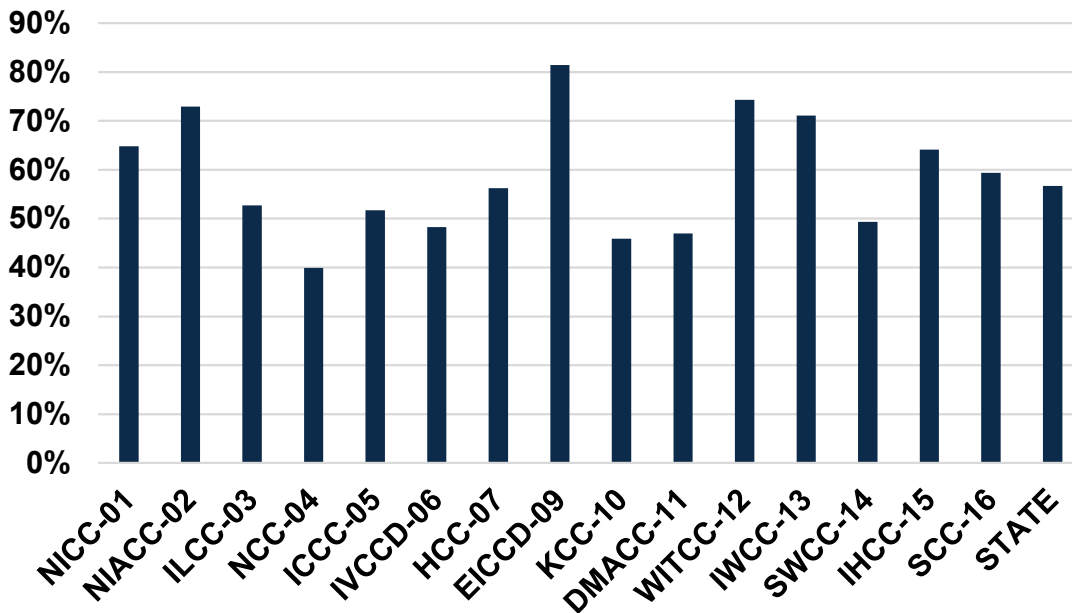


FIGURE 14. PERCENT OF IMMEDIATE ENROLLEES WITH PRIOR JOINT ENROLLMENT EXPERIENCE BY COMMUNITY COLLEGE



Enrollment Projections

There are two quantitative forecasting methods that are often used for enrollment projections: causal forecasting methods and time series methods. Causal forecasting methods are based on the assumption that the variable being forecasted is under the influence of one or more other variables [6]. Time series models assume that all information needed for forecasting is contained in data observed over successive periods of time, and that past data patterns (i.e., trend, seasonal, cyclical) have an effect on future data [6].

In terms of community college enrollment, the causal forecasting method assumes that enrollment in any given year is under the influence of other relevant factors. Such factors may include, but are not limited to, the distribution of demographics and economy in that year. Therefore, in order to estimate fall 2023 community college enrollment with causal forecasting methods, obtaining information regarding the distribution of demographics and the economy in 2023 is a prerequisite; however, such information is unknown for 2023.

Given that Iowa's community college enrollment data is available back to the 1960s, and that information on other relevant factors is unknown for 2023, time series methods are more appropriate for fall 2023 enrollment forecasting.

We used a single exponential smoothing equation, $\hat{y}_{t+1} = \partial y_t + (1-\partial)\hat{y}_t$, with time series methods to estimate fall 2023 enrollment. According to this equation, the value of y at time $t+1$ (i.e., \hat{y}_{t+1}) is a weighted combination of the observed value at time t (i.e., y_t) and the forecasted value at time t (i.e., \hat{y}_t), and the value of ∂ is the smoothing constant, which ranges from 0 to 1 [7]. Selecting the smoothing constant can be subjective or objective. If the value of a smoothing constant is near one, the forecasting puts more weights on the most recent observations, and the value of a smoothing constant near zero assumes that the distant past observations have a large influence. Considering the COVID-19 pandemic, the Department chose constant values close to one to forecast fall 2023 enrollment. It is estimated that the total enrollment for fall 2023 will fall between 82,242 and 85,264 students; however, the actual enrollment for fall 2023 might fall out of this estimated range due to the uncertainty of the COVID-19 pandemic.

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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, Senior Year Plus and the Statewide Intermediary Network program.