FALL ENROLLMENT IOWA COMMUNITY COLLEGES

Released 2021







Iowa Department of Education

Grimes State Office Building Phone: 515-281-8260 Fax: 515-242-5988 www.educateiowa.gov

Ann Lebo, Director, Iowa Department of Education 515-281-3436 ann.lebo@iowa.gov

Jeremy Varner, Administrator, Division of Community Colleges and Workforce Preparation 515-242-6187 jeremy.varner@iowa.gov

Amy Gieseke, Bureau Chief, Bureau of Community Colleges 515-858-2234 amy.gieseke@iowa.gov

Vladimir Bassis, Lead Consultant, Bureau of Community Colleges 515-326-1718 vladimir.bassis@iowa.gov

Dan Li, Education Program Consultant, Bureau of Community Colleges 515-281-3503 dan.li@iowa.gov

Published: 2021

State of Iowa Department of Education

Grimes State Office Building 400 E. 14th Street Des Moines, IA 50319-0146

State Board of Education

Brooke Axiotis, President, Des Moines Bettie Bolar, Vice President, Marshalltown Rod Bradley, Denison Brian J. Kane, Dubuque Michael L. Knedler, Council Bluffs Mike May, Spirit Lake John Robbins, Iowa Falls Georgia Van Gundy, Waukee Hannah Groos, Student Member, Norwalk

Administration

Ann Lebo, Director and Executive Officer of the State Board of Education

Division of Community Colleges and Workforce Preparation

Jeremy Varner, Division Administrator

Bureau of Community Colleges

Amy Gieseke, Bureau Chief Vladimir Bassis, Lead Consultant, Management Information Systems Dan Li, Education Program Consultant

It is the policy of the Iowa Department of Education not to discriminate on the basis of race, creed, color, sexual orientation, gender identity, national origin, sex, disability, religion, age, political party affiliation, or actual or potential parental, family or marital status in its programs, activities, or employment practices as required by the Iowa Code sections 216.9 and 256.10(2), Titles VI and VII of the Civil Rights Act of 1964 (42 U.S.C. § 2000d2000e), the Equal Pay Act of 1973 (29 U.S.C. § 206, et seq.), Title IX (Educational Amendments, 20 U.S.C. § 1681 – 1688), Section 504 (Rehabilitation Act of 1973, 29 U.S.C. § 794), and the Americans with Disabilities Act (42 U.S.C. § 12101, et seq.). If you have questions or complaints related to compliance with this policy by the Iowa Department of Education, please contact the legal counsel for the Iowa Department of Education, Grimes State Office Building, 400 E. 14th Street, Des Moines, IA 50319-0146, telephone number: 515-281-5295, or the Director of the Office for Civil Rights, U.S. Department of Education, Citigroup Center, 500 W. Madison Street, Suite 1475, Chicago, IL 60661-4544, telephone number: 312-730-1560, FAX number: 312-730-1576, TDD number: 877-521-2172, email: OCR.Chicago@ed.gov.

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 dropped 1.6 percent, the enrollment in part-time students decreased 1.2 percent, and the enrollment in full-time students declined 2.3 percent. Nationwide, the same categories decreased by 5.6 percent, 2.8 percent and 9.8 percent [8]
- Part-time enrollment remained larger than full-time enrollment and reached an all-time record high 65.1 percent of total fall enrollment;
- The enrollment of nontraditional college age students decreased 6.0 percent, and the enrollment of traditional age students decreased less than one percent.
- Joint enrollment increased 3.4 percent. Nationally, joint enrollment decreased 0.2 percent.
- Although online enrollment and online credit hours dropped 15.9 percent and 53.1 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 23.3 percent to 20.4 percent; the percentage of students with disabilities increased from 2.7 in pre-pandemic fall 2019 to 3.0 percent.
- Compared to last fall, the proportion of minorities increased 0.7 percent to a record high 23.8 percent. Nationally, minorities decreased 4.1 percent [8].
- The proportion of female students is 56.6 percent. Compared to last fall, the number of male students increased 0.3 percent, and the number of female students decreased 3.1 percent. Nationwide, male students decreased 4.7 percent and female students decreased 6.8 percent [8].
- Different from last year, students with no program of study comprised the largest group (39.6 percent) of total enrollment, followed by students in college parallel programs (30.7 percent) and CTE programs (27.9 percent).
- Percentages of new enrollments (20.2 percent of all, down 10.2 percent from fall 2020; down 6.1 percent nationally) and new enrollments immediately after high school completion (8.3 percent of all, down 17.3 percent from last year) dropped compared to last fall. Percentages of males among immediate enrollees (47.3) are higher than in general enrollment (43.4); percentages of racial minorities (21.7) are slightly lower than those in general enrollment (23.8).



Table of Contents

Students	
Student Demographics	
Academics	
Program Type	
Transfer Major Programs	8
Career Clusters	
Online Enrollment.	
Joint Enrollment	
Immediate Enrollment	
Enrollment Projections	_
References	_





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 [1]; 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 [2]. In fall 2021, a total of 81,749 students enrolled in Iowa community colleges, a 1.6 percent decrease in enrollment from last fall.

Moreover, Figure 1 shows there has been a year-to-year decrease in fall enrollment since 2011. The decrease in 2020 enrollment is the largest in the last eight years, which is due to COVID-19. This fall, there

FALL ENROLLMENT HIGHLIGHTS



Enrollment 81,749 students



1.6% decrease from last fall



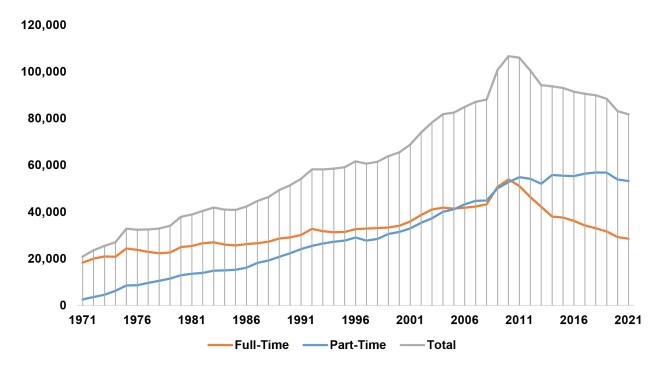
Enrollment increased at 9 colleges and decreased at 5



36.7% of students enrolled full time

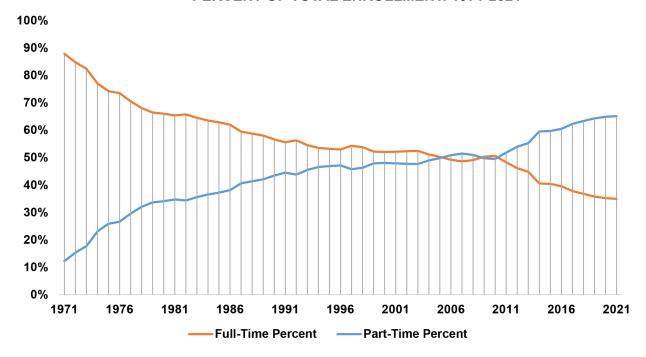
is also a 1.6 percent decrease in enrollment. The negative impact of COVID-19 on enrollment does not only occur in Iowa. According to recent data from the National Student Clearinghouse Research Center, nationally, community colleges have experienced a great loss in fall enrollment (5.6 percent) [8].

FIGURE 1. FALL ENROLLMENT BY STATUS: 1971-2021



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 89.1 percent in 1970 to 34.9 percent in 2021 (Figure 2, next page). This fall, enrollment of full-time students was 28,549 (34.9 percent of total enrollment) students, compared to 29,236 students (35.2 percent) last fall.

FIGURE 2. HISTORICAL ENROLLMENT OF FULL-TIME STUDENTS AND PART-TIME AS A PERCENT OF TOTAL ENROLLMENT: 1971-2021



While the percentage of full-time students has been decreasing since 1970, the percentage of part-time student has increased steadily over the years. In fall 2021, 53,200 students were enrolled as part-time students, which accounted for 65.1 percent of total enrollment, compared to 53,873 part-time students (64.8 percent of total enrollment) last fall. In terms of change from last fall, part-time enrollment decreased 1.2 percent, and full-time enrollment decreased 2.3 percent. Nationwide, part-time and full-time enrollment dropped 2.8 percent and 9.8 percent, respectively [8]. Table 1 (next page) shows the full-time, part-time and total enrollment of each community college. This fall, the enrollment increased at nine colleges, decreased at five colleges and stayed same at one college.



TABLE 1. FALL 2021 ENROLLMENT BY COLLEGE

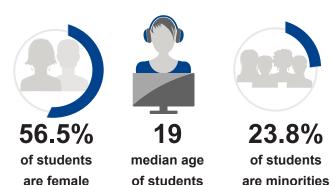
	Full-time		e	Part-tim		
College	Total	N	%	N	%	Change (%) from last year
Northeast Iowa	4,163	1,007	24.2%	3,156	75.8%	-0.1%
North Iowa Area	2,482	1,173	47.3%	1,309	52.7%	-7.4%
Iowa Lakes	1,833	806	44.0%	1,027	56.0%	0.0%
Northwest Iowa	1,706	560	32.8%	1,146	67.2%	2.2%
Iowa Central	5,009	2,497	49.9%	2,512	50.1%	9.8%
Iowa Valley	2,486	1,208	48.6%	1,278	51.4%	-2.8%
Hawkeye	5,085	1,921	37.8%	3,164	62.2%	0.9%
Eastern Iowa	7,460	2,091	28.0%	5,369	72.0%	5.4%
Kirkwood	12,607	4,338	34.4%	8,269	65.6%	2.7%
Des Moines Area	20,536	5,414	26.4%	15,122	73.6%	-10.9%
Western Iowa Tech	5,450	1,690	31.0%	3,760	69.0%	1.7%
Iowa Western	5,684	2,429	42.7%	3,255	57.3%	-1.7%
Southwestern	1,542	607	39.4%	935	60.6%	2.6%
Indian Hills	3,385	1,703	50.3%	1,682	49.7%	3.2%
Southeastern	2,321	1,105	47.6%	1,216	52.4%	2.7%
TOTAL	81,749	28,549	34.9%	53,200	65.1%	-1.6%

Student Demographics

In fall 2021, 56.5 percent of students enrolled were female, 43.5 percent were male and 33 students did not report gender. Female students have outnumbered males nationally in higher education since 1980. Compared to last fall, the number of male students increased 0.3 percent, and the number of female students decreased 3.1 percent. Nationwide, male students decreased 4.7 percent and female students decreased 6.8 percent [8].

COVID-19 impacted the age distribution of fall 2020 students. The average age of community college

FALL ENROLLMENT HIGHLIGHTS



students in fall 2020 was 20 with a median age of 18. This fall, the average age and median age is back to the year before the pandemic, which is 21 with a median age of 19. Students aged under 18 (40.7 percent) and between 18 and 22 (38.9 percent) are the two largest age groups that Iowa's community colleges are serving, followed by students aged between 23 and 26 (6.6 percent) and between 31 and 39 (5.6 percent). Other age groups in total comprised less than 10 percent of fall enrollment this year. Divided by traditional (under 25 years) and nontraditional college age (25 years and older) groups, the proportion

of the traditional college age group dropped by 0.3 percent to 83.4 percent, whereas the proportion of nontraditional college age students increased by 0.3 percent to 16.6 percent (Figure 3). Figure 4 compares national data and Iowa data in terms of enrollment change by age, which shows Iowa lost more students age 40+ than the national average [8].

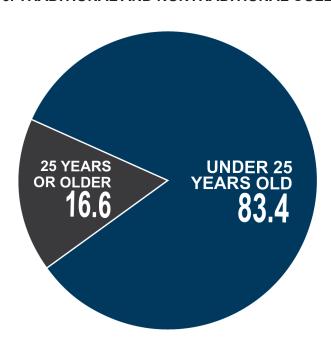
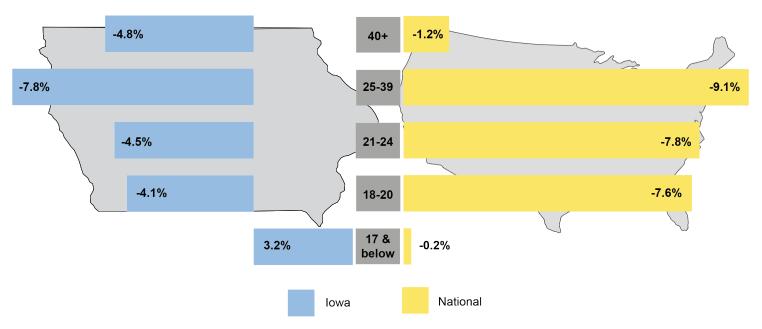


FIGURE 3. TRADITIONAL AND NONTRADITIONAL COLLEGE AGE





Around 90.7 percent of students enrolled in Iowa's community colleges this fall were Iowans. Residents from other states accounted for 8.2 percent of enrolled students, and foreign nationals comprised 1.1 percent (Figure 5). This composition did not vary significantly from last year.

Last fall, there was an unprecedented decline in the percentage of racial and ethnic minorities (23.1 percent). This fall, among the 75,275 students who reported their race and ethnicity, 23.8 percent of students were minorities, which is higher than the year before the pandemic. Hispanics were the second largest racial/ethnic group (9.8 percent), followed by Blacks (7.6 percent) and Asians (2.8 percent). More than two percent indicated they were part of multiple racial and ethnic groups. American Indians and Pacific Islanders respectively constituted 0.6 percent and 0.2 percent. Figure 6 compares national data and Iowa data in terms of enrollment change by race/ethnicity. It shows that Iowa lost more Asian students than the national average, i.e., 5.3 percent (Iowa) versus 2.2 percent (nationwide) [8].

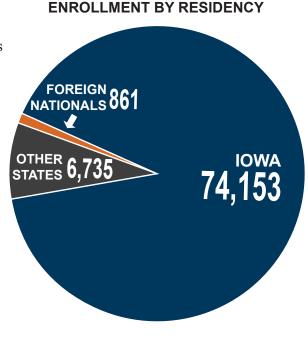


FIGURE 5. FALL 2021

This fall also demonstrated declines and gains in some categories of traditionally underserved populations: students with disabilities represented 3.0 percent of the total enrollment (2.7 percent last year), and the representation of economically disadvantaged students decreased to 20.4 percent from 23.2 percent last fall.

Hawaiian 35.3% or Pacific -4 4% Islander -5.3% Asian Hispanic 2.5% -2.4% **Black** -1.9% -5.1% White -3.3% -4.8% National

FIGURE 6. FALL 2021 ENROLLMENT BY RACE AND ETHNICITY

Academics

ACADEMIC HIGHLIGHTS

Students attending Iowa's community colleges this fall registered for 692,356 credit hours, compared to 705,267 credit hours last fall (a 1.8 percent decrease). On average, students enrolled in 8.5 credit hours in the fall semester, which is consistent with last fall. Figure 7 displays the change of total

8.6
Average number of credit hours



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.

FIGURE 7. TOTAL CREDIT HOURS (TOP) AND AVERAGE CREDIT HOURS REGISTERED: 2017-2021

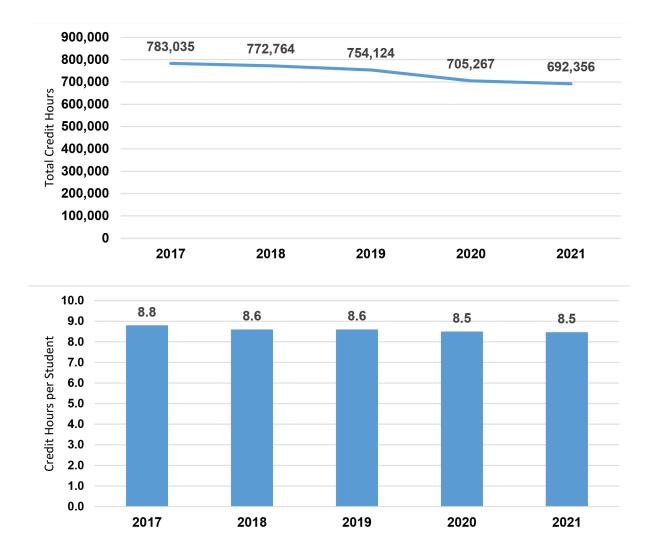


Table 2 summarizes the fall registered credit hours by college. Full-time students registered for 398,549 credit hours, accounting for 57.6 percent of total credit hours registered. This represents a slight decrease from last fall in which the full-time students registered comprised 57.8 percent of total registration hours; however, the average course load for full-time students was 14.0 credit hours, which is 0.1 credit higher than last fall.

Part-time students registered for 293,807 credit hours, accounting for 42.4 percent of total credit hours, a 1.2 percent decrease from last fall. The average course load for part-time students remained virtually unchanged from last fall's 5.5 credit hours.

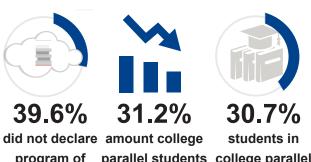
TABLE 2. SUMMARY OF FALL 2021 CREDIT HOURS BY COLLEGE

		Credit Hours Taken by Full-Time Students		Credit Hours Taken by Part-Time Students		Average Course Load	
College	Total Hours	(N)	(%)	(N)	(%)	Full-Time	Part-Time
Northeast Iowa	31,923	14,410	45.1	17,514	54.9	14.3	5.5
North Iowa Area	23,793	16,743	70.4	7,050	29.6	14.3	5.4
Iowa Lakes	17,339	12,327	71.1	5,012	28.9	15.3	4.9
Northwest Iowa	14,536	8,813	60.6	5,723	39.4	15.7	5.0
Iowa Central	50,512	36,817	72.9	13,695	27.1	14.7	5.5
Iowa Valley	24,853	17,768	71.5	7,085	28.5	14.7	5.5
Hawkeye	44,980	27,530	61.2	17,450	38.8	14.3	5.5
Eastern Iowa	57,202	28,279	49.4	28,923	50.6	13.5	5.4
Kirkwood	108,482	59,887	55.2	48,596	44.8	13.8	5.9
Des Moines Area	156,393	74,671	47.7	81,722	52.3	13.8	5.4
Western Iowa Tech	45,839	24,410	53.3	21,429	46.7	14.4	5.7
Iowa Western	54,676	34,705	63.5	19,971	36.5	14.3	6.1
Southwestern	13,978	8,666	62.0	5,312	38.0	14.3	5.7
Indian Hills	25,379	17,655	69.6	7,724	30.4	10.4	4.6
Southeastern	22,473	15,869	70.6	6,604	29.4	14.4	5.4
TOTAL	692,356	398,549	57.6	293,807	42.4	14.0	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



program of parallel students college parallel study decreased programs

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 32,378 students, accounting for 39.6 percent of total enrollment, followed by students in college parallel program (25,090 students, accounting for 30.7 percent) and CTE programs (22,820 students, accounting for 27.9 percent). This fall, 1,442 students enrolled in AGS programs (1.8 percent) and 19 students declared two or more different types of programs. As compared to last year, the number of students with no program of study increased 36.2 percent, whereas the number of students in college parallel programs decreased 27.2 percent. The number of students in AGS programs and in CTE programs also decreased 10.9 percent and 1.8 percent, respectively.

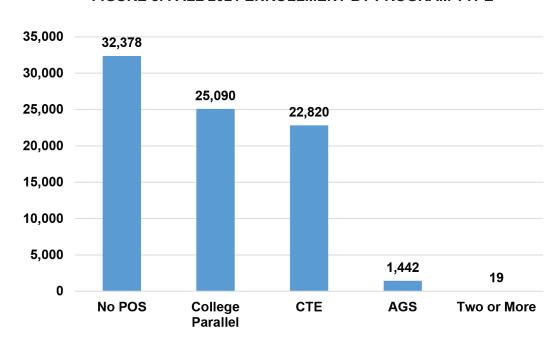
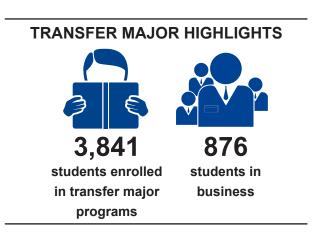


FIGURE 8. FALL 2021 ENROLLMENT BY PROGRAM TYPE

Transfer Major Programs

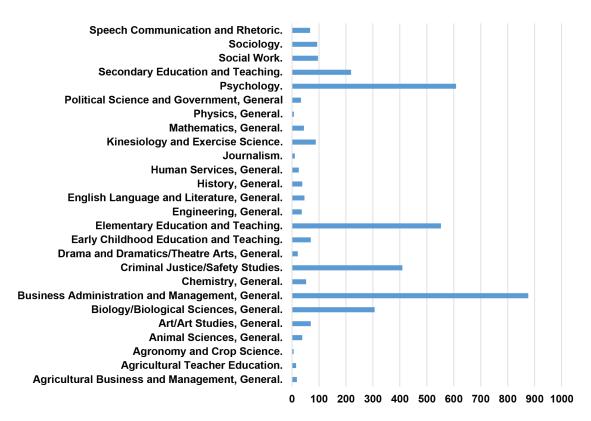
In December 2017, the Iowa Association of Community College Presidents unanimously approved an Iowa Department of Education proposal to establish an authorized process to permit community colleges to adopt transfer majors. This process has now been authorized through Iowa Administrative Code 281 21.3. 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



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 2021, there are 26 potential transfer major disciplines available to community college students, depending on which colleges are offering them. In the fall 2021 enrollment data, there are 3,841 enrolled transfer major students across 26 of these disciplines (Figure 9) and across 14 colleges (Figure 10). The most popular transfer major disciplines for these students include business with 876 enrollments (22.8 percent); psychology with 608 enrollments (15.8 percent); elementary education and training with 552 enrollments (14.4 percent); and criminal justice with 409 enrollments (10.6 percent). These four disciplines represent 63.7 percent of fall 2021 transfer major enrollments.

Career Clusters

The Iowa Department of Education reports CTE programs by the 16 National Career Clusters Framework that aligns academic programs with occupational fields. Information on career clusters can be obtained from www.careerclusters.org

Figure 11 displays the distribution of CTE enrollment by career clusters. Historically, cluster categories with the largest enrollments have been health science, manufacturing business, management and administration,

THREE LARGEST CAREER CLUSTERS







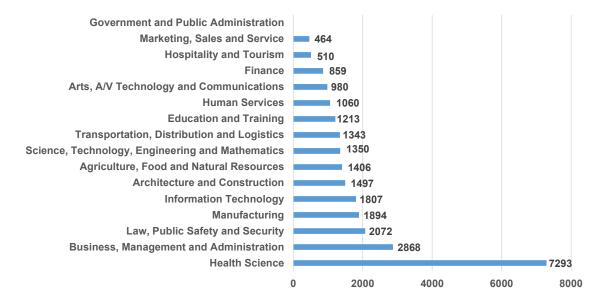
7,293 students in health science

2,868 students in business

2,072 students in law, public safety and security

and manufacturing. This fall, the top three cluster categories with the largest enrollment are health science (7,293 students, and a 7.4 percent decrease from last fall), business, management and administration (2,868 students, and a 16.4 percent increase), and law, public safety and security (2,072 students, a 7.0 percent decrease). Huge increase appeared in and education and training (90.7 percent), and science, technology, engineering and mathematics (49.3 percent).

FIGURE 11. FALL 2021 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 2021, 41,216 students enrolled

ONLINE ENROLLMENT HIGHLIGHTS



15.9% decrease in

decrease in online enrollment

41,216 students enrolled in at

least one online course

decrease in credit hours for

online classes

in at least one online course (a 15.9 percent decrease from last year) and 10,543 students enrolled in at least one blended course (a 37.3 percent decrease from last year). Online course students registered for 238,345 credit hours. Compared to 328,603 credit hours last fall, this volume represents a 27.5 percent decrease. This fall, students registered for 47,168 credit hours in blended classes, compared to 100,466 credit hours last fall, representing a decrease of 53.1 percent. The decrease in online enrollment and online credit hours can be explained by the fact that in-person classes are available in most community colleges this fall.

TABLE 3. FALL 2021 ONLINE AND BLENDED HOURS AND ENROLLMENT BY COLLEGE

Online Course Enrollment

Blended Course Enrollment

College	Hours	Headcount	% Change Credit Hours	Hours	Headcount	% Change Credit Hours
Northeast Iowa	9,641	1,670	-22.9%	1,442	393	-55.8%
North Iowa Area	7,839	1,585	-4.2%	634	207	-42.1%
Iowa Lakes	5,622	1,092	-45.1%	1,315	266	-
Northwest Iowa	6,380	1,153	-4.3%	195	51	-45.4%
Iowa Central	10,554	1,692	34.9%	3,739	800	-79.8%
Iowa Valley	7,506	1,505	4.6%	2,311	585	12.7%
Hawkeye	11,554	2,230	21.2%	395	126	-93.6%
Eastern Iowa	23,074	3,599	-14.2%	3,399	529	-31.4%
Kirkwood	36,372	6,132	-36.9%	9,504	2,213	-64.4%
Des Moines Area	66,076	11,227	-46.1%	16,810	3,699	94.7%
Western Iowa Tech	15,932	2,696	-7.7%	3,604	897	24.3%
Iowa Western	20,278	3,264	-12.1%	2,367	417	-90.2%
Southwestern	4,467	875	-10.0%	159	50	-25.0%
Indian Hills	5,374	1,209	-3.6%	373	131	-37.4%
Southeastern	7,677	1,287	-9.0%	922	179	28.4%
TOTAL	238,345	41,216	-27.5%	47,168	10,543	-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, 35,634 high school students (unduplicated headcount) participated in at least one joint enrollment program, compared to 34,450 participants last fall, which represents a 3.4 percent increase, compared to the 0.2 percent decrease indicated by nationwide data [8]. Students participating in joint enrollment programs accounted for 43.6 percent of total enrollment.

High school students participating in joint enrollment programs this fall registered for 187,966 credit hours of classes, compared to 176,626 credit hours last fall, which represents a 6.4 percent increase. The number of credit hours attributed to joint enrollment programs this fall accounted for 27.1 percent of total registered credit hours, compared to 25.9 percent last fall. On average, students enrolled in 5.3 credit hours, which is 0.2 credits higher than last fall.

In terms of joint enrollment type, 99.2 percent of high school students participated in joint enrollment through contractual agreements (Figure 12), and 0.8 percent through direct payment of tuition. These

JOINT ENROLLMENT HIGHLIGHTS

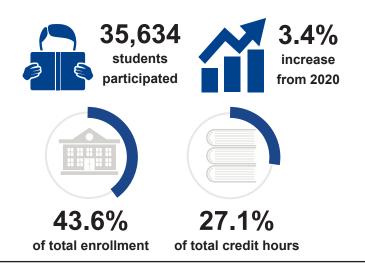
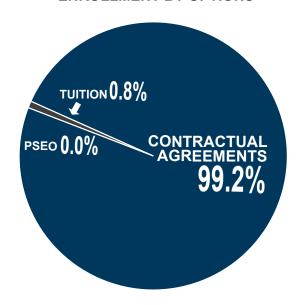


FIGURE 12. FALL 2021 JOINT ENROLLMENT BY OPTIONS



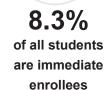
percentages are consistent with last fall; however, no student participated in jointed enrollment through PSEO, compared 17 students last year. The decline in PSEO enrollments is expected, as the rules for types of joint enrollment changed as of academic year 2017-2018 [5].

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 (2.0 percent less than last year), with 34.1 percent of them having previous joint enrolled experience (down 3.6 percent from last year). Proportionally, however, those declines constitute significant drops, 10.2 and 17.3 percent, respectively. Nationwide, first-year enrollments in community colleges dropped 6.1 percent [8]. 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 onequarter to one-third of all Iowa high school graduating classes, and around one-tenth of

IMMEDIATE ENROLLMENT HIGHLIGHTS







55.1% of immediate enrollees had JE experience



20.2%

of fall

enrollment is

new students

47.3% of immediate enrollees are male



21.7% of immediate enrollees are a racial minority

Iowa community colleges' total fall enrollment. COVID-19 did not seem to impact the stability of those proportions, though this year immediate enrollees comprised 8.3 percent of total Fall 2021 enrollment, a 1.5 percent decline from last fall.

This fall, a state identification number has been used to match Iowa high school students to community college enrollees. The matching procedure identified 6,761 students who entered Iowa community colleges directly after graduating from their Iowa high schools. Distributed by community college, they represent a range of 5.7 percent to 12.3 percent of the total fall enrollment.

Over 55.1.0 percent of immediate enrollees (3,726) took some college-level courses through joint enrollment opportunities while in an Iowa high school, a 4.9 percent decline from last Fall. Distributed by college, those percentages range from 30.6 to 82.6.

With the natural exception of age, the demographics of immediate enrollees is similar to all Fall 2021 enrollees, though males comprise a higher percentage of 47.3 (increased 1.5 percent compared to Fall 2020), and racial minorities are somewhat lower at 21.7 percent (a 0.4 percent decrease from last Fall). Most of the immediate enrollees (97.1 percent) are between 18 and 20 years old; 2.8 percent are under 18 and 0.2 percent are over 20 years old. (Figure 14).





FIGURE 13. FALL 2021 SHARE OF IMMEDIATE ENROLLEES IN IOWA COMMUNITY COLLEGES

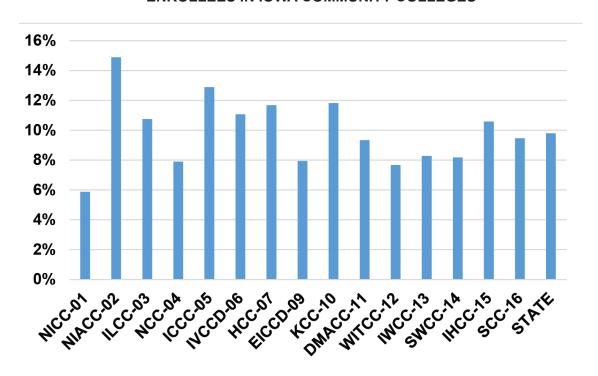
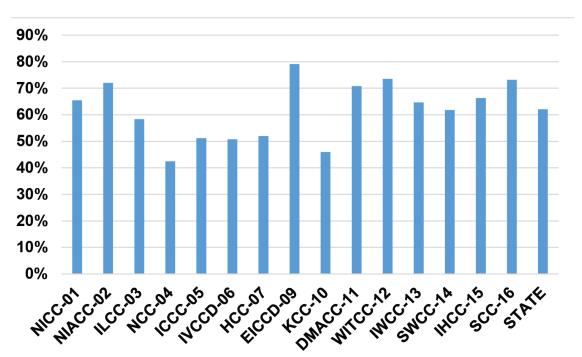


FIGURE 14. PERCENT OF IMMEDIATE ENROLLEES WITH PRIOR JOINT ENROLLMENT EXPERIENCE BY COMMUNITY COLLEGE



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].

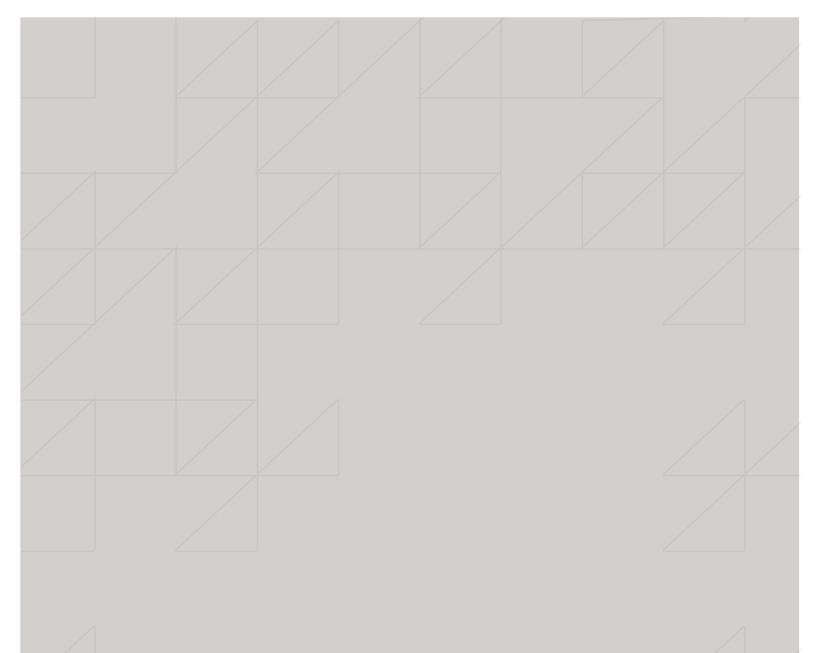
In terms of community college enrollment, the causal forecasting method assumes that enrollment in any given year is under the influence of other relevant factors. Such factors may include, but are not limited to, the distribution of demographics and economy in that year. Therefore, in order to estimate fall 2022 community college enrollment with causal forecasting methods, obtaining information regarding the distribution of demographics and the economy in 2022 is a prerequisite; however, such information is unknown for 2022.

Given that Iowa's community college enrollment data is available back to the 1960s, and that information on other relevant factors is unknown for 2022, time series methods are more appropriate for fall 2022 enrollment forecasting.

We used a single exponential smoothing equation, $\hat{y}t+1 = \partial yt + (1-\partial)\hat{y}t$, with time series methods to estimate fall 2021 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., yt) 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 might still impact the fall enrollment, we chose constant values close to one to forecast fall 2022 enrollment. We estimate that the total enrollment for fall 2022 will fall between 81,830 and 83,269 students; however, the actual enrollment for fall 2022 might fall out of this estimated range due to the uncertainty of COVID-19.

References

- 1. W.N. Grubb. Learning and earning in the middle, part I: National studies of pre-baccalaureate education. Economics of Education Review. 2002.
- 2. Paul Davidson, Nathan Bomey and Jessica Menton, It may feel like 2008 all over again, but here's how the coronavirus crisis is different. USA TODAY, March 11, 2020. Retrieved from
- 3. https://www.usatoday.com/story/money/2020/03/11/recession-heres-how-coronavirus-crises-different-2008/5012228002/ on Nov. 5, 2020.
- 5. See revision to Iowa Code Chapter 261E (Senior Year Plus), section 6, subsection 3.
- 6. P. J. Brockwell and R. A. Davis. Introduction to Time Series and Forecasting. Springer, New York, 1996.
- 7. P. S. Kalekar. "Time series forecasting using Holt-Winters exponential smoothing," Kanwal Rekhi School of Information Technology, 2004.
- 8. National Student Clearinghouse. Retrieved from https://nscresearchcenter.org/stay-informed/ on October 29, 2021.





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.