

# Fall Enrollment Report

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2017



**COMMUNITY COLLEGES &  
WORKFORCE PREPARATION**  
*PROSPERITY THROUGH EDUCATION*

**IOWA DEPARTMENT  
OF EDUCATION**



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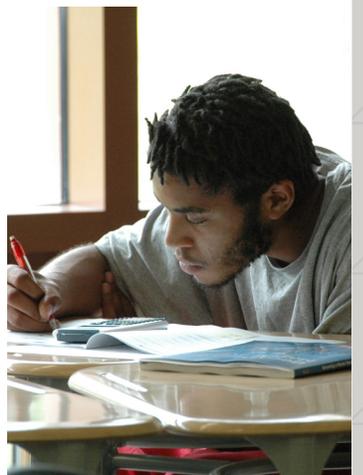
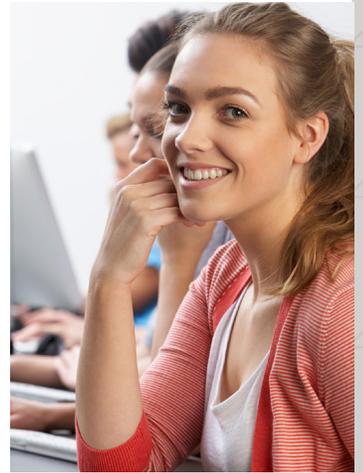
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## Executive Summary

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

- » Fall 2017 enrollment decreased less than one percent to 90,531 students.
- » Part-time enrollment reached a record high, comprising 62.2 percent of total fall enrollment.
- » Minorities comprised 22.2 percent of total fall enrollment.
- » Total credit hours registered decreased 2.8 percent to 783,036 credit hours.
- » Average course load for both full- and part-time students remained relatively unchanged at 13.8 credit hours and 5.5 credit hours, respectively.
- » Students with no program of study comprised 37.7 percent of total fall enrollment, followed by college parallel transfer programs (31.2 percent) and CTE programs (29.0 percent).
- » The number of high school students participating in joint enrollment grew 2.7 percent to 34,928 students, accounting for 38.6 percent of community college enrollment (unduplicated).
- » Of students who participated in joint enrollment while in high school, the majority (91.0 percent) did so through contracted courses between high schools and community colleges.





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## Students

In fall 2017, a total of 90,531 students enrolled in Iowa community colleges, a decrease of less than one percent from last fall. Although fall enrollment has decreased since peaking in 2010, Figure 1 displays the overall increase over the past 50 years.

The number of full-time students (i.e., students who enrolled in 12 or more credit hours per semester) as a percentage of total fall enrollment has steadily declined from 90.9 percent in 1968 to 37.8 percent in 2017 (Figure 2). This fall, enrollment of full-time students was 34,195 (37.8 percent of total enrollment)

students, compared to 36,151 students (39.5 percent) last fall.

While the percentage of full-time students has been decreasing since 1968, part-time enrollment has hit a record high. This fall, 56,336 students were enrolled as part-time students, which accounted for 62.2 percent of total enrollment, compared to 55,279 part-time students (60.5 percent of total) last fall.

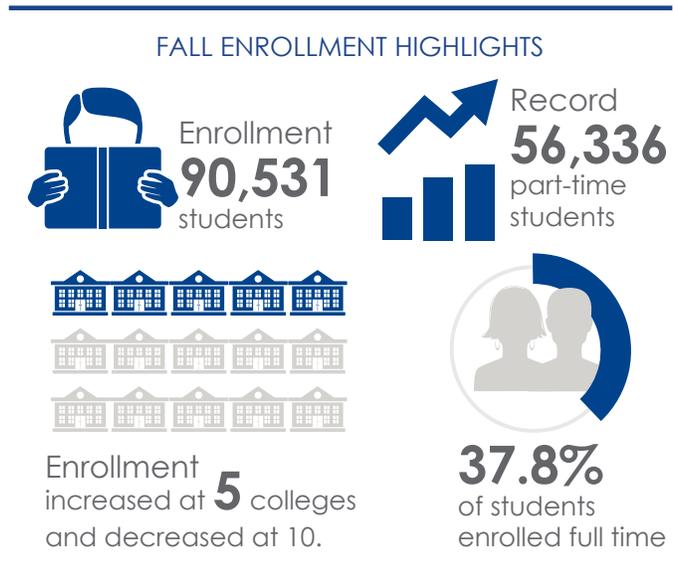


FIGURE 1: FALL ENROLLMENT BY STATUS: 1968-2017

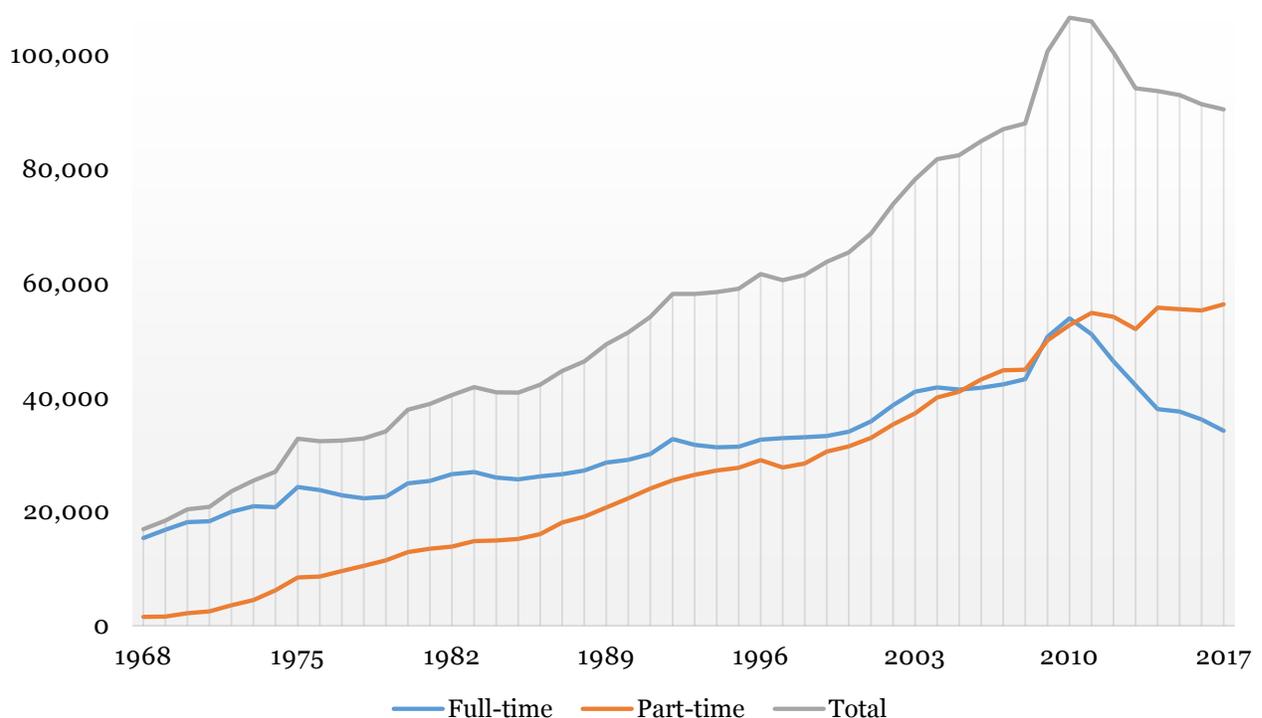


FIGURE 2: HISTORICAL ENROLLMENT OF FULL-TIME STUDENTS AND PART-TIME STUDENTS AS A PERCENT OF TOTAL ENROLLMENT: 1968-2017

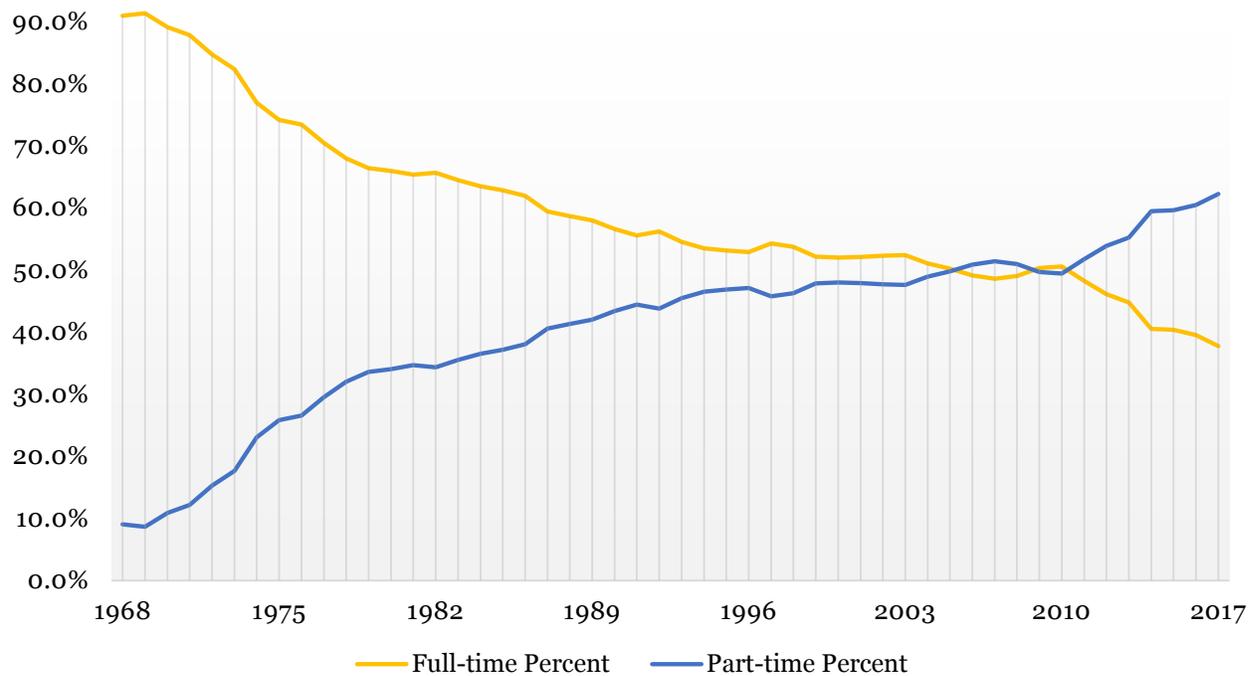


TABLE 1: FALL 2017 ENROLLMENT BY COLLEGE

College	Total	Full-time		Part-time		Change (%) from last year
		N	%	N	%	
Northeast Iowa	4,545	1,221	26.9%	3,324	73.1%	-3.9%
North Iowa Area	2,947	1,346	45.7%	1,601	54.3%	-2.5%
Iowa Lakes	2,067	1,001	48.4%	1,066	51.6%	-4.3%
Northwest Iowa	1,642	559	34.0%	1,083	66.0%	0.2%
Iowa Central	5,489	2,774	50.5%	2,715	49.5%	-4.0%
Iowa Valley	2,888	1,391	48.2%	1,497	51.8%	0.5%
Hawkeye	5,605	2,525	45.0%	3,080	55.0%	1.3%
Eastern Iowa	7,666	2,421	31.6%	5,245	68.4%	-2.6%
Kirkwood	14,480	5,639	38.9%	8,841	61.1%	-1.8%
Des Moines Area	22,982	6,476	28.2%	16,506	71.8%	2.4%
Western Iowa Tech	5,730	1,898	33.1%	3,832	66.9%	1.2%
Iowa Western	6,168	2,897	47.0%	3,271	53.0%	-0.2%
Southwestern	1,574	685	43.5%	889	56.5%	-4.4%
Indian Hills	4,090	2,149	52.5%	1,941	47.5%	-6.3%
Southeastern	2,658	1,213	45.6%	1,445	54.4%	-6.5%
<b>TOTAL</b>	<b>90,531</b>	<b>34,195</b>	<b>37.8%</b>	<b>56,336</b>	<b>62.2%</b>	<b>-1.0%</b>

## Students Demographics

In fall 2017, 54.5 percent of students enrolled at an Iowa community college were female, 45.4 percent were male, and less than 0.2 percent did not report gender (Figure 3). Nationally, females have outnumbered males in higher education since 1980.

The average age of community students enrolled this fall is 21, and the median age is 19, which is consistent with last year. Figure 4 displays the age distribution of students enrolled in Iowa community colleges this fall. The two largest age groups are students between the ages of 18 and 22 (40.9 percent), and students under 18 (35.3 percent), followed by students between 23 and 26 (8.0 percent), and between 31 and 39 (6.2 percent). Other age groups comprised less than 10 percent of fall enrollment this year.

### STUDENT DEMOGRAPHIC HIGHLIGHTS



**54.5%**  
of students  
are female



Median  
age of students  
**19**



**22.2%**  
of students are  
minorities

FIGURE 3: FALL 2017 ENROLLMENT BY GENDER

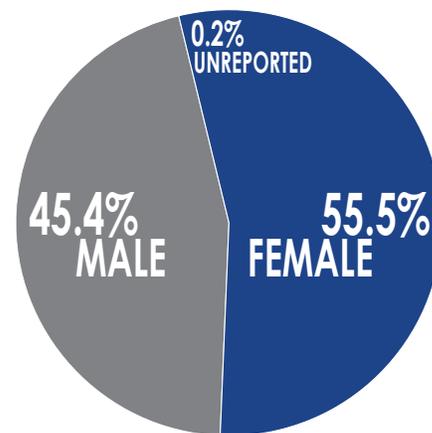
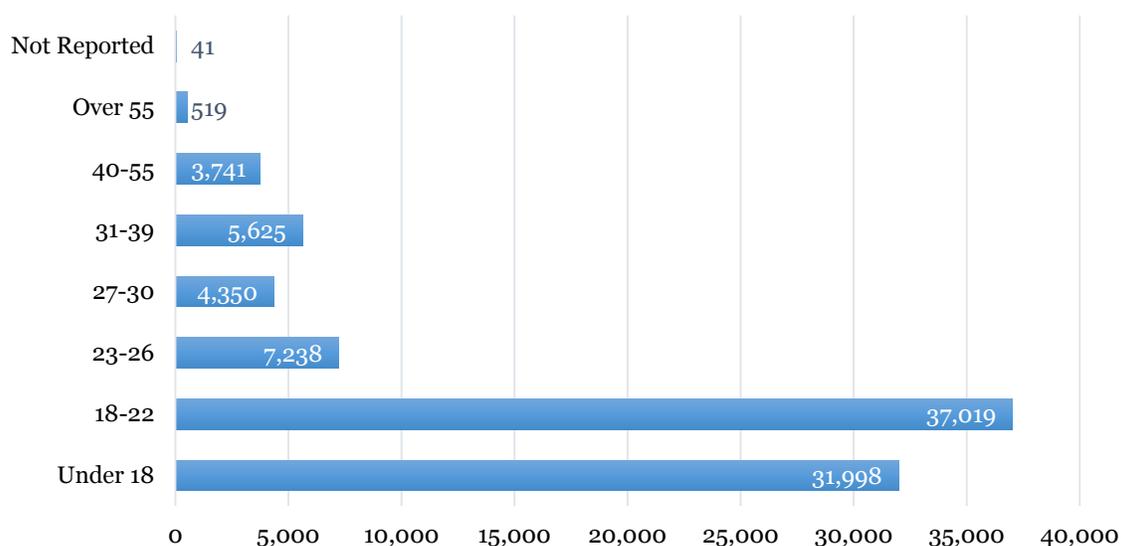


FIGURE 4: AGE DISTRIBUTION OF STUDENTS ENROLLED IN FALL 2017



This fall, 6,167 students (6.8 percent) did not report their race and ethnicity. Among the 84,364 students (Figure 5) who did report race and ethnicity, 22.2 percent are minorities, compared to 20.5 percent last year. Hispanic students were the second largest racial/ethnic group (8.3 percent), followed by African-American (7.8 percent), and Asian (3.0 percent). More than two percent indicated they were part of multiple racial and ethnic groups. American Indian and Pacific Islander respectively constitute 0.7 percent and 0.1 percent.

In terms of residency, approximately 90 percent of students enrolled in Iowa’s community colleges this fall are Iowans. Residents from other states accounted for 8.8 percent of total fall enrollment, while foreign nationals comprised 1.2 percent (Figure 6), and one student did not report.

FIGURE 6: FALL 2017 ENROLLMENT BY RESIDENCY

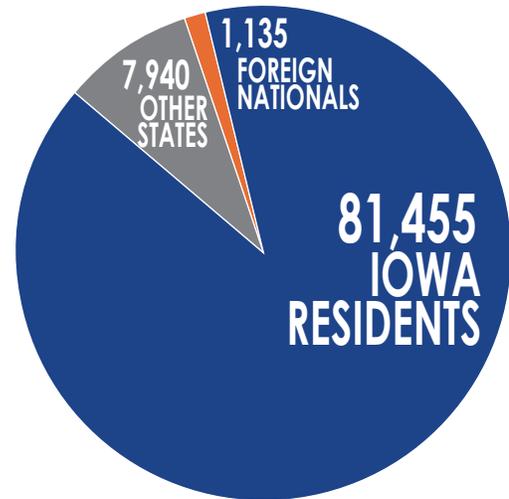
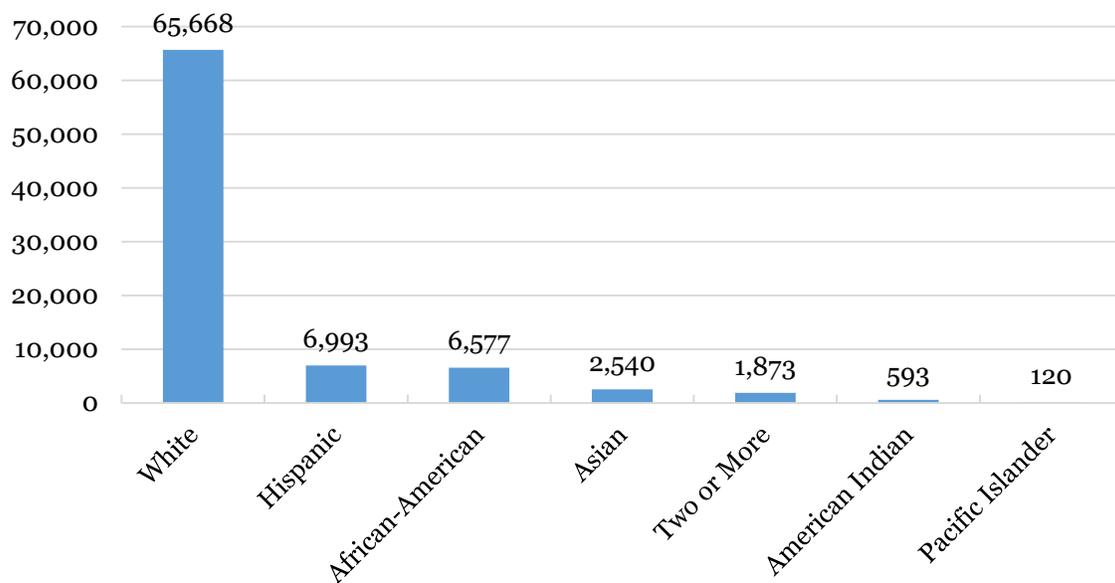


FIGURE 5: FALL 2017 ENROLLMENT BY RACE AND ETHNICITY



## Academics

Students attending Iowa's community colleges registered for 783,036 credit hours, compared to 805,488 credit hours last fall (a 2.8 percent decrease). On average, students enrolled in 8.6 credit hours compared to 8.8 credit hours last fall. Figures 7 and 8 display

the change of total credit hours and the average credit hours registered per student over the last five years. The decreases in both total and average credit hours, as indicated in the figures below, align with the enrollment decline in recent years.

### STUDENT ACADEMIC HIGHLIGHTS



**8.6**  
Average  
number of  
credit hours



Total Credit  
Hours Down  
**2.8%**  
since last year

FIGURE 7: TOTAL CREDIT HOURS REGISTERED: 2013-2017

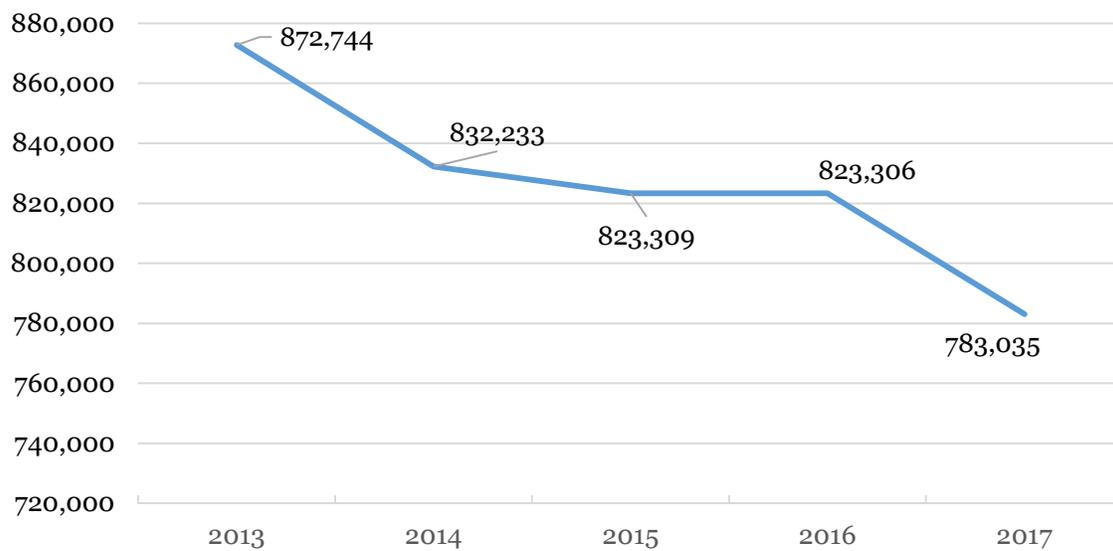


FIGURE 8: AVERAGE CREDIT HOURS REGISTERED PER STUDENT: 2013-2017

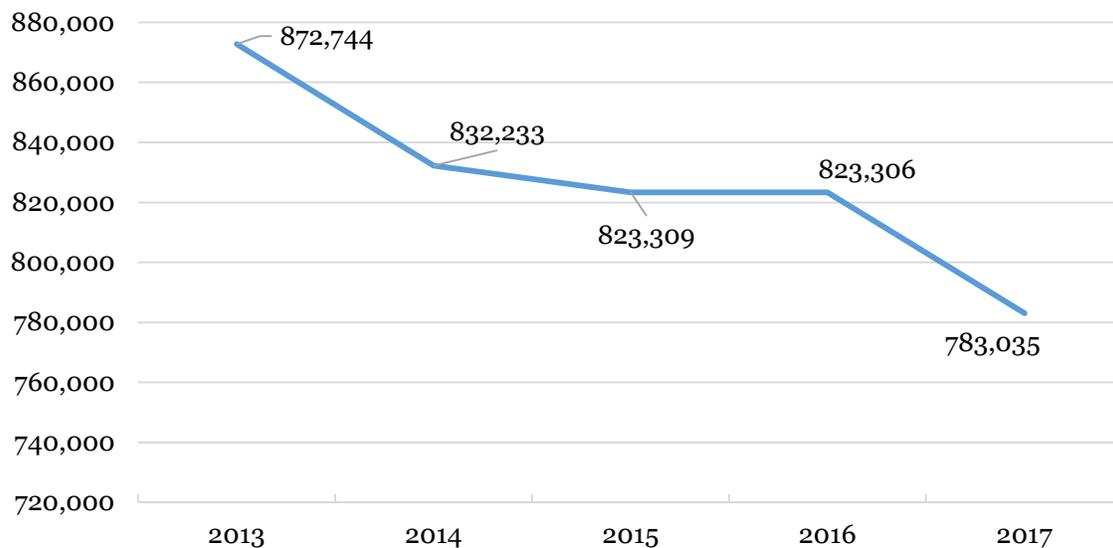


Table 2 summarizes the total number of credit hours registered this fall by college. Full-time students registered for 473,519 credit hours, accounting for 60.5 percent of total credit hours. This represents a slight decrease from last fall, in which full-time students registered for 62.1 percent of total credit hours. However, the average course load for full-time students remained virtually unchanged at 13.8 credit hours.

Part-time students registered for 309,517 credit hours, accounting for 39.5 percent of total credit hours. This represents a 1.5 percent increase from last fall. Similarly, the average course load for part-time students remained virtually unchanged from last fall's 5.5 credit hours.

TABLE 2: SUMMARY OF FALL 2017 TOTAL REGISTERED CREDIT HOURS BY COLLEGE

College	Total Hours	Credit Hours Taken by Full-Time Students		Credit Hours Taken by Part-Time Students		Average Course Load	
		(N)	(%)	(N)	(%)	Full-Time	Part-Time
Northeast Iowa	35,259	17,371	49.3	17,888	50.7	14.2	5.4
North Iowa Area	27,704	19,367	69.9	8,337	30.1	14.4	5.2
Iowa Lakes	21,017	15,581	74.1	5,436	25.9	15.6	5.1
Northwest Iowa	13,862	8,556	61.7	5,306	38.3	15.3	4.9
Iowa Central	55,321	40,028	72.4	15,294	27.6	14.4	5.6
Iowa Valley	28,003	20,263	72.4	7,740	27.6	14.6	5.2
Hawkeye	52,096	35,561	68.3	16,535	31.7	14.1	5.4
Eastern Iowa	62,037	32,627	52.6	29,410	47.4	13.5	5.6
Kirkwood	129,528	78,017	60.2	51,512	39.8	13.8	5.8
Des Moines Area	179,675	88,555	49.3	91,120	50.7	13.7	5.5
Western Iowa Tech	47,548	27,154	57.1	20,394	42.9	14.3	5.3
Iowa Western	60,103	41,077	68.3	19,026	31.7	14.2	5.8
Southwestern	15,105	10,009	66.3	5,096	33.7	14.6	5.7
Indian Hills	30,598	22,011	71.9	8,588	28.1	10.2	4.4
Southeastern	25,180	17,343	68.9	7,837	31.1	14.3	5.4
<b>TOTAL</b>	<b>783,036</b>	<b>473,519</b>	<b>60.5</b>	<b>309,517</b>	<b>39.5</b>	<b>13.8</b>	<b>5.5</b>

Note: Rounding may yield minor inaccuracies in total hours.

## Program Type

Community college programs are generally categorized as college parallel (transfer arts and sciences), career and technical education (CTE), or general studies. College parallel programs prepare students for matriculation into four-year colleges or universities; CTE programs prepare students for entry into the workforce; and general studies allow

students to receive two-year degrees with a custom-selected set of courses that do not lead to specific occupations or direct transfer. Students who declared two or more types of programs were reported as a separate group. Additionally, students who were either ineligible or 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 9, the “no program of study” group was the largest, accounting for 37.7 percent of total enrollment (34,134 students), followed by college parallel programs at 31.2 percent (28,273 students), and CTE programs at 29.0 percent (26,262 students). This fall, 1,740 students enrolled in associate of general studies (AGS) degree programs (1.9 percent) and 122 students declared two or more types of programs (0.1 percent).

CTE enrollment declined 0.6 percent from last year with 26,262 students, which is down from 26,417 last year. Enrollment comparisons in other program types are not available as AGS, multiple program types, and “no program of study” were newly identified groups this year.

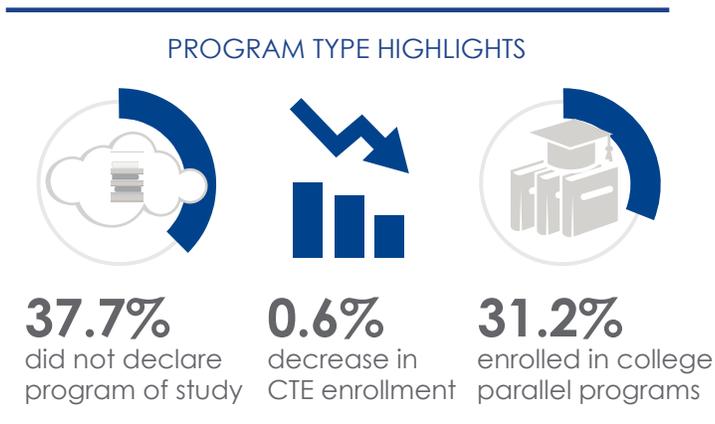
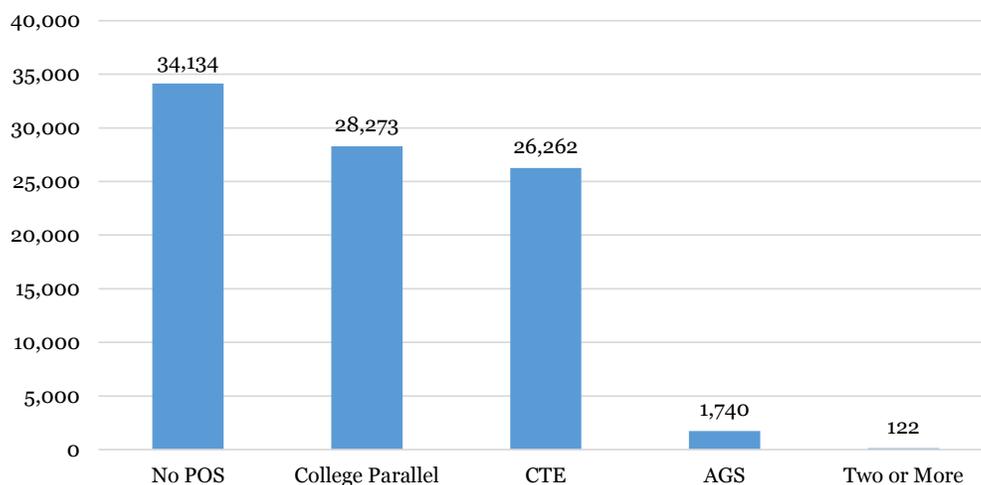


FIGURE 9: FALL 2017 ENROLLMENT BY PROGRAM TYPE



*Note:* No POS refers to students who were either ineligible or not willing to declare a program of study. Two or more refers to students who declared two or more different programs of study.

## 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](http://www.careerclusters.org).

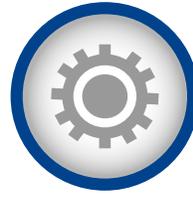
Each student can be enrolled in multiple career clusters. Of the 26,262 students enrolled in CTE programs, several students

enrolled in more than one career cluster, which yielded a total enrollment of 26,270 students across all 16 career clusters. Figure 10 displays the distribution of CTE enrollment by career clusters. Historically, cluster categories with the largest enrollments have been health science; manufacturing; and business, management and administration, and this fall was no exception. A total of 8,644 students enrolled in health science (a 1.9 percent decrease from last fall), 2,400 students enrolled in manufacturing (a 3.4 percent decrease), and 1,990 students enrolled in business, management and administration (an 8.1 percent decrease).

### THREE LARGEST CAREER CLUSTERS



**8,644**  
students in  
health science

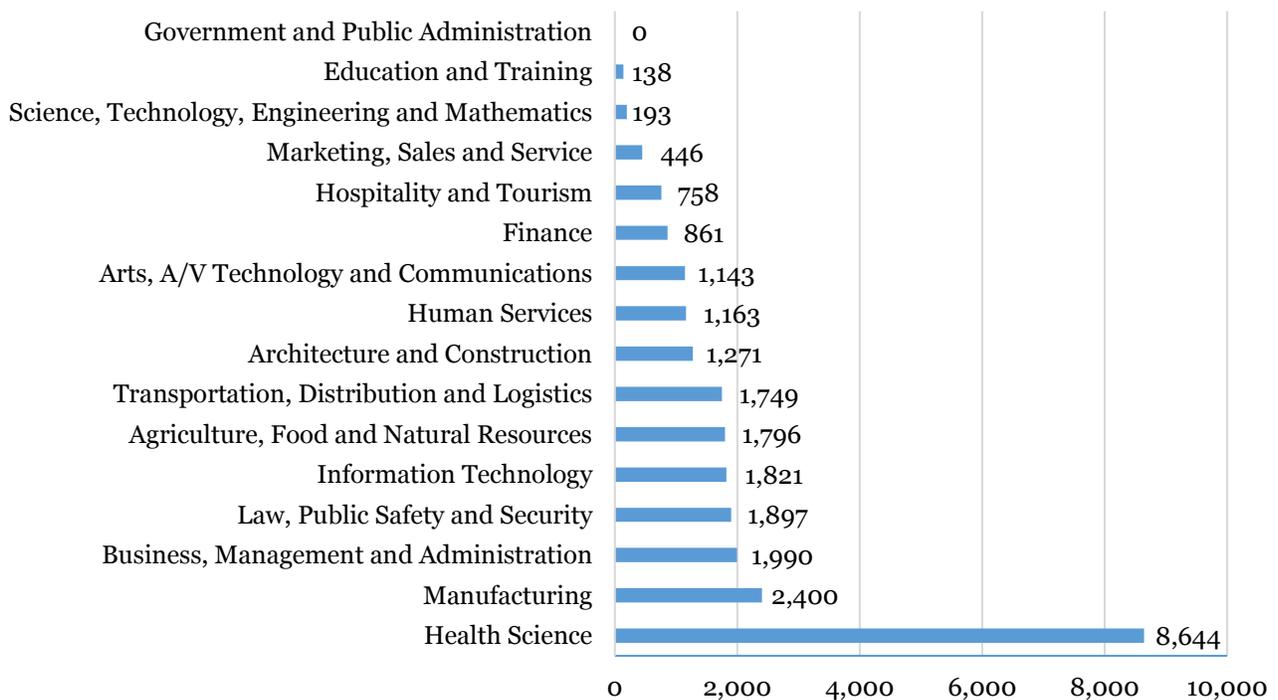


**2,400**  
students in  
manufacturing



**1,990**  
students in  
business

FIGURE 10: FALL 2017 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.

### ONLINE ENROLLMENT HIGHLIGHTS

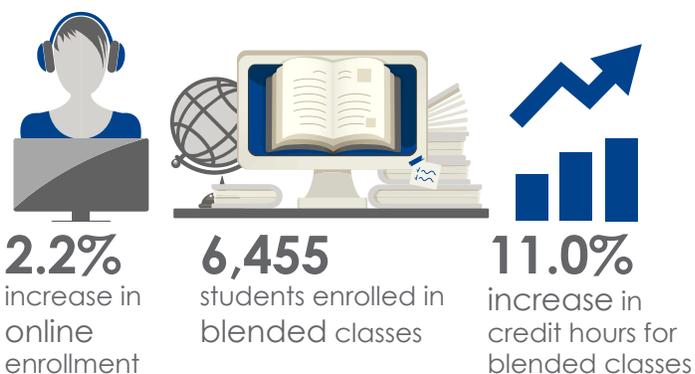


Table 3 summarizes the number of students enrolled in online and blended classes, as well as the credit hours attributed to each. In fall 2017, 31,252 students enrolled in at least one online course (a 2.2 percent increase from last year) and 6,455 students enrolled in at least one blended course (a 15.9 percent increase from last year). Online course students registered for 154,925 credit hours. Compared to 154,179 credit hours last fall, this represents a 0.5 percent increase. This fall, students registered for 23,658 credit hours in blended classes, compared to 21,332 credit hours last fall, representing an increase of 11.0 percent.

TABLE 3: FALL 2017 ONLINE AND BLENDED COURSE ENROLLMENT BY COLLEGE

College	Online Course Enrollment			Blended Course Enrollment		
	Hours	Headcount	% Change Credit Hours	Hours	Headcount	% Change Credit Hours
Northeast Iowa	5,732	1,124	-7.4	2,332	617	49.4
North Iowa Area	6,120	1,596	8.8	850	269	-46.0
Iowa Lakes	5,314	1,011	17.8	-	-	-
Northwest Iowa	4,955	993	3.3	378	59	9.6
Iowa Central	7,769	1,523	-1.4	2,172	886	56.6
Iowa Valley	5,658	1,259	0.9	1,735	517	2.3
Hawkeye	7,913	1,693	-0.2	4,205	1,054	8.2
Eastern Iowa	16,036	2,740	3.5	893	198	47.5
Kirkwood	21,294	4,295	-4.7	2,383	696	16.1
Des Moines Area	31,778	6,680	7.0	-	-	-
Western Iowa Tech	13,098	2,448	4.0	1,603	325	65.3
Iowa Western	13,856	2,658	-6.7	3,129	793	-14.4
Southwestern	3,785	774	4.6	493	136	-
Indian Hills	5,570	1,371	-18.1	2,926	783	-9.9
Southeastern	6,048	1,087	-3.0	559	112	68.4
<b>TOTAL</b>	<b>154,925</b>	<b>31,252</b>	<b>0.5</b>	<b>23,658</b>	<b>6,445</b>	<b>11.0</b>

## 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, 34,928 high school students participated in at least one joint enrollment program, compared to 34,018 participants last fall, representing a 2.7 percent increase. Students participating in joint enrollment programs accounted for 38.6 percent of total enrollment.

High school students participating in joint enrollment programs this fall registered for 178,171 credit hours of classes, compared to 163,755 credit hours last fall, representing an 8.8 percent increase. The number of credit hours attributed to joint enrollment programs this fall accounted for 22.8 percent of total registered credit hours, compared to 20.3 percent last fall. On average, students enrolled in 5.1 credit hours, compared to 4.8 credit hours last fall.

In terms of joint enrollment type, 91.0 percent of high school students participated in joint enrollment through contractual agreements (Figure 11), 7.8 percent through PSEO, and 1.2 percent through direct payment of tuition. Last year, contractual agreement, PSEO, and direct payment of tuition comprised 89.1 percent, 10.1 percent, and 0.8 percent of total joint enrollment, respectively.

### JOINT ENROLLMENT HIGHLIGHTS

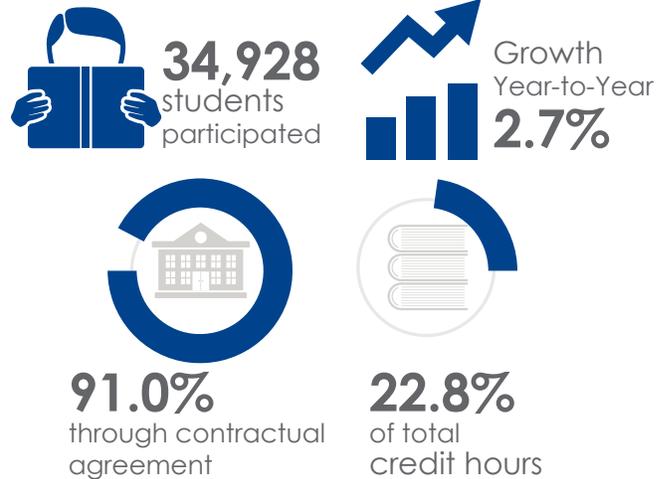
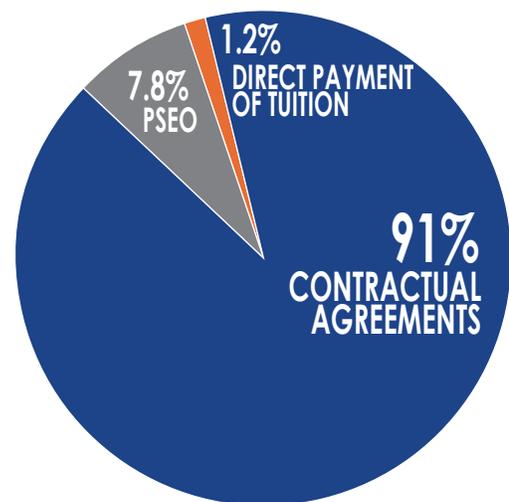


FIGURE 11: FALL 2017 JOINT ENROLLMENT BY OPTIONS



## Immediate Enrollment

Every fall, Iowa community colleges enroll a large number of new students. This fall, they comprised 31.1 percent of total enrollment. A sizable portion of the first-time community college population is comprised of students directly out of high school. According to annually stable patterns, such cohort of “immediate enrollees” comprises one-quarter to one-third of all Iowa high school graduating classes, and close to one-tenth of Iowa community colleges’ total fall enrollment.

### IMMEDIATE ENROLLMENT HIGHLIGHTS



**9.6%**  
of all students  
are immediate  
enrollees



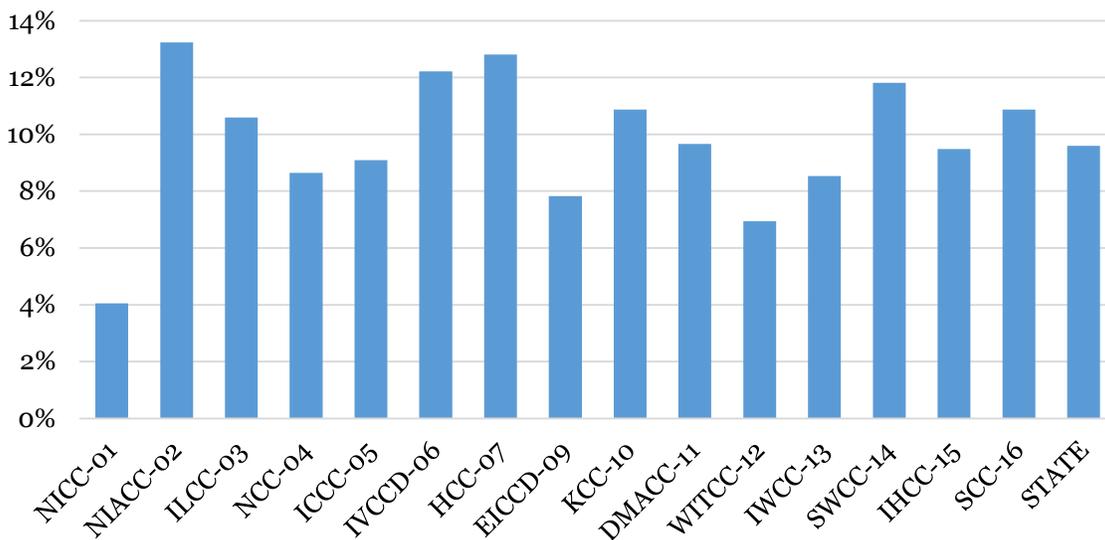
**31.1%** of  
fall enrollment is  
from immediate  
enrollees



**52.2%**  
participated in  
joint enrollment  
in high school

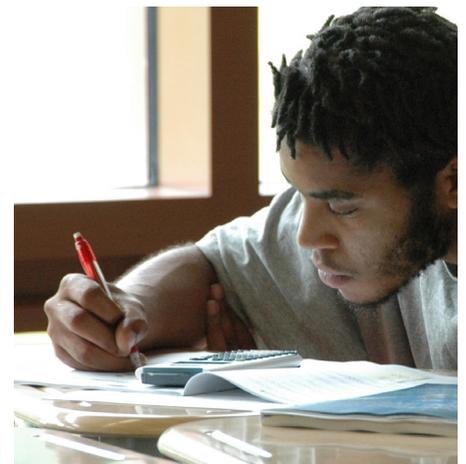
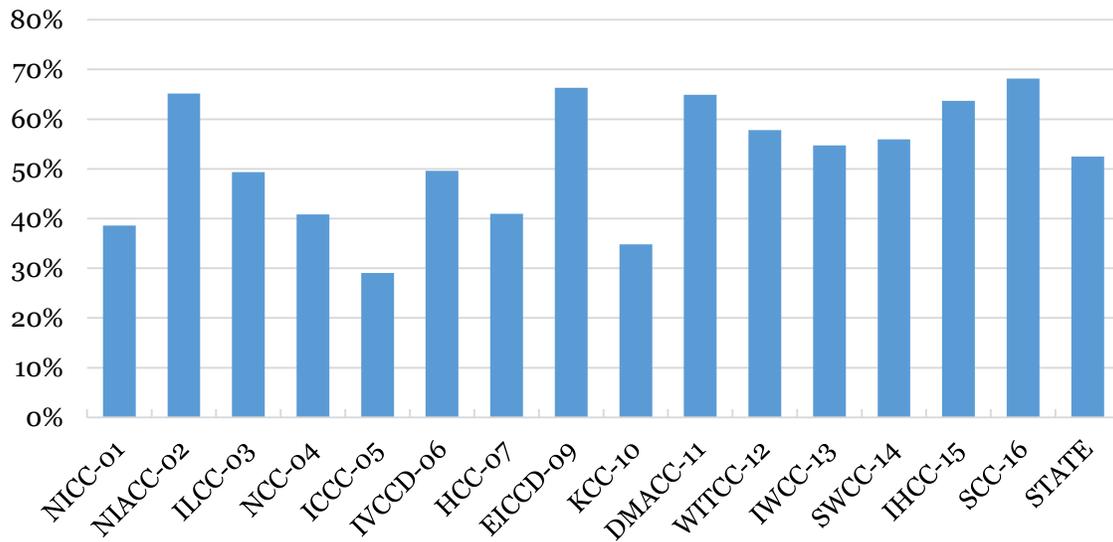
This fall, a state identification number has been used to match Iowa high school students to community college enrollees. The matching procedure identified 8,687 students who made up 9.6 percent of the total fall enrollment at Iowa’s community colleges. Distributed by community college, they present a range from 4.1 percent to 13.2 percent of the total fall enrollment (Figure 12).

FIGURE 12: FALL 2017 SHARE OF IMMEDIATE ENROLLEES IN IOWA COMMUNITY COLLEGES



Close to 52.5 percent of immediate enrollees (4,558) took some college level courses through joint enrollment opportunities while in Iowa high school. Distributed by college, those percentages range from 29.1 to 68.2 (Figure 13).

FIGURE 13: PERCENT OF IMMEDIATE ENROLLEES WITH PRIOR JOINT ENROLLMENT EXPERIENCE BY COMMUNITY COLLEGE



## Enrollment Projections

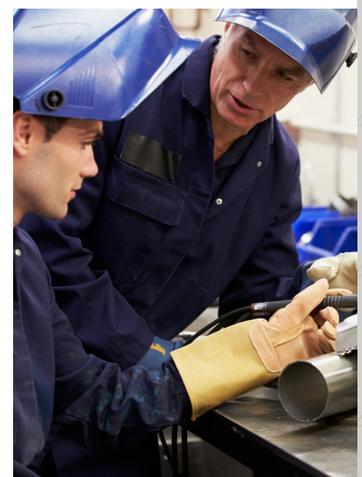
There are two quantitative forecasting methods that are often used for enrollment projections: causal forecasting methods and time series methods. Causal forecasting methods are based on the assumption that the variable being forecasted is under the influence of one or more other variables [1]. Time series models assume that all information needed for forecasting is contained in data observed over successive periods in time, and that the past data patterns (i.e., trend, seasonal, cyclical) have an effect on future data [1].

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 the economy in that year. Therefore, in order to estimate fall 2018 community college enrollment with causal forecasting methods, obtaining information regarding the distribution of demographics and the economy in 2018 is a prerequisite. However, such information is unknown for 2018.

Given that Iowa's community college enrollment data is available back to 1960s, and that information on other relevant factors are unknown for 2018, time series methods are more appropriate for fall 2018 enrollment forecasting.

We used a single exponential smoothing equation  $\hat{y}_{t+1} = \partial y_t + (1-\partial)\hat{y}_t$  in time series methods to estimate fall 2018 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  $\partial$  is the smoothing constant, which ranges from 0 to 1 [2]. In our case, the fall 2018 enrollment is forecasted to be a weighted combination of the actual fall 2017 enrollment and the forecasted fall 2017 enrollment.

Based on single exponential smoothing equation with  $\partial=0.1$  and  $\partial=0.3$ , we estimate that the total enrollment for fall 2018 will fall between 85,841 and 93,029 students.





## References

- [1] P. J. Brockwell and R. A. Davis. Introduction to Time Series and Forecasting. Springer, New York, 1996.
- [2] P. S. Kalekar, "Time series forecasting using Holt-Winters exponential smoothing," Kanwal Rekhi School of Information Technology, 2004.

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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 lead to 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 the 15 Iowa public community colleges on state accreditation, program approval, 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 program, Senior Year PLUS, the National Crosswalk Service Center, and the Statewide Intermediary Network for Academic Career and Employment (PACE) program.