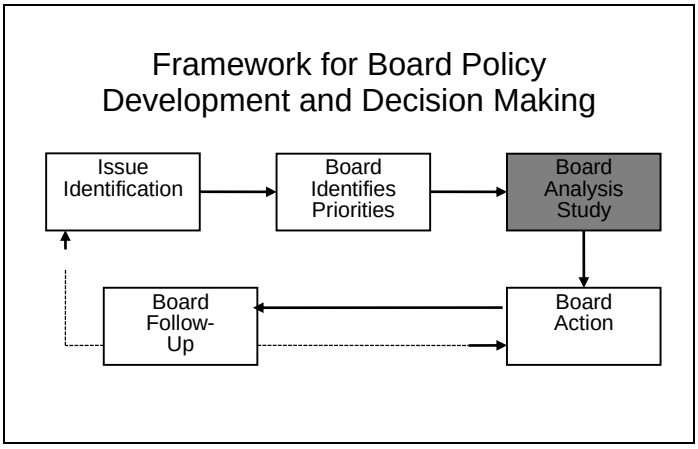
Iowa State Board of Education

Executive Summary

January 21, 2016



Agenda Item: Annual Condition of Iowa's Community Colleges Report 2015

Iowa Goal: Individuals will pursue postsecondary education in order to drive economic success.

State Board Role/Authority: The Annual Condition of Iowa's Community Colleges Report 2015 provides information for all community colleges and the general public. This report is presented for information only as the State Board provides leadership and advocacy for the system of education in Iowa.

Presenter: Jeremy Varner, Administrator
Division of Community Colleges

Attachments: None (A copy of the report will be available at the meeting.)

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

Background: Iowa's 15 community colleges offer thousands of credit and non-credit courses. The 2015 Annual Condition of Iowa's Community Colleges Report provides fiscal year 2015 and trend data on community college enrollment, programs, human resources, and finances. This report is supported by Management Information System (MIS) data, as reported by Iowa community colleges to the Iowa Department of Education, Division of Community Colleges, and additional references, which are identified in the body of the report.

The Annual Condition of Iowa's Community Colleges 2015

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Division of Community Colleges

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Department of Education
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Des Moines IA 50319-0146

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Acknowledgments

Many people have contributed to *The Annual Condition of Iowa's Community Colleges: 2015*. The project was supervised by Jeremy Varner and coordinated by Barbara Ledvina. The report was compiled and written by Vladimir Bassis, Monte Burroughs, Barbara Burrows, Lisa Gard, Alex Harris, Paula Nissen, and Eric St Clair.

In addition to those mentioned above, several people edited part or all of this document and provided invaluable feedback and help with layout.

Dear Education Stakeholders,

One of the critical functions of the Iowa Department of Education is to provide and interpret educational data. We do this to support accountability, transparency, and the ongoing improvement of our schools. Staff in the Division of Community Colleges continue to refine and improve the methods in which we collect, analyze, and report data to ensure that it is both meaningful and easily understood.

Meaningful educational data reports are essential to Iowans as we strive to improve our schools and prepare students for success. At the college level, data help administrators, faculty, and staff make important programmatic and operational decisions that impact the success of their students. At the state level, data provide policymakers and education professionals with information about the students attending our community colleges, the programs and opportunities offered to them, and indicators of how well they are progressing toward their educational goals.

The data provided in the 2015 annual Iowa Condition of Community Colleges includes enrollment data; measures of student achievement, including degree completion and transfer rates; types of academic programs offered at our 15 institutions; and information about the financial impact on students attending Iowa's community colleges. This report is designed to help Iowans understand the challenges and opportunities Iowa's community colleges face in providing quality programs to meet the demands of their diverse students and communities.

Thank you for taking the time to review this report and for your ongoing support of Iowa's community colleges. I look forward to working with you to provide Iowans with quality programs, services, and opportunities to meet their educational goals.

Sincerely,

Ryan M. Wise

Ryan M. Wise, Ed.L.D.
Director Iowa
Department of Education

Executive Summary

Since 1998, the Iowa Department of Education's Division of Community Colleges (division) has compiled and published The Annual Condition of Iowa's Community Colleges, commonly known as the Condition Report. The intent of the Condition Report is to provide clear, objective data about Iowa's system of community colleges to meet the needs of policymakers, governing bodies, and community college stakeholders.

Data reported in the Condition Report comes primarily from each of Iowa's 15 community colleges, transmitted each fall to the division's Management Information System (MIS). Upon receipt, division staff review the data for discrepancies and return summary reports to the colleges to confirm accuracy. After confirmation, data files are aggregated for analysis and subsequent reporting. This aggregated data is reported in the Condition Report as dashboards and summative data that provide snapshots of various community college functions, along with related narrative for the reader to gain a more in-depth understanding. In addition, figures depict basic statistics and demographic data for quick reference and to illustrate trends and changes over time. Tables with more detailed data can be found on the department's website.

The 2015 Condition Report features two supplemental sections featuring information about innovative data projects underway at the division. Section 17 discusses in-state student migration through an analysis of students' reported domicile (by ZIP codes) compared to their college of attendance. This data analysis illustrates an interesting use of new interactive data sets available at: www.educateiowa.gov/adult-career-community-college/publications.

Section 18 discusses the expansion of the community college credentialing landscape. It focuses on the division's partnerships with Iowa Workforce Development and CompTIA (an information technology certification organization). The intent of these partnerships is to develop standardized procedures and data-sharing protocols to streamline educational outcome analysis and reporting.

Some highlights of the fiscal year (FY) 2015 Condition Report include:

- Enrollment decreased slightly to 138,642 students taking 1,889,542 credit hours.
- CTE enrollment was 35,415 students, with 42.3 percent enrolled in the Health Science career cluster.
- The median age of credit students was 20, largely due to the fact that Iowa community colleges enroll the highest percentage of students under 18, according to national data. The average age was 22.4.
- Female students outnumbered males, 54 to 46 percent (the highest percentage of males in 16 years).
- Iowa community colleges have become increasingly diverse, reaching a record high 18.9 percent of students reporting minority racial or ethnic backgrounds. For the past six years, Iowa community colleges have led the nation with a minority penetration rate of 3.4 percent, meaning 3.4 percent of Iowa's college-age minority population attend community college.
- Online credit courses accounted for over 22.1 percent of total credits, with over 40.3 percent of students taking at least one course.
- Joint enrollment of 44,034 high school students accounted for over 30 percent of total enrollment and almost 19 percent of total credits. Online non-credit enrollment increased by more than 19 percent.
- The number of awards increased to 19,225, with the number of Associate of Applied Science (AAS) degrees surpassing Associate of Arts (AA) degrees for the first time in history.
- Non-credit participation decrease 3.7 percent, with 232,480 individuals participated in 412,559 courses. Of these courses, 51.8 percent were designed to enhance students' employability or academic success.
- Adult Education and Literacy enrollment was 19,464 students, continuing a declining trend since 2011.
- Over 35 percent of AEL participants advanced multiple skill levels; 34.2 percent achieved employment within one quarter of exiting AEL programs; and 74.5 percent retained employment three quarters after exiting. Also, 1,942 high school equivalency diplomas were awarded, and 27.9 percent entered postsecondary institutions.
- Iowa skilled worker and job creation fund programs provided training and support to over 4,100 PACE (Pathways for Career and Employment Program) participants; tuition assistance to over 1,300 GAP participants in certificate training programs; and career guidance to more than 50,000 students through regional work-based learning intermediary networks.

- Students in the 2013 cohort (8,534 students enrolled for the first-time, full-time in fall 2013) were tracked for three years to evaluate their success. Overall, 43.6 percent were deemed "successful" in that they either transferred, graduated, or graduated and transferred within three years of enrollment.
- Of the 2013 cohort, 24.6 percent transferred to a four-year institution; however, 53.3 percent of these transfer students had not earned their two-year degree prior to transferring.
- The median tuition and fees in FY 2015 was $164.50 per credit. In FY 2016, a full-time Iowa resident will pay between $4,200 and $5,520 for 30 credits at Iowa's community colleges, which is about 40 percent less than the lowest tuition and fees at Iowa's public universities.
- The total Iowa community college unrestricted general revenues were $557,231,882, representing a nominal decrease. Total expenditures were $555,103,800, with salaries comprising over 75 percent.
- There were 13,935 college employees, consisting of 49.4 instructional, 24.9 professional, 18.7 secretarial and clerical, and 0.9 administrative staff members.

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1 Iowa's Community Colleges

"The mission of the community colleges of Iowa in the 21st century is to provide exemplary educational and community services to meet the needs and enhance the lives of Iowans."

Source: "Shaping the Future: A Five-Year Plan for the Community Colleges of Iowa, 2006-2011"

Community colleges have an "open door" policy, which means that nearly everyone who applies may be accepted.

Each of the 15 community colleges offers comprehensive programs including arts and sciences, college transfer (parallel) courses, career and technical education programs, training and retraining programs for the workforce of Iowa's businesses and industries, and a variety of adult education and non-credit courses for residents of each community college district.

History of Iowa's Community Colleges

Mason City schools established the first two-year postsecondary educational institution in Iowa in 1918. At the time this junior college was organized, there was no law authorizing two-year postsecondary educational programs. Mason City Junior College proved to be successful and was accredited by the North Central Association of Colleges and Schools in 1919. Additional public junior colleges were organized beginning in 1920, and the movement spread rapidly. By 1930, at least 32 towns and cities in Iowa had organized public junior colleges as part of their public school systems.

In 1927, the 42nd General Assembly passed the first law authorizing the establishment of public junior colleges. The law permitted the establishment of schools offering instructional programs at a level higher than an approved four-year high school course. The colleges had to be dually authorized by the voters and approved by the State Superintendent of the Iowa Department of Public Instruction (now the Director of the Iowa Department of Education). Such colleges were permitted to offer postsecondary programs lasting one or two years. The Superintendent was authorized to prepare standards and to provide adequate inspection of these junior colleges.

The Iowa public junior college movement reached its peak in 1927 when nine public junior colleges were organized. After 1930, no public junior colleges were organized until 1946, when Clinton Junior College was founded. In 1931, the 44th General Assembly approved the first restriction to the development of public junior colleges, prohibiting the establishment of a public junior college in any school district having a population of less than 20,000. The 49th General Assembly, in 1941, reduced the population requirement to 5,000.

Between the years 1918 and 1953, a total of 35 different public junior colleges were established through the operation of public school districts. While some of these colleges closed, 10 of the closed colleges later reopened. The enrollment trend steadily increased over the years with the exception of the World War II years. During the 1955-66 decade, which immediately preceded the initiation of a community college system, enrollment almost quadrupled. By 1965, 16 public junior colleges were operating in Iowa with a total fall semester enrollment of 9,110. Local public school districts operated the junior colleges, with a dean who reported directly to the local superintendent. These institutions offered arts and sciences programs equivalent to the first two years of the baccalaureate program, a limited number of occupational programs, and adult education opportunities.

In 1958, Congress initiated a development parallel to the public junior college movement. Title VIII of the National Defense Education Act (NDEA) made federal funds available to states on a matching basis to develop area vocational programs. To implement this legislation, the Iowa State Board of Education modified the state vocational education plan to make local school districts and Iowa State University eligible to operate as "area schools." This legislation included a specific allocation of funds to develop area vocational programs under NDEA's Title VIII, a designation of area vocational-technical high schools, and the authorization for tuition-

paying students to attend these schools and programs.

The Iowa State Board of Education eventually designated a total of 15 schools as area vocational-technical high schools. These schools were also designated as area schools for the purposes of Title VIII, and were to be used to initiate programming for the Manpower Development and Training Act. A total of 1,816 full-time day students enrolled in postsecondary vocational programs for the 1965-66 school year; the majority of which entered programs administered by agencies operating the area vocational-technical high schools or programs.

Even though public junior colleges and area vocational-technical high schools offered some opportunities for arts and sciences and preparatory vocational education, enrollment opportunities were limited for most Iowans. In 1959, the 58th General Assembly appropriated $25,000 to the Iowa Legislative Research Bureau to conduct a policy study of the needs of higher education in Iowa. Included in this report was a recommendation to establish regional community colleges. The report also recommended the state pay at least half the cost of building and operating these colleges. As a result of this study, the General Assembly directed the Iowa Department of Public Instruction to conduct a two-year study of the need to develop a statewide system of public community colleges.

The Iowa Department of Public Instruction submitted its report, "Education Beyond High School Age: The Community College," to the General Assembly in December, 1962. The report made recommendations and proposed enabling legislation. It recommended restructuring the county educational system and forming 16 area education districts whose boundaries should be drawn along existing school district lines. These districts were intended to replace the county boards of education and provide programs and services that would complement those provided by local school districts. It was envisioned that the area districts would also serve as a legal structure through which a statewide system of community colleges could be developed.

In 1963, the 60th General Assembly took no action on the report. An interim legislative committee concluded that it would be appropriate to put vocational and two-year college education together in a single comprehensive system, but separated the county board consolidation issue (area education agencies were later established by the legislature in 1974). Staff of the Iowa Department of Public Instruction worked closely with various groups throughout the state, and arrived at conclusions similar to those of the interim committee. Passage of the Vocational Education Act of 1963 provided additional impetus to this planning.

After receiving the interim committee's report in 1964, the 61st General Assembly, in 1965, enacted legislation that permitted the development of a statewide system of two-year postsecondary educational institutions, identified as "merged area schools." The Iowa Department of Public Instruction was to direct the operation of the development of merged area schools as either area community colleges or area vocational schools.

Legislation authorizing merged area schools, which are now referred to as "community colleges," provided for the fiscal support for these institutions through a combination of student tuition and federal, state, and local funds. These resources included a local three-quarter mill levy on the property within the merged area for operational purposes, and an additional three-quarter mill levy for the purchase of sites and construction of buildings. State general aid was distributed to community colleges on the basis of $2.25 per day for the average daily enrollment of full-time equivalent students who were residents of Iowa. The 63rd General Assembly changed this formula in 1969 to determine enrollment and state aid on the basis of actual contact hours of instruction. Individual colleges were granted authority to establish tuition rates, with the limitation that tuition was not to exceed the lowest tuition rate charged by any one of Iowa's three public universities.

Legislation approved in 1965 was enthusiastically received. The Iowa Department of Public Instruction received the first plan for a community college on July 5, 1965; one day after the legislation was effective. Plans for the other community colleges followed in quick succession. Although the original plans called for 20 areas, the number was quickly reduced to 16 and later one area was split among adjacent areas. Fourteen (14) community colleges were approved and organized in 1966, and a 15th in January 1967. Fourteen (14) of these community colleges began operation during the 1966-67 school year.

Seven (7) districts were originally approved as Area Community Colleges (current names):

- North Iowa Area Community College
- Iowa Lakes Community College
- Iowa Central Community College
- Iowa Valley Community College District
- Eastern Iowa Community Colleges
- Des Moines Area Community College
- Southeastern Community College

Eight (8) were approved as Area Vocational Schools (current names):

- Northeast Iowa Community College
- Northwest Iowa Community College
- Hawkeye Community College
- Kirkwood Community College
- Western Iowa Tech Community College
- Iowa Western Community College

- Southwestern Community College
- Indian Hills Community College

By July 1970, all of the area vocational-technical high schools and junior colleges had either merged into the new system or were discontinued. All areas of the state were included in community college service areas by July 1971.

The community colleges and area vocational schools grew quickly, both in terms of students served and services offered. In 1983, the Iowa Industrial New Jobs Training Act was established by the legislature adding contracted customized job training to the community colleges' list of services. Other job training programs followed, further expanding the role of community colleges in economic development. Currently, all 15 operate as comprehensive community colleges, offering arts and science (college transfer), vocational preparatory, and adult and continuing education programs. In 1987, Hawkeye Community College, the final Iowa college operating as a vocational school, received approval to operate as a comprehensive community college.

In 1989, the 73rd General Assembly passed Senate File 449, requiring that secondary vocational programs be competency-based, and that the competencies be articulated with postsecondary vocational education. This resulted in increased cooperation between local education agencies and the community colleges, and a growth in programs in which high school students are awarded college credit for coursework completed in these articulated programs. The Postsecondary Enrollment Options Act of 1989, and, later, supplemental weighting, allowed high school students to jointly enroll in college credit courses in significantly greater numbers.

In the late 1990s, the majority of community colleges expanded their role in workforce development by becoming Workforce Investment Act primary service providers and housing one-stop centers.

In 1999, the 78th General Assembly passed House File 680 mandating the Department of Education convene a committee to identify and study options for restructuring the governance of Iowa's community colleges. The committee's final report, which was submitted to the legislature in December, 1999, reaffirmed the existing governance structure of Iowa's community colleges, with locally elected boards of directors and the Iowa State Board of Education responsible for statewide oversight and coordination. The study recommended the development of a statewide strategic plan for the system of community colleges.

House File 2433 mandated the development of a statewide strategic plan for the statewide system of community colleges every five years. The first plan was approved by the Iowa Association of Community College Presidents, the Iowa Association of Community College Trustees, and the Iowa State Board of Education, and forwarded to the legislature by July 2001. Specific goals included:

- provide high quality, comprehensive educational programs and services accessible to all Iowans;
- develop high-skilled workers to meet the demands of Iowa's changing economy;
- maximize financial and human resources to assure provision of comprehensive community college services to Iowans and to allow Iowa to compete on a national and international level; and
- demonstrate effectiveness and efficiency for achieving the system mission and goals.

In January 2003, the State Board of Education amended the Community College Strategic Plan to include a fifth goal:

- recruit, enroll, retain, and/or graduate persons of underrepresented groups (i.e., gender, race/ethnicity, socioeconomic status) in all programs.

Within six months of implementing House File 2433, a progress report was published summarizing statewide and local community college responses to the five-year plan, entitled "Shaping the Future." Annual progress reports are compiled by the Iowa Department of Education and presented to the State Board of Education. In spring 2006, the State Board of Education approved the second five-year statewide community college strategic plan. The following August, the State Board of Education approved performance measures for the plan. Baseline data on each of the measures was reviewed. An annual report is provided to the State Board of Education on these performance measures.

Iowa Code

The statement of policy describing the educational opportunities and services to be provided by community colleges is included in Section 260C.1 of the Iowa Code. This statement of policy identifies the following as services that should be included in a community college's mission:

- the first two years of college work, including pre-professional education;
- vocational and technical training;
- programs for in-service training and retraining of workers;
- programs for high school completion for students of post-high school age;
- programs for all students of high school age who may best serve themselves by enrolling in vocational and technical training, while also enrolled in a local high school, public or private;
- programs for students of high school age that provide advanced college placement courses not taught at a student's high school while the student is also enrolled

in the high school;
- student personnel services;
- community services;
- vocational education for persons who have academic, socioeconomic, or other handicaps that prevent succeeding in regular vocational education programs;
- training, retraining, and all necessary preparation for productive employment of all citizens;
- vocational and technical training for persons who are not enrolled in a high school and who have not completed high school; and
- developmental education for persons who are academically or personally underprepared to succeed in their program of study.

In 2006, the Iowa Department of Education created a book entitled, *Forty Years of Growth and Achievement: A History of Iowa's Community Colleges*, which details the statewide, institutional history of the community colleges. For more information on the history of Iowa's community colleges, see this publication.

Area 1 (NICC)
Northeast Iowa Community College
Administrative Center
Box 400
Calmar, Iowa 52132

Area 2 (NIACC)
North Iowa Area Community College
Administrative Center
500 College Drive
Mason City, Iowa 50401

Area 3 (ILCC)
Iowa Lakes Community College
Administrative Center
19 South 7th Street
Estherville, Iowa 51334

Area 4 (NCC)
Northwest Iowa Community College
Administrative Center
603 West Park Street
Sheldon, Iowa 51201-1046

Area 5 (ICCC)
Iowa Central Community College
Administrative Center
330 Avenue M
Fort Dodge, Iowa 50501

Area 6 (IVCCD)
Iowa Valley Community College District
Administrative Center
3702 South Center Street
Marshalltown, Iowa 50158

Area 7 (HCC)
Hawkeye Community College
Administrative Center
1501 East Orange Road, Box 8015
Waterloo, Iowa 50704

Area 9 (EICC)
Eastern Iowa Community Colleges
Administrative Center
306 West River Road
Davenport, Iowa 52801

Area 10 (KCC)
Kirkwood Community College
Administrative Center
6301 Kirkwood Blvd., S.W., Box 2068
Cedar Rapids, Iowa 52406-2068

Area 11 (DMACC)
Des Moines Area Community College
Administrative Center
2006 South Ankeny Blvd.
Ankeny, Iowa 50021

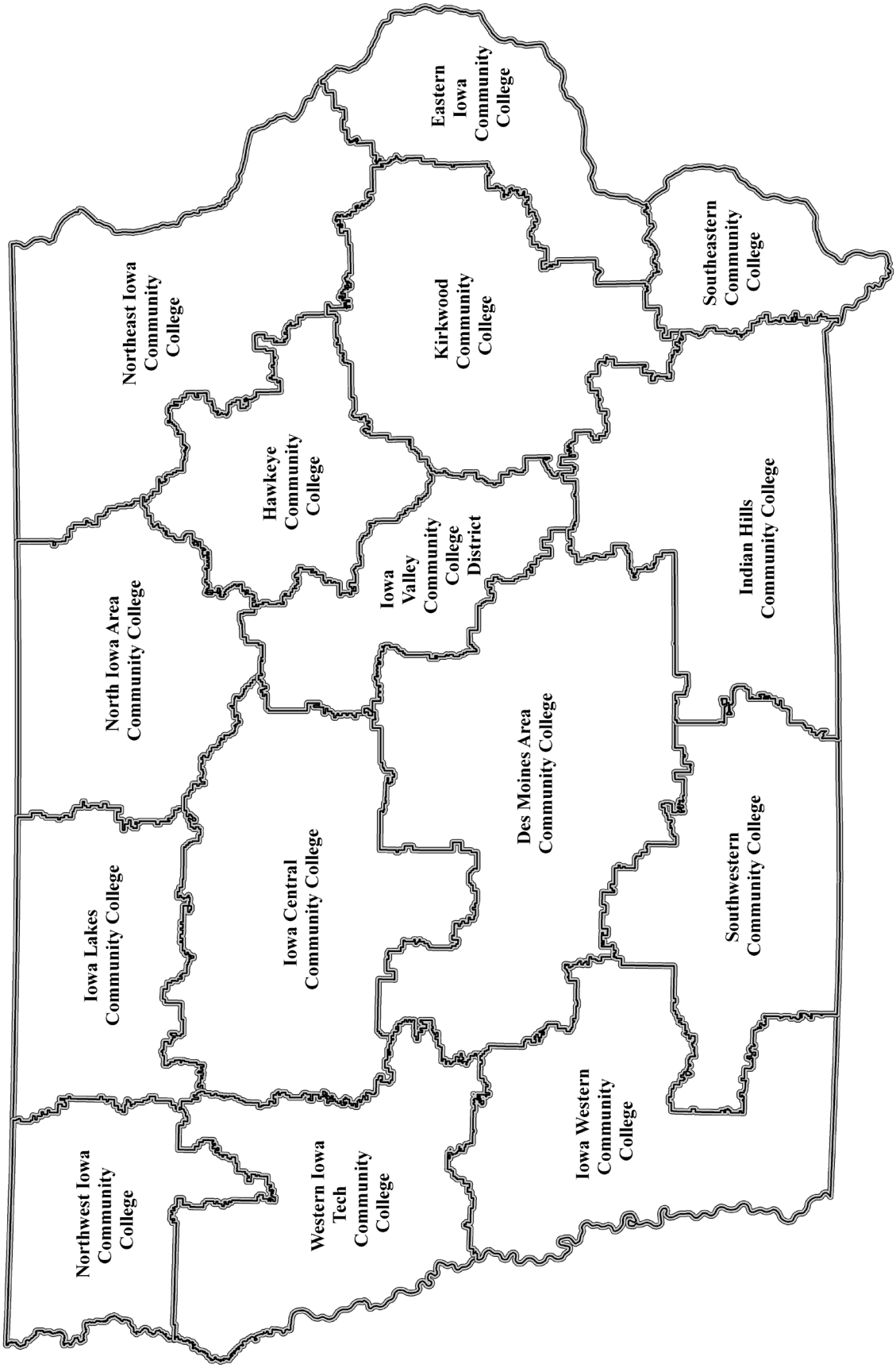
Area 12 (WITCC)
Western Iowa Tech Community College
Administrative Center
4647 Stone Avenue, Box 5199
Sioux City, Iowa 51102-5199

Area 13 (IWCC)
Iowa Western Community College
Administrative Center
2700 College Road, Box 4-C
Council Bluffs, Iowa 51502-3004

Area 14 (SWCC)
Southwestern Community College
Administrative Center
1501 West Townline Street
Creston, Iowa 50801

Area 15 (IHCC)
Indian Hills Community College
Administrative Center
525 Grandview Avenue
Ottumwa, Iowa 52501

Area 16 (SCC)
Southeastern Community College
Administrative Center
1015 South Gear Avenue, Box 180
West Burlington, Iowa 52655-0180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2 Fall Enrollment

The Iowa Department of Education collects enrollment information from all 15 community colleges on the tenth business day of the fall semester each year.

The community colleges reported that 93,074 were enrolled in the fall of 2015. This is a slight decrease from the 93,772 that were enrolled in the fall of 2014. Six of the 15 colleges saw an increase in enrollment. See Table 2-1 for a summary of the enrollment by college.

93,074
Fall 2015 Enrollment

59.6%
Students enrolled part-time

90%
Residents of Iowa

Student Demographics

While the number of students enrolled full-time in 2015 dropped slightly from 40.5 percent to 40.4 percent, the number of students enrolled part-time (enrolled in fewer than 12 semester credit hours) increased from 59.5 to 59.6 percent. Since the inception of the community college system in 1965, the percentage of students enrolled full-time has decreased from a high of 90 percent to the current 40.4 percent. Figure 2-1 shows the change in enrollment status since 1965.

The average age of community college students was up from 21.6 years in 2014 to 23.8 years in 2015. The median age was 20 years, up one year from the previous year. The percentage of female students remained the same at 53.8 percent.

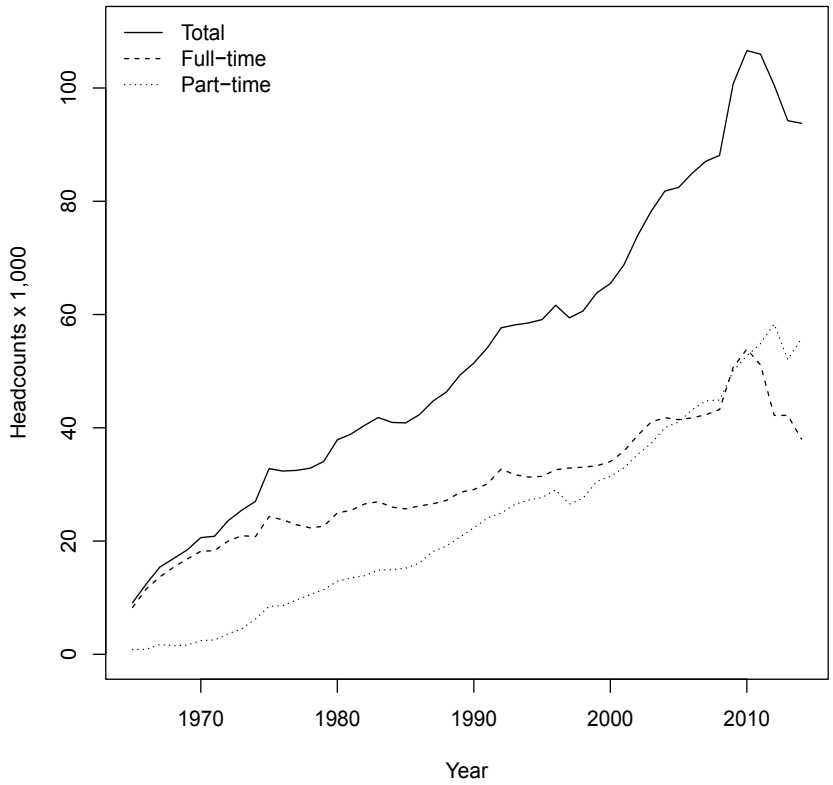
The proportion of minority students attending Iowa's community colleges in the fall of 2015 is higher than the

Table 2-1: Fall 2015 enrollment by college compared to previous year.

College	FY 2014	FY 2015	Change (%)[a]
Northeast Iowa	4,934	4,865	-1.4
North Iowa Area	2,950	2,947	-0.1
Iowa Lakes	2,391	2,366	-1.0
Northwest Iowa	1,576	1,624	3.0
Iowa Central	5,686	5,634	-0.9
Iowa Valley	2,987	2,761	-7.6
Hawkeye	5,291	5,371	1.5
Eastern Iowa	8,143	8,383	2.9
Kirkwood	14,268	14,814	3.8
Des Moines Area	23,526	22,298	-5.2
Western Iowa Tech	6,398	6,152	-3.8
Iowa Western	6,623	6,562	-0.9
Southwestern	1,600	1,656	3.5
Indian Hills	4,412	4,773	8.2
Southeastern	2,987	2,868	-4.0
Total	93,772	93,074	-0.7

[a] Percentage change in total enrollment from fall 2014.

Figure 2-1: Fall enrollment since 1965.



proportion of minorities in Iowa's general population: 18.5 percent versus 11.6 percent. Hispanic students accounted for 6.8 percent of total enrollment; African-American students, 6.7 percent; and Asian/Pacific Islanders, 2.6 percent.

Residents of Iowa accounted for 90 percent of students. Residents from other states accounted for 9.5 percent of enrolled students, with foreign nationals accounting for the balance.

Academics

Students attending Iowa's community colleges in the fall of 2015 were registered for 823,306 semester credit hours, compared to 832,234 semester hours last fall. Average course load for all students was 8.8 semester hours.

Full-time students registered for 519,410 semester hours, or 63.1 percent of the total semester hours. Average course load for full-time students was 13.8 semester hours. In 2014, full-time students registered for 524,238 semester hours, so there was a slight decrease this year.

Part-time students registered for 303,896 semester hours. Average course load for part-time students was 5.5 semester hours. Last fall, part-time students registered for 307,996 semester hours (37 percent of total), averaging 5.5 semester hours. Table 2-2 provides data on full- vs part-time headcount at each college.

Program Types

Programs of study are generally categorized as college parallel (transfer), career and technical education (CTE), or career option. College parallel programs prepare students for matriculation into four-year colleges or universities. CTE programs prepare students for entry into the workforce as skilled technicians or similar middle-skill careers. Career option programs prepare students for either matriculation to a four-year university or entry into a career field after graduation.

College parallel programs comprised the largest category, with 64,235 enrolled students this fall, a 1.4 percent decrease from last fall. College parallel programs accounted for 60.7 percent of this fall's total enrollment.

In fall 2015, 27,742 students enrolled in CTE programs, accounting for 29.8 percent of total enrollment. Last fall, 28,020 students enrolled in CTE programs. The number of students enrolled in CTE programs this fall represents a 1.0 percent decrease from last fall.

Total enrollment this fall in career option programs was 1,081 students, accounting for 1.2 percent of total enrollment. Last fall, 2,368 students enrolled in career option programs. The Iowa Department of Education will phase out career option programs by the end of fiscal year 2016, which is reflected in the 54.3 percent decline in the number of students enrolled in career option programs.

Table 2-2: Fall 2015 enrollment by college.

		Full-time		Part-time	
College	Total	N	%	N	%
Northeast Iowa	4,865	1,477	30.4	3,388	69.6
North Iowa Area	2,947	1,379	46.8	1,568	53.2
Iowa Lakes	2,366	1,114	47.1	1,252	52.9
Northwest Iowa	1,624	573	35.3	1,051	64.7
Iowa Central	5,634	2,969	52.7	2,665	47.3
Iowa Valley	2,761	1,395	50.5	1,366	49.5
Hawkeye	5,371	2,567	47.8	2,804	52.2
Eastern Iowa	8,383	2,605	31.1	5,778	68.9
Kirkwood	14,814	6,229	42.0	8,585	58.0
Des Moines Area	22,298	6,931	31.1	15,367	68.9
Western Iowa Tech	6,152	2,292	37.3	3,860	62.7
Iowa Western	6,562	3,337	50.9	3,225	49.1
Southwestern	1,656	793	47.9	863	52.1
Indian Hills	4,773	2,639	55.3	2,134	44.7
Southeastern	2,868	1,280	44.6	1,588	55.4
Total	93,074	37,580	40.4	55,494	59.6

Online Enrollment

Online enrollment is defined as participation in a class that is only offered via the Internet with no face-to-face contact between the instructor and students. Of the 93,074 students enrolled in the fall of 2015, 28,166 (30.2 percent) enrolled in at least one online course, compared to 27,455 students (29.3 percent) who did so in the fall of 2014. This represents an increase of 2.6 percent from fall 2014.

In the fall of 2015, 144,136 semester credit hours out of 823,306 total semester hours were attributed to online courses, compared to 140,837 semester hours in 2014 (Table 2-3). This represents an increase in online enrollment from 16.9 percent in 2014 to 17.5 percent in 2015. On average, students were enrolled in 5.1 semester hours of online courses in the fall of 2015.

Joint Enrollment

Community colleges offer high school students three joint enrollment options to earn college credit: postsecondary enrollment option (PSEO), contracted courses between high schools and community colleges, or self payment of tuition. Students may choose to participate in more than one joint enrollment program during an academic year.

Upon successful course completion, a student may either apply earned credits toward an award or transfer them to a four-year college or university.

In the fall of 2015, 33,145 high school students participated in at least one joint enrollment program, up 5.4 percent from 2014. Students participating in joint enrollment programs accounted for 35.6 percent of this fall's enrollment, compared to 33.5 percent in 2014.

High school students participating in joint enrollment programs in the fall of 2015 registered for 164,149 semester hours of classes, up 6.3 percent from 2014. The number of semester hours attributed to joint enrollment programs accounted for 19.9 percent of total registered semester hours; up from 18.6 percent in 2014.

Career Clusters

The Iowa Department of Education categorizes career and technical education (CTE) programs into 16 career clusters, with each program aligning to a category of similar programs. Visit www.careerclusters.org for more information about career clusters.

Historically, clusters with the largest enrollments have been health science, manufacturing, and business management and administration. As Table 2-4 indicates, 10,042 students enrolled in health sciences in the fall of 2015, 2,633 in manufacturing, and 2,266 in business management and administration. These figures represent decreases in enrollment in each of the three clusters.

Table 2-3: Fall 2015 online hours and enrollment by college.

College	Hours	Enrollment	Change (%)[a]
Northeast Iowa	6,346	1,246	-18.7
North Iowa Area	5,176	1,463	3.8
Iowa Lakes	4,247	820	4.6
Northwest Iowa	4,767	952	15.3
Iowa Central	7,799	1,464	3.0
Iowa Valley	5,311	1,132	-8.3
Hawkeye	6,895	1,416	-1.6
Eastern Iowa	14,677	2,453	-1.9
Kirkwood	16,674	3,226	24.1
Des Moines Area	28,392	5,666	2.5
Western Iowa Tech	13,147	2,416	-6.6
Iowa Western	14,374	2,589	3.9
Southwestern	3,798	759	15.0
Indian Hills	6,742	1,561	16.6
Southeastern	5,792	1,003	-9.0
Total	144,136	28,166	2.6

[a] Percentage change in enrollment from last fall.

Table 2-4: Year-to-year changes in enrollment by career cluster.

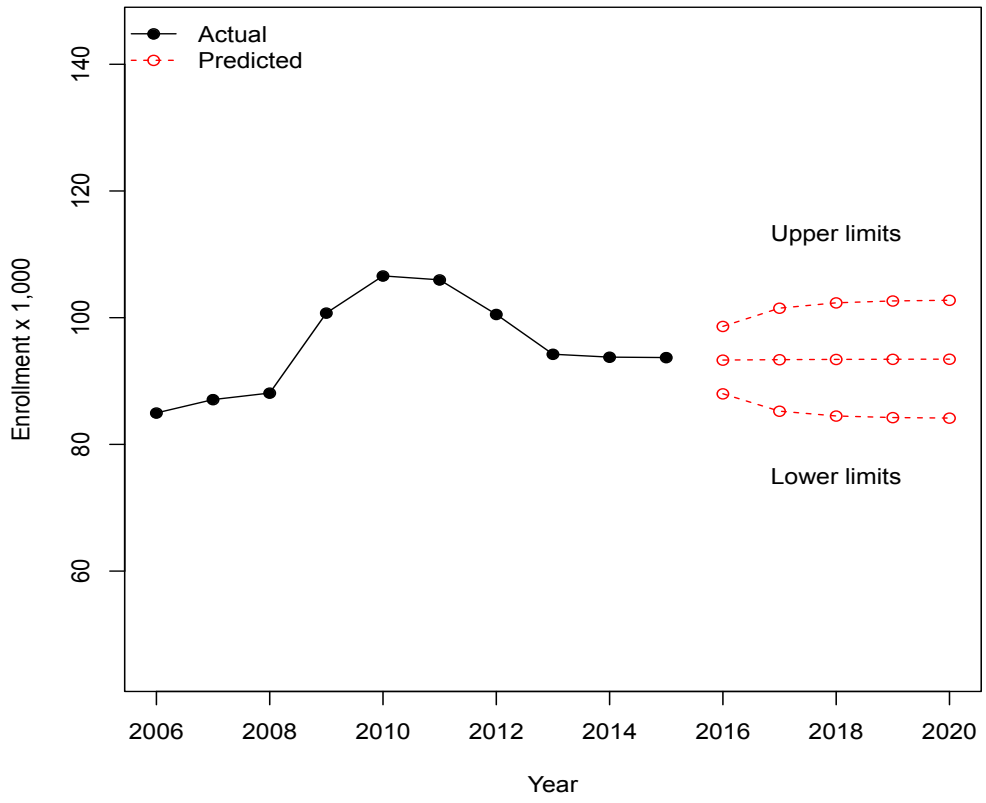
Career cluster	FY 2014	FY 2015	Change (%)
Agriculture, Food and Natural Resources	2,015	1,916	-4.9
Architecture and Construction	1,399	1,228	-12.2
Arts, A/V Technology and Communications	1,223	1,226	0.2
Business, Management and Administration	2,540	2,266	-10.8
Education and Training	228	152	-33.3
Finance	1,137	1,093	-3.9
Health Science	10,581	10,042	-5.1
Hospitality and Tourism	945	918	-2.9
Human Services	1,453	1,392	-4.2
Information Technology	1,770	1,833	3.6
Law, Public Safety and Security	1,651	1,567	-5.1
Manufacturing	2,839	2,633	-7.3
Marketing, Sales and Service	466	434	-6.9
Science, Technology, Engineering and Mathematics	193	183	-5.2
Transportation, Distribution and Logistics	1,977	1,957	-1.0
Total	30,417	28,840	-5.2

Projections for Fall 2016-2019

Autoregressive integrated moving average (ARIMA) is a statistical model used in time series analysis to describe an event and predict its future course (see Appendix A for more information about fall projections and ARIMA).

Using fall enrollment data from 2006-2015, the ARIMA model predicts that enrollment for fall 2016 will vary between 87,991 and 98,629 students. If the model holds true, then fall enrollment should start to level out around 2017, increasing to about 93,500 students by 2019. Figure 2-2 plot actual and predicted enrollment through 2019.

Figure 2-2: Predicted fall enrollment through 2019.



3 Fiscal Year Credit Enrollment and Demographics

Fiscal year (FY) 2015 credit enrollment follows students through the 2014-2015 academic year. Courses are counted each time a student takes a course, while headcount only includes a student once. Although enrollment dropped, the composition of community college students remained relatively constant.

Student enrollment in 2015 was 138,642 students, which was a 1.8 percent enrollment decline from the prior year. This enrollment decline continues the trend started in 2012. Between 2011 and 2015, enrollment decreased an average of 2.8 percent each year (Figure 3-1).

Credit hours have also declined for the fourth time since 1999, to 1,889,542 hours, representing a 2.7 percent decrease since the prior year. This decrease in credit hours demonstrates a smaller number of courses taken by students this year. Over the entire fiscal year 2015, students enrolled in an average of 13.6 credit hours (Figure 3-2).

Enrollment declined moderately (0.8 percent) for arts and sciences programs. These programs, which are designed to transfer to four-year colleges and universities (college parallel), declined to 96,784 students. Despite this decline, arts and sciences enrollment increased to 70 percent of the overall enrollment (Figure 3-3). The moderate decline in arts and sciences has not effected the continuous increase in joint enrollment (Section 5), where students typically enroll in arts and sciences courses.

Career and technical education (CTE) programs decreased in enrollment by 506 (1.4 percent) students, to a total of 35,415 students (Figure 3.3). Health science remained the largest CTE program, followed by business management and administration, and manufacturing (Figure 3-4). Enrollment in health science decreased over six percent to 14,969 students. Business management and administration programs enrolled 3,761 students, which

Credit Enrollment

Students: **138,642**

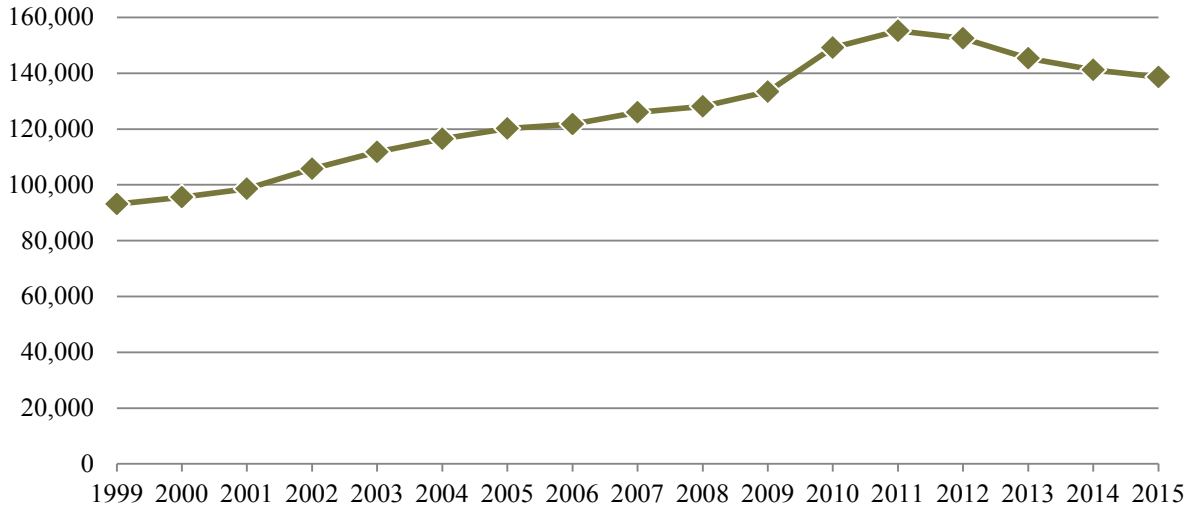
Down since 2014: **1.8%**

Credit Hours: **1,889,542**
Down 2.7% since 2014

Credit Hours per Student: **13.6**
Down from 13.8 in 2014

Largest Program Major: **College Parallel**
70% of total enrollment

Figure 3-1: Fiscal year credit enrollment: 1999-2015.



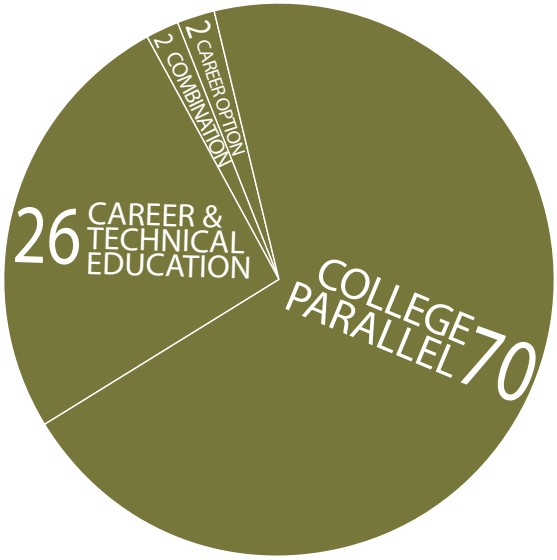
*In 2014, CTE programs were brought to compliance with changed federal distribution of programs within federal Career Clusters. As a result, accounting programs migrated from Business to the Financial Career Cluster, significantly reducing the number of programs under Business Management and Administration Career Cluster.

Figure 3-2: Fiscal year semester hours (top) and average semester hours per student (bottom): 1999-2015.

was 9.3 percent less than last year.* Manufacturing, which is both the largest industry in Iowa and hardest hit by the 2008-09 recession, decreased by 1.5 percent in 2015, demonstrating a moderate decline since last year. Students enrolled in Science, Technology, Engineering and Mathematics (STEM) programs comprised only 0.2 percent in 2015 enrollment, similar to the previous year.

The Iowa Department of Education continuously realigns its program classification data with the federal career clusters in order to correspond to the most recent recommendations. Some of the enrollment changes were attributable to this realignment instead of actual growth or decline. For instance, the significant increase in human services programs and the substantial decrease of enrollment in government and public administration programs were attributable to the career cluster realignment.

Figure 3-3: Enrollment by program type.

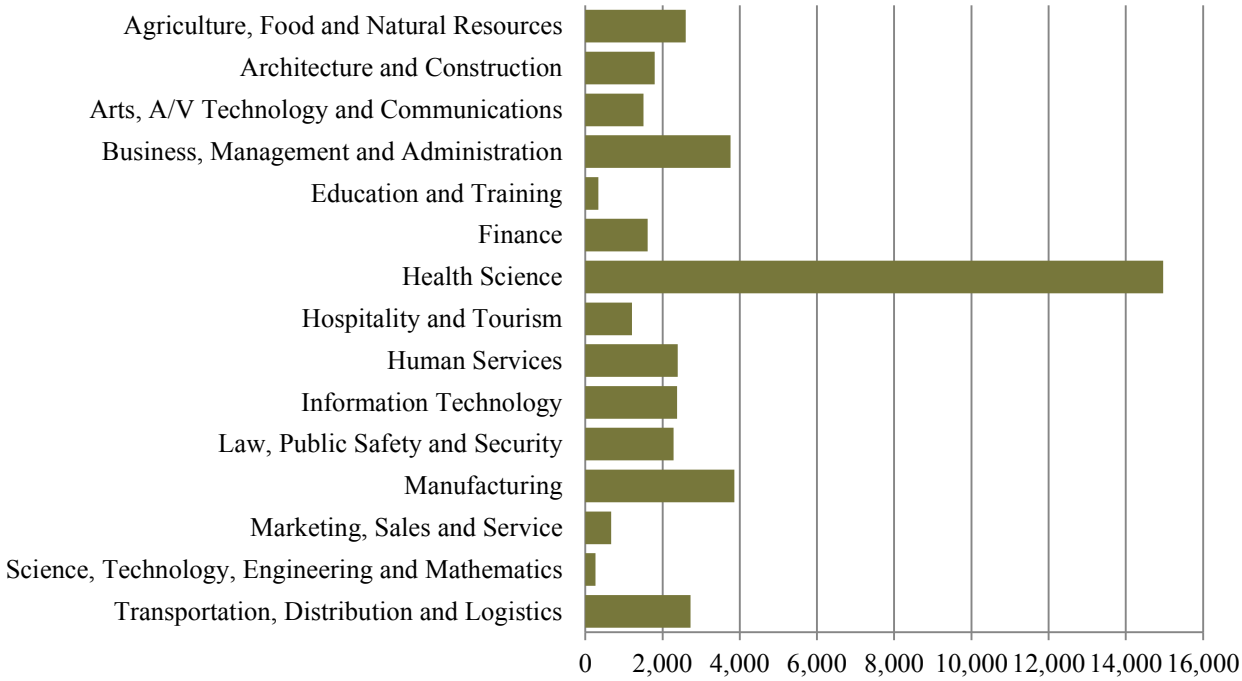


Student Demographics

The typical community college student, as with prior years, is female, under 25, and white. However, the face of the typical student is slightly changing. Although predominately white, more minority students are enrolling in community colleges. With the exception of fiscal year 2012, when the number of minorities slightly declined, the enrollment of minorities has steadily grown for the past five years, with average annual growth of 4.1 percent.

On average, an Iowa community college student is slightly younger than an average community college student nationwide. According to the most recent National Center for Educational Statistics data (Fall 2014), Iowa community colleges enroll 28.6 percent of the students who are under 18 years old (the highest percent in the nation), while the national percent for that category is only 8.6. Iowa is also higher on students under 20 years old, but in other categories it is consistently lower than the national average.

Figure 3-4: Enrollment by career and technical education career cluster: 2015.



Compared to four-year public universities, Iowa community colleges tend to serve an older population; however, most students are of traditional age with 77 percent under 25 years old. The median student age was 20 years old, which means half of the student population were under that age (Figures 3-6 and 3-7).

Though females continue to outnumber males in community colleges, 54 to 46 percent, respectively, (Figure 3-5), 46 percent for males is the highest for the past 16 years. Since the community college Management Information System (MIS) was established, females represented a higher percentage of community college enrollment, remaining steady between 55 and 57 percent. Nationally, community colleges and undergraduate students in four-year institutions have similar female/male distribution: 56/44 and 54/46, respectively (2014). Females have outnumbered males in postsecondary institutions nationwide since 1978 (Snyder, Tan, and Hoffman, 2003).

Iowa community colleges have become increasingly diverse. In 2007, 12 percent of students were racial or ethnic minorities. This proportion continually grew to a record high of 18.9 percent in 2015, with only one year of decline to 16.8 percent in 2012 (Figure 3.8).

In 2010, the Iowa Department of Education changed its reporting methods for race. Students were allowed to identify themselves under multiple racial or ethnic categories. A total of 2,434 students, or close to 10 percent of all minorities, claimed themselves as multi-racial in 2015.

Nationally, community college enrollment of minority students varied from state-to-state, ranging from 8.7 percent in Maine, to 57.4 percent in Alaska, with a nationwide average of 31.9 percent.*

Though the percentage of racial and ethnic minority students is relatively low in Iowa community colleges, they enrolled a higher percentage of minority stundents than other states (16.6 percent in 2014) when compared to the state population. The U.S. Census Bureau (2014)

*Among states where non-white population is in the minority.

Figure 3-5: Credit student gender: 2015.

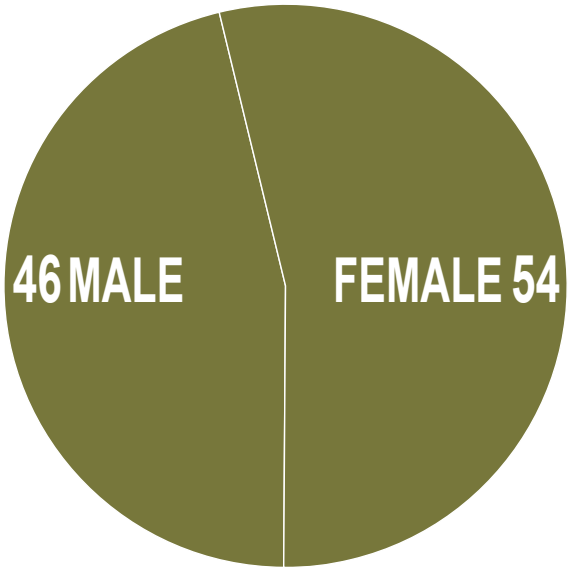


Figure 3-6: Credit student age: 2015.

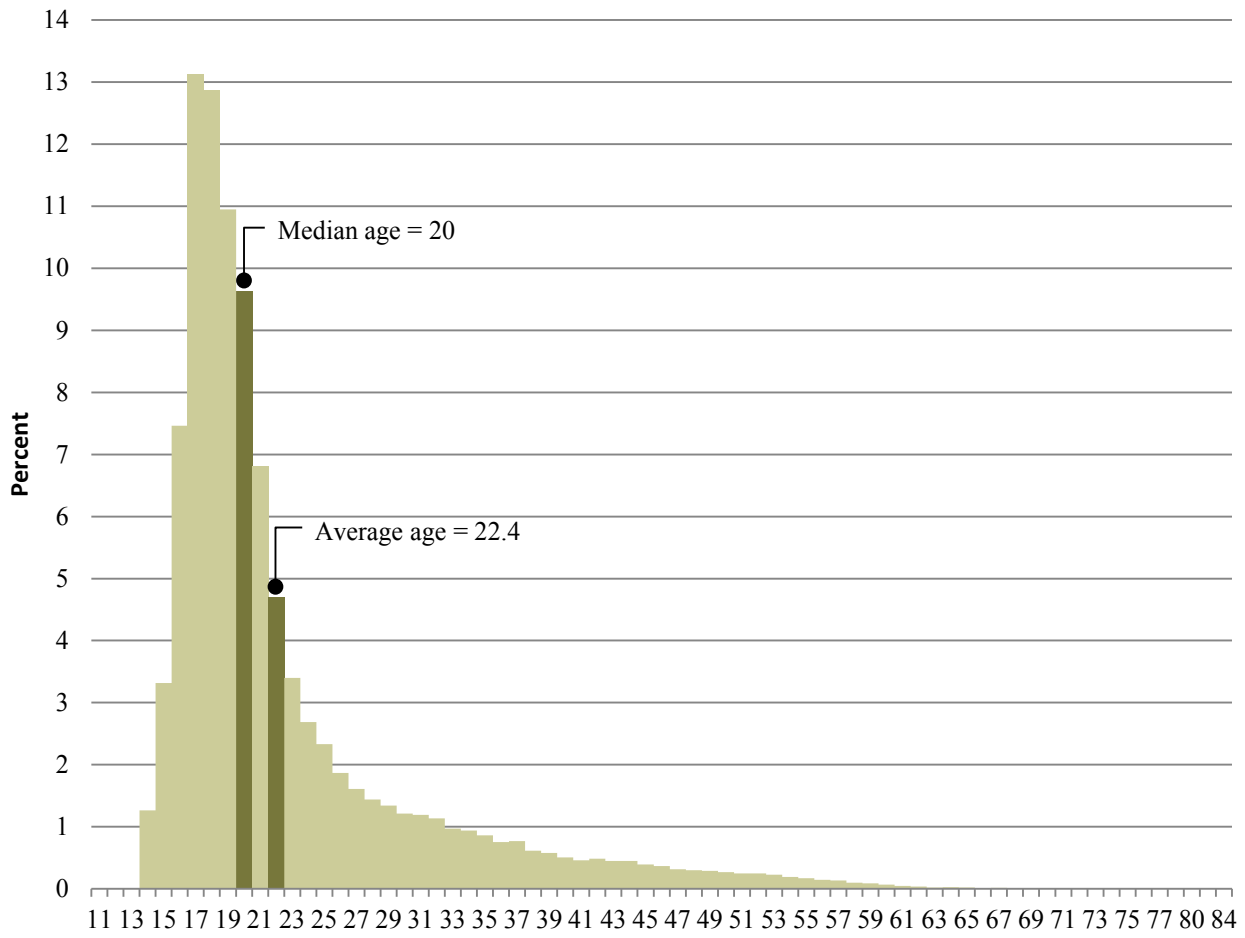
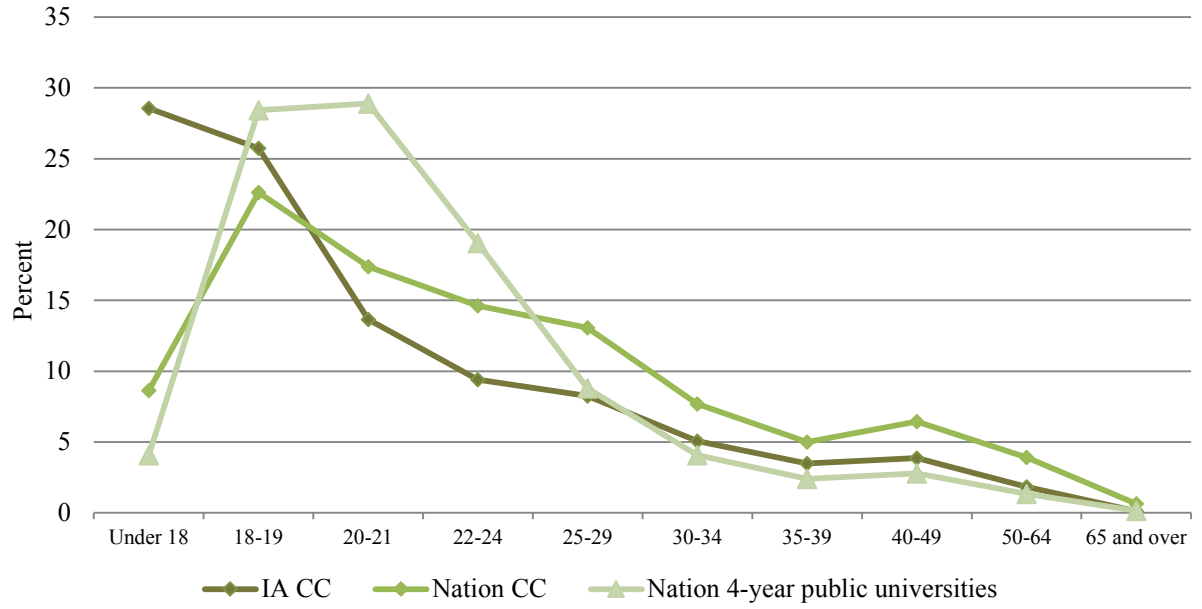


Figure 3-7: Credit student age, national comparison: 2014.



Source: U.S. Department of Education, Integrated Postsecondary Data Systems, Fall 2014.

estimated 17.8 percent of Iowans, 15 years of age and older, were non-white. In that group, 3.4 percent were enrolled in Iowa community colleges in the same year, representing the highest penetration rate of minority students in community colleges in the nation.* Iowa led the nation in community college penetration rate of minority students for the past six years. Iowa was followed by Illinoise (3.1 percent) and Kansas (2.9 percent) (Figure 3.9).

*Among states where non-white population is in the minority.

Student Residency

Credit enrollment in Iowa community colleges consists of Iowa residents, non-Iowa U.S. residents, and foreign nationals. The residency status is reported to

Figure 3-8: Distibution of racial/ethnic minority students: 2011-2015.

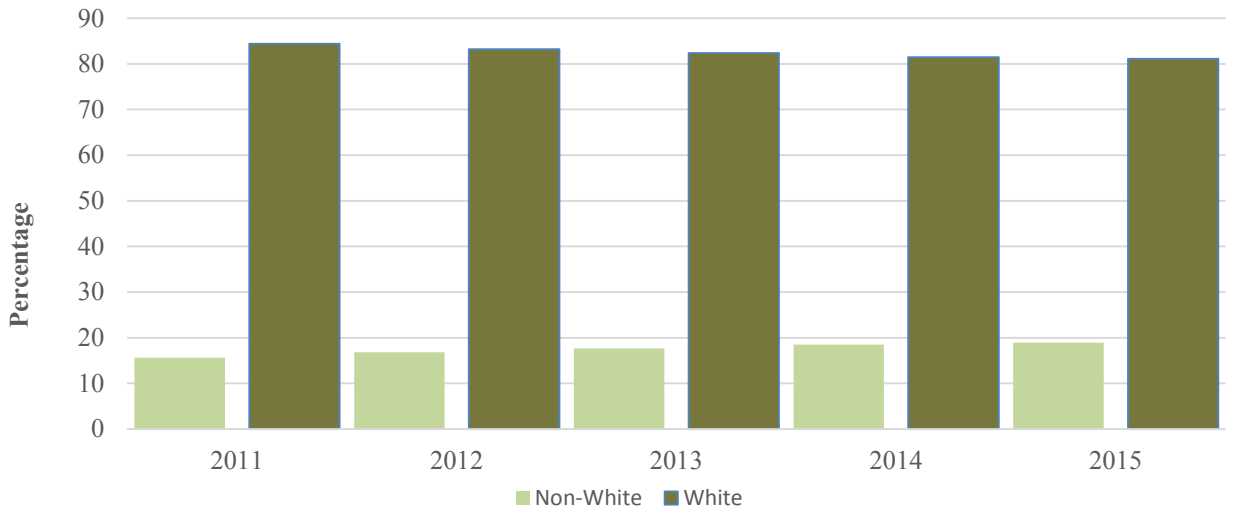
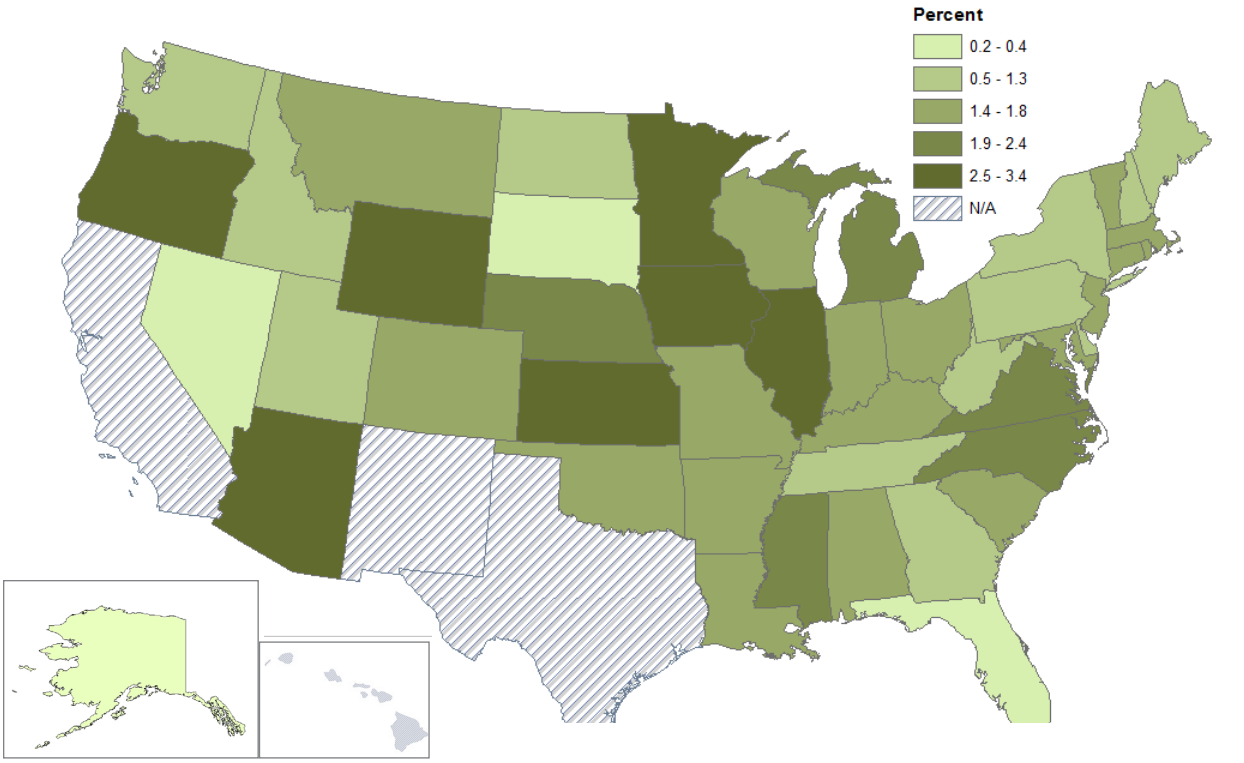
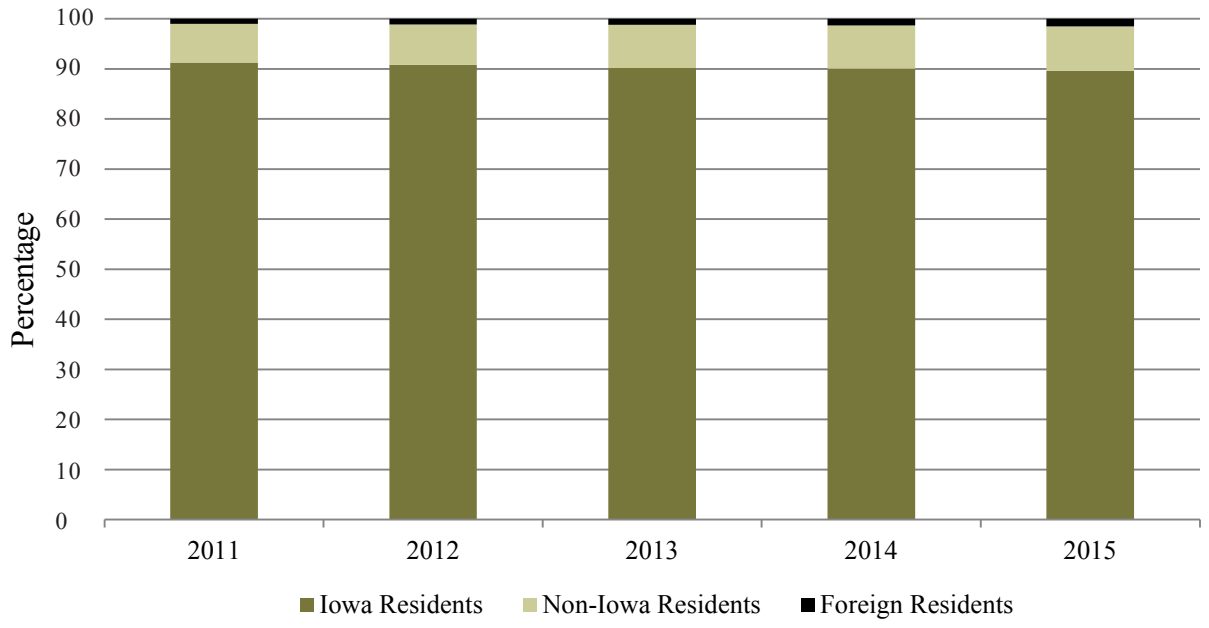


Figure 3-9: Penetration rate of ethnic/racial minority students in U.S. two-year public colleges: 2014.



Source: U.S. Department of Education, Integrated Postsecondary Data Systems (2014), and U.S. Census Bureau, 2014.

Figure 3-10: Residency status of credit students: 2011-2015.



the Iowa Department of Education based on the type of student tuition and immigration status at the time of the reporting.

In 2015, Iowa community colleges enrolled 89.6 percent Iowa residents, 8.9 percent non-Iowa residents, and 1.5 percent foreign nationals. These numbers have remained stable for the past five years, with a small but steady trend towards a larger component of non-Iowa residents. Their enrollment increased from 7.7 percent in 2011 to 8.9 percent in 2015, with average annual growth of 0.9 percent. The number of foreign residents in Iowa community colleges remains low, even though it grew seven percent on average between 2011 and 2015 (Figure 3.10). Nationally, the average percentage of foreign nationals in community colleges was 1.6 in 2014*, varying from 0.0 in New Hampshire and South Dakota to 3.4 percent in Maryland (U.S. Department of Education, Integrated Postsecondary Data Systems, 2014*).

*Latest available data.

Developmental Education

For this section, a student is identified as enrolled in developmental education if he/she is enrolled in a course numbered below 100 (e.g., MAT-060).

During fiscal year 2015, 16,859 students enrolled in a developmental education course (12.5 percent decline from 2014), which represented 12.2 percent of the entire student body. Students enrolled in a total of 85,709 credit hours of developmental education during the fiscal year, which is 11.4 percent less than last year.

Within developmental education, many students enrolled in mathematics. In 2015, students took 15,433 developmental mathematics courses, which far exceeded the 7,490 developmental English, Communications, and Reading courses. Figure 3-11 shows a detailed list of popular developmental education courses. The three most popular developmental education courses were mathematics: College Preparatory Math, Elementary Algebra, and Pre-Algebra. Combined, they enrolled 8,076 students.

Among English developmental courses, College Preparatory Writing II and Basic Writing had the largest enrollment with 1,916 students, or close to 40 percent of all developmental English enrollment.

Similar to the general population of students, most of those who took developmental education were females (58.2 percent). Racial/ethnic minority students, however, comprised 51.5 percent of all developmental education enrollees, a much higher percent than that of the general

Developmental Education Enrollment

Enrollment
16,859
12.5% less than last year

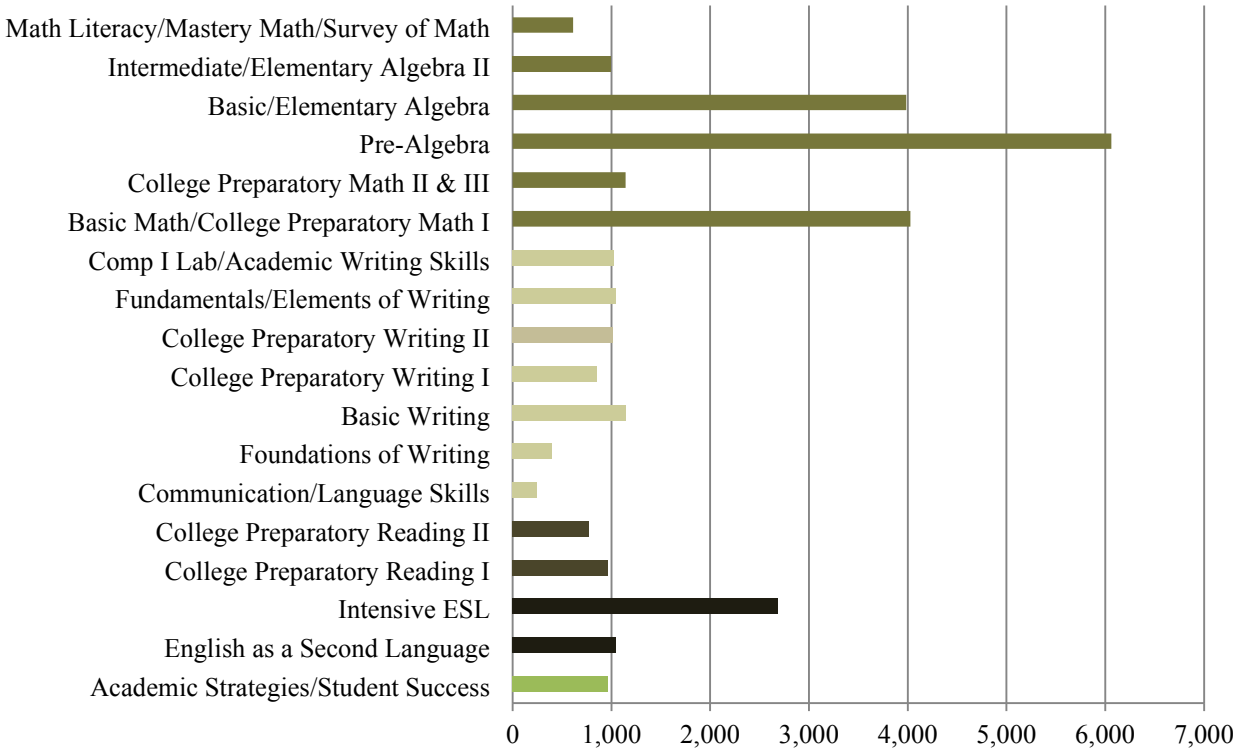
Percent of total enrollment
12.2%

Credit Hours
85,709
12.0% less than last year

Average credit per student
5.1

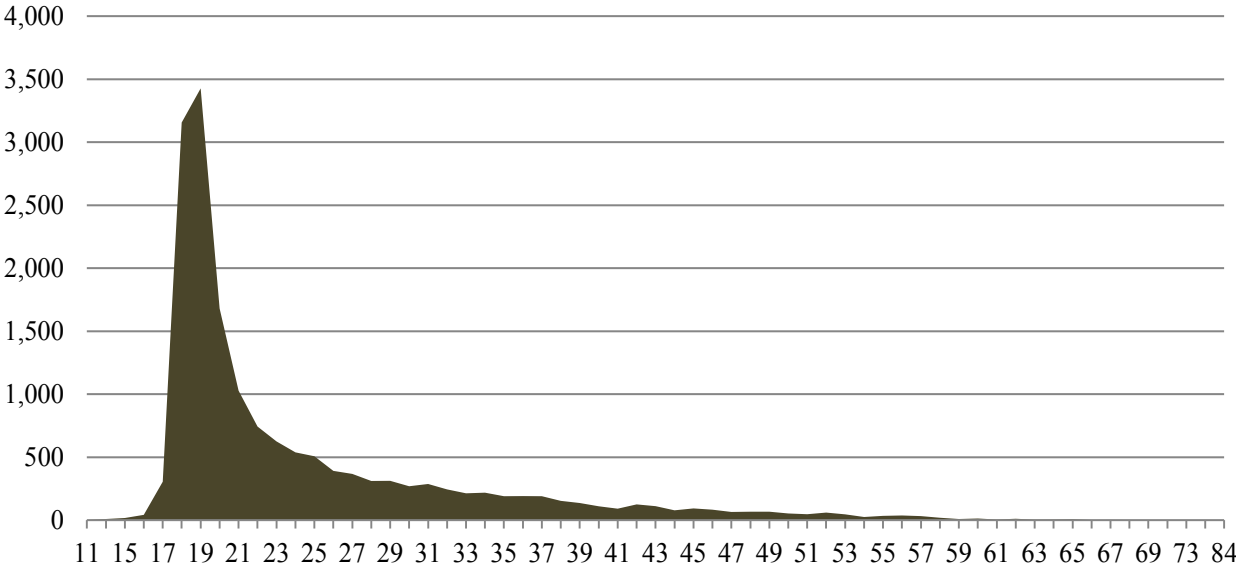
Most Frequent Subject
MATHEMATICS
15,433 courses

Figure 3-11: Number of most popular developmental courses, groupped by type.



student population (18.9 percent). The average age for all community college students was 22.4 years old; yet, the average age for students in developmental education was 23.9, with the median age of 21. Over 52 percent of developmental course enrollees were between ages 18 and 22, with the peak participation being among 19 year old students. This age group comprised over 25 percent of all developmental enrollment in 2015 (Figure 3-12).

Figure 3-12: Age of developmental education students.



4 Online Enrollment

The Iowa Department of Education has collected data on community college enrollment in online courses since FY 2007. An online course is defined as any course delivered entirely (100 percent) via the Internet. An online student is defined as one who is enrolled in at least one online course. Data were not collected on other distance education categories such as hybrid or blended courses.

Over 40 percent of all community college students enrolled in at least one online course during FY 2015. During FY 2015, 59,801 community college students enrolled in 417,151 semester credit hours of online courses, compared to 56,021 students who enrolled in 388,685 semester credit hours of online courses last fiscal year. This change in semester credit hours represents an increase of 7.3 percent from FY 2014. Online semester credit hours accounted for over one-fifth of total semester credit hours in FY 2015. In Iowa, enrollment in online coursework increased 6.7 percent in 2015.

Demographics

The demographic profile of students enrolled in online courses is similar to that of the general population of community college students, with the typical student being a white female resident of Iowa. Although 59,801 students enrolled in online coursework, 2,736 had incomplete demographic data. Removing these left 57,065 records with complete demographic information, as displayed in Table 4-1. Of those students who reported demographic information in FY 2015, 36,718 were females (64.3 percent), a percentage essentially unchanged since FY 2013. Whites comprised the largest racial group (82.6 percent), followed by Blacks (6.3 percent), and Hispanics (5.1 percent). Table 4-2 displays online enrollment by ethnicity per community college.

Table 4-1: Head count of online enrollment by ethnicity and sex.

Subpopulation	Females	Males	Total
American Indian	253	138	391
Asian	1,098	886	1,984
Black	1,965	1,647	3,612
Hispanic	1,836	1,056	2,892
Pacific Islander	51	32	83
White	30,889	16,268	47,157
Other	626	320	946
Total	**36,718**	**20,347**	**57,065**

Note: This table excludes 2,736 records with missing demographic data.

In 2015, residency statuses of 59,819 online students were reported for tuition purposes (Table 4-3). Residents of Iowa accounted for 50,716 students (84.8 percent) of those enrolled in online courses. Out-of-state residents, including foreign students, accounted for 9,103 students (15.2 percent) enrolled in online courses, essentially unchanged from last fiscal year.

The average age of students taking one or more online courses was 23.8 years old. Students between 23 and 39 accounted for 26.3 percent of online enrollment.

Enrollment by Program Type

Enrollment in Iowa's community colleges is disaggregated into four program types: college parallel, career option, career and technical education (CTE), and some combination of the three. Table 4-4 displays enrollment and semester credit hours by type of program. Table 4-5 displays enrollment for each college by sex and program type.

As Table 4-4 shows, 41,533 students (69.5 percent) of the 59,801 students who took online courses during FY 2015 were enrolled in college parallel programs. Furthermore, these students accounted for 30.0 percent of total community college enrollment, 14.6 percent of the 1,889,542 total semester credit hours, and almost two-thirds of the 417,151 online semester credit hours. Among the 96,784 students enrolled in college parallel programs throughout the state, 43.0 percent enrolled in online courses, accounting for one-fourth of the 1,102,558 semester credit hours attributed to college parallel students.

During the same time period, 15,640 students of the 59,801 students who took online courses were enrolled in CTE programs, accounting for 26.2 percent of total online enrollment. This group of students accounted for 11.3 percent of total enrollment, 6.0 percent of total semester credit hours, and 27.2 percent of all online semester credit hours. Among the 35,415 community college students enrolled in CTE programs throughout the state, 44.2 percent enrolled in online courses, accounting for 17.3 percent of the 654,516 semester credit hours attributed to CTE students.

Out of 59,801 students who took online courses during FY 2015, 1,774 (3.0 percent) were enrolled in career option programs. These students accounted for 1.3 percent of total enrollment, but less than one percent of total semester credit hours, and 4.0 percent of all online semester credit hours. Among the 3,041 community college students enrolled in career option programs throughout the state, 58.3 percent were enrolled in online courses, accounting for 35.7 percent of the 47,198 semester credit hours attributed to career option students.

Table 4-2: Online enrollment by college and ethnicity for FY 2015.

College	American Indian	Asian	Black	Hispanic	Pacific Islander	White	Two or more	Not reported	Total
Northeast Iowa	5	12	72	48	2	2,577	25	90	2,831
North Iowa Area	6	36	129	102	0	1,964	30	13	2,280
Iowa Lakes	8	85	78	59	4	1,401	6	48	1,689
Northwest Iowa	13	28	15	66	2	1,441	17	77	1,659
Iowa Central	19	50	419	199	6	2,742	34	277	3,746
Iowa Valley	42	193	137	203	4	1,573	35	150	2,337
Hawkeye	14	110	331	91	4	2,993	51	0	3,594
Eastern Iowa	24	123	339	370	12	4,360	144	208	5,580
Kirkwood	48	569	525	343	10	6,396	170	649	8,710
Des Moines Area	29	333	573	458	4	8,845	250	526	11,018
Western Iowa Tech	76	93	112	385	7	3,418	38	394	4,523
Iowa Western	76	274	465	292	20	4,052	8	121	5,308
Southwestern	3	17	46	52	4	1,135	20	11	1,288
Indian Hills	7	32	314	143	3	2,561	55	110	3,225
Southeastern	21	29	57	81	1	1,700	63	61	2,013
Total	**391**	**1,984**	**3,612**	**2,892**	**83**	**47,158**	**946**	**2,735**	**59,801**

Table 4-3: FY 2015 residency status of students enrolled in online courses for tuition purposes.

College	In-state	Out-of-state	Foreign	Total
Northeast	2,444	382	5	2,831
North Iowa Area	2,009	237	34	2,280
Iowa Lakes	1,402	272	15	1,689
Northwest	1,396	257	6	1,659
Iowa Central	2,820	895	33	3,748
Iowa Valley	1,870	189	278	2,337
Hawkeye	3,277	304	13	3,594
Eastern Iowa	4,328	1,195	57	5,580
Kirkwood	7,715	506	489	8,710
Des Moines Area	10,512	293	224	11,029
Western Iowa Tech	3,784	727	12	4,523
Iowa Western	3,598	1,658	54	5,310
Southwestern	1,128	151	12	1,291
Indian Hills	2,740	419	66	3,225
Southeastern	1,693	312	8	2,013
Total	**50,716**	**7,797**	**1,306**	**59,819**

Note: Data for this table may be duplicated because students can change residency status from one term to the next.

Table 4-4: Total and online enrollment and credit hours by program type for FY 2015.

	Enrollment		Semester Hours	
Program	Total	Online	Total	Online
College parallel	96,784	41,533	1,102,558	275,910
CTE	35,415	15,640	660,990	113,497
Career option	3,041	1,774	47,198	16,864
Combination	3,402	854	78,796	10,880
Total	**138,642**	**59,801**	**1,889,542**	**417,151**

Table 4-5: Online enrollment by sex, college, and program type for FY 2015.

College	College parallel	Career option	CTE	Combination	TOTAL
		Females			
Northeast Iowa	1,046	0	849	28	1,923
North Iowa Area	1,110	4	208	22	1,344
Iowa Lakes	718	34	311	46	1,109
Northwest	882	12	158	20	1,072
Iowa Central	1,659	343	372	48	2,422
Iowa Valley	1,059	9	332	0	1,400
Hawkeye	1,975	0	352	36	2,363
Eastern Iowa	2,331	0	1,359	83	3,773
Kirkwood	3,196	20	2,074	89	5,379
Des Moines Area	5,275	759	803	132	6,969
Western Iowa Tech	1,883	1	1,137	62	3,083
Iowa Western	2,022	0	1,002	61	3,085
Southwestern	723	0	119	0	842
Indian Hills	1,017	1	1,118	0	2,136
Southeastern	1,109	55	214	0	1,378
Total females	*26,005*	*1,238*	*10,408*	*627*	*38,278*
		Males			
Northeast Iowa	532	0	370	6	908
North Iowa Area	737	1	190	8	936
Iowa Lakes	409	21	140	10	580
Northwest	509	7	70	1	587
Iowa Central	931	116	262	15	1,324
Iowa Valley	787	19	131	0	937
Hawkeye	1,003	0	222	6	1,231
Eastern Iowa	1,317	0	464	26	1,807
Kirkwood	2,210	13	1,071	37	3,331
Des Moines Area	3,028	337	625	59	4,049
Western Iowa Tech	884	1	532	23	1,440
Iowa Western	1,894	0	312	15	2,221
Southwestern	374	0	72	0	446
Indian Hills	436	0	652	0	1,088
Southeastern	473	21	140	0	634
Total males	*15,524*	*536*	*5,253*	*206*	*21,519*
ALL STUDENTS	***41,529***	***1,774***	***15,661***	***833***	***59,797***

Note: This table excludes records of four students who did not disclose their sex.

5 Joint Enrollment and Demographics

Joint enrollment is defined as a high school student enrolled in community college course. Joint enrollment of high school students accounts for over 30 percent of total community college credit enrollment and over one-sixth of total credit hours. Iowa is one of at least 48 states with state dual enrollment policies[1]. In Iowa, high school students enroll in community college credit courses in a variety of ways including Postsecondary Enrollment Option (PSEO), college courses offered through a contract between a local school district and a community college (e.g., concurrent enrollment), and independent enrollment in a college course as a tuition-paying student.

Most joint enrollment opportunities fall under the rubric of Senior Year Plus (SYP). Legislation, passed in 2008, consolidated and standardized several existing programs involving college credit opportunities for high school students including PSEO, concurrent enrollment (which entails supplementary weighted funding for local school districts), career and regional academies, and Advanced Placement (AP®). The Community College Management Information System (MIS) captures joint enrollment in three categories:

- PSEO;
- contracted courses (which may or may not be concurrent enrollment and generate supplementary weighting for the partnering local district); and
- tuition.

While sometimes referred to as dual credit, joint enrollment does not necessarily entail credit being issued at both the secondary and postsecondary levels. Some programs, such as PSEO and concurrent enrollment, require that credit be issued at each level, while other joint enrollment opportunities have no such requirement.

[1]Zinth, Jennifer. Dual Enrollment: Statewide Policy in Place. Education Commission of the States. February, 2015. www.ecs.org

Joint Enrollment

Number of Students: 44,034

Growth since 2014: 2.4%

Semester Hours: 350,997
Up 4.0% since 2014.

Semester Hours per H.S. Student: 7.9
Up 1.3% since 2014.

Figure 5-1: Fiscal year joint enrollment: 2004-2015.

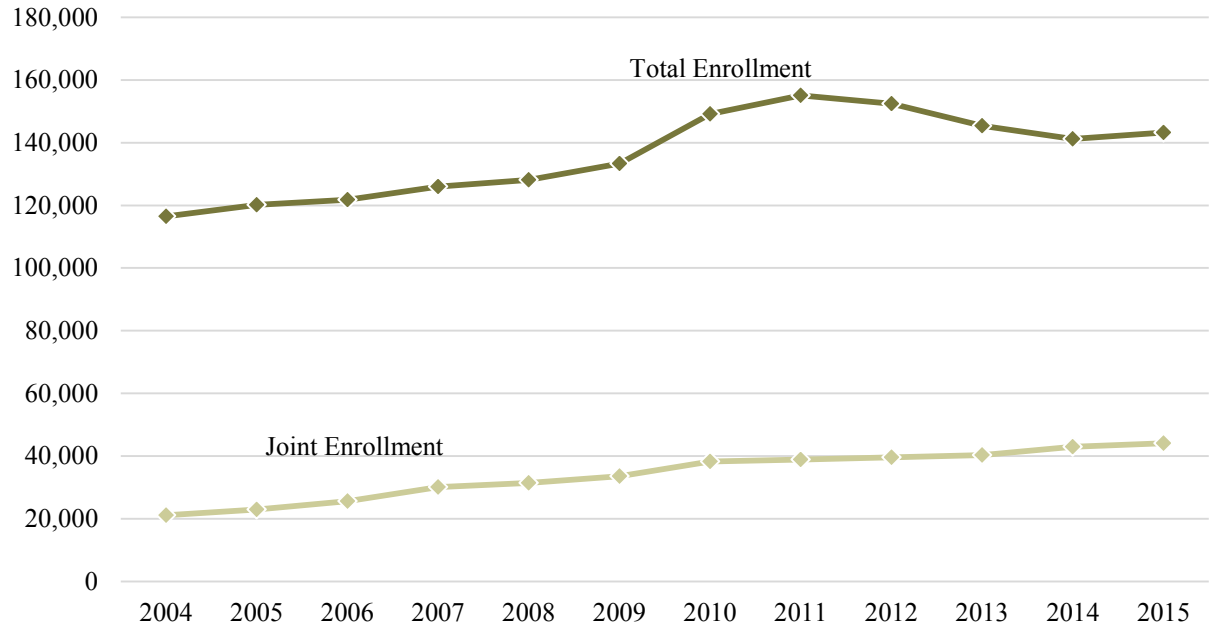


Figure 5-2: Fiscal year joint enrollment semester hours: 2004-2015.

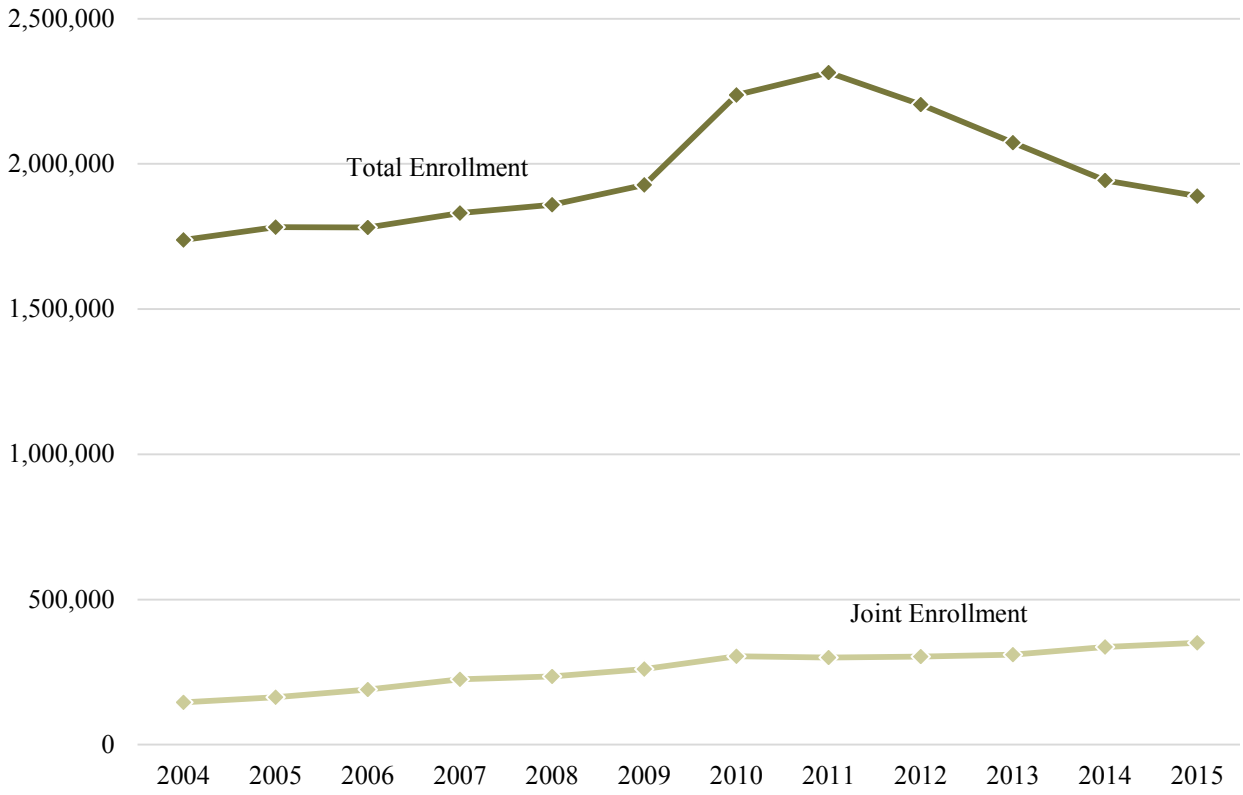


Figure 5-3: Average semester hours per jointly enrolled student: 2004-2015.

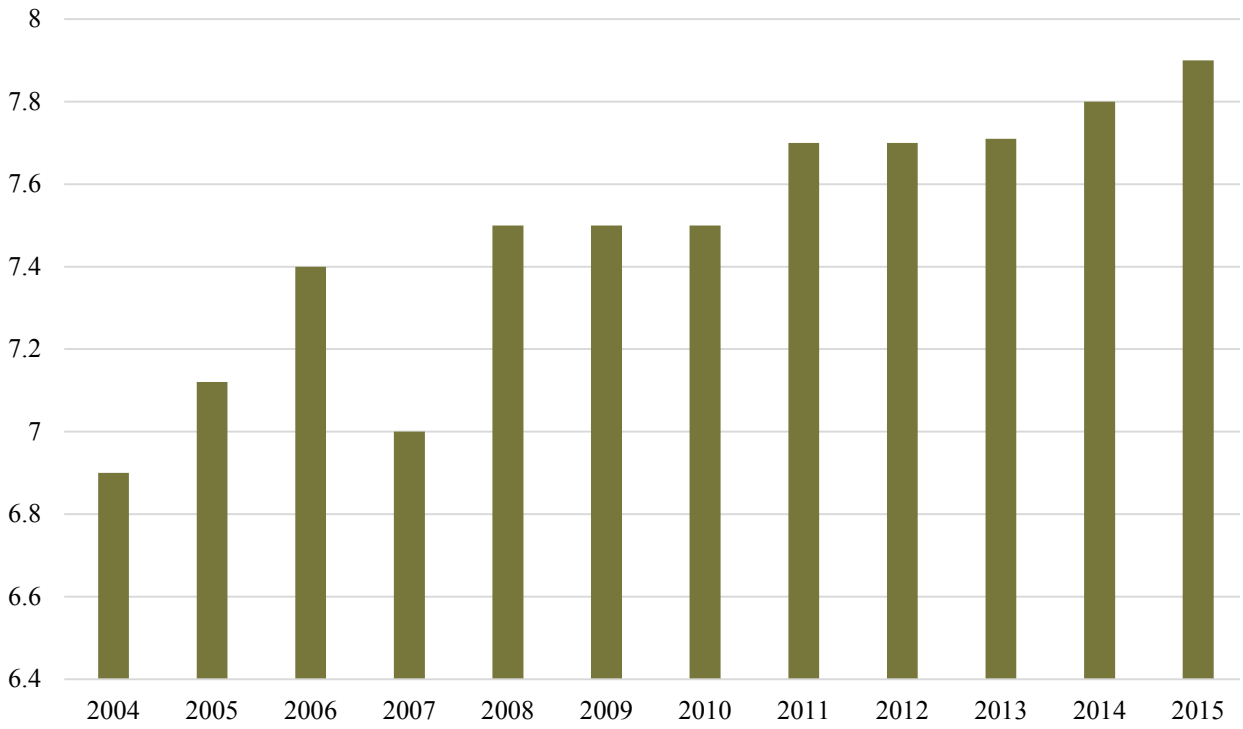
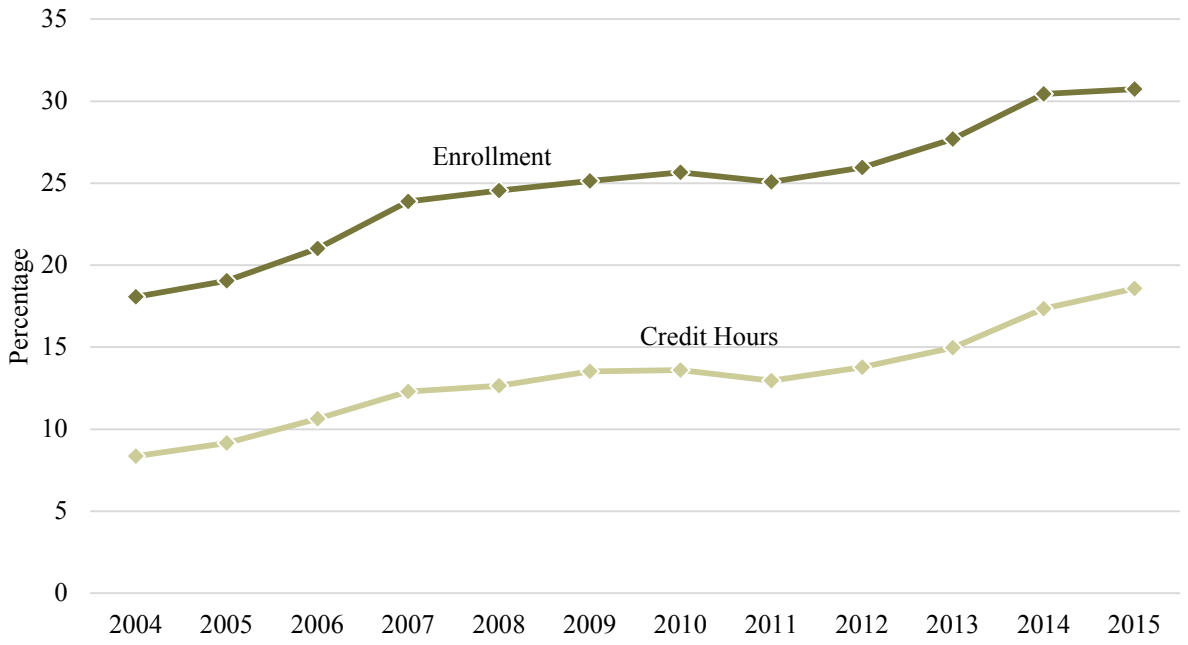


Figure 5-4: Joint enrollment and semester hours as a percentage of total credit enrollment and semester hours: 2004-2015.

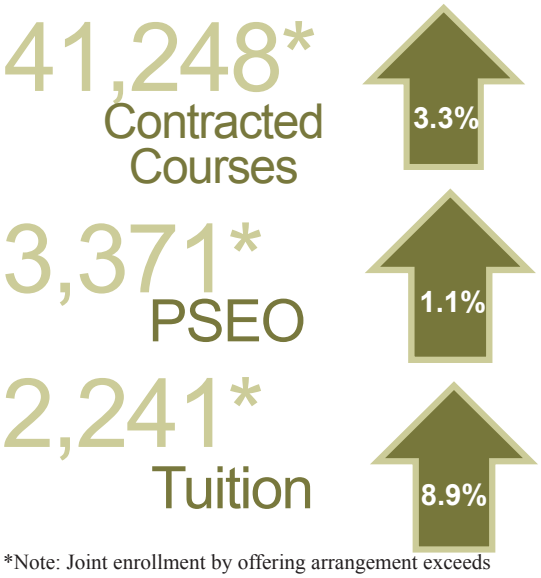


Joint enrollment in Iowa community colleges has steadily risen to a record high of 44,034 students in fiscal year (FY) 2015, which represents a 2.4 percent enrollment increase from 2014 (Figure 5-1). Enrollment growth of jointly enrolled students continues to outpace the growth of total credit enrollment, despite an increase in total credit enrollment of approximately one percent from FY 2014 to FY 2015. Since FY 2004, joint enrollment has increased 109 percent – approximately 6.9 percent per year.

Jointly enrolled students enrolled in a total of 350,997 credit hours in FY 2015 compared to 336,923 credit hours the previous year (Figure 5-2). The number of average credit hours taken by each student slightly increased to 7.9, equivalent to about 2 or 3 courses per student (Figure 5-3). The number of credit hours taken per jointly enrolled student has increased one credit hour since FY 2004. In FY 2015, joint enrollment accounted for 19 percent of total credit hours, a two percentage point increase from FY 2014. Because high school students generally enroll part-time, they account for a smaller proportion of total credit hours than for total enrollment (Figure 5-4).

The rate at which high school students enroll in community college coursework varies by local school district and community college region (Figure 5-8). Nationally, public two-year colleges offer college credit coursework to high school students at higher rates than other sectors of higher education. In 2005, 98 percent of public two-year colleges nationwide had high school students jointly enrolled in college credit coursework compared with 77 percent of public four-year institutions.[2] In Iowa, delivery of programs to high school students is a part of the community colleges' mission (Iowa Code 260C.1); therefore, all 15 community colleges are committed to offering college credit opportunities to these students.

Joint Enrollment by Offering Arrangement



*Note: Joint enrollment by offering arrangement exceeds unduplicated total 44,034 because some students are enrolled in multiple categories.

[2]Kleiner, Brian and Laurie Lewis. Dual Enrollment of High School Students at Postsecondary Institutions: 2002-03. National Center for Education Statistics. 2005. www.nces.ed.gov

Figure 5-5: Credit joint enrollment by offering arrangement type: 2015.

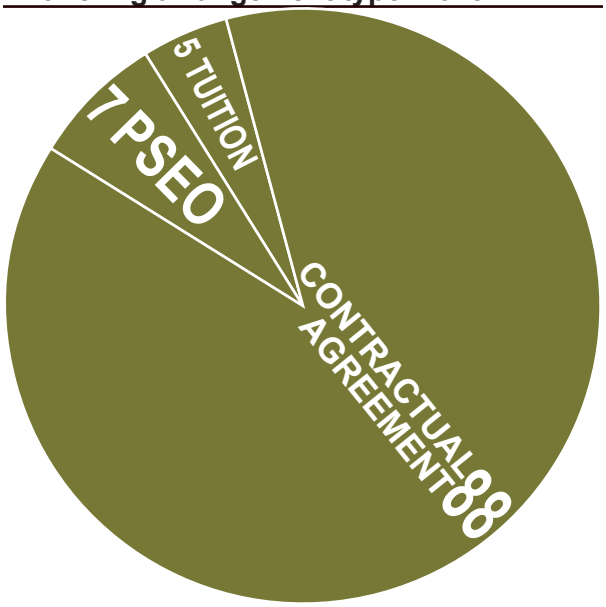
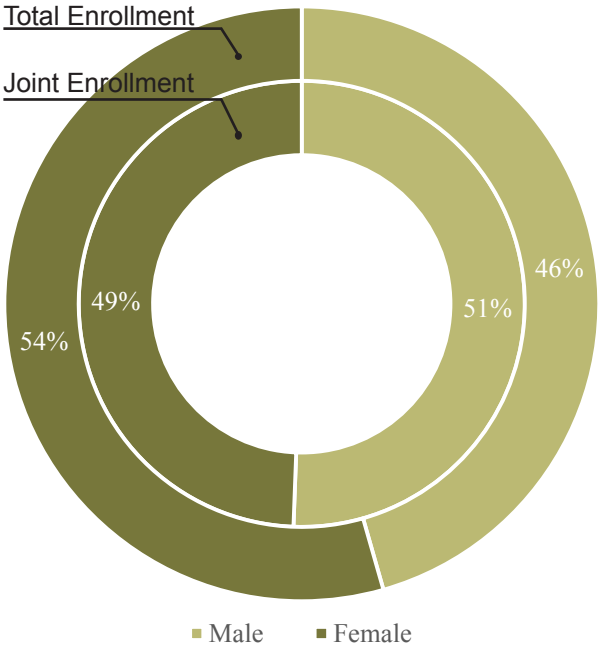
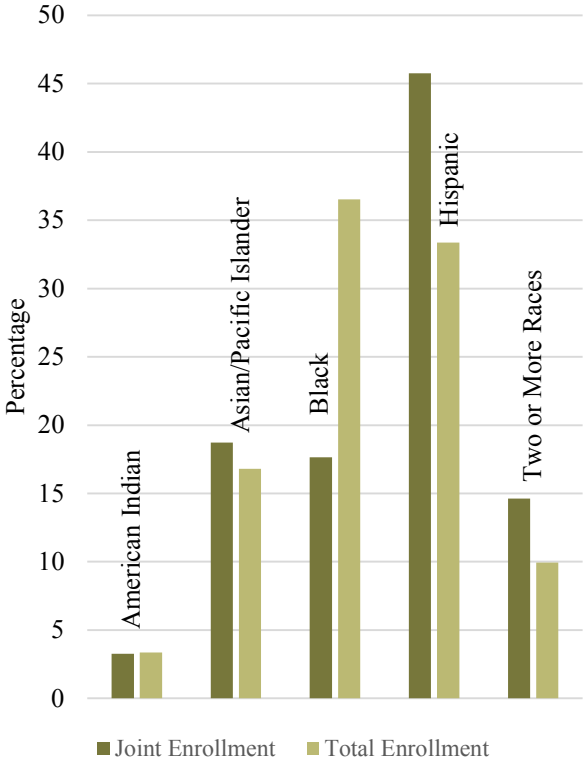


Figure 5-6: Jointly enrolled credit student gender*: 2015.



*Students with unknown gender are not included.

Figure 5-7: Jointly enrolled credit student enrollment by racial minorities: 2015.



Joint Enrollment Offering Arrangements

Contracted courses had the largest enrollment of the three types of joint enrollment offering arrangements, accounting for 88 percent of jointly enrolled students in FY 2015 (Figure 5-5). Enrollment in contracted courses rose 3.4 percent from the previous year to 41,248 students. Postsecondary Enrollment Options, which accounted for approximately seven percent of joint enrollment, experienced a slight enrollment increase of about one percent from FY 2014. Similarly, enrollment of tuition-paying students increased about one percent, to 2,241 students, from the previous year.

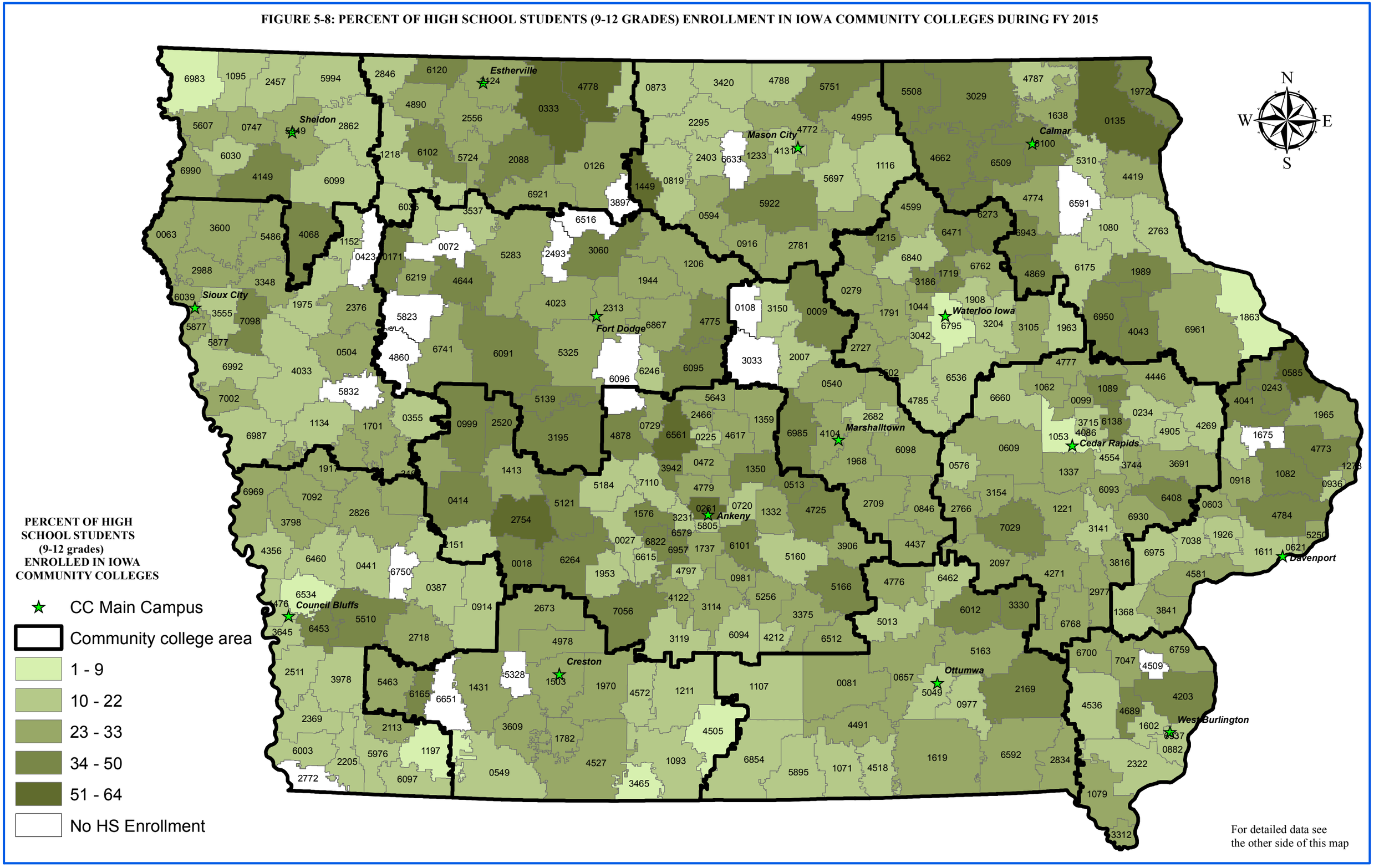
Jointly Enrolled Student Demographics

Compared with the overall student body, jointly enrolled students have higher proportions of whites and males. The typical jointly enrolled student is male, 17 years old, and white. This is the third consecutive year in which more males jointly enrolled than females. In FY 2015, slightly more than half of joint enrollees were male compared to about 46 percent of the overall student body (Figure 5-6).

The phenomenon of proportionally greater male enrollment is driven by contracted course enrollment, which was 51.1 percent male in FY 2015, up from 50.8 percent in FY 2014. In contrast, PSEO and tuition enrollment were 62.8 percent and 51.5 percent female, respectively.

The racial/ethnic background of joint enrollees is less diverse than either total community college enrollment or public K-12 enrollment. In FY 2015, close to 14

FIGURE 5-8: PERCENT OF HIGH SCHOOL STUDENTS (9-12 GRADES) ENROLLMENT IN IOWA COMMUNITY COLLEGES DURING FY 2015



District Number	District Name	Percent (Joint)
0009	AGWSR	39.34
0018	ADAIR-CASEY	37.25
0027	ADEL-DESOTO-MINBURN	20.29
0063	AKRON WESTFIELD	22.54
0081	ALBIA	29.74
0099	ALBURNETT	26.85
0126	ALGONA	33.06
0135	ALLAMAKEE	52.12
0153	NORTH BUTLER	24.75
0171	ALTA	33.90
0225	AMES	12.65
0234	ANAMOSA	21.49
0243	ANDREW	50.00
0261	ANKENY	57.89
0279	APLINGTON-PARKERSBURG	23.71
0333	NORTH UNION	52.38
0355	AR-WE-VA	17.65
0387	ATLANTIC	16.24
0414	AUDUBON	37.81
0441	A-H-S-T	12.13
0472	BALLARD	24.40
0504	BATTLE CREEK-IDA GROVE	24.31
0513	BAXTER	34.72
0540	BCLUW	23.50
0549	BEDFORD	18.18
0576	BELLE PLAINE	12.20
0585	BELLEVUE	54.46
0594	BELMOND-KLEMME	25.60
0603	BENNETT	25.93
0609	BENTON	28.49
0621	BETTENDORF	21.58
0657	EDDYVILLE-BLAKESBURG-FREMONT	24.24
0720	BONDURANT-FARRAR	14.05
0729	BOONE	23.08
0747	BOYDEN-HULL	24.24
0819	WEST HANCOCK	10.73
0846	BROOKLYN-GUERNSEY-MALCOM	29.90
0873	NORTH IOWA	15.88
0882	BURLINGTON	12.42
0914	CAM	10.05
0916	CAL	27.50
0918	CALAMUS-WHEATLAND	29.26
0936	CAMANCHE	19.73
0977	CARDINAL	20.36
0981	CARLISLE	32.64
0999	CARROLL	41.37
1044	CEDAR FALLS	29.27
1053	CEDAR RAPIDS	7.40
1062	CENTER POINT-URBANA	25.00
1071	CENTERVILLE	20.05
1079	CENTRAL LEE	30.89
1080	CENTRAL	21.66
1082	CENTRAL DE WITT	38.49
1089	CENTRAL CITY	45.78
1093	CENTRAL DECATUR	11.43
1095	CENTRAL LYON	21.67
1107	CHARITON	21.90
1116	CHARLES CITY	20.59
1134	CHARTER OAK-UTE	10.38
1152	CHEROKEE	22.02
1197	CLARINDA	7.22
1206	CLARION-GOLDFIELD-DOWS	30.31
1211	CLARKE	14.98
1215	CLARKSVILLE	34.02
1218	CLAY CENTRAL-EVERLY	14.71
1221	CLEAR CREEK-AMANA	31.96
1233	CLEAR LAKE	29.59
1278	CLINTON	30.13
1332	COLFAX-MINGO	23.00
1337	COLLEGE	25.55
1350	COLLINS-MAXWELL	37.87
1359	COLO-NESCO	28.48
1368	COLUMBUS	22.22
1413	COON RAPIDS-BAYARD	26.95
1431	CORNING	24.51
1449	CORWITH-WESLEY	52.63
1476	COUNCIL BLUFFS	20.84
1503	CRESTON	29.58
1576	DALLAS CENTER-GRIMES	40.75
1602	DANVILLE	17.92
1611	DAVENPORT	16.90
1619	DAVIS COUNTY	28.33
1638	DECORAH	31.78
1701	DENISON	26.81
1719	DENVER	40.26
1737	DES MOINES INDEPENDENT	28.16
1782	DIAGONAL	30.23
1791	DIKE-NEW HARTFORD	23.11
1863	DUBUQUE	8.16
1908	DUNKERTON	18.64
1917	BOYER VALLEY	32.47
1926	DURANT	13.46
1944	EAGLE GROVE	29.06
1953	EARLHAM	17.83
1963	EAST BUCHANAN	20.11
1965	EASTON VALLEY	23.56
1968	EAST MARSHALL	23.69
1970	EAST UNION	26.95
1972	EASTERN ALLAMAKEE	39.23
1975	RIVER VALLEY	19.70
1989	EDGEWOOD-COLESBURG	34.55
2007	ELDORA-NEW PROVIDENCE	17.51
2088	EMMETSBURG	33.85
2097	ENGLISH VALLEYS	22.88
2113	ESSEX	22.64
2124	ESTHERVILLE LINCOLN CENTRAL	27.23
2151	EXIRA-ELK HORN-KIMBALLTON	17.69
2169	FAIRFIELD	37.01
2205	FARRAGUT	11.18
2295	FOREST CITY	11.75
2313	FORT DODGE	27.13
2322	FORT MADISON	21.57
2369	FREMONT-MILLS	16.77
2376	GALVA-HOLSTEIN	30.77
2403	GARNER-HAYFIELD	14.57
2457	GEORGE-LITTLE ROCK	20.86
2466	GILBERT	23.52
2502	GLADBROOK-REINBECK	23.88
2511	GLENWOOD	14.48
2520	GLIDDEN-RALSTON	33.88
2556	GRAETTINGER-TERRIL	32.91
2673	NODAWAY	26.40
2682	GMG	14.79
2709	GRINNELL-NEWBURG	25.98
2718	GRISWOLD	26.89
2727	GRUNDY CENTER	23.87
2754	GUTHRIE CENTER	59.90
2763	CLAYTON RIDGE	20.11
2766	H-L-V	26.17
2781	HAMPTON-DUMONT	32.61
2826	HARLAN	26.61
2834	HARMONY	31.11
2846	HARRIS-LAKE PARK	21.30
2862	HARTLEY-MELVIN-SANBORN	18.66
2977	HIGHLAND	32.30
2988	HINTON	29.17
3029	HOWARD-WINNESHIEK	38.36
3042	HUDSON	20.50
3060	HUMBOLDT	44.58
3105	INDEPENDENCE	25.59
3114	INDIANOLA	33.44
3119	INTERSTATE 35	17.07
3141	IOWA CITY	9.78
3150	IOWA FALLS	14.47
3154	IOWA VALLEY	31.49
3168	IKM-MANNING	28.46
3186	JANESVILLE CONSOLIDATED	34.88
3195	GREENE COUNTY	37.09
3204	JESUP	16.44
3231	JOHNSTON	19.81
3312	KEOKUK	23.19
3330	KEOTA	40.91
3348	KINGSLEY-PIERSON	27.50
3375	KNOXVILLE	26.52
3420	LAKE MILLS	12.77
3465	LAMONI	1.77
3537	LAURENS-MARATHON	21.88
3555	LAWTON-BRONSON	19.80
3600	LE MARS	29.43
3609	LENOX	22.56
3645	LEWIS CENTRAL	19.23
3691	NORTH CEDAR	23.45
3715	LINN-MAR	18.66
3744	LISBON	22.94
3798	LOGAN-MAGNOLIA	25.60
3816	LONE TREE	32.93
3841	LOUISA-MUSCATINE	23.94
3906	LYNNVILLE-SULLY	22.73
3942	MADRID	35.04
3978	EAST MILLS	16.16
4023	MANSON NORTHWEST WEBSTER	27.30
4033	MAPLE VALLEY-ANTHON OTO	12.45
4041	MAQUOKETA	36.93
4043	MAQUOKETA VALLEY	38.77
4068	MARCUS-MERIDEN-CLEGHORN	38.67
4086	MARION INDEPENDENT	23.15
4104	MARSHALLTOWN	23.55
4122	MARTENSDALE-ST MARYS	29.51
4131	MASON CITY	11.08
4149	MOC-FLOYD VALLEY	38.21
4203	MEDIAPOLIS	42.25
4212	MELCHER-DALLAS	10.42
4269	MIDLAND	11.26
4271	MID-PRAIRIE	28.95
4356	MISSOURI VALLEY	20.92
4419	MFL MARMAC	25.52
4437	MONTEZUMA	31.55
4446	MONTICELLO	28.72
4491	MORAVIA	26.92
4505	MORMON TRAIL	5.13
4518	MOULTON-UDELL	17.14
4527	MOUNT AYR	33.48
4536	MOUNT PLEASANT	15.44
4554	MOUNT VERNON	14.69
4572	MURRAY	13.93
4581	MUSCATINE	23.50
4599	NASHUA-PLAINFIELD	24.38
4617	NEVADA	30.52
4644	NEWELL-FONDA	45.45
4662	NEW HAMPTON	42.28
4689	NEW LONDON	42.77
4725	NEWTON	34.01
4772	CENTRAL SPRINGS	28.69
4773	NORTHEAST	50.15
4774	NORTH FAYETTE	29.26
4775	NORTHEAST HAMILTON	33.93
4776	NORTH MAHASKA	26.98
4777	NORTH LINN	33.17
4778	NORTH KOSSUTH	63.64
4779	NORTH POLK	31.03
4784	NORTH SCOTT	38.66
4785	NORTH TAMA COUNTY	16.67
4787	NORTH WINNESHIEK	20.00
4788	NORTHWOOD-KENSETT	18.88
4797	NORWALK	13.73
4869	OELWEIN	39.38
4878	OGDEN	35.25
4890	OKOBOJI	30.25
4905	OLIN CONSOLIDATED	11.11
4978	ORIENT-MACKSBURG	24.53
4995	OSAGE	26.44
5013	OSKALOOSA	21.79
5049	OTTUMWA	16.64
5121	PANORAMA	34.13
5139	PATON-CHURDAN	44.78
5160	PCM	18.94
5163	PEKIN	33.06
5166	PELLA	49.48
5184	PERRY	20.03
5250	PLEASANT VALLEY	25.36
5256	PLEASANTVILLE	24.77
5283	POCAHONTAS AREA	33.45
5310	POSTVILLE	16.59
5325	PRAIRIE VALLEY	32.40
5463	RED OAK	24.38
5486	REMSEN-UNION	27.61
5508	RICEVILLE	45.13
5510	RIVERSIDE	38.92
5607	ROCK VALLEY	26.80
5643	ROLAND-STORY	25.38
5697	RUDD-ROCKFORD-MARBLE RK	22.03
5724	RUTHVEN-AYRSHIRE	26.47
5751	ST ANSGAR	34.89
5805	SAYDEL	15.17
5877	SERGEANT BLUFF-LUTON	24.06
5895	SEYMOUR	13.16
5922	WEST FORK	37.33
5949	SHELDON	23.65
5976	SHENANDOAH	17.62
5994	SIBLEY-OCHEYEDAN	12.74
6003	SIDNEY	19.29
6012	SIGOURNEY	37.63
6030	SIOUX CENTER	17.57
6035	SIOUX CENTRAL	21.83
6039	SIOUX CITY	23.11
6091	SOUTH CENTRAL CALHOUN	36.56
6093	SOLON	26.61
6094	SOUTHEAST WARREN	18.01
6095	SOUTH HAMILTON	35.91
6097	SOUTH PAGE	16.00
6098	SOUTH TAMA COUNTY	24.58
6099	SOUTH O'BRIEN	18.72
6100	SOUTH WINNESHIEK	44.31
6101	SOUTHEAST POLK	35.73
6102	SPENCER	35.28
6120	SPIRIT LAKE	34.29
6138	SPRINGVILLE	37.78
6165	STANTON	34.94
6175	STARMONT	21.60
6219	STORM LAKE	31.69
6246	STRATFORD	13.33
6264	WEST CENTRAL VALLEY	40.97
6273	SUMNER-FREDERICKSBURG	33.89
6408	TIPTON	36.64
6453	TREYNOR	34.04
6460	TRI-CENTER	9.63
6462	TRI-COUNTY	16.00
6471	TRIPOLI	37.09
6509	TURKEY VALLEY	41.36
6512	TWIN CEDARS	26.62
6534	UNDERWOOD	9.41
6536	UNION	14.73
6579	URBANDALE	39.82
6592	VAN BUREN	24.07
6615	VAN METER	19.17
6660	VINTON-SHELLSBURG	18.31
6700	WACO	28.66
6741	EAST SAC COUNTY	32.36
6759	WAPELLO	23.62
6762	WAPSIE VALLEY	29.80
6768	WASHINGTON	28.82
6795	WATERLOO	7.45
6822	WAUKEE	40.58
6840	WAVERLY-SHELL ROCK	18.87
6854	WAYNE	12.94
6867	WEBSTER CITY	26.71
6921	WEST BEND-MALLARD	25.85
6930	WEST BRANCH	32.95
6937	WEST BURLINGTON IND	20.54
6943	WEST CENTRAL	47.92
6950	WEST DELAWARE COUNTY	44.20
6957	WEST DES MOINES	41.81
6961	WESTERN DUBUQUE	32.52
6969	WEST HARRISON	27.94
6975	WEST LIBERTY	19.35
6983	WEST LYON	8.64
6985	WEST MARSHALL	33.91
6987	WEST MONONA	12.29
6990	WEST SIOUX	25.37
6992	WESTWOOD	20.81
7002	WHITING	25.00
7029	WILLIAMSBURG	40.09
7038	WILTON	15.91
7047	WINFIELD-MT UNION	29.05
7056	WINTERSET	39.04
7092	WOODBINE	30.82
7098	WOODBURY CENTRAL	42.08
7110	WOODWARD-GRANGER	11.10
	STATE	25.00

NOTE: Data excludes 3,814 (8.3 percent) jointly enrolled secondary students with missing district number or State ID.
SOURCE: K-12 Student Data and CC MIS.

Racial/Ethnic Minority Background*

Joint Enrollment 13.9% Total Enrollment 18.9%

*Students with unknown race/ethnicity are not included.

percent of joint enrollees were reported as having a minority racial/ethnic background. As a proportion of total joint enrollment by program type, tuition course enrollment had the largest proportion of minority students (15 percent), followed by contracted course (14 percent), and PSEO (six percent). Hispanics were the largest minority group with 46 percent of minority joint enrollment, followed by Asian and Black students, with 19 percent and 18 percent respectively (Figure 5-7). By comparison, Black students accounted for the largest proportion of total community college enrollment at 37 percent, followed by Hispanic at 33 percent, and Asian at 17 percent.

Jointly enrolled students were younger than the overall community college student body, with about 78 percent under 17 years of age (Figure 5-9). Almost all jointly enrolled students (99.5 percent) were classified as residents of Iowa for tuition purposes. Only 145 out-of-state and 91 foreign nationals were jointly enrolled during FY 2015.

Grade Level of Jointly Enrolled Students

Jointly enrolled students tend to be upperclassmen in high school, with 80 percent in their last two years of high school. Seniors accounted for 47 percent of jointly enrolled students while almost a third were juniors (Figure 5-10).

Figure 5-9: Jointly enrolled credit student age*: 2015.

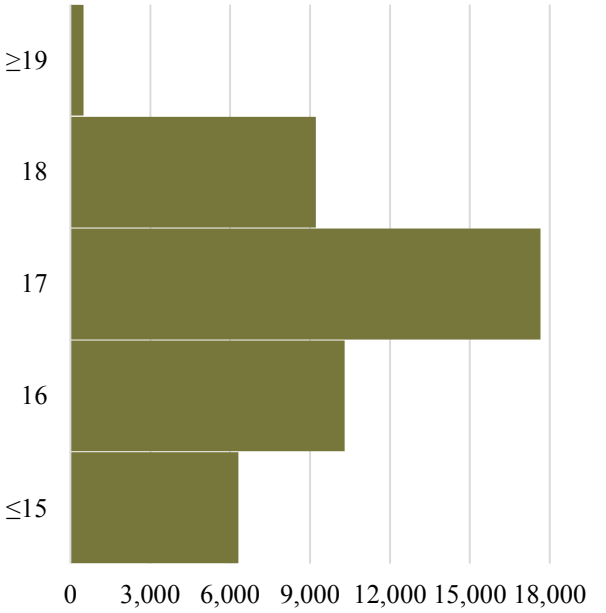
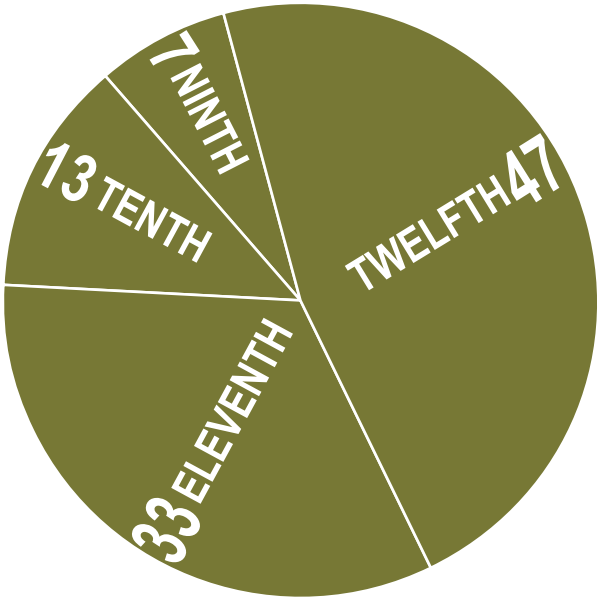


Figure 5-10: Jointly enrolled credit student grade level: 2015.



*Students with unknown age are not included.

6 Credit Student Awards

Fiscal year (FY) credit awards track students who received any type of community college award during the fiscal year. Award counts include the same student each time the student receives an award during this period of time. In FY 2015, the number of awards increased marginally, and the composition of community college awardees remained relatively the same.

In FY 2015, the number of awards increased to 19,225, a growth of 0.9 percent. The growth is manifested by higher numbers of Associate of General Studies (AGS), Associate of Applied Science awards, and certificates. This increase happened despite four years of consecutive decline in total enrollments. The award rate (number of awards per number of students) grew by 0.4 percent since last year, reaching a twelve-year record high of 13.9 percent. On average, the number of awards in Iowa community colleges has increased 3.3 percent since tracking began in FY 2000. Overall, the number of awards has been steady since year 2006, fluctuating between years 2000 and 2005, and, with data collection-related exception in 2013*, has been on the rise continuously since year 2010 through 2015 (Figure 6-1).

*In 2013, the time-frame to report awards has changed to align with state fiscal year. As the result, 2013 awards were reported based on nine months, while 2014 was reported based on new 12-month time-frame, thus making the difference between the two years higher than usual.

Credit Awards

Largest Award Type:

ASSOCIATE OF APPLIED SCIENCE (AAS)

95 more awards than Associate of Arts

Number of Awards: **19,225**

Increased since last year: **0.9%**

There are a variety of credit student awards granted by Iowa community colleges, including:

- Associate of Arts (AA)
- Associate of Science (AS)
- Associate of General Studies (AGS)
- Associate of Applied Arts (AAA)
- Associate of Applied Science (AAS)
- Associate of Professional Studies (APS)
- Diplomas
- Certificates

For the first time in the history of the MIS (Management Information Systems, 2000), the largest number of awards was received in AAS, and not AA type. AAS awards comprised 5,230 (27.2 percent) of the

Figure 6-1: Awards by type: 2000-2015.

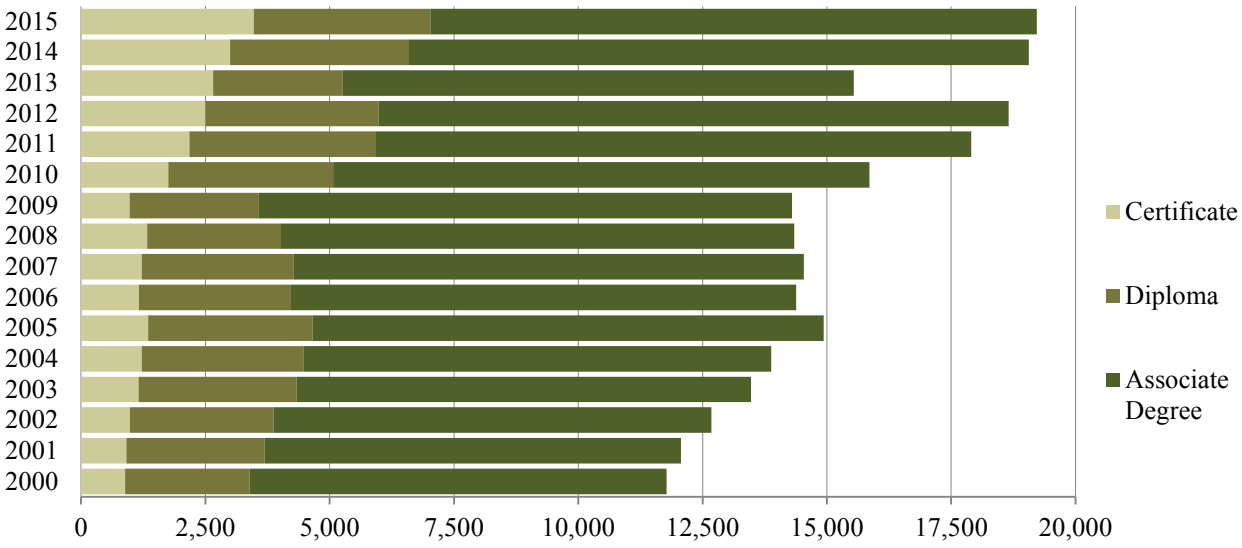
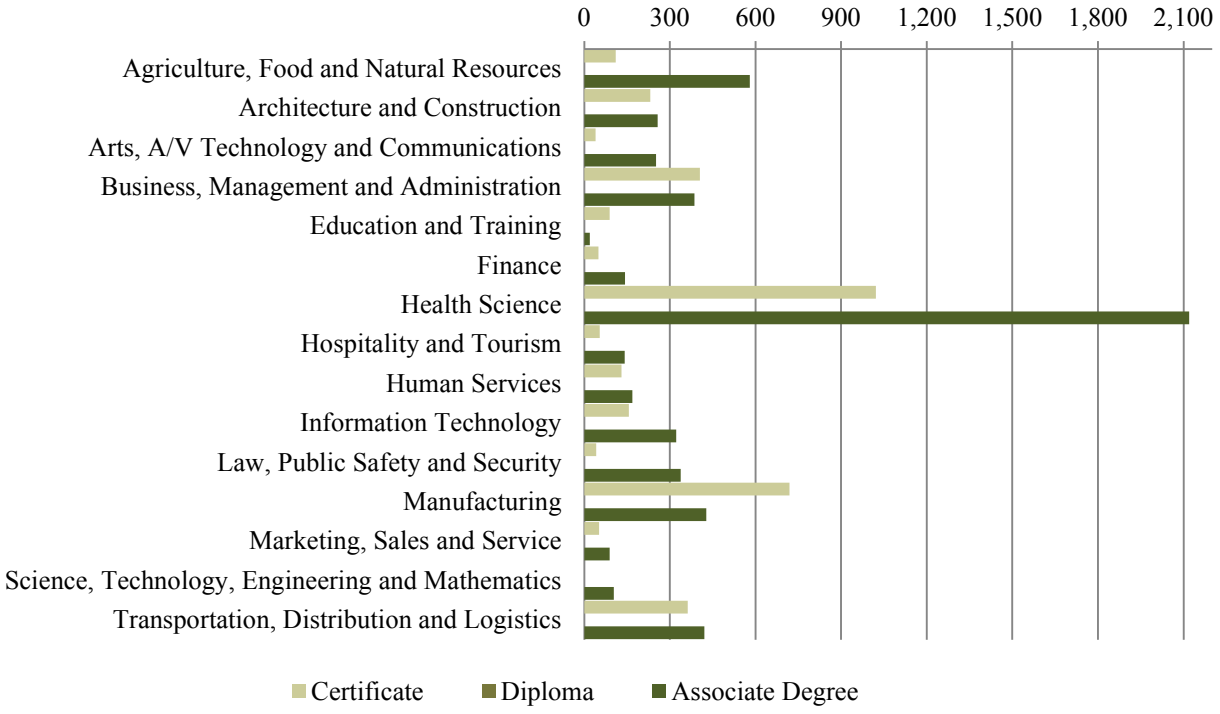


Figure 6-2: Student award by CTE program: 2015.



NOTE: There were no awards in Government and Public Administration.

total credit student awards granted during FY 2015. AA awards accounted for another 5,135 (26.7 percent) of awards issued. The share of AS awards decreased from 6.8 percent in 2014, to 5.5 percent in 2015. The share of certificates increased from 15.7 to a record-high 18.2 percent between the same years, reaching a record high 3,470; the number of diplomas decreased to 18.5 percent of all awards for a total of 3,553. AGS degrees increased 61.4 percent, while AAA degrees dropped 60.2 percent.

Credit student awards by program of study have remained fairly consistent over the past five years. In career and technical education (CTE) programs, the largest number of awards (4,861) was granted in health science, followed by manufacturing (1,669); transportation, distribution and logistics (992); business, management and administration (894); architecture and construction (842); and agriculture, food and natural resources programs (813). Steady over the last 14 years, the prevailing number of degrees (over 45 percent) were associate degrees, followed by diplomas and certificates (Figure 6-2).

Awardees Demographics

The typical community college awardee is a white female receiving an AA or AAS degree in health science. In general, the same distribution is true for credit student enrollment. While females comprised around 55 percent of general enrollment for the past 15 years, the awards previously were distributed more heavily toward women, typically presenting a 60 (females) to 40 (males) percent picture. In FY 2015, however, 54 percent of all enrollees in Iowa community colleges were women, and 55 percent of all awardees were women (Figure 6-3). Nationally, women earn more awards than men (U.S.

Figure 6-3: Awardees by gender: 2015.

Department of Education, Integrated Postsecondary Education Data Systems, IPEDS, 2014). Women earned 57.7 percent of all awards given by U.S. public two-year institutions.

A somewhat different trend was present for the racial distribution. Although whites comprised over 81.1 percent of Iowa community college enrollees in FY 2015, they comprised 86.9 percent of all community college awardees. Nationally, however, whites comprised only 62.8 percent of all public two-year institutions awards recipients (IPEDS, 2014).

The distribution of awards among racial minorities does not mirror enrollment either. Blacks remained the largest group of enrollees among racial and ethnic minorities (38.2 percent) in 2015, but comprised only 35.3 percent of minority awardees. Conversely, students of Hispanic origin comprised 37.9 percent of all awardees among racial and ethnic minorities, with only 33.7 percent of all minority enrollees in FY 2015 (Figure 6-4).

Similar to all awardees, the overwhelming majority of awards received by racial minorities in 2015 were associate degrees (58.5 percent), followed by certificates (23.6 percent), and diplomas (17.9 percent). The number of awards among racial and ethnic minorities has continued to grow, with some fluctuations, between the 2000 and 2015, by 10.1 percent on average (Figure 6-5). This change in award rates among minorities is three times higher than the overall growth rate of 3.3 percent.

Figure 6-4: Awards by racial and ethnic minorities, percent: 2015.

In FY 2015, over 38 percent of all CTE awards were in health science. The gender distribution, however, is even higher: close to 63 percent of all CTE awards received by women were in health science. Women also led in

Figure 6-5: Credit student awards within racial/ethnic minority group: 2000-2015.

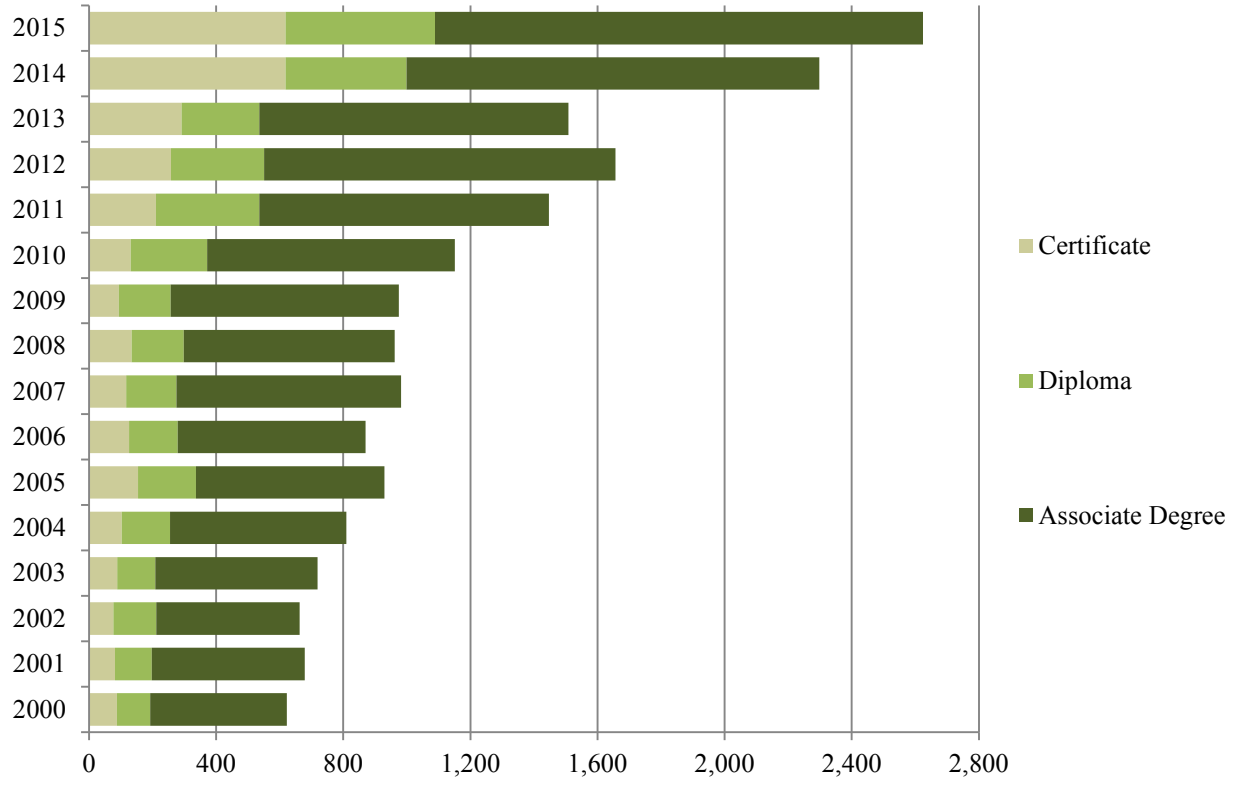
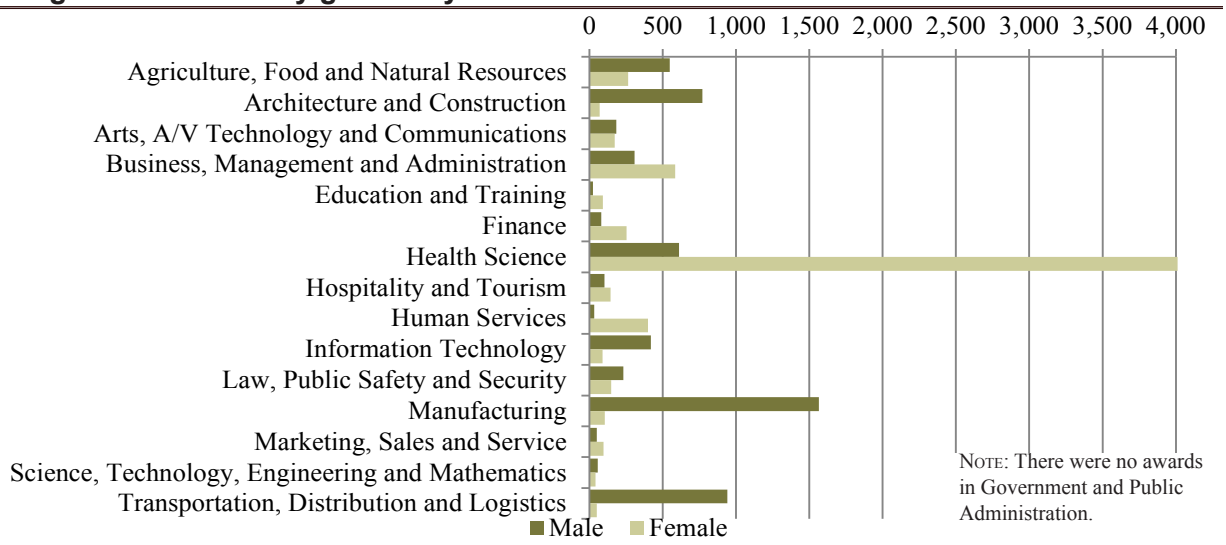


Figure 6-6: Award by gender by career cluster: 2015.



business, management and administration, education and training, human services and finances, while men received more awards in transportation; manufacturing; architecture and construction; information technologies; and agriculture (Figure 6-6).

The majority of CTE awards received by racial and ethnic minority students were among health science award recepients, followed by awards in manufacturing (Figure 6-7). This distribution pattern follows the pattern for the general cohort of awardees.

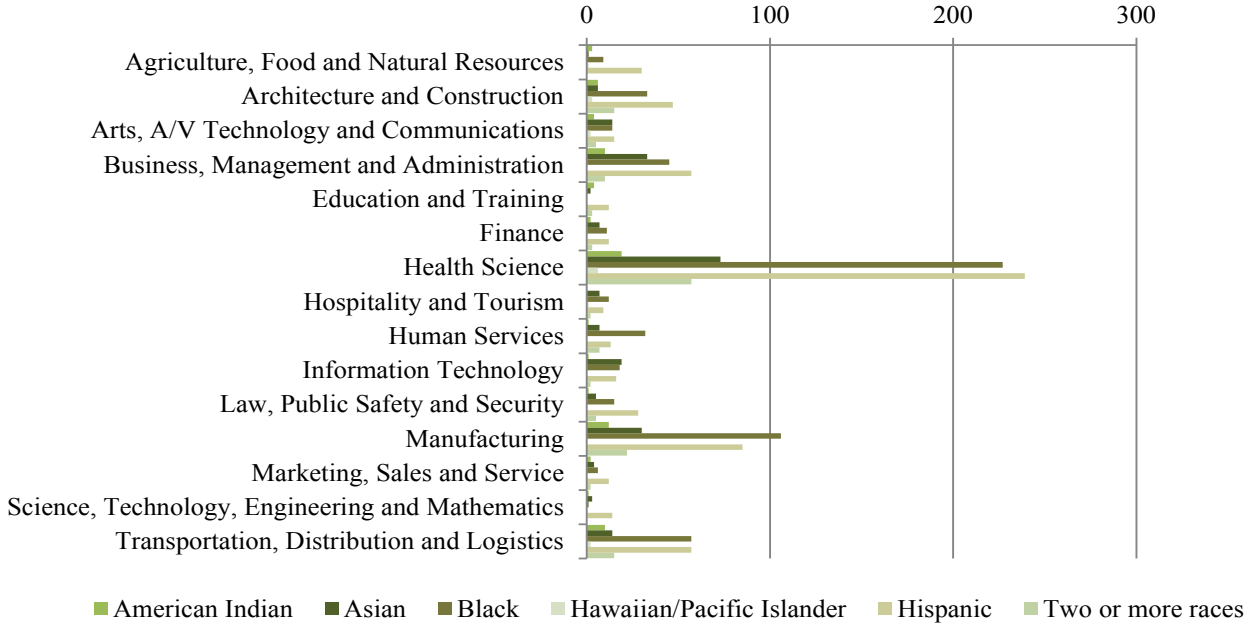
Award Rates and Distribution in Other States*

The award rate is the number of awards per enrolled student. Award rates were approached in several ways: as the ratio between all enrollment and all awards; between Associate degrees and all enrollment; between all awards and FTE (Full-Time Equivalent), and as the ratio between Associate degrees and FTE.

Nationally, the ratio of all awards vs. all enrollment in public two-year institutions in eight contiguous states is 11.7. Iowa community colleges are above that average with 13.0 percent, third after South Dakota and

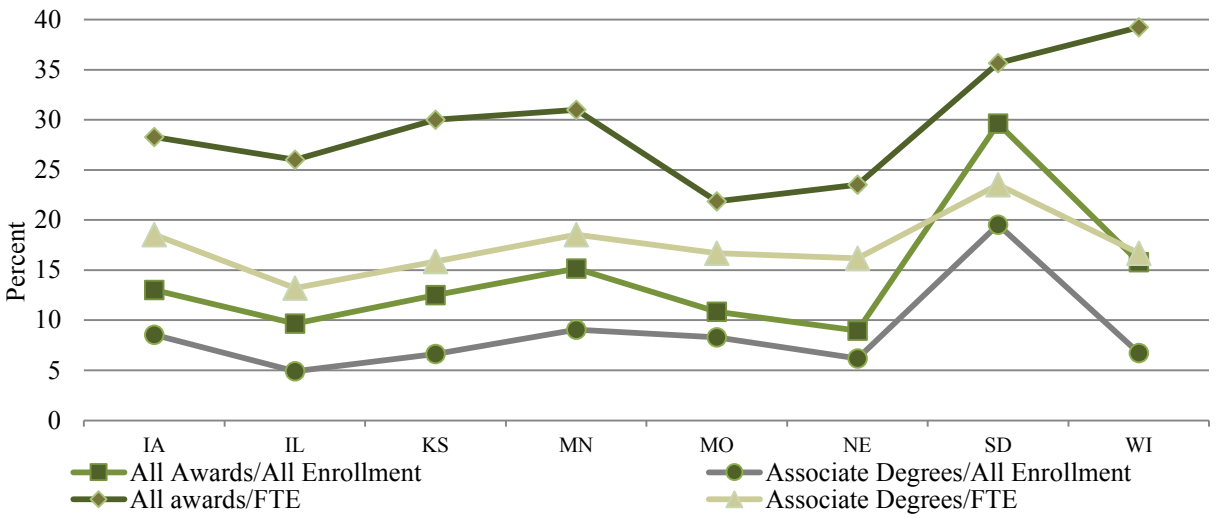
*SOURCE: U.S. Department of Education, Integrated Postsecondary Education Data Systems, 2014.

Figure 6-7: Credit student awards by CTE program and racial/ethnic minority: 2015.



NOTE: There were no awards in Government and Public Administration.

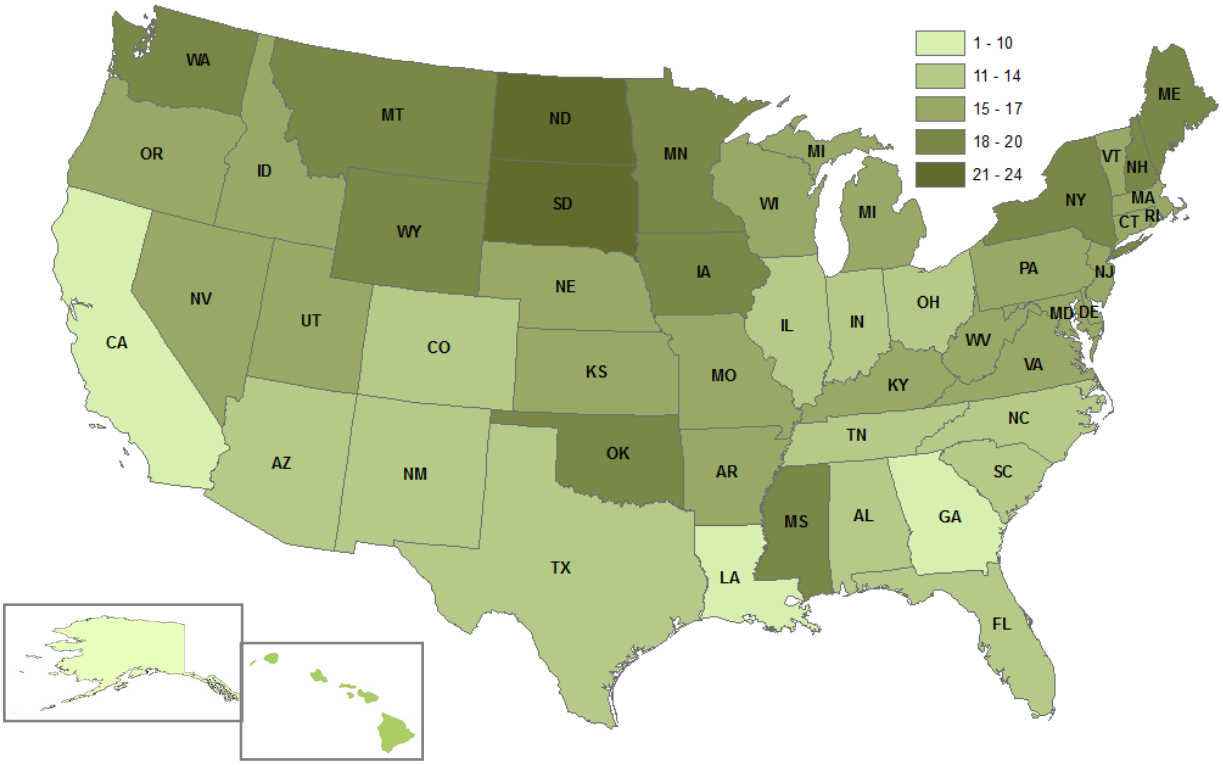
Figure 6-8: Credit student award rates, contiguous states: 2014*.



Missouri on Associate degrees vs. all enrollment (8.5 percent); above average (28.2 percent) on all awards vs. FTE (28.3 percent); and second (after South Dakota) on Associate degrees vs. FTE with 18.6 percent (Figure 6-8). Nationwide, Iowa is higher than the 14.0 percent average on the number of Associate degrees per FTE (18.6 percent), ranking 8th among all states, while during previous year it ranked 14th (Figure 6-9).

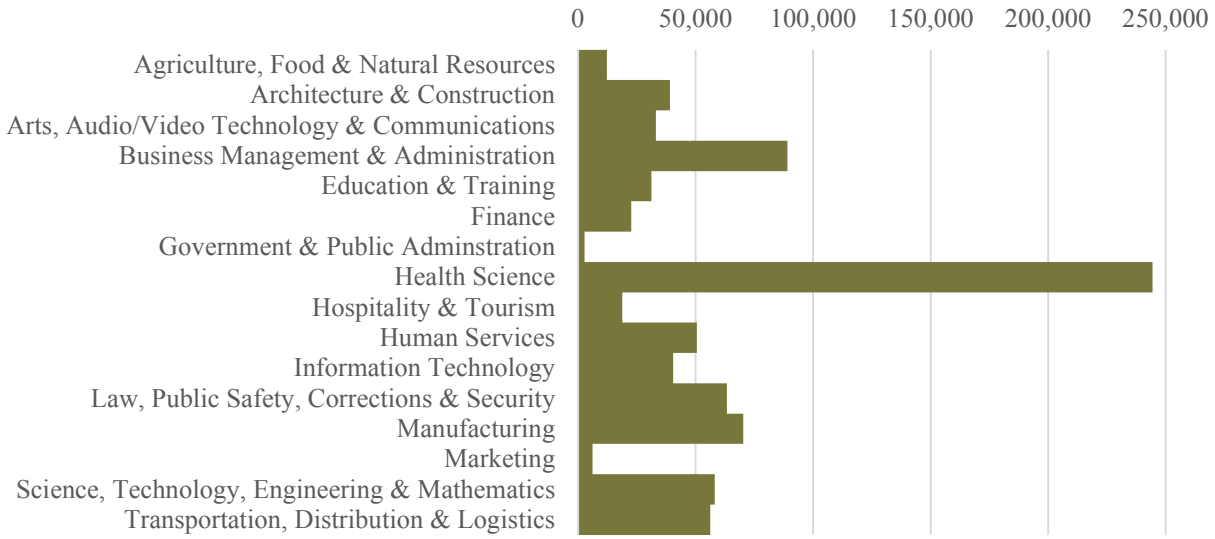
Although national data do not classify program areas in the same educational clusters, recent data aggregated by career clusters are analogous to Iowa community colleges. Similar to Iowa, most awards were granted in general studies intended to prepare students for a four-year degree, followed by health/clinical sciences, and business (Figure 6-10).

Figure 6-9: Number of 2-year degrees per FTE rate, 2-year public institutions: 2014*.



*Source: U.S. Department of Education, Integrated Postsecondary Data Systems, 2014.

Figure 6-10: U.S. credit student awards by CTE program: 2014*.



*Source: U.S. Department of Education, Integrated Postsecondary Data Systems, 2014 and Perkins Collaborative Resource Network, 2014.

7 Credit Programs

Credit programs provided by Iowa's 15 community colleges fall under two general categories: arts and sciences (A&S) and career and technical education (CTE). The A&S programs consist of a college parallel (transfer) course of study designed to provide a strong general education component to satisfy the lower-division liberal arts and science requirements for a bachelor's degree. In accordance with Iowa Code, A&S programs consist of 60 to 64 semester credit hours that culminate in an Associate of Arts (AA) or an Associate of Science (AS) degree, the latter consisting of at least 20 math and science credits. Acquisition of these degrees should prepare students to transfer into four-year colleges or universities with junior standing.

In FY 2015, 71 percent of Iowa community college students were enrolled in A&S programs of study and 29 percent of students were enrolled in CTE programs primarily designed to prepare students for immediate employment in occupations requiring less than a four-year degree. These programs culminate in Associate of Applied Arts (AAA), Associate of Applied Sciences (AAS), Associate of Sciences-Career Option (ASCO), and Associate of Professional Studies (APS) degrees, diplomas, and certificates. The ASCO award type, originally intended for transfer to a related baccalaureate program or immediate employment, was phased-out by 2013 legislation largely because it did not adequately prepare students for direct employment or seamless transfer. This program type was replaced by the Associate of Professional Studies degree option that includes 62-68 semester credit hours divided into five discipline categories and requires the submission of at least three articulation agreements with four-year institutions. These agreements must specify how 32 CTE credits will transfer directly into related baccalaureate programs, rather than just as CTE electives guaranteed by Iowa's statewide CTE transfer agreement maintained by LACTS (Liaison Advisory Committee on Transfer Students). Currently, only Iowa Central Community College has adapted its ASCO programs to fit the stringent criteria of the APS degree and there are a few remaining ASCO programs that must be phased out by August 2016.

Iowa community colleges offer CTE programs in the 16 National Career Clusters® (Figure 7-1), each representing a distinct grouping of occupations and industries based on the knowledge and skills required.[1] In FY 2015, there were 1,426 award options offered statewide in CTE programs of study, with the majority being in Agriculture, Automotive Technology and Repair, Business, Health Sciences, Information Technology, and Engineering Technology and Manufacturing. Table 7-1 lists the most popular CTE

Figure 7-1: National Career Clusters®

[1]See http://www.careertech.org/career-clusters/glance/at-a-glance.html for additional information regarding the Career Cluster® Framework.

programs offered from August 15, 2014 through August 14, 2015, based on the number of community colleges with an active program in each area.

Table 7-1: Most popular CTE programs offered by Iowa community colleges in 2015.

Offered by all 15 Community Colleges
Accounting/Bookkeeping
Agriculture (Business, Equine, Horticulture, Production, Supplies, etc.)
Automobile/Automotive Mechanics Technology
Construction Trades (Carpentry, Electrician, Plumbing, HVAC, etc.)
Health Care (Administration, Clinical/Medical Assistant, Records, etc.)
Information Technology (Programming, Web Design, Networking, etc.)
Registered Nursing
Licensed Practical Nurse Training
Offered by at least 11 Community Colleges
Administrative Assistant and Secretarial Science
Autobody/Collision and Repair Technology
Business Administration and Management
Child Care Provider/Assistant
Criminal Justice (Corrections, Police and Fire Science, Cyber Forensics)
Dental Assisting or Dental Hygiene
Engineering Technology (Electrical, Mechanical, Robotics)
Emergency Medical Technology (EMT Paramedic)
Industrial Technology (Electronics, Mechanics, Maintenance, Repairers)
Machine Tool Technology/Machinist
Mechanics Technology (Diesel, Aircraft, Motorcycle Maintenance)
Medical Technology (Respiratory Care, Surgical, Diagnostic, Radiology)
Retail Sales, Distribution, Marketing Operations
Welding Technology/Welder

Credit Program Approval and CurricUNET

Iowa community colleges are required to obtain approval from the Iowa Department of Education for all credit programs. All 15 colleges are approved to offer AA and AS degree programs, which are recorded under a single "Liberal Arts and Sciences/Liberal Studies" CIP code (Classification of Instructional Programs). The specific details of these programs regarding the composition of general education and elective courses are maintained at the college level and are not accessible through the statewide database. In contrast, state approval, recording, and access of CTE programmatic information is mandated by Iowa Code and is managed by the department through CurricUNET.

The statewide implementation of CurricUNET's course management system has greatly enhanced and expedited the program approval, modification, and archival processes. This web-based system facilitates course and program development and approval internally for each college, and then expedites the approval process at the state level. Program details and communication between the colleges and the state are archived for easy access and reporting. The state website is available to the public at www.curricunet.com/iowa_doe and provides access to information regarding courses and CTE programs offered by each of Iowa's community colleges. Modifications to improve this public site are ongoing in an effort to make it easier to navigate and more informative.

New Credit CTE Programs

Over the five-year period from 2010-2014, an average of 21.6 new CTE programs were approved annually for Iowa's community colleges. Fiscal year 2015 far exceeded that trend with 28 new program proposals approved from August 2014 through June 2015. These proposals resulted in 36 new award options approved for implementation at 11 community colleges. Table 7-2 provides a listing of the specific programs approved with additional award options listed in italics.

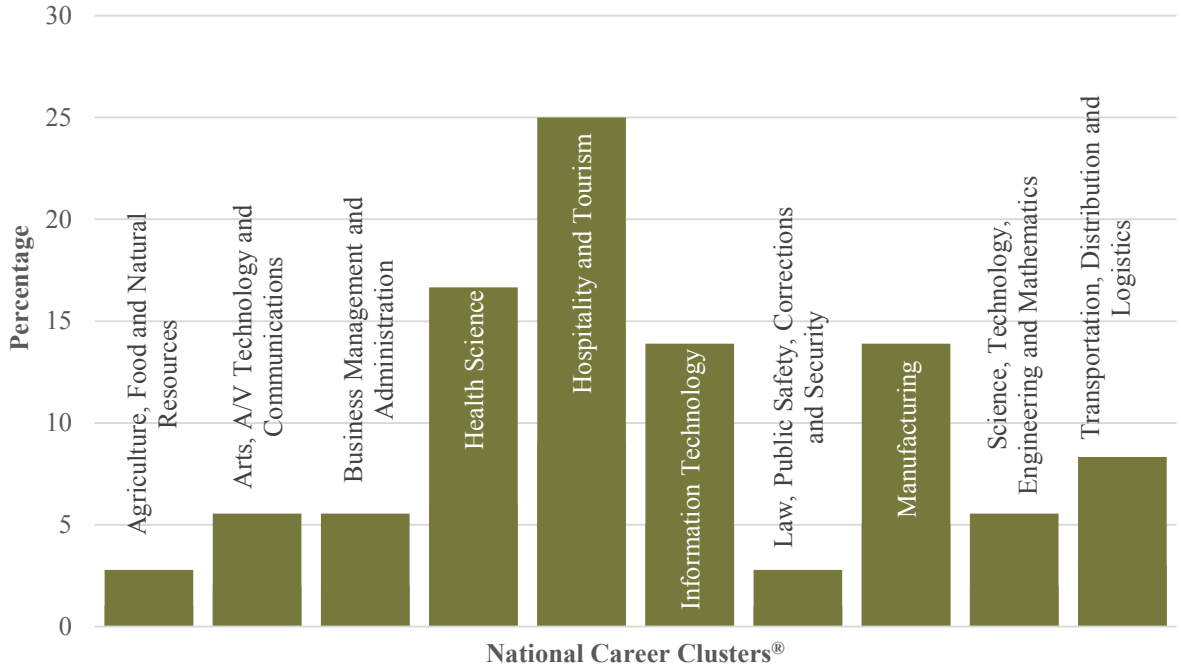
These new programs spanned 10 of the 16 Career Clusters®. Due primarily to Iowa's acquisition of a federal grant to build training capacity in Information Technology, Healthcare, Utilities, and Manufacturing (IHUM), 64 percent of the new programs are related to these fields. Figure 7-2 provides the percentage distribution of these new programs by national Career Clusters®.

Of the 36 new CTE programs, 25 (69.4 percent) offered an associate degree, including 24 associate of applied science (AAS) and one associate of applied arts (AAA) degrees. In addition, there were seven (19.4 percent) diplomas, including three stand-alone programs and four options within AAS programs; and four (11.1 percent) certificate programs, including two stand-alone and two options within AAS programs. These percentages are illustrated in Figure 7-3.

Maintaining an Accurate CTE Program Database

In addition to developing and submitting new programs for approval, Iowa community colleges may request program deactivation, modifications to active programs, or changes to active programs' classification or state codes. The latter may involve CIP changes, which department consultants handle carefully in order to accurately crosswalk annual enrollment and completion data, as well as educational outcome data

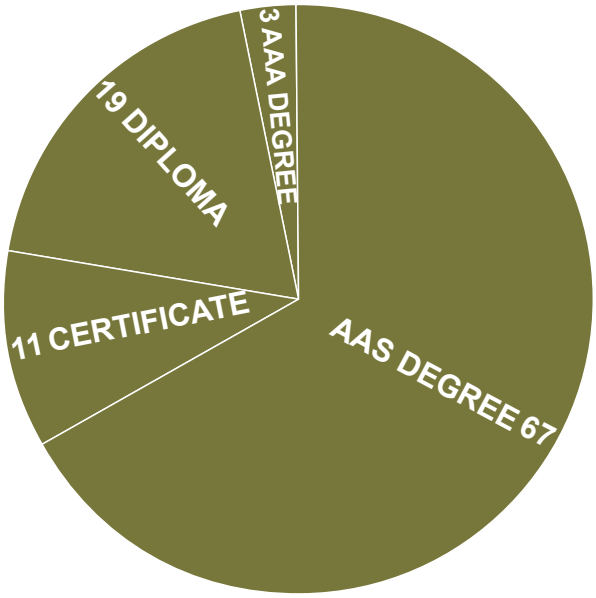
Figure 7-2: New CTE programs by national Career Clusters®: 2014.



regarding employment and wages of completers. A less critical change may be made regarding a program's ITSO code, which is a state code used to adequately classify a program's Instructional Level, Type, Special Emphasis, or Object and Purpose. CurricUNET has made it much easier for department consultants to analyze all program codes and, if necessary, initiate corrections to properly classify programs in accordance with their career focus and instructional or delivery attributes.

In FY 2015, Iowa's 15 community colleges offered 1,426 CTE program award options. The largest award type offered were two-year degrees (693), followed by one-year diplomas (378) and certificates (355). The 693 two-year associate degrees (AAA, AAS, ASCO, and APS) range from 60 to 86 credits, comprised of at least 12 general education credits from three disciplines (Communication, Social Studies/Humanities, and Science/Math) and at least 50 percent technical core coursework. The 378 one-year diploma programs range from 15 to 48 credits, including at least three general education credits among their heavy technical emphasis. The 355 certificate programs range from 1 to 48 technical credits with no general education requirement.

Figure 7-3: New credit CTE programs by award type (percent): FY 2015.



The advent of CurricUNET has made it easy to check these programs for compliance regarding the number of credits, number of weeks, average number of credits per term, general education credits and categories, and technical core coursework. Colleges can easily monitor their compliance by accessing color-coded reports that indicate areas of non-compliance in red font and areas that violate state recommendations, but are not out of compliance with Iowa Code, in yellow font. Colleges can then submit program modifications to correct compliance issues.

In addition to the 28 new program proposals (i.e., 36 new award options) submitted for approval, Iowa's community colleges submitted 34 Notice of Intent proposals to offer new programs, 318 program modifications, 24 program deactivations, and 57 CIP/ITSO Reclassification for implementation during FY 2015. These 461 proposals represent an 11.4 percent increase in program requests submitted to the

Table 7-2: New CTE programs approved for implementation during FY 2015.

College	Local Program Title	National Career Clusters
Des Moines Area	Real Time Reporting (Court Reporting)	Law, Public Safety, Corrections, and Security
Eastern Iowa	Information Technology-Programming Concentration*	Information Technology
Eastern Iowa	Information Technology-Web Development Concentration*	Information Technology
Eastern Iowa	Information Technology-Database Concentration*	Information Technology
Eastern Iowa	Information Technology-Games & Simulation Concentration*	Information Technology
Eastern Iowa	Information Technology-Security & Forensics Concentration*	Information Technology
Eastern Iowa	Diagnostic Medical Sonography/*Diagnostic Cardiac Sonography*	Health Science
Hawkeye	Golf Course and Country Club Management	Hospitality and Tourism
Hawkeye	Medical Billing and Coding Associate	Health Science
Indian Hills	Dental Hygiene	Health Science
Indian Hills	HVAC and Refrigeration	Manufacturing
Indian Hills	Industrial Maintenance Technology/*Fluid Power Sys. Tech.**	Manufacturing
Iowa Central	Digital Mass Communications	Arts, A/V Technology, and Communications
Iowa Central	Baking and Pastry Arts	Hospitality and Tourism
Iowa Central	Industrial Robotics and Automation	Science, Technology, Engineering and Math
Iowa Lakes	Digital, Social, and Broadcast Productions	Arts, A/V Technology, and Communications
Iowa Lakes	Engineering Technology	Science, Technology, Engineering and Math
Iowa Lakes	Electrical Technology	Manufacturing
Iowa Valley	Mobile Service Technician	Agriculture, Food, and Natural Resources
Iowa Valley	Culinary Arts Apprenticeship	Hospitality and Tourism
Iowa Valley	Powerline Technician	Transportation, Distribution, and Logistics
Iowa Valley	Natural Gas Technician/*Utility Technician*	Transportation, Distribution, and Logistics
Iowa Western	Personal Trainer	Health Science
Kirkwood	Emergency Medical Technician	Health Science
Northeast Iowa	Finance/*Agriculture Finance*	Business Management and Administration
Western Iowa Tech	Culinary Arts/*Prep Cook/Food Preparation*	Hospitality and Tourism
Western Iowa Tech	Manufacturing (Mechanical Engineering)*	Manufacturing
Western Iowa Tech	Hospitality Management/*Hospitality Operations/Oper. Concepts*	Hospitality and Tourism

*New CIP codes for existing programs, as directed by the Iowa Department of Education.

department in FY 2014. Getting through this volume of requests in the established 30- to 90-day timeframes is manageable because of the workflow, notification, and archival processes offered through CurricUNET. In fact, the colleges have come to expect that a program modification request will be processed in less than a week and a new program approved in less than a month, including its mandatory 14-day peer review. More often than not, department consultants are able to meet these expectations thanks to the efficiencies of CurricUNET.

Not only has CurricUNET expedited these review/approval processes, it has facilitated bringing existing programs into compliance and managing the common course numbering system. Additionally it has improved communication between department consultants and college program developers, and motivated conversations about ways to improve the access to and resources available via the department's website and CurricUNET. As college faculty and staff become more comfortable with the mechanics of CurricUNET, they see the efficiencies that have been gained through its statewide utilization.

8 Non-Credit Enrollment and Programs

Non-credit programs contain a variety of instructional offerings including personal and academic basic skill development, skill development for preparation of individuals entering the workforce, technical courses directly related to specific industry-based work opportunities, and courses to pursue special interests.

In fiscal year (FY) 2015, 232,480 individuals participated in non-credit programs and courses. Enrollment dropped 3.7 percent since last year with an average decrease of 2.2 percent since 2011 (Figure 8-1). The same pattern is applicable to contact hours with a decrease of 2.4 percent since last year. Since 2011 there has been an average decline of 2.6 percent (Figure 8-2).

Non-Credit Courses and Programs

Enrollment in non-credit courses is disaggregated into several program categories and included 412,559 courses in 2015, a decrease of 3.0 percent from the previous year (Figure 8-3). The largest of these categories, 51.8 percent (129,972) in 2015, consisted of non-credit courses designed to enhance students' employability or academic success. If adult basic skills, adult learning, and family/individual development were included in the definition of enhancing students' employability and academic success, this would total 60.6 percent of course offerings in 2015.

The second largest category of non-credit enrollment included state or federally mandated, state recognized, or court ordered or referred courses (16.5 percent of all programs). State mandated or court ordered courses include the drinking drivers education, driver improvement, community rehabilitation programs, used auto dealer training, mine safety and health, along with various vehicle operators training. Slightly less were courses that were designed for recertification and licensure (15.6 percent) (Figure 8-5).

Non-Credit Enrollment

Number of Students: 232,480

Declined since last year: 3.7%

Contact Hours: 6,838,661

Down 2.4% since 2014

Contact Hours Per Student: 29.4

Up 0.4% since 2014

Figure 8-1: Fiscal year non-credit enrollment: 2004-2015.

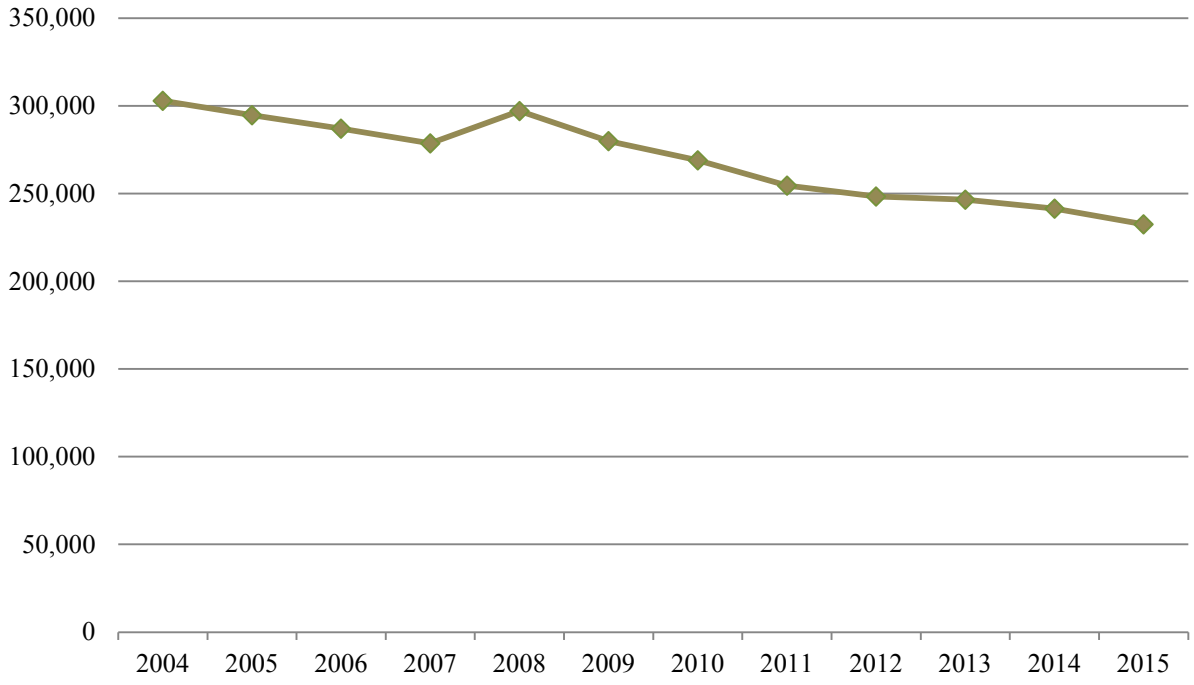


Figure 8-2: Fiscal year non-credit contact hours: 2004-2015.

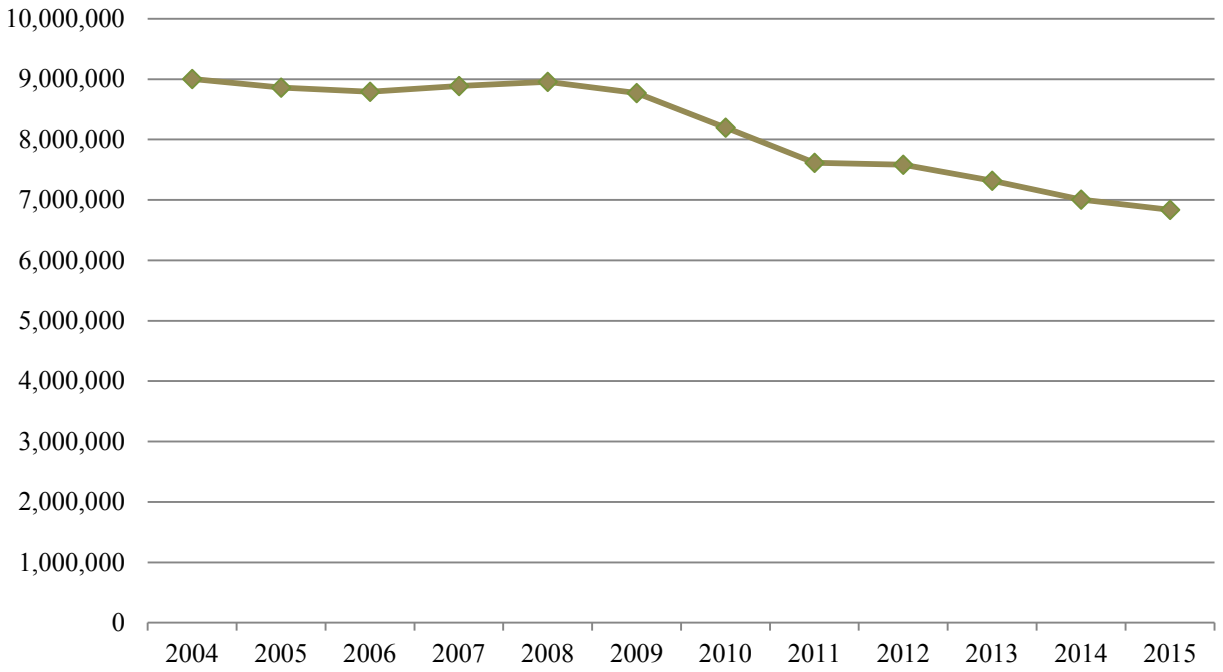
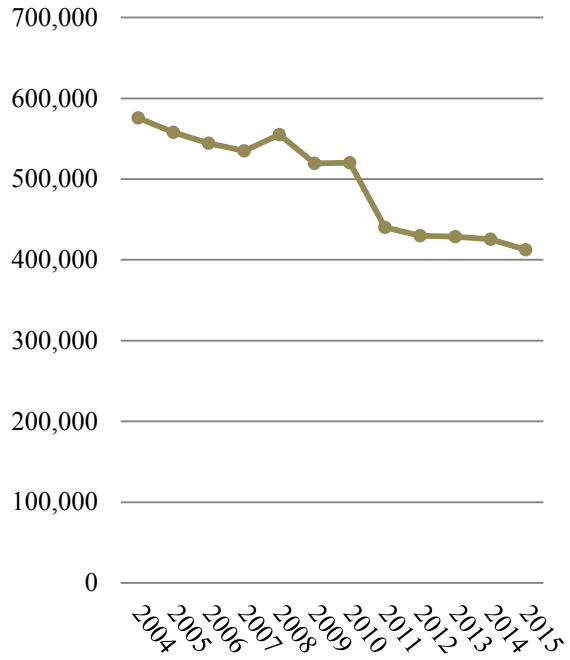


Figure 8-3: Non-credit courses delivered: 2004-2015.



Gender and race/ethnicity of Non-Credit Programs Participants

Historically, females have composed most of community college non-credit enrollment. Conclusions based on reported gender data should be made cautiously as 33,463 enrollees, or 14.2 percent, were reported without a gender category in FY 2015. Of those students with reported gender, 49.6 were men, and 50.4 percent were women (Figure 8-5).

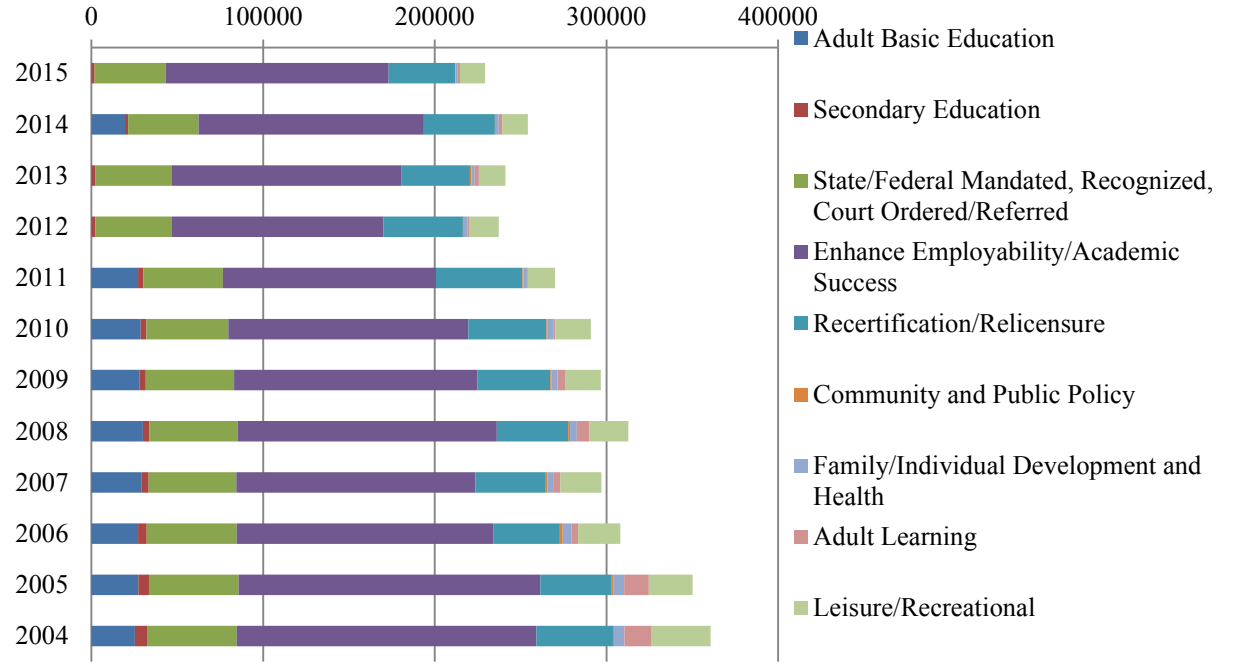
While 57 percent of the total non-credit participants did not report ethnicity or race, of those who did, the majority were White (82.2 percent); 7.5 percent identified themselves as Hispanic or Latino; 6.7 percent as Black; 2.0 percent as Asian; 0.6 percent as American Indian; 0.1 percent as Hawaiian/Pacific Islander; and 0.8 percent reported more than one race (Figure 8-6).

Non-Credit Skill Enhancement Enrollment by Career Clusters

Skill enhancement courses in the non-credit reporting category are designed to provide short-term programs and non-credit courses for the specific purpose of training persons for employment and upgrading and retraining the skills of persons presently employed. Courses and programs designated as short-term preparatory are also included within this category. Skill enhancement courses include many options that align with the 16 national career clusters, the framework for organizing and delivering career and technical education programs.

In FY 2015, 129,972 students were enrolled in skill enhancement courses with 106,820 reported in one of the 16 national career clusters (Figure 8-7). Colleges reported over 2,292,431 contact hours with 96.9 percent (2,221,126) of the total contact hours reported as taken within one or more of the national career clusters (Figure 8-8). Non-credit enrollment at Iowa community

Figure 8-4: Enrollment by program type: 2004-2015.



colleges, distributed among national career clusters, contains a high percentage of student contact hours in health sciences (34.9 percent). Over 61,259 students were enrolled in non-credit health science courses in FY 2015. This is a 3.1 percent decrease since last year and represents 57.3 percent of the total enrollment for skill enhancement in a national career cluster.

Colleges reported 15.6 percent of enrollees in business, management, and administration courses. A total of 5.9 percent were enrolled in transportation, distribution and logistics; 4.6 percent in law public safety and security; 3.6 percent in agriculture, food and natural resources; 2.6 in manufacturing; and 2.1 percent in in architecture and construction (Figure 8-7 and Figure 8-8). For a comparison with credit student enrollment, see Section 3, Fiscal Year Credit Enrollment and Demographics.

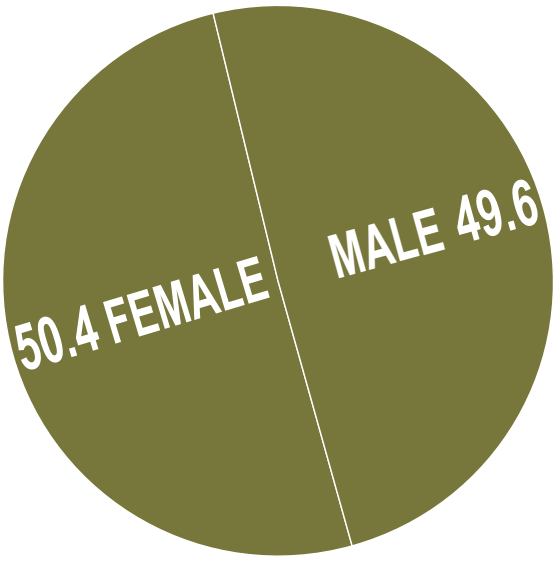
State and Federally Mandated Programs

Non-credit courses include state or federally mandated, court ordered or referred courses and programs that are designed to meet legislated or licensing requirements as defined in the Code of Iowa.

State and federally mandated coursework enrollment increased by 0.9 percent from the previous year (Figure 8-9). This represents a slight turn from the 4.3 percent average annual decrease in enrollment in this category from 2011 to 2015.

State and federally mandated programs vary in their scope and level of enrollment, as displayed in Figure 8-11.

Figure 8-5: Non-credit enrollment by gender*.

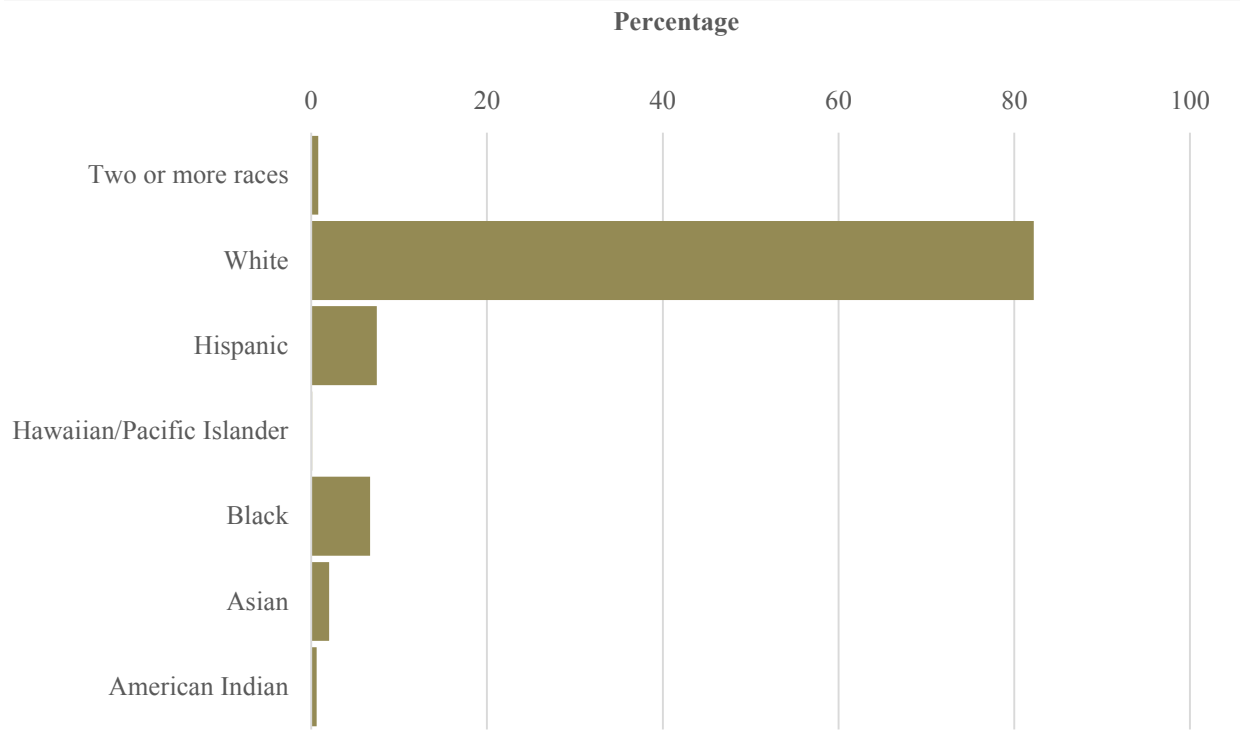


*Based on the number of students who reported their gender.

Non-Credit Mine Safety and Health

The Iowa Department of Education administers a federal grant from the U.S. Department of Labor and Mine Safety and Health Administration (MSHA), which provides funds for training and services delivered to mine owners/operators/contractors in the state of Iowa. Enrollment in MSHA programs between 2011 and 2015 has dropped by one percent with 652 students enrolled in FY 2015 (Figure 8-10).

Figure 8-6: Non-credit enrollment by race/ethnicity*.



*Based on the number of students who reported their race and ethnicity.

Figure 8-7: Non-credit skill enhancement enrollment by career cluster.

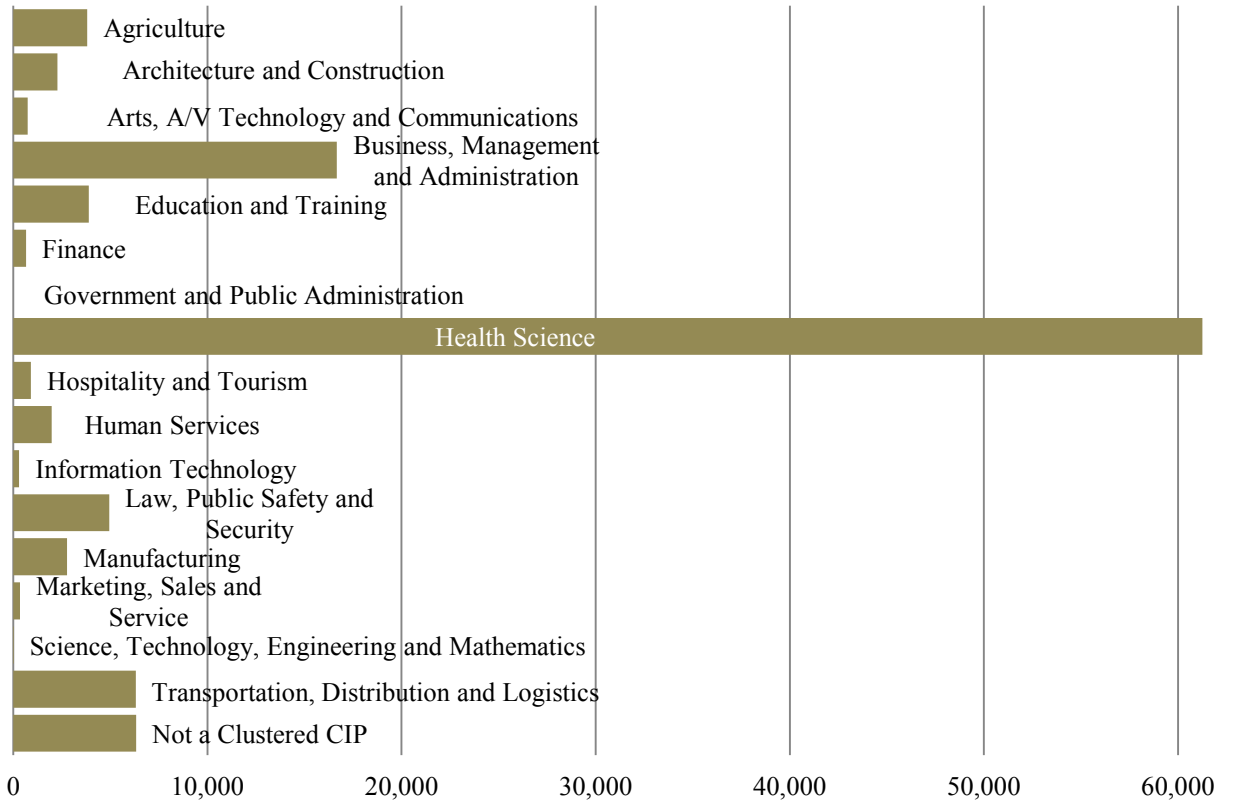


Figure 8-8: Non-credit skill enhancement by career cluster contact hours.

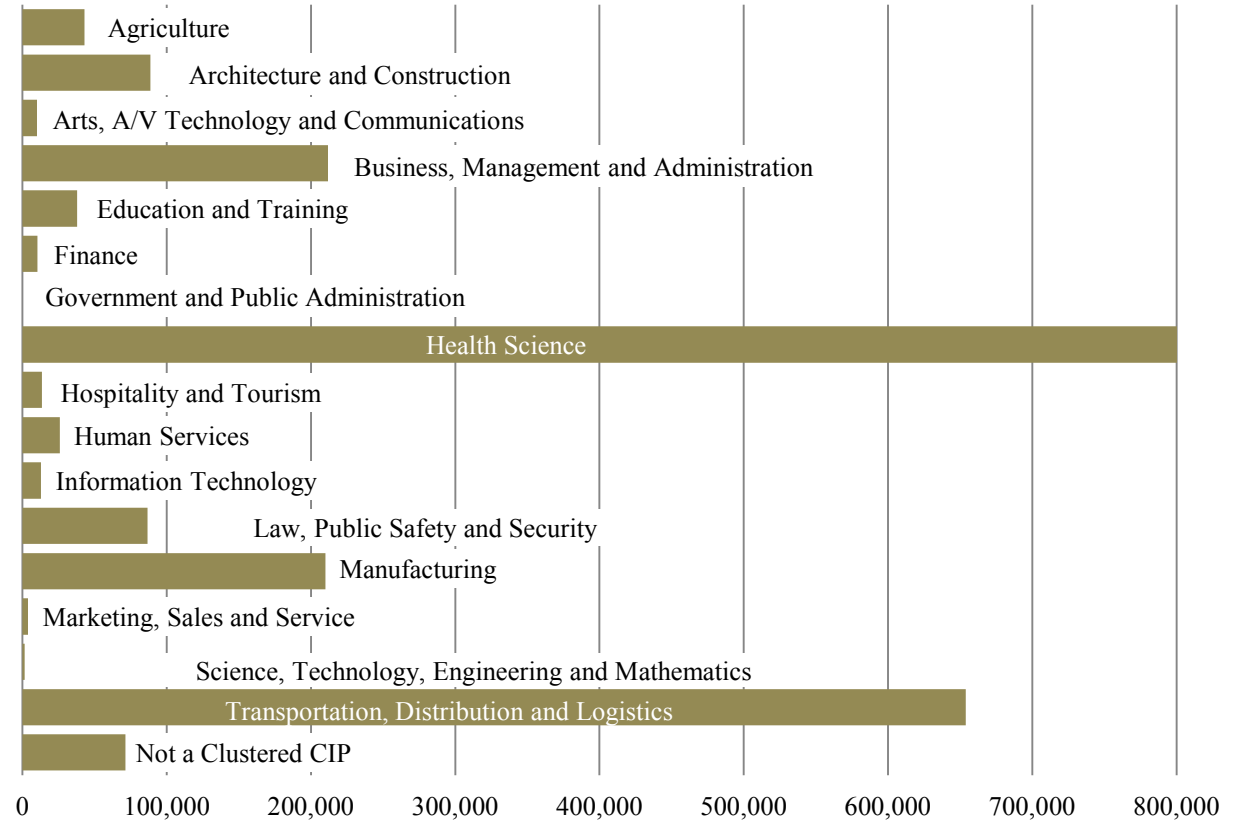


Figure 8-9: State and federally mandated, recognized, court ordered or referred enrollment: 2008-2015.

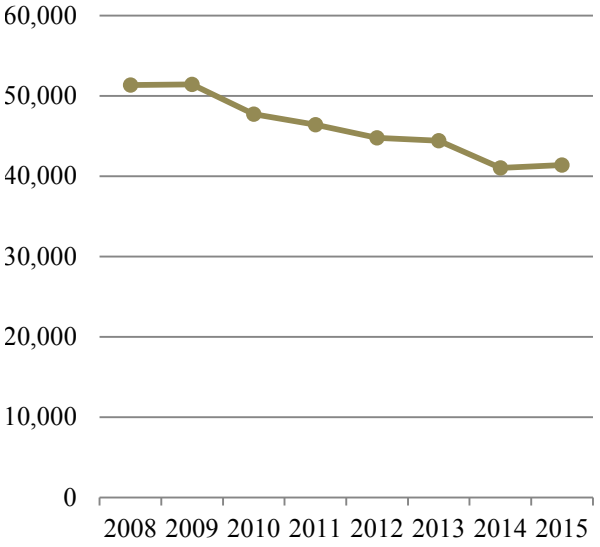
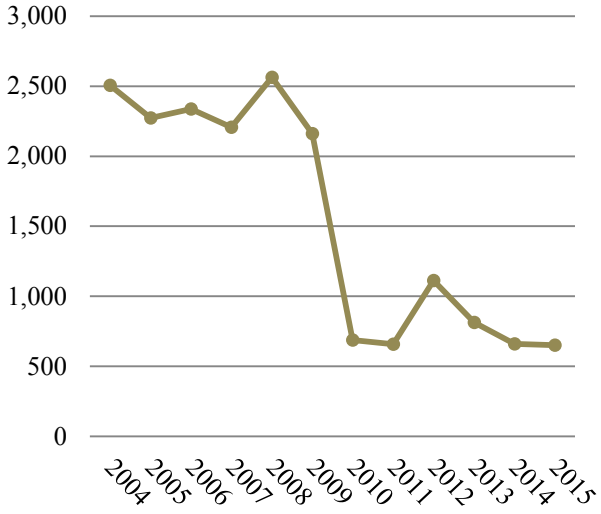


Figure 8-10: MSHA enrollment: 2004-2015.



Non-Credit Drinking Drivers (DUI) Course Enrollment

The Iowa course for drinking drivers is the state-mandated course for drivers convicted of driving while under the influence of drugs and/or alcohol. Iowa community colleges and private providers, licensed through the Iowa Department of Public Health, offer the state-approved program. Enrollment in drinking driver education courses decreased an average of 3.8 percent annually between 2011 and 2015, with a corresponding 4.9 percent decline in contact hours (Figure 8-12).

Figure 8-11: State/federal mandated, recognized, court ordered/referred programs.

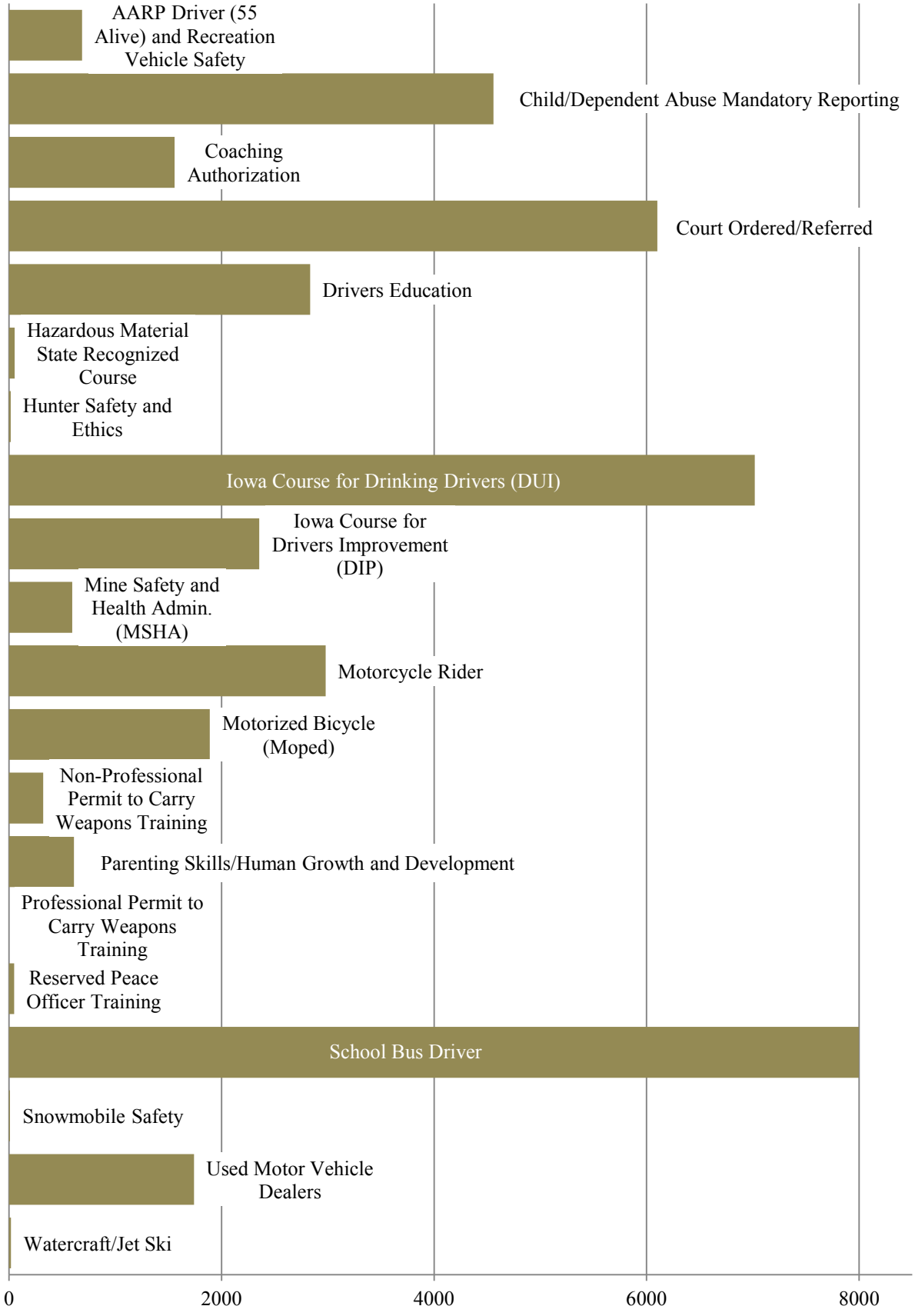
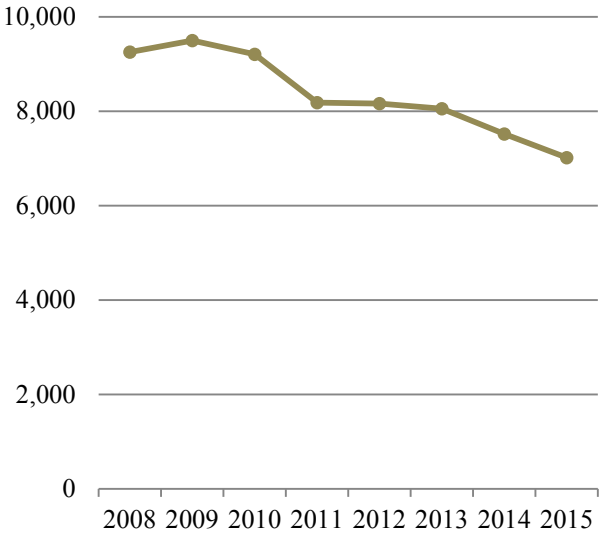


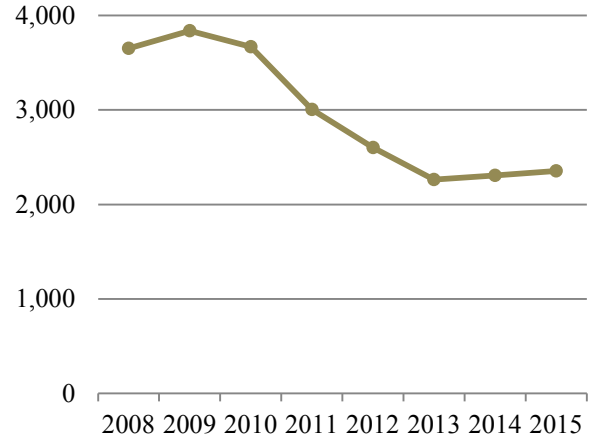
Figure 8-12: Iowa drinking driver course enrollment: 2008-2015.



Non-Credit Driver Improvement (DIP) Enrollment

Iowa course for driver improvement (DIP) is the state mandated course designed for persons who have committed a serious violation of a motor vehicle law in Iowa. Iowa community colleges provide the program with the assistance from the Iowa Department of Transportation. Despite an increase in enrollment for 2015 of two percent, enrollment has decreased an average of 5.9 percent annually from FY 2011 through FY 2015 (Figure 8-13). Contact hours for the driver improvement courses also decreased. From the previous year, there was a 0.7 percent increase in contact hours but a 6.2 percent average decrease between program years 2011 and 2015.

Figure 8-13: Iowa driver improvement enrollment: 2008-2015.

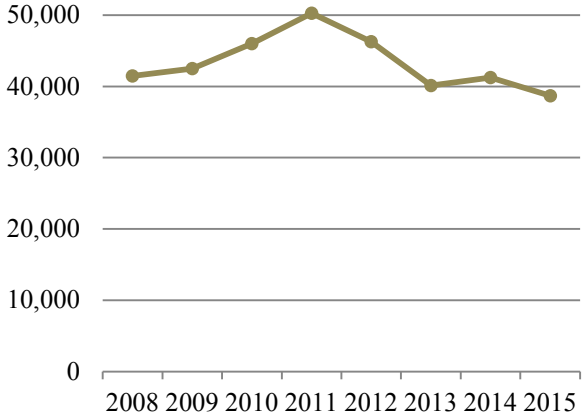


Recertification and Licensing

The coursework under this category is designed for individuals employed in occupations that may or may not require a four-year degree and whose positions require them to be recertified or relicensed to maintain employment (e.g., chemical application, insurance). The recertification or relicensing is coursework that does not lead to an additional degree. Of the 38,697 students enrolled in recertification and licensure coursework in 2015, 81.7 percent were in healthcare related courses, including practical nursing, EMT paramedics and Allied Health services.

Overall, recertification and licensure enrollment decreased by 6.2 percent in 2015 from the previous year. In this category, average annual enrollment between 2011 and 2015 declined by 6.8 percent (Figures 8-14 and 8-15).

Figure 8-14: Recertification and licensing enrollment: 2008-2015.



Used Motor Vehicle Dealer Education

The Used Motor Vehicle Dealer coursework ensures pre-licensing requirements, established in Iowa Code (Chapter 21) in 2009, are met for used auto dealers in Iowa. The curriculum is delivered through continuing education departments at Iowa community colleges. The number of students enrolled in used auto dealer courses is cyclical as illustrated in Figure 8-16. Fiscal year 2015 resulted in a 750.9 percent increase with 1,742 students enrolled; however, the average enrollment has only increase by 2.6 percent from 2011 to 2015. Contact hours increased an average of 2.3 percent from 2011 to 2015, consistent with the pattern of the enrollment changes between program years.

Figure 8-15: Recertification and licensing programs.

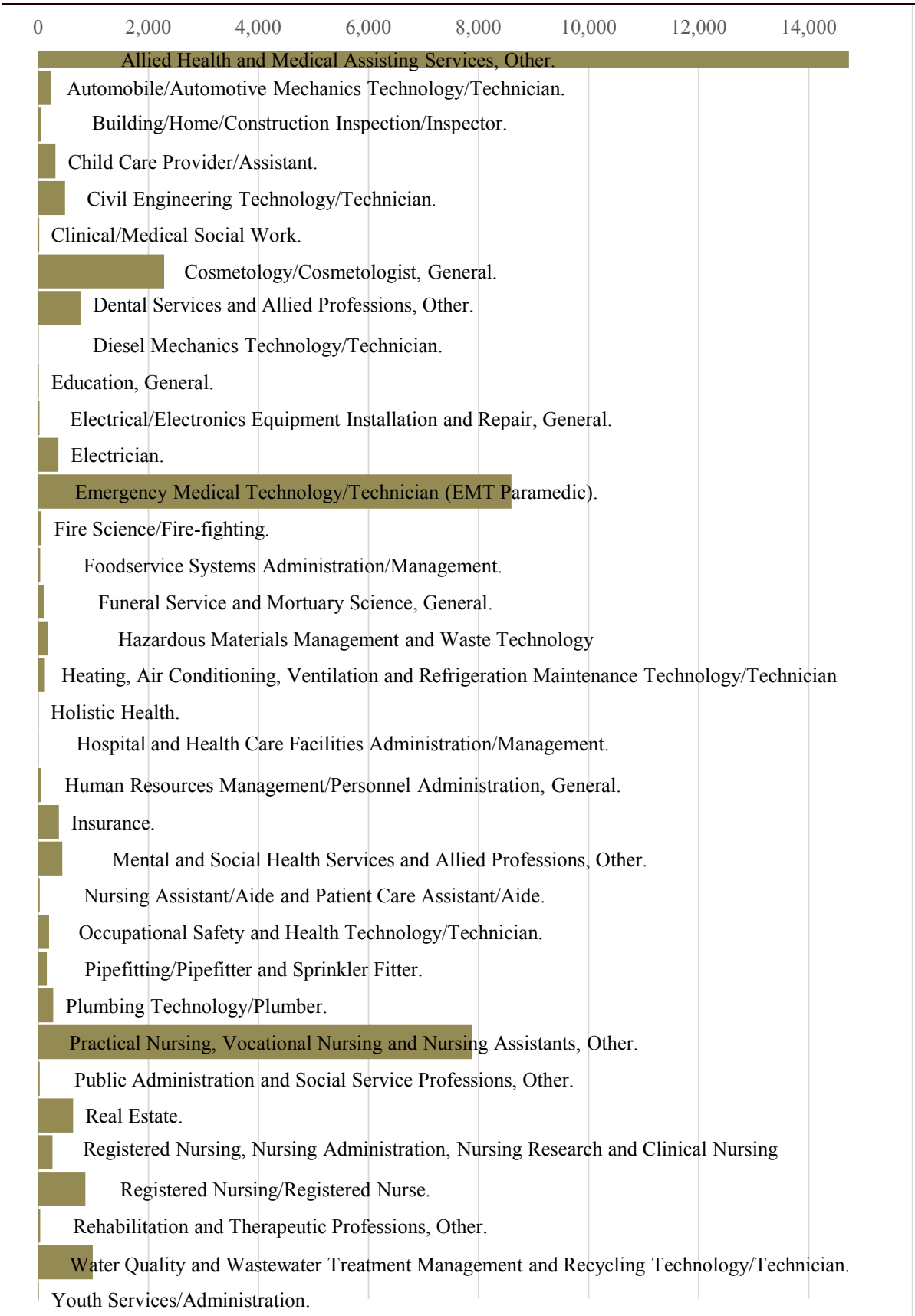
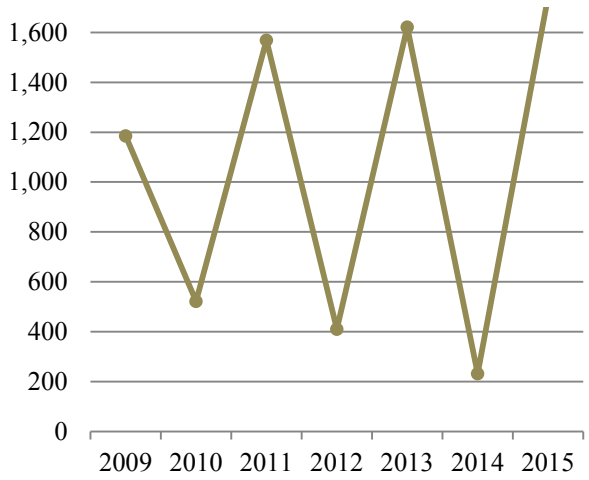


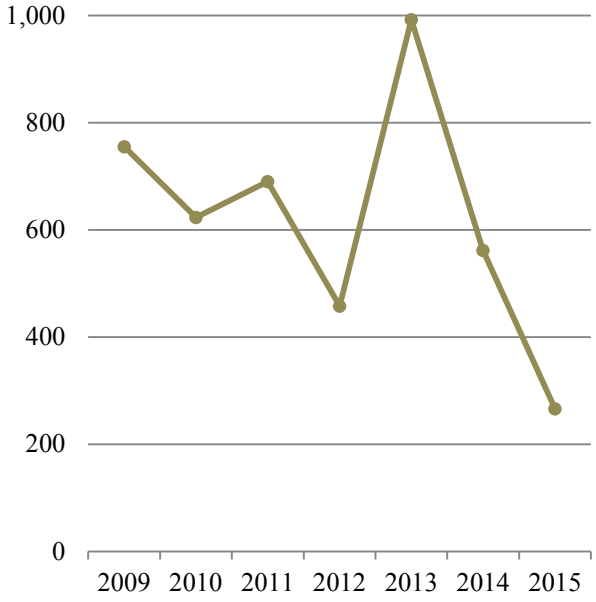
Figure 8-16: Used motor vehicle dealer education enrollment: 2009-2015.



Community and Public Policy

Community and Public Safety Policy is a program that focuses on the systematic analysis of public policy issues and community decision processes. Classes include instruction in the role of economic and political factors in public decision-making and policy formation, and microeconomic analysis of policy issues. Enrollment in Community and Public Policy programs for FY 2015 decreased by 47.3 percent with 266 enrolled. Overall, there has been an average decrease of 21.2 percent annually from 2011 to 2015 (Figure 8-17).

Figure 8-17: Community and public policy enrollment: 2009-2015.

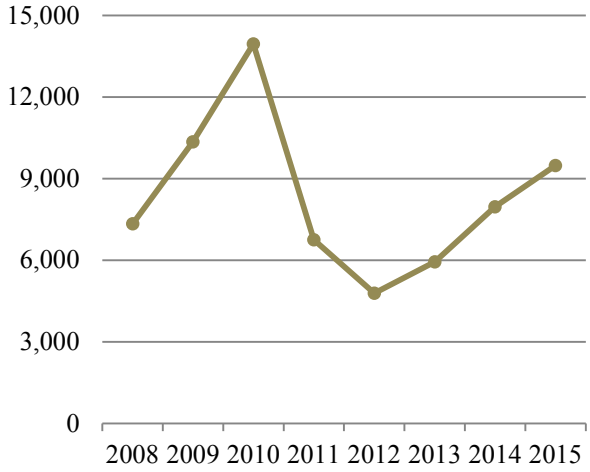


Online Non-Credit Courses

Online non-credit enrollment increased in 2015 by 19 percent from the previous year (Figure 8-18). Average enrollment between 2011 and 2015 has increased by 8.9 percent with contact hours increasing over the same five year period by 4.5 percent. Students in 2015 averaged 22.7 contact hours each.

Overall, 4.1 percent of all students enrolled in non-credit coursework received it through online delivery in 2015.

Figure 8-18: Online courses delivered: 2008-2015.



Community Rehabilitation and Sheltered Workshops

Iowa community colleges deliver programs for people in community rehabilitation centers (sheltered workshops). Enrollment in these programs continues to decrease an average of 24.8 percent annually between 2011 and 2015 (Figure 8-19). Only one college reported enrollment and contact hours (10,860 hours) in sheltered workshops for 2015.

Enrollment in Correctional Institutions

Iowa community colleges delivered non-credit coursework to residents of correctional institutions to enhance the life skills, academic skills, and employability success of criminal offenders. Enrollment in 2015 was 2,088 students, a decrease of 7.4 percent (Figure 8-20). Average decrease in enrollment for the past five years has been 9.3 percent.

Figure 8-19: Community rehabilitation and sheltered workshop enrollment: 2008-2015.

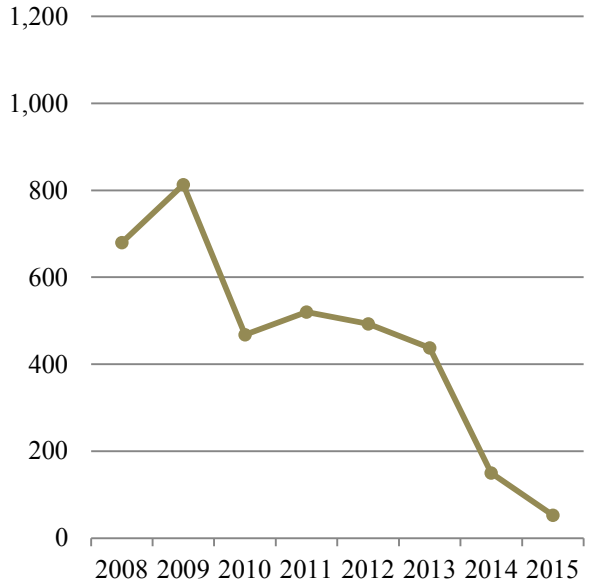
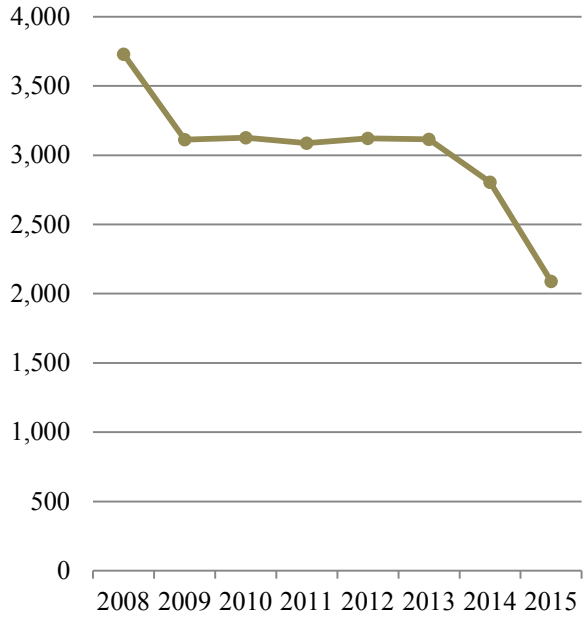


Figure 8-20: Enrollment in correctional institutions: 2008-2015.



9 Adult Education and Literacy Enrollment and Programs

The federally-funded adult education and literacy programs administered by the Iowa Department of Education's Division of Community Colleges provide lifelong educational opportunities and support services to eligible participants. Programs assist adults in obtaining the knowledge and skills necessary for work, further education, family self-sufficiency, and community involvement. Iowa's adult education and literacy (AEL) programs are delivered through the state's 15 community colleges.

By improving the education and skill levels of individual Iowans, the programs enhance the competitiveness of state's workforce and economy. Through non-credit instruction in adult basic education (ABE), adult secondary education (ASE) and English as a Second Language (ESL), programs help learners to:

- gain employment or better their current employment;
- obtain a high school equivalency diploma by passing the state approved assessment;
- attain skills necessary to enter postsecondary education and training;
- exit public welfare and become self-sufficient;
- learn to speak, to read, and to write the English language;
- master basic academic skills to help their children succeed in school;
- become U.S. citizens and participate in a democratic society; and
- gain self-esteem, personal confidence, and a sense of personal and civic responsibility.

ABE, ASE, and ESL levels of instruction are classified in the Community College Management Information System (MIS) as Basic Skills, Developmental and Remedial Education, High School Equivalence Program, and Second Language Learning. Total adult education and literacy enrollment data collected through the MIS includes all students who attended at least one 50-minute class period.

The National Reporting System (NRS) is the accountability system for the federally-funded Adult Education and Family Literacy Act (AEFLA), state administered adult education program. The NRS specifies parameters for students to be included in reports to the U.S. Department of Education's Office of Career, Technical, and Adult Education (OCTAE). Eligibility for enrollment includes persons that are at least 16 years of age and not enrolled or required to be enrolled in a secondary school under Iowa Code Chapter 299.1A; and meet one of the following:

1) lack sufficient mastery of basic educational skills to enable them to function effectively in society;
2) do not have a secondary school diploma or a recognized equivalent, and have not achieved an equivalent level of education; or
3) are unable to speak, read, or write the English language.

Adult Literacy Enrollment

Number of Students: 19,464

Decrease Since Last Year: 1.0%

Students Reported per NRS Requirements: 12,203

Increase Since Last Year: 22.1%

While only a portion of the overall population served by AEL programs, this subset represents learners that are assessed for achieving follow-up core measures fundamental to academic and vocational success, including education level gains, achieving their secondary diploma, entering and retaining employment, and transitioning to postsecondary or training.

In FY 2015, AEL program enrollment was 19,464 (Figure 9-1), with an unduplicated headcount of 17,773. However, the data management system used to report for federal accounting purposes consisted of 18,321 participants. Of these students, 12,203 were eligible for, and therefore included in, federal year-end reporting based on the NRS requirements (Figure 9-2).

MIS unduplicated enrollment decreased an average of 8.7 percent annually from fiscal year 2011 to 2015. The greatest category of decrease was in the High School Equivalency Program, averaging a 27.5 percent decline over the past five years. Enrollment in Basic Skills, and Developmental and Remedial Education increased by 205 students since last year, but has averaged a 6.6 percent decrease from 2011 to 2015.

Figure 9-1: Adult literacy program enrollment (MIS): 2011-2015.

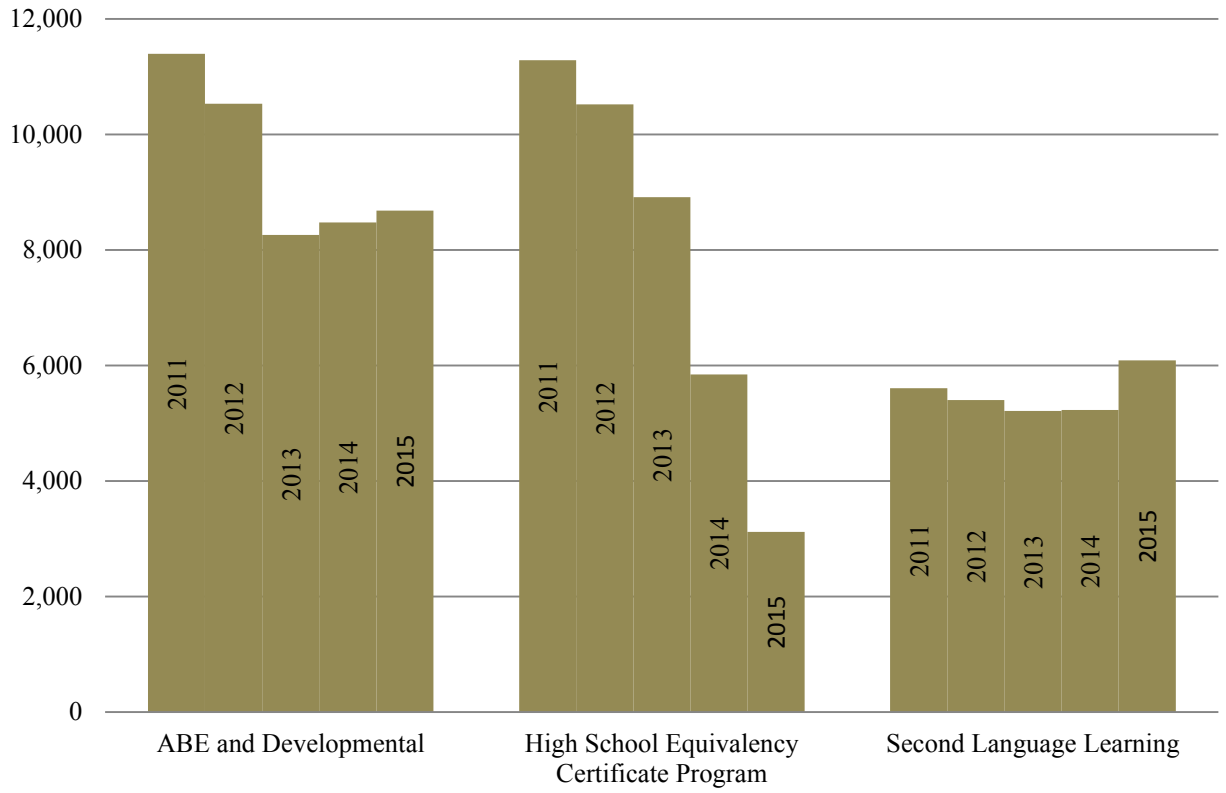
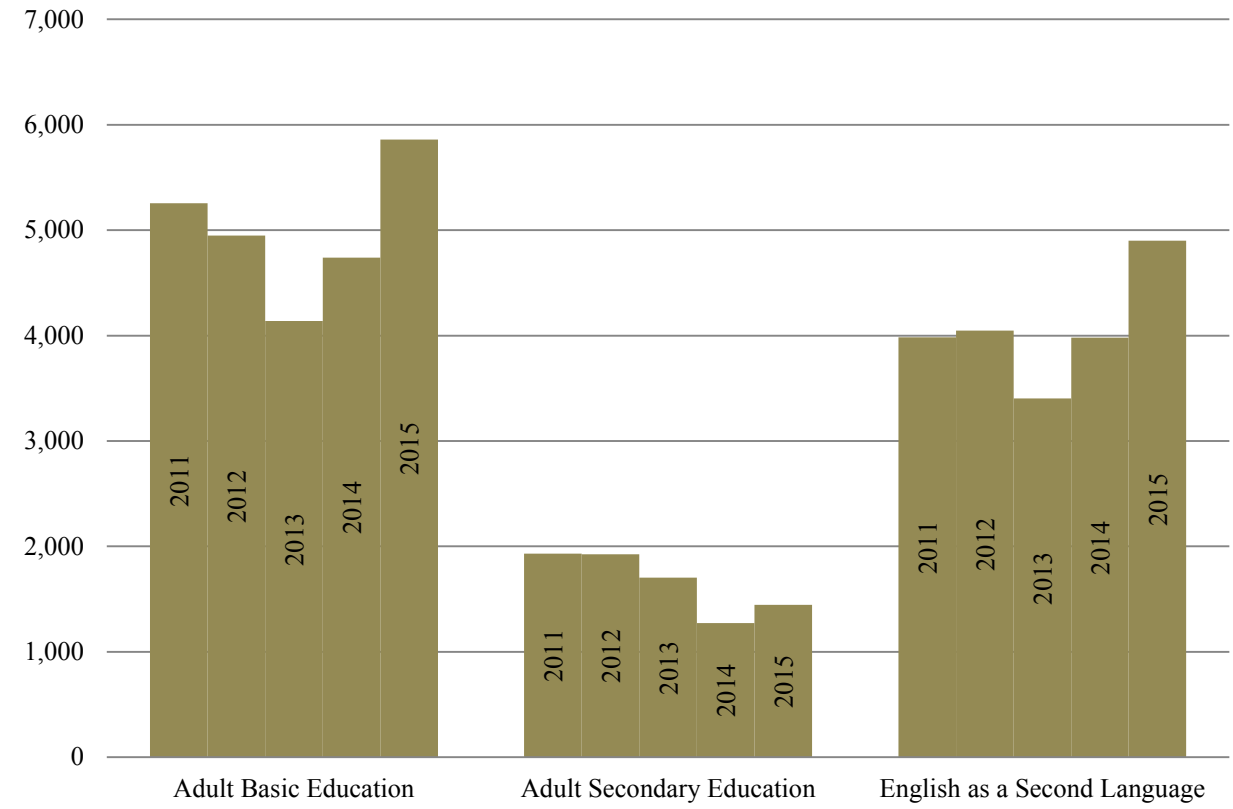


Figure 9-2: Program enrollment as reported on NRS: 2011-2015.



NRS Enrollment in Instructional Programs

Adult education and literacy instructional programs represent a progression of basic skill attainment as defined by the NRS educational functioning levels. Each level has a description of basic reading, writing, numeracy, and functional and workplace skills that can be expected from a person functioning at that level. The levels for ABE are beginning literacy, beginning basic education, low and high intermediate basic education. ASE has only two levels, low and high. The six ESL levels are beginning literacy, low beginning ESL, high beginning ESL, low and high intermediate ESL, and advanced ESL. ABE instruction had the most enrollees in 2015 with 5,859 participants; 48 percent of the total enrollment. ESL was the second largest group of participants with 4,899 participants, while ASE represented 12 percent with 1,444 enrollees (Figure 9-2). There has been a five year average increase of 5.3 percent in ESL enrollment.

Of those that were enrolled in 2015 and federally reported, 50 percent were female and 35 percent self-identified as White. Thirty-one percent of participants identified themselves as Hispanic or Latino, 19 percent as Black or African American, and 12 percent as Asian. The remaining three categories (Native American, Hawaiian or Pacific Islander, and two or more races) combine to about three percent of the participants (Figure 9-3).

The largest age group served by AEL programs ranged between 25-44 years of age, with 49 percent in this category. The next largest group, 19-24, accounted for 26 percent. The 45-59 age group had 1,576 participants which was slightly higher than the 16-18 age group with 1,208 participants (Figure 9-4).

Additionally, optional demographic information is collected from participants in the AEL program that can assist program coordinators in directing resources to target needs. The three highest optional secondary status measures, as indicated upon entry into the AEL program, included the following: self-identified as receiving public assistance (892); self-identified as a single parent (958); and self-identified as being a dislocated worker (60). It is important to note that a participant might indicate more than one status measure.

Core Outcome Measures

The five NRS core outcome measures are educational gain, high school equivalency diploma, entered employment, retained employment, and entered postsecondary education. Iowa is measured based on performance in these categories. The U.S. Department of Education negotiates a target for program effectiveness and outcomes, in part, by whether these targets are met. This section presents information on each of these targets.

Educational Gain – This measure represents the primary purpose of the AEL programs, which is to improve the basic literacy skills of participants. The

Figure 9-3: Adult education and literacy student racial and ethnic background.

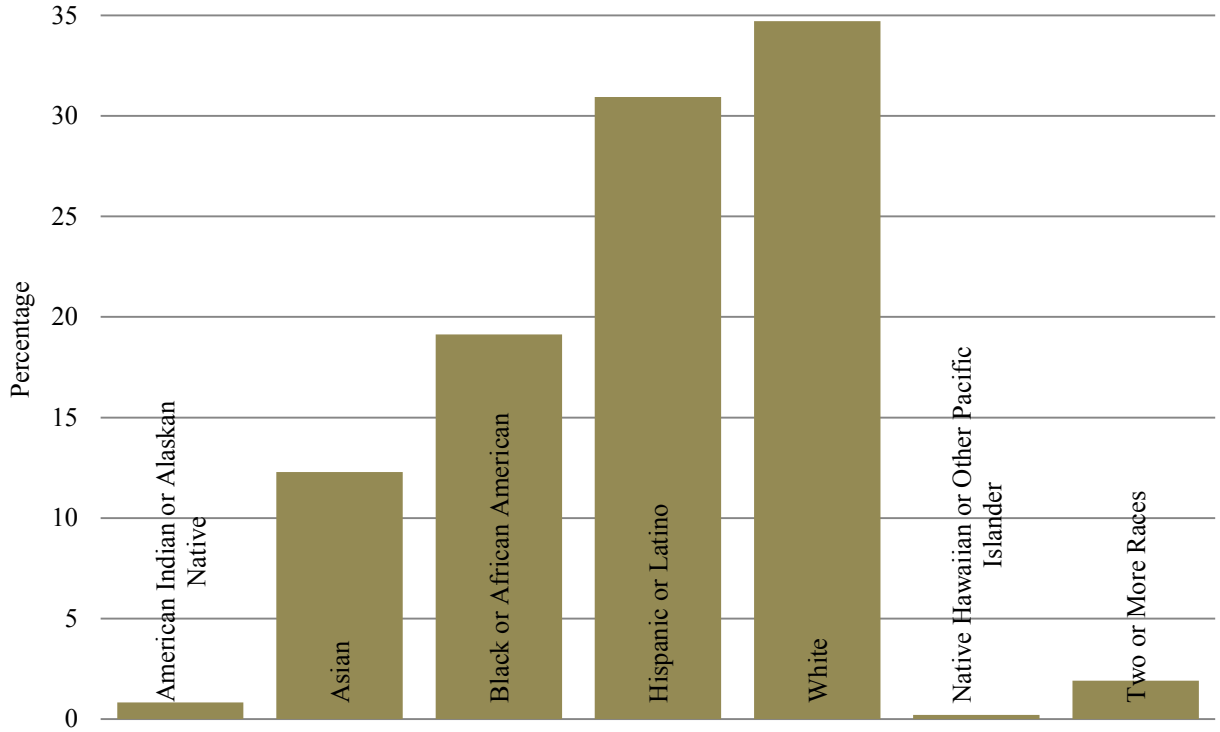
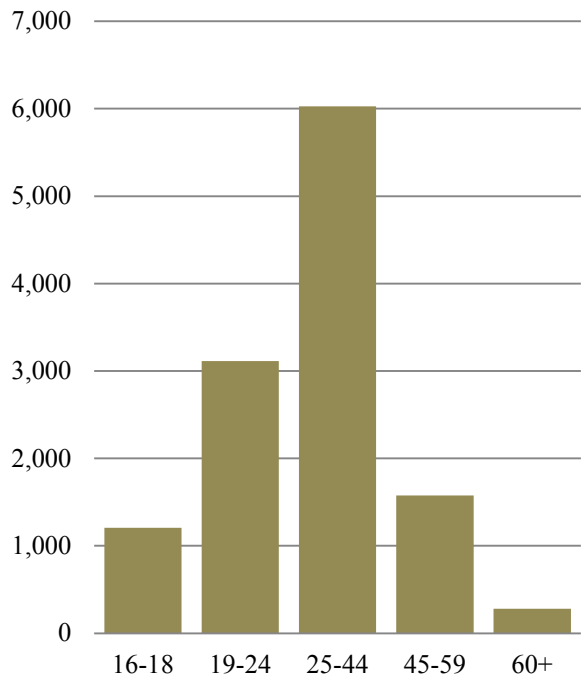


Figure 9-4: NRS enrollment by age.



NRS's approach to measuring educational gain is to define a set of educational functioning levels at which students are initially placed based on their abilities to perform literacy-related tasks in specific content areas. Iowa's AEL program uses the federally-approved Comprehensive Adult Student Assessment System (CASAS) to assess all incoming students for grade-level placement. After 70-100 hours of instructional intervention (or a minimum of 40 hours), students are again assessed to determine their skill levels. If their skills have improved sufficiently to be placed one or more levels higher, an "advance" is recorded for that student. Of the 12,203 reported in NRS, 70 percent self-identified their highest level of school completed as between the 9th and 12th grade. Those reporting their highest level of school completed was between 6th and 8th grade was the second largest grouping (14 percent) (Figure 9-5).

In 2015, 7,720 participants (63.3 percent of total NRS reported), persisted beyond the minimum hours of instruction and took a post-assessment. This represents an increase from 2014, in which only 55.3 percent of the 9,991 NRS reported participants persisted. Of those that persisted in 2015, 5,370 completed or advanced at least one educational functioning level in the fiscal year. Over 35 percent (1,856) of the participants advanced multiple levels (Figure 9-6).

High School Equivalency Diploma – For many participants in adult education and literacy programs, the main goal is to achieve a high school equivalency diploma. To qualify for the federal cohort, a participant must have completed all five sub-tests (pass or fail) within the program year or have a qualified enrollment of 11th or 12th grade, and have exited from the program. Of the 12,203 participants, eleven percent (1,396) met this federal reporting (NRS) qualification. Of the 1,396 eligible, 95 percent (1,326) had data available for matching against all recipients of high school diplomas. Of those, 82 percent (1,086) were awarded a high school equivalency and reported federally as having achieved this outcome measure (Figure 9-7). However, the Iowa Department of Education actually awarded a total of 1,942 equivalency diplomas in 2015 for all in-cohort and non-cohort participants.

Entered Employment – Upon enrollment in AEL programs, participants are required to indicate employment status. Of the 12,203 participants reported in the NRS, 1,811 (13 percent) were not seeking employment (Figure 9-8). Fifty percent of the remaining enrollees self-reported as unemployed. To qualify for follow-up within this cohort to NRS, a participant must also exit the program, either by completing instruction or no longer participating. There were 3,549 participants that qualified for consideration in this cohort.

Iowa participates as a data match state by partnering with Iowa Workforce Development for employment wage information. Twenty-three percent of the cohort was not able to be matched due to missing data. However, of the 77 percent (2,733) that was matched, 934 participants (34 percent) were identified as achieving employment within one quarter of exiting the AEL program.

Retained Employment – In 2015, 5,074 of the 12,203 participants reported to the NRS in the AEL programs self-identified as employed. To qualify for follow-up within this cohort, a participant must exit the program, either

Figure 9-5: Highest level of school completed by participants.

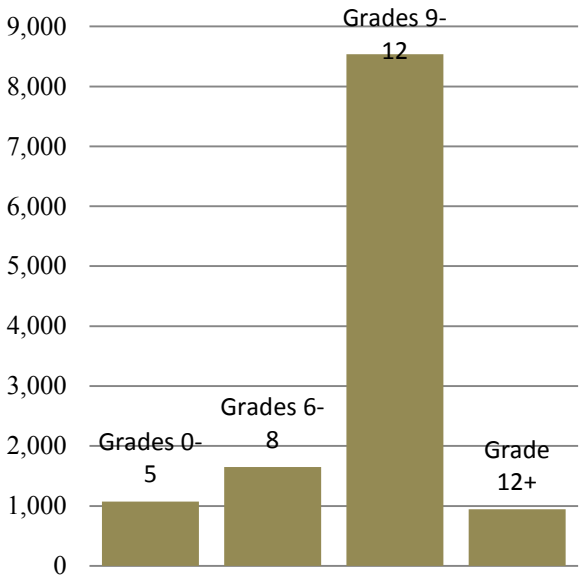
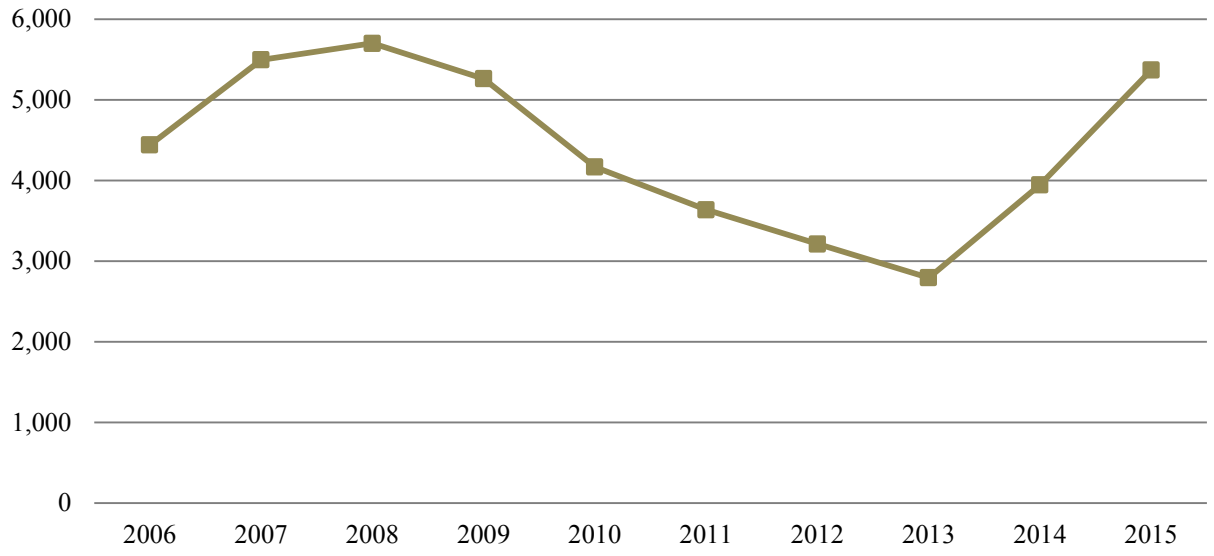


Figure 9-6: Educational functioning level gains as reported on NRS: 2006-2015.



by completing instruction or no longer participating. In addition to these employed participants, all participants from the "entered employment" cohort (934) were added; resulting in 3,480 participants qualified for consideration in the category. With an 83 percent match rate, 2153 (75 percent) participants retained their employment three quarters after their exit from the AEL program.

Entered Postsecondary Education or Training – In this measure the participant must have achieved their High School Equivalency Diploma while enrolled in AEL programs or have a secondary credential at entry, and exit the program. The participant must then enroll in a transition or postsecondary course, or a training program within the program year. In 2015, there were 2,472 participants eligible for this cohort. With an 88 percent match rate against postsecondary data, 606 (28 percent) entered postsecondary education or training (Figure 9-9).

Figure 9-7: Core outcome measure - awarded secondary diplomas: 2009-2015.

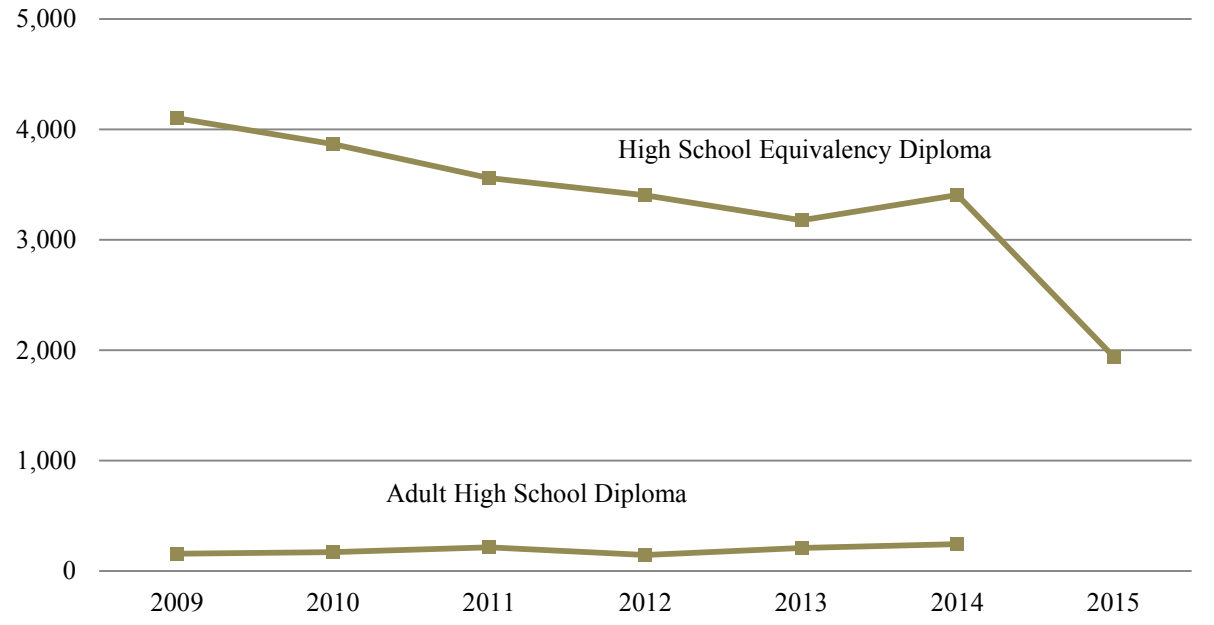


Figure 9-8: Employment status upon entry to program.

Specific Target Populations

Within NRS-reported participants, there are two subsets reported separately: distance learners and participants from corrections. By reviewing the data from each of these subsets, adult education and literacy programs are able to identify patterns and needs.

Distance Learners – This subset includes all participants that received more than 51 percent of their instruction from online curriculum. In 2015, a total of 268 participants were reported as being distance learners. Of those, 168 were enrolled as ABE and 100 were enrolled as ASE participants. One hundred thirty-four participants (50 percent) achieved an educational level gain during the program year.

Corrections – In Iowa, five community colleges work with the Iowa Department of Corrections to provide AEL programs. In 2015, 1,673 participants were included as part of the total enrollment reported in the NRS. While this does not represent all of the adults served, of these participants, 641 (38 percent) achieved an educational level gain and 169 (10 percent) were awarded a High School Equivalency Diploma.

Figure 9-9: Core measure benchmark comparison.

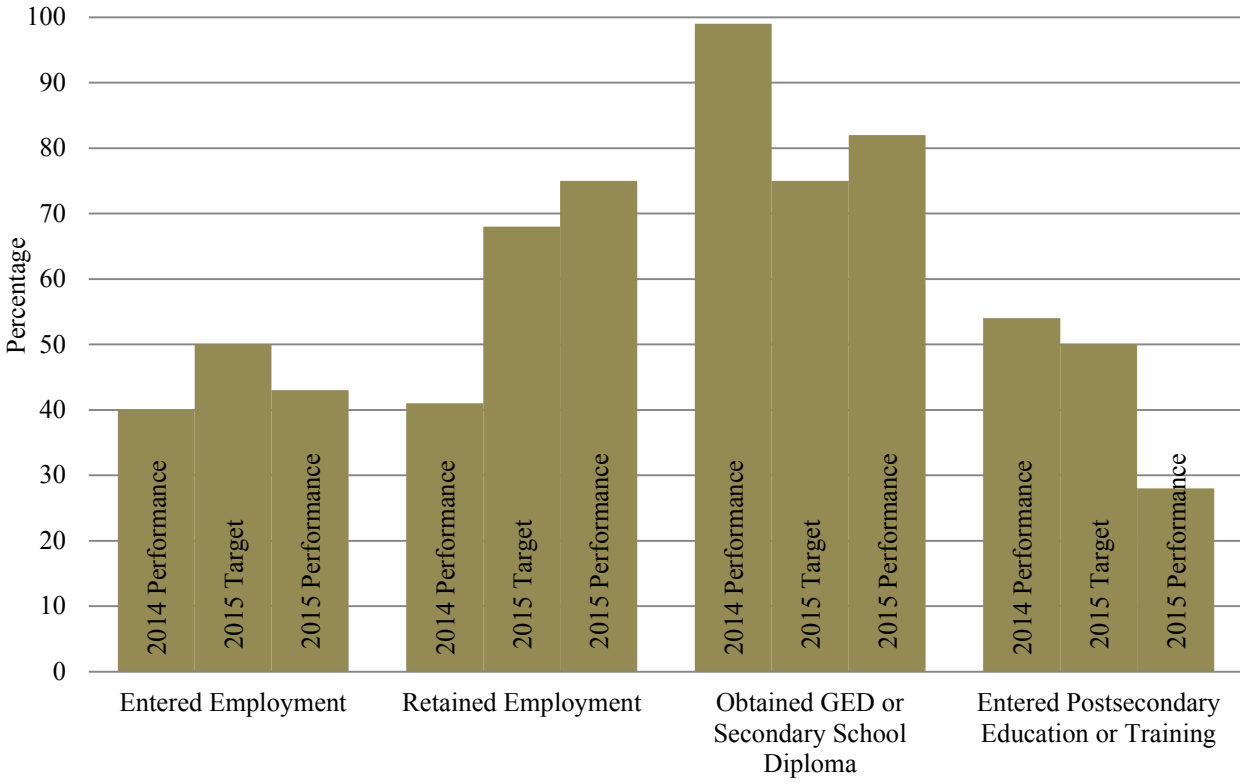
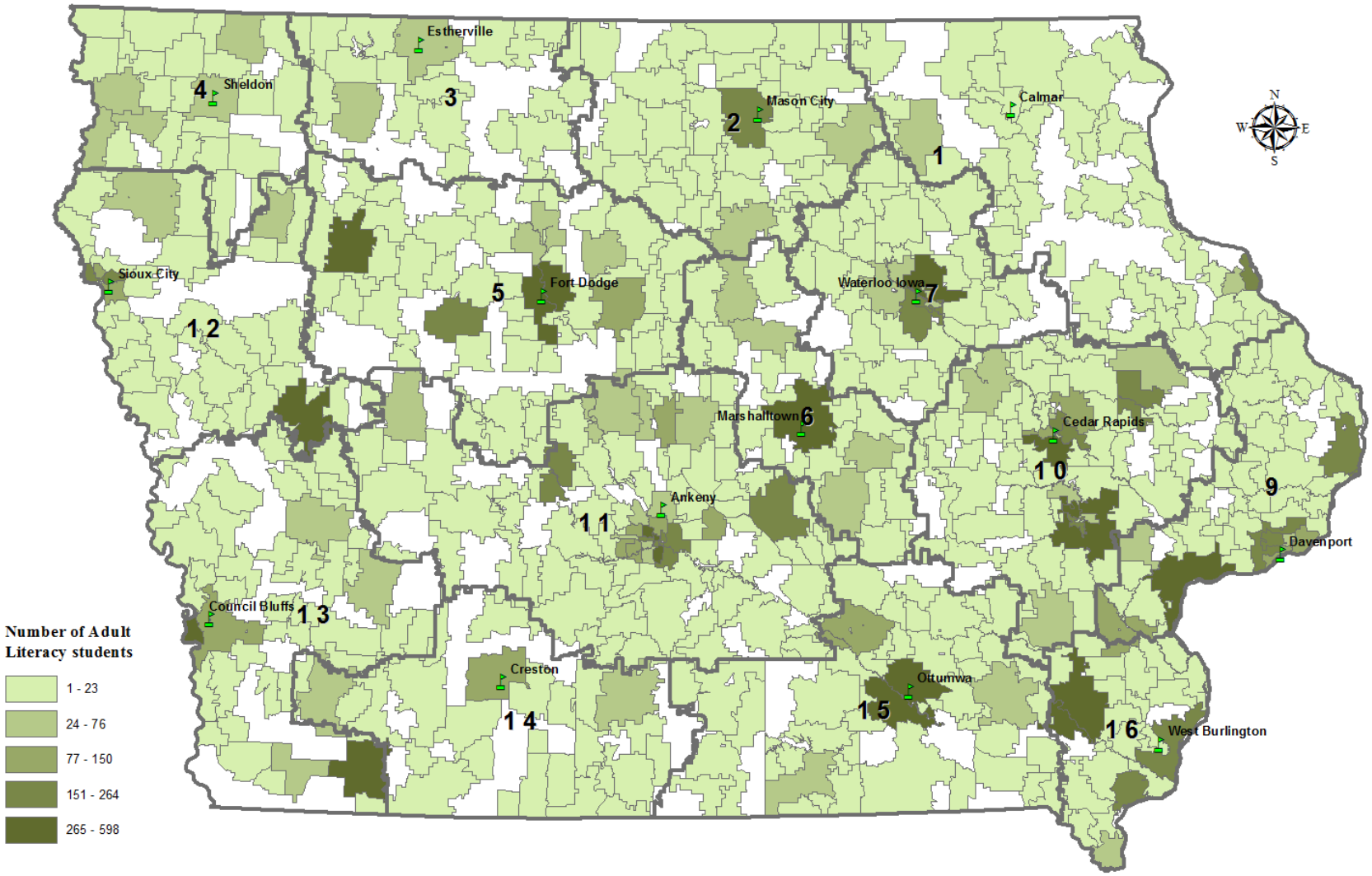


Figure 9-10: MIS-reported adult literacy program enrollment by zip code area: 2015.



Counts include 16,653 Adult Literacy students with valid Iowa ZIP codes. Counts do not include students with not reported ZIP codes or ZIP codes outside of Iowa. White areas represent zip code areas with no reported students.

10 Iowa Skilled Worker and Job Creation Fund

History of Iowa Skilled Worker and Job Creation Fund

In 2013, the Iowa Legislature made an historic investment in a portfolio of education, workforce development, job training, and adult literacy programs designed to address Iowa's growing shortage of skilled workers. The Iowa Skilled Worker and Job Creation Fund was created to support worker training and job creation efforts, with funding from the state's gaming industry receipts. This investment allows Iowa's community colleges to help an increased number of Iowans from all social and economic backgrounds to acquire the skills and industry-recognized credentials needed to secure gainful employment.

The following existing and new community college education, workforce development, job training, and adult literacy programs are supported with this new fund:

- Workforce Training and Economic Development Fund (260C.18A);
- Pathways for Career and Employment Program (260H);
- GAP Tuition Assistance Program (260I);
- Work-Based Learning Intermediary Network (256.40);
- Accelerated Career Education Infrastructure Program (260G);
- Adult Basic Education and Adult Literacy Programs (260C.50); and
- Kibbie Skilled Worker Shortage Tuition Grant Program (261.130).

All of these programs are now under the administrative oversight of the Iowa Department of Education, with the exception of the Kibbie Tuition Grant Program, which is managed by the Iowa College Student Aid Commission, and the Accelerated Career Education (ACE) program managed by the Iowa Economic Development Authority (IEDA).

This section of the Condition Report highlights the Workforce Training and Economic Development Fund, Pathways for Career and Employment Program, GAP Tuition Assistance Program, and the Work-Based Learning Intermediary Network.

Workforce Training and Economic Development (WTED) Fund

The Workforce Training and Economic Development (WTED) Fund was established in 2003 as part of the Grow Iowa Values Fund. This fund has become an important source of financing for community college new program innovation, development, and capacity building, particularly for career and technical education.

Allocations from the Workforce Training and Economic Development Fund may be used to support the following community college activities:

- Career academies;
- Career and Technical Education (CTE) programs;
- Entrepreneurship education and small business assistance; and
- General training, retraining, and in-service educational initiatives for targeted industries.

Other programs with separate funding sources may be supplemented with WTED funds, including:

- Accelerated Career Education (ACE) Infrastructure (260G);
- GAP Tuition Assistance Program (260I);
- Iowa Jobs Training (260F);
- National Career Readiness Certification (NCRC);
- National Advanced Manufacturing Certification (NAM); and
- Pathways for Academic Career & Employment (PACE) (260H).

Figure 10-1: FY 2015 WTED fund.

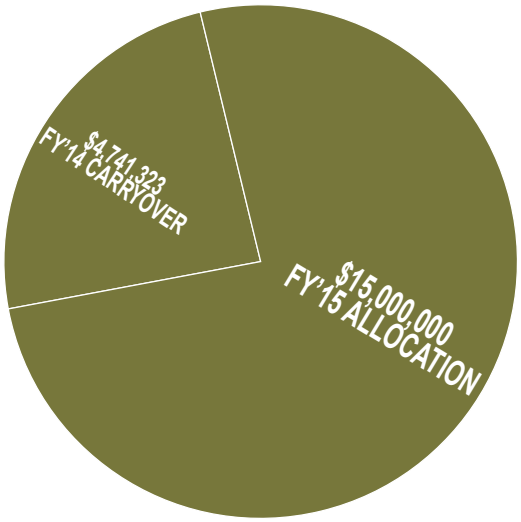


Figure 10-2: WTED percent of expenditures by program.

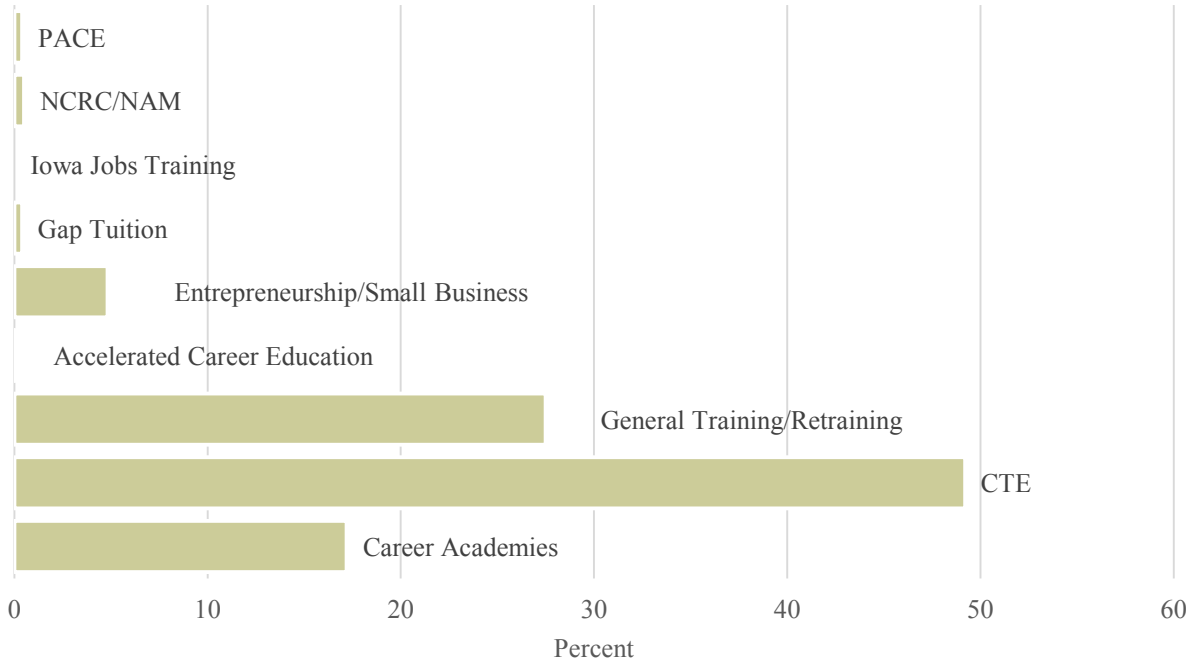


Figure 10-1 represents the total funds available for FY 2015 whereas $15,000,000 was the allocation for FY 2015 and $4,741,323 was carry forward from FY 2014, totaling $19,741,323. Of the $19,741,323 total WTED funds available for FY 2015, there was $16,693,185 expended in FY 2015, and $3,048,138 carried forward as obligated or planned funds for projects in FY 2016.

Pathways for Academic Career and Employment (PACE) Program

The PACE program provides funding to Iowa's community colleges for the development of academic and employment training programs. An individual must meet one or more of the following criteria to participate in a PACE program:

- deemed by definition to be low skilled;
- earned income at or below 250 percent of the federal poverty level;
- unemployed;
- underemployed; and
- dislocated workers.

In addition to assisting individuals with obtaining gainful, quality employment, PACE programs must be designed to help individuals acquire competency in basic skills and a specific technical field, complete a specified level of postsecondary education, earn credentials of value to employers, and satisfy local and regional economic need.

The Iowa Legislature appropriated $5 million for the PACE program in FY 2015 and there was $2,299.819 in carry forward funds from FY 2014 (Table 10-1). Of this appropriation, colleges spent of total a $5,785,103. Expenses included financial, education, personal, and career support for participants, such as tuition, tutoring, and travel assistance. Colleges may also expend PACE funds on program supports such as staff, travel, supplies, and equipment.

In the student category, $1,390,135 was spent on

Table 10-1: PACE budget summary.

	Amount ($)
Source	
FY 2014 Carry Forward	2,299,819
FY 2015 Allocation	5,000,000
FY 2015 Total Funds	7,299,819
Student Expense Categories	
Financial & Education Support	1,390,135
Personal Support	449,748
Career Support	34,670
College Expense Categories	
Salary & Personnel	3,069,137
Travel	116,099
Supplies & Equipment	234,088
Other	433,981
Regional Industry Sector Partnerships	57,245
Total Expenses	5,785,103
FY 2016 Carry Forward	**1,514,716**

Table 10-2: Summary of PACE participants.

Category	Counts
Number of Completed Applications	5,909
Number of Approved Participants	4,143
Training Activities Pursued	
HSED and Basic Skills Training	1,445
Certificate Programs	2,360
Degree Seeking	1,940
Diploma Programs	578
Total Training Activities	**6,323**

financial and education support, $449,748 on personal support; $34,670 on career support. Additionally, $3,853,305 was spent on personnel, supplies, equipment and other costs associated with the support of the community colleges. Lastly, $57,245 was used to support regional industry sector partnerships though the community colleges.

Nearly 6,000 individuals submitted applications to be considered for participation in a PACE program in FY 2015, nearly doubling last year's applications (Table 10-2). Of those applicants, 4,143 individuals were approved to participate. Broken down further, 1,445 individuals pursued their high school equivalence or basic skills training; 2,360 participated in a certificate program; 1,940 in a degree program; and 578 pursued diploma.

Gap Tuition Assistance Program

Gap Tuition Assistance Program (GAP) funding is used by Iowa's community colleges to provide need-based tuition assistance towards the completion of approved continuing education certificate training programs.

Eligibility for the program is based on a number of factors, including financial need. An individual earning an income at or below 250 percent of the federal poverty level satisfies the program's financial need eligibility requirement. In addition, an individual must demonstrate:

- the ability to complete an eligible certificate program;
- the ability to enter a postsecondary certificate, diploma, or degree program for credit, and
- the ability to gain and maintain full-time employment.

Eligible programs must be non-credit, but aligned with a credit certificate, diploma, or degree program. The program must offer training in an in-demand occupation, such as information technology, healthcare, advanced manufacturing, and transportation and logistics.

The Gap Tuition Assistance Program received a $2 million appropriation from the Iowa Legislature in FY 2015. Including the $861,426 carried forward from FY 2014, community colleges had a total of $2,861,426 to spend over the past year. Table 10-3 shows that in FY 2015, colleges spent a total of $2,415,015 on tuition and books, equipment, fees and testing, and program staff (allowable expense as of FY 2015). By category, $2,037,748 was spent on tuition and books, $38,886 on equipment, $145,917 on fees, assessments, and testing, and $192,464 on staff support and services.

Table 10-3: GAP budget summary.

Source:	Amount ($)
FY 2014 Carry Forward	861,426
FY 2015 Allocation	2,000,000
FY 2015 Total Funds	2,861,426
Expenses:	
Tuition & Books	2,037,748
Equipment	38,886
Fees, Assessment, Testing	145,917
Staff Support & Services	192,464
Total Expenses	2,415,015
FY 2016 Carry forward	**446,411**

Almost 3,300 individuals completed an application to be considered for financial assistance under the Gap Tuition Assistance Program in FY 2014 (Table 10-4). Of these applicants, 1,348 were approved for tuition assistance. At the time of reporting, 1,049 individuals had completed an eligible training program, 180 had failed to complete their training and the remaining 119 approved individuals were either actively participating or waiting to participate in a program. The statewide completion rate in FY 2015 was approximately 85 percent.

There are currently 286 approved certificate programs in which participants of the Gap Tuition Assistance program may enroll. The programs which saw the highest enrollment include certified nursing assistance with 300 participants, commercial driver's license/transportation with 243 participants, and welding with 132 participants. Additionally, there were 660 third-party credentials received by participants following completion.

Table 10-4: Summary of GAP participants.

Category	Total
Number of Completed Applications	3,272
Number of Approved Participants	1,348
Status of Approved Participants	
Completed Training	1,049
Did Not Complete Training	180
Completion Rate, percent	85.4
Number of Earned 3rd Party Credentials	660

Table 10-5: Summary of intermediary participants.

Work Site Core Services (Students)	Intermediary Funds Only	Shared Resources	Total Participants
Internships	549	192	741
Job Shadowing	1,782	2,023	3,805
Student Tours	7,290	2,094	9,384
Other Work Site Experience	1,151	-	1,151
Total Work Site	**10,772**	**4,309**	**15,081**
Work Site Core Services (Educators)	**793**	**21**	**814**
Other Core Services (Career Fairs, Camps, etc.)	**32,329**	**20,312**	**52,641**
Total All Participants	**43,894**	**24,642**	**68,536**

Work-Based Learning Intermediary Network

The Iowa Department of Educationde was appropriated $1.45 million for the development and implementation of a statewide work-based learning intermediary network. This funding was awarded on a competitive basis to 15 regional intermediary networks. Funds received from the state through this grant are to be used to develop and expand work-based learning opportunities within each region.

The statewide system of 15 regional intermediary networks will serve within each region as a one-stop contact point for information on work-based learning opportunities, thus helping to better prepare students to make informed postsecondary and career decisions. The 15 regional networks prepare students for the workforce by connecting students, the education system, business, and the community through relevant, work-based learning activities across all 16 career clusters. This achieves the goal of aligning students' career interests with appropriate postsecondary education. The long-term result will be positioning students for successful career attainment.

Some intermediary regional networks have been in operation for a number of years, prior to the creation of the Iowa Skilled Worker and Job Creation Fund, whereas others began operation with the advent of state funding.

FY2015 was the second year of this grant and resulted in an increase in the awareness of the Statewide Intermediary Network. There has been success in providing a variety of work-based learning opportunities for a broader range of K12 students across all career clusters. In addition, the regional intermediary contacts have developed stronger connections with partners to offer more experiences for students. The FY2015 Work-Based Intermediary Network report includes activities that resulted from these collaborative partnerships.

Work site core services were provided to 10,772 students (from intermediary funding) and an additional 4,309 through other funding sources from partnerships. Work site core services are opportunities that occur at a business or industry site. Furthermore, there were other core services provided to a total of 32,329 students with intermediary funds (career fairs, career camps, NCRC testing, etc.), and an additional 20,312 through collaborative funding sources (Table 10-5).

There were also 793 educators who participated in teacher tours, externships and other teacher experiences.

More information on the programs discussed above may be found on the Department's website:

https://www.educateiowa.gov/adult-career-community-college/publications.

11 Apprenticeship

This section discusses apprenticeship programs offered through the community colleges and funded through Iowa Economic Development Authority (IEDA), as well as those apprenticeship programs that were not funded through IEDA. The United States Department of Labor's, Bureau of Apprenticeship and Training must approve all apprenticeship projects funded through the IEDA.

In fiscal year (FY) 2015, the total number of students in all apprenticeship programs significantly decreased from the previous year, dropping from 3,372 to 391 (Figure 11-1). This represents an 88 percent decrease in enrollment from FY 2014 to FY 2015. This drop is attributed, in large part, to a change in how the IEDA distributes funding to apprenticeship programs.

In the past, funds were funneled through several community colleges to apprenticeship programs, with

Apprenticeship Programs

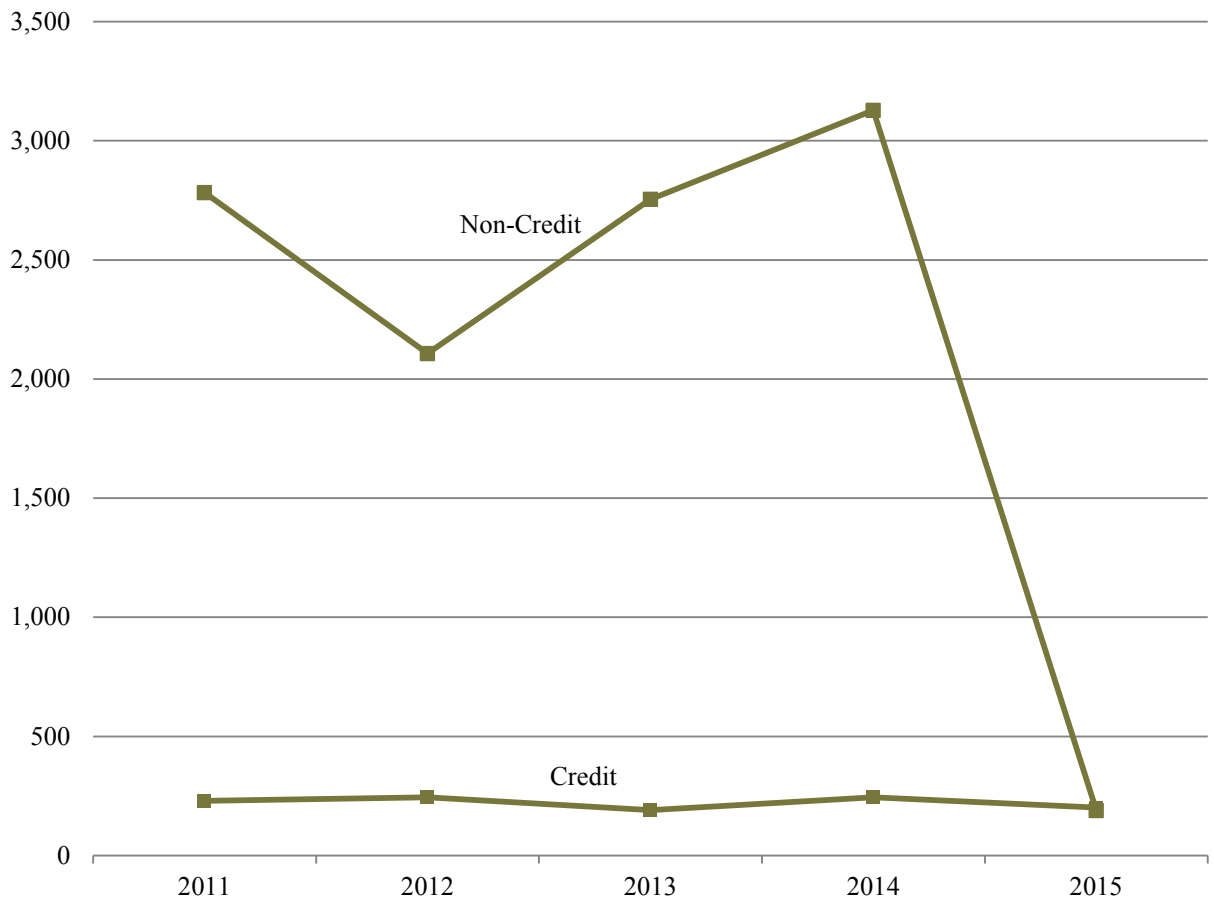
Students (Non-Credit): 190

Decline since last year: 93.9%

Students (Credit): 201

Decline since last year: 17.6%

Figure 11-1: Apprenticeship program enrollment, credit and non-credit: 2011-2015.



apprenticeship enrollment and contact hours reported through the community colleges. In FY 2015, the IEDA worked directly with businesses conducting apprenticeships to distribute funding. Accordingly, those colleges that did not maintain a formal education and training role in an apprenticeship program showed virtually no enrollment or contact hours in FY 2015 (Figure 11-2).

The number of students in credit apprenticeship programs totaled 201, a decrease of approximately 17 percent from the previous year. Similarly, 2,510 credit hours taken in FY 2015, declined from the previous year (Figure 11-3). Over the previous five years, the number of credit students has declined by 29 and the number of credit hours taken has increased by 1,105.

IEDA-Funded Apprenticeship Programs

The Iowa New Jobs Training Program (260E) assists businesses which are creating new positions or new jobs. Funds available for training through the program depend upon training and development needs and projected tax revenue available to repay the certificates of completion. Applications for this program must be made through the local community colleges. In FY 2015, no students enrolled in apprenticeship programs funded by the Iowa New Jobs Training Program (260E).

The Iowa Jobs Training Program (260F) provides job training services to current employees of eligible businesses which are located in Iowa. Job training services are defined as any training needed to enhance the performance of a business' employees. This program is administered by the IEDA and services are provided by Iowa's 15 community colleges. Each community college works with eligible businesses to assess training needs, determine availability of funds, and provide training. A total of 190 students participated in an apprenticeship funded through the Iowa Jobs Training Program (260F) in FY 2015. Compared to last year, the number of students participating decreased by 1,921, while the number of contact hours decreased by 372,854.

Programs Not Funded by IEDA

A total of 116 students participated in a non-credit apprenticeship program that was not funded by the IEDA in FY 2015. These 116 students enrolled in 20,947 contact hours. Enrollment in non-IEDA apprenticeship programs is up from FY 2014, when 91 students enrolled in such programs.

Figure 11-2: Apprenticeship non-credit contact hours: 2011-2015.

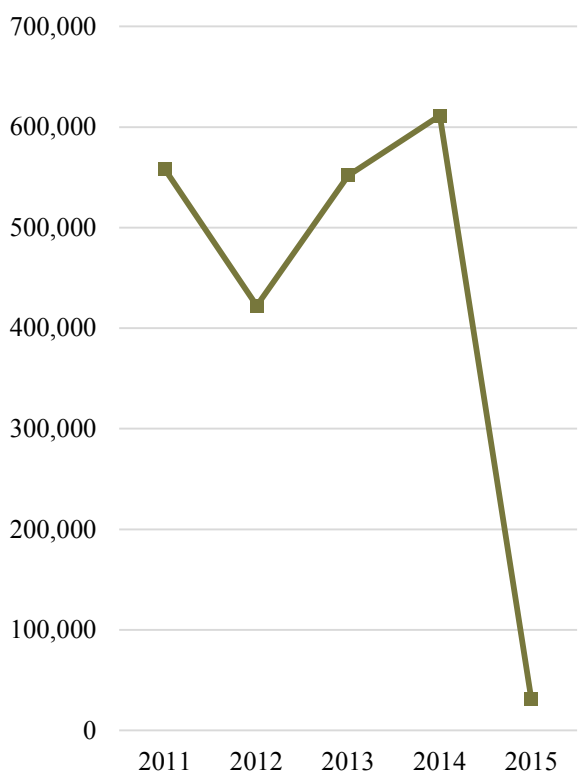
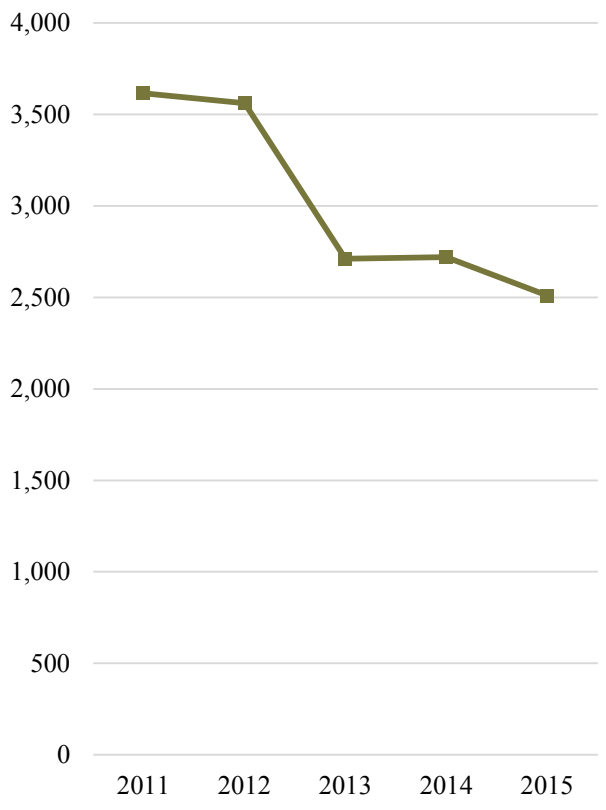


Figure 11-3: Apprenticeship credit hours: 2011-2015.



12 Student Success

Students enroll in community colleges for several reasons. Some students plan to earn an award such as a diploma or an associate degree, others intend to transfer credits earned at a community college to a four-year college or university. However, graduation and transfer rates are not the only measures of success. For example, improving one's job skills through adult basic education is another measure of success. Adults lacking a high school diploma or equivalent (i.e. GED) are at an economic disadvantage compared to those with higher levels of education. By acquiring new skills and completing adult basic education, students either may enter the labor market or return to it as more economically productive citizens.

Graduation, Transfer, and Success Rates

Community college data analysts define student cohorts, typically based on their first term of enrollment at a college, and then track their progression to produce various measures of success. For any such cohort, students experience one of the following outcomes:

- transfer to a four-year college or university, but not earn a two-year award;
- earn a two-year award, but not transfer to a four-year college or university;
- earn a two-year award, and then transfer to a four year college or university; and
- neither earn a two-year award nor transfer to a four-year college or university.

This report focuses on the fiscal year 2013 cohort of students who first enrolled in Iowa community colleges in fall semester 2012, and follows their progression for three years (i.e., through June 30, 2015). As Table 12-1 shows, the 2013 cohort consisted of 8,534 students, of which 2,603 graduated with a two-year award, yielding a graduation rate of 30.5 percent. Among these graduates, 1,623 (62.4 percent) *did not* transfer to four-year colleges or universities within the three-year period.

Of the 8,534 students from the 2013 cohort, 2,099 transferred to four-year colleges or universities, yielding a transfer rate of 24.6 percent. Of these transfer students, 1,119 (53.3 percent) transferred without earning two-year awards. The remaining 980 students (11.5 percent) transferred to four-year colleges or universities after earning two-year awards. Overall, 3,722 students from the 2013 cohort transferred, graduated, or graduated and then transferred, yielding a success rate of 43.6 percent. Table 12-2 displays these outcomes by college.

Summary of Success

Overall Transfer Rate:
24.6%
FY 2013 Cohort

Overall Graduation Rate:
30.5%
Associates Degrees Only

Overall Success Rate:
43.6%
FY 2013 Cohort

Demographics of Success

Table 12-3 summarizes success rates by race and sex. Of the 8,534 records for the 2013 cohort, 379 had missing demographic data and subsequently were excluded from this analysis. Of the remaining 8,155 students, 3,833 (47.0 percent) were females and 4,322 (53.0 percent)

Table 12-1. Cohort 2013 contingency table, graduation versus transfer.

	Transferred[a]		
Graduated[b]	No	Yes	*Total*
No	4,812	1,119	*5,931*
Yes	1,623	980	*2,603*
Total	**6,435**	**2,099**	**8,534**

[a] Students within a cohort who transferred to a four-year college or university within three years.
[b] Students within a cohort who earned a two-year award within three years.

Table 12-2. Graduation and transfer outcomes by college.

College	Cohort	N_G[a]	N_T[b]	N_B[c]	N_X[d]	Success rate (%)
Northeast Iowa	416	85	54	33	244	41.3
North Iowa Area	381	78	41	61	201	47.2
Iowa Lakes	425	127	37	64	197	53.6
Northwest	183	62	7	14	100	45.4
Iowa Central	482	50	91	44	297	38.4
Iowa Valley	467	153	0	0	314	32.8
Hawkeye	730	181	97	85	367	49.7
Eastern Iowa	489	74	65	55	295	39.7
Kirkwood	1,843	257	263	229	1,094	40.6
Des Moines Area	843	84	175	71	513	39.1
Western Iowa Tech	238	60	29	11	138	42.0
Iowa Western	876	109	152	124	491	43.9
Southwestern	181	39	19	35	88	51.4
Indian Hills	674	203	55	99	317	53.0
Southeastern	306	61	34	55	156	49.0
Total	**8,534**	**1,623**	**1,119**	**980**	**4,812**	**43.6**

Note: Success rate = ((Cohort - N_X)/Cohort) * 100%

[a] Number of students who earned a two-year award, but did not transfer to a four-year college or university.
[b] Number of students who transferred to a four-year college or university, but did not earn a two-year award.
[c] Number of students who earned a two-year award and then transferred to a four-year college or university.
[d] Number of students who neither earned a two-year award nor transferred to a four-year college or university.

Table 12-3. Success rates by race and sex.

	Females			Males			Total		
		Success			Success			Success	
Subpopulation	Cohort	N	%	Cohort	N	%	Cohort	N	%
American Indian	27	7	25.9	36	8	22.2	63	15	23.8
Asian	78	39	50.0	78	37	47.4	156	76	48.7
Black	340	110	32.4	546	172	31.5	886	282	31.8
Hispanic	266	89	33.5	312	126	40.4	578	215	37.2
Pacific Islander	5	2	40.0	10	2	20.0	15	4	26.7
Two or more	76	32	42.1	71	32	45.1	147	64	43.5
White	3,041	1,383	45.5	3,269	1,547	47.3	6,310	2,930	46.4
Total	**3,833**	**1,662**	**43.4**	**4,322**	**1,924**	**44.5**	**8,155**	**3,586**	**44.0**

Note: Success Rate = (N Success/Cohort) * 100%. This table excludes 379 records with missing demographic data. Refer to appendix A for a more detailed discussion about methods used in this chapter.

were males. Success rate among females (43.4 percent) was slightly lower than the success rate among males (44.5 percent). Additionally, of the 3,586 included in the success rate, females accounted for 46.3 percent while males constituted 53.7 percent.

Of the 2013 cohort students who self-reported demographics, Whites were the majority race making up 77.4 percent, followed by Blacks (10.9 percent), and Hispanics (7.1 percent). The overall success rate among Whites was 46.4 percent; among Blacks, 31.8 percent; and among Hispanics, 37.2 percent. Additionally, of the 3,586 students included in the success rate, Whites accounted for 81.7 percent while Blacks and Hispanic constituted 7.9 percent and 6.0 percent, respectively.

Graduates' Wages

Data published by the U. S. Bureau of Labor Statistics [1] indicate entry-level weekly wages for workers holding associate degrees during the second quarter 2015 was $535.00, up $2.00 from third quarter of 2014.

Iowa Workforce Development (IWD) provides "occupational information in the areas of employment, job openings, pay, career preparation requirements, and top skills" for jobs across Iowa [3]. Weekly wages are derived from the Iowa Wage Survey prepared annually by IWD [3]. Data from IWD suggest that the 2014 entry-level salary of Iowa workers in occupations that typically require associate degrees was $660.80 per week, which is 23.5 percent higher than national entry-level weekly wages. The Iowa Department of Education is currently developing a report that will examine the relationships among community college completion and employment rates and wages.

Adult Basic Education

A primary focus of Iowa's Adult Basic Education (ABE) program is to help students acquire basic skills so they can earn a high school equivalence diploma, which will subsequently give them access to postsecondary credit education. ABE programs in Iowa's community college provide many non-credit training opportunities, including skilled training for occupations in high demand. In addition, ABE program participants receive help setting employment goals based on their interests and aptitude. Using results from workforce and basic skills assessments, ABE staff work with participants to determine career readiness and skills needed to obtain a job in a desired field. Iowa tracks participants who indicate their intent to secure or retain employment as a goal during the program year.

In 2015, 606 ABE program participants (30 percent) continued with postsecondary education. During that same period, 43 percent of the participants who were unemployed at the time of entry obtained employment within one quarter of exiting ABE programs. Furthermore, 75 percent of the participants who were employed retained employment three quarters later.

Time to Award

A research brief published by Complete College America states that students who complete at least 30 semester hours of coursework during their first year "are more likely to graduate on time than students who complete fewer credits per year" [2]. According to the report, "Students who earned...an associate degree in two years completed an average of 29.8 credits [semester hours] in their first year."

Research by RTI International suggests that the national average time-to-award for an associate degree is 38.7 months [4], equivalent to 3.23 years. This means that a student enrolled in a 64-semester hour program of study is completing fewer than 10 hours per term. Data from CurricuNET indicate that Iowa community colleges require an average 70.1 semester hours for associate degrees. To graduate in four semesters, a student would need to average 17.6 semester hours per term.

The cohort used to calculate time-to-award started with 6,769 records of Iowa community college students who earned associate degrees during FY 2015. Out of these 6,769 records, 3,250 records were excluded because these students were not continuously enrolled over the past five years. After accounting for these exclusions, 3,519 records remained for analysis.

Of the 3,519 remaining records from the cohort, the average time to earn an associate degree was 2.92 years, which is equivalent to 24 semester hours per academic year. Over 40 percent of these students earned associate degrees within two years. After three years, the cumulative graduation rate was almost 72 percent.

References

[1] Bureau of Labor Statistics. Usual weekly earnings of wage and salary workers, second quarter 2015. News release USDL-15-1431, U.S. Department of Labor, Washington, DC, September 30, 2014.

[2] Complete College America. The power of 15 credits: Enrollment intensity and postsecondary student achievement. Research brief, Complete College America, Indianapolis, IN, April 2013. Retrieved from http://completecollege.org/resources/ on December 2, 2015.

[3] Iowa Workforce Development. Iowa short term occupational projections 2014-2016. Retrieved from http://iwin.iwd.state.ia.us/, December 2, 2015.

[4] RTI International. Average time to a certificate, an associate degree, or a bachelor's degree: United States. Retrieved from http://www.completionarch.org/arch/indicator/4TC-28-TTD-US/ on December 2, 2015.

13 Tuition and Fees

Each fall, the Iowa Department of Education collects data about tuition and fees from Iowa's community colleges. Institutional data for this report were collected from a survey of community college business officers. National and regional data were collected from the Integrated Postsecondary Education Data System (IPEDS).

Unless noted otherwise, tuition and fees are expressed as dollars per semester credit hour. Any calculations of extended costs assume students are residents of Iowa as defined by Iowa Code [1] and are enrolled in two semesters (fall and spring) of full-time study at 15 semester credit hours per term. Visit https://www.educateiowa.gov/adult-career-community-college/publications to read the latest edition of the tuition and fees report.

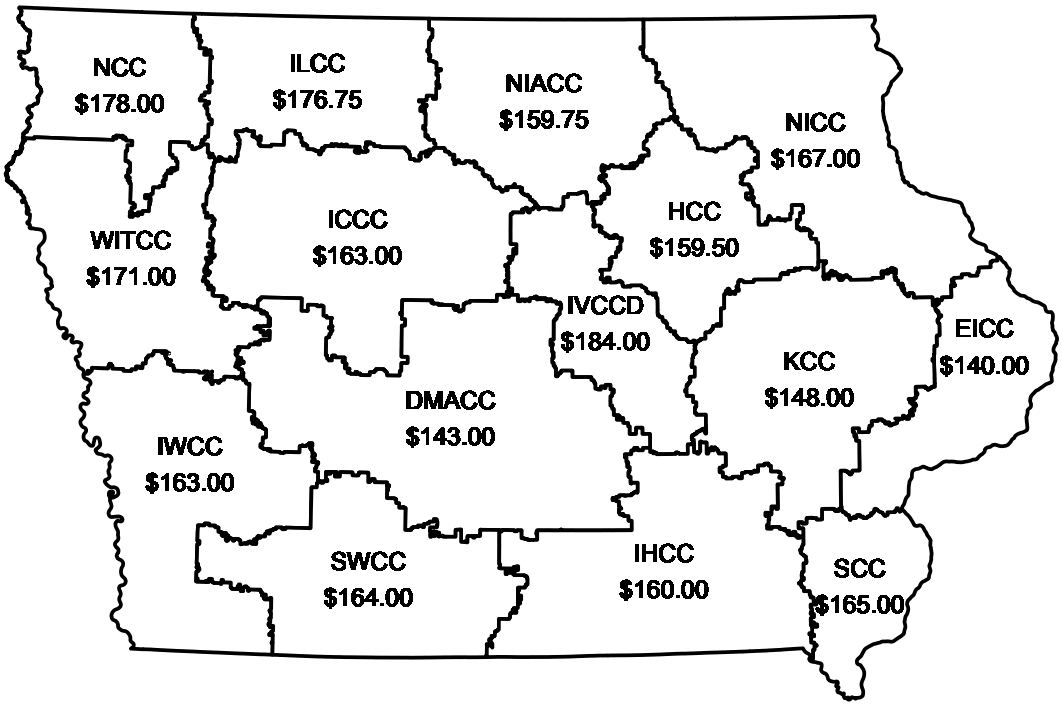
Cost of Enrollment

The sum of tuition and mandatory fees for an academic year defines total cost of enrollment (TCE). This cost does not include expenses such as books, room and board, transportation, or other additional fees.

In FY 2015, the median tuition and mandatory fees per credit were $151.00 and $13.50 respectively, yielding a median TCE of $164.50 per credit. Eastern Iowa Community College ($140.00 per credit) and Des Moines Area Community College ($143.00 per credit) have the lowest tuition rates of the 15 community colleges. Neither college assessed mandatory fees, which helped to minimize rates. By comparison, Iowa Valley Community College District had the highest tuition rate ($184.00 per credit), followed by Northwest Iowa Community College ($178.00 per credit). Figure 13-1 depicts tuition rates per credit across Iowa.

In fiscal year 2016, a full-time Iowa resident will pay between $4,200 and $5,520 for 30 credits depending upon which community college the student attends. Total cost of enrollment increased an average of 4.2 percent from FY 2015. Northwest Iowa Community College had the smallest percentage change in TCE (1.7 percent), whereas Western Iowa Tech Community College had the highest overall increase (13.2 percent). Figure 13-2 depicts distribution of year-to-year changes among Iowa's community colleges.

Figure 13-1: Tuition rates per credit for FY 2016.



Tuition and Fees

Northwest Iowa Community College had the lowest percentage change in tuition only (2.0 percent), whereas Iowa Western Community College had the highest (8.0 percent).

Mandatory fees at Western Iowa Tech College (WITCC) increased almost 90 percent to defray costs associated with a program designed to issue laptop computers to all credit students. This increase in mandatory fees caused WITCC to have the highest overall percentage increase in tuition rates (13.2 percent).

Online Tuition

State policy allows community colleges to establish separate tuition rates for distance education courses that are delivered through a consortium agreement approved by the Iowa Department of Education. This agreement pertains to the Iowa Community College Online Consortium (ICCOC) that sets tuition and fees for online courses on behalf of its members. Community colleges that do not participate in the consortium set their own tuition and fees for online courses.

Mandatory Fees

Most community colleges assess mandatory fees that do not include fees applied to specific programs. Mandatory fees were highest at Western Iowa Tech ($32.00 per credit) and lowest at Southeastern Community College ($3.00 per credit).

Iowa Lakes Community College assesses students $10.00 per term for a basic activity fee in addition to its other mandatory fees. Kirkwood Community College has no mandatory fees per credit; however, the college began assessing students a technology fee of $25.00 per term, effective July 1, 2015.

Revenue Sources

Figure 13-3 illustrates the primary sources of revenue for community colleges since 1980, as percentages of total revenue. In 1980, state and local funds accounted for the majority of college revenue (61.6 percent). However, by FY 2015, revenue from that source had fallen to 38.8 percent. Tuition and fees accounted for the largest share of general operating fund revenues in FY 2015, illustrating the shift from state and local support to tuition and fees.

Between FY 2005 and FY 2014, state support fell from almost 36 percent to just over 34 percent. During this same period, local funding remained relatively unchanged.

Comparisons

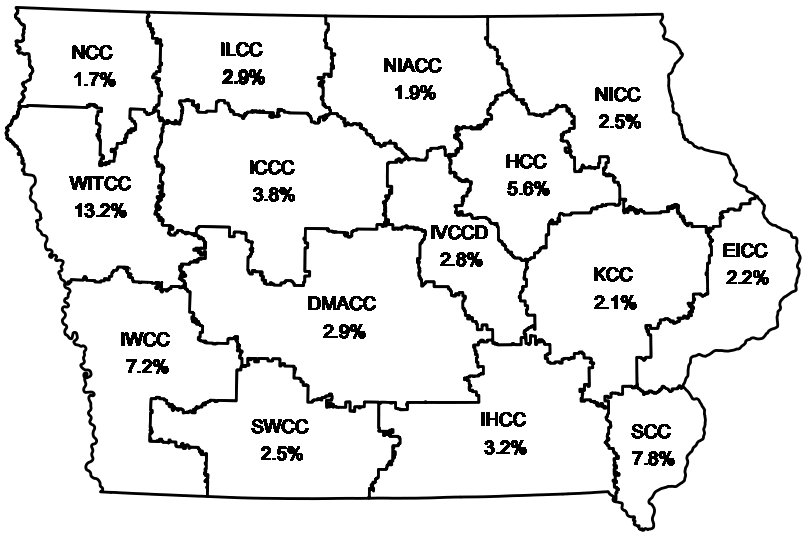
Source data for national and regional comparisons were acquired from IPEDS. National and regional data were collected from 931 public two-year institutions that award associate degrees. IPEDS reports tuition and fees for an academic year, assuming 30 credits per year, with FY 2013 being the latest reporting year.

Data pertaining to Iowa's public universities were collected from tables available on the universities' respective websites. Data pertaining to Iowa's community colleges were collected from a survey of community college business officers.

National

According to IPEDS data, the average annual in-state TCE in Iowa during FY 2013 was $4,415.31, placing Iowa in the 85th percentile. This means Iowa's average annual in-state TCE was greater than or equal

Figure 13-2: Change (%) in TCE from FY 2015 to FY 2016.



to 85 percent of all reporting states. Figure 13-4 shows that in FY 2013 New Hampshire ($7,224.14), Vermont ($5,668.00), and Minnesota ($5,343.87) had the highest total costs of enrollment. By comparison, California ($1,237.98), New Mexico ($1,558.32), and Arizona ($1,980.20) had the lowest total costs of enrollment.

Regional

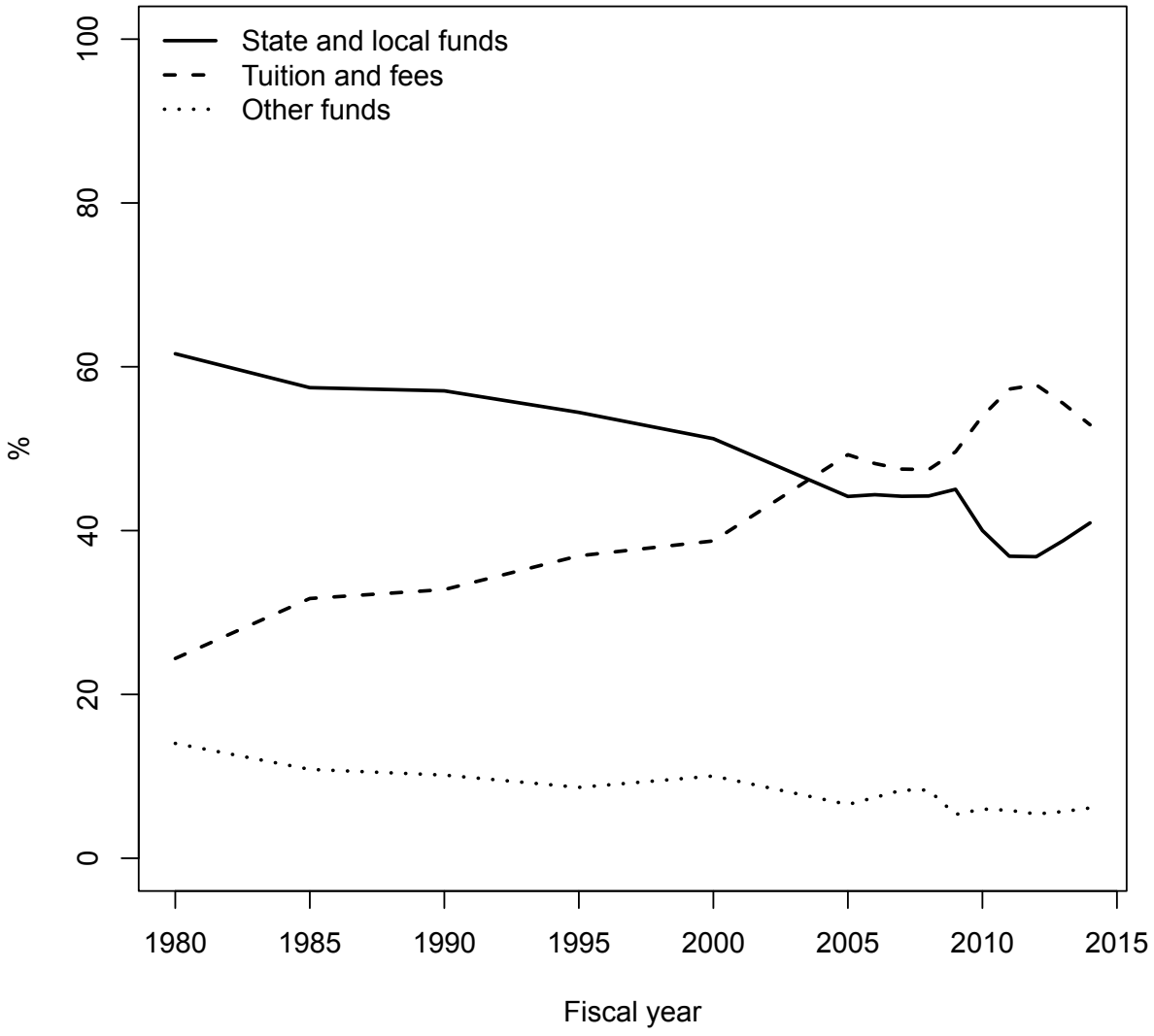
Minnesota has had the highest regional average TCE since 2009 (Table 13-1), while Nebraska and Missouri have had the lowest. During this time period, the average TCE in Iowa was near the middle of the group, occasionally switching positions with Wisconsin.

In 2013, the most recent year for which IPEDS data are available, average annual in-state TCE in Iowa was about $4,416 annually (Figure 13-5), an increase of 3.4 percent (Figure 13-6) from 2012. By comparison, Wisconsin and Illinois had the highest average percentage change, 4.3 percent and 3.9 percent respectively. South Dakota (-5.1 percent) was the only state within the region where average TCE decreased.

Institutional

By law, tuition at Iowa community colleges cannot exceed the minimum tuition at the public universities [1]. In 2016, the highest tuition per credit at Iowa

Figure 13-3: Sources of revenue as percentages of total.



community colleges ($162.00) is almost 42 percent lower than the lowest corresponding tuition at Iowa's public universities ($277.00).

Average TCE at Iowa's community colleges has increased 12.6 percent since 2011. This is equivalent to an annualized 3.0 percent increase. During the same time period, average TCE at Iowa's public universities increased 10.5 percent, equivalent to a 2.5 percent annualized rate. By comparison, cumulative rate of inflation increased 7.4 percent, equivalent to a 1.8 percent annualized increase.

References

[[1] Iowa Code §260C.14 §§2 (2014) and 281— IAC 21.

[2] Iowa State University. Tuition & fees. Data table. Retrieved June 1, 2015, from http://www.registrar.iastate.edu/sites/default/files/uploads/fees/Fall15Spring16/F15-S16.pdf.

[3] IPEDS. IPEDS Data Center. Retrieved from http://nces.ed.gov/ipeds/datacenter/login.aspx, August 6, 2014.

[4] University of Iowa. Tuition and fee tables. Interactive database. Retrieved June 1, 2015, from https://www.maui.uiowa.edu/maui/pub/tuition/projection.page

[5] University of Northern Iowa. Tuition and fees. Data table. Retrieved June 1, 2014, from http://www.uni.edu/tuition/2015-2016-undergraduate-tuition-fees

[6] U.S. Inflation Calculator. Historical inflation rates: 1914-2015. Retrieved from http://www.usinflationcalculator.com/. Interactive database.

Figure 13-4: Average annual TCE during fiscal year 2014.

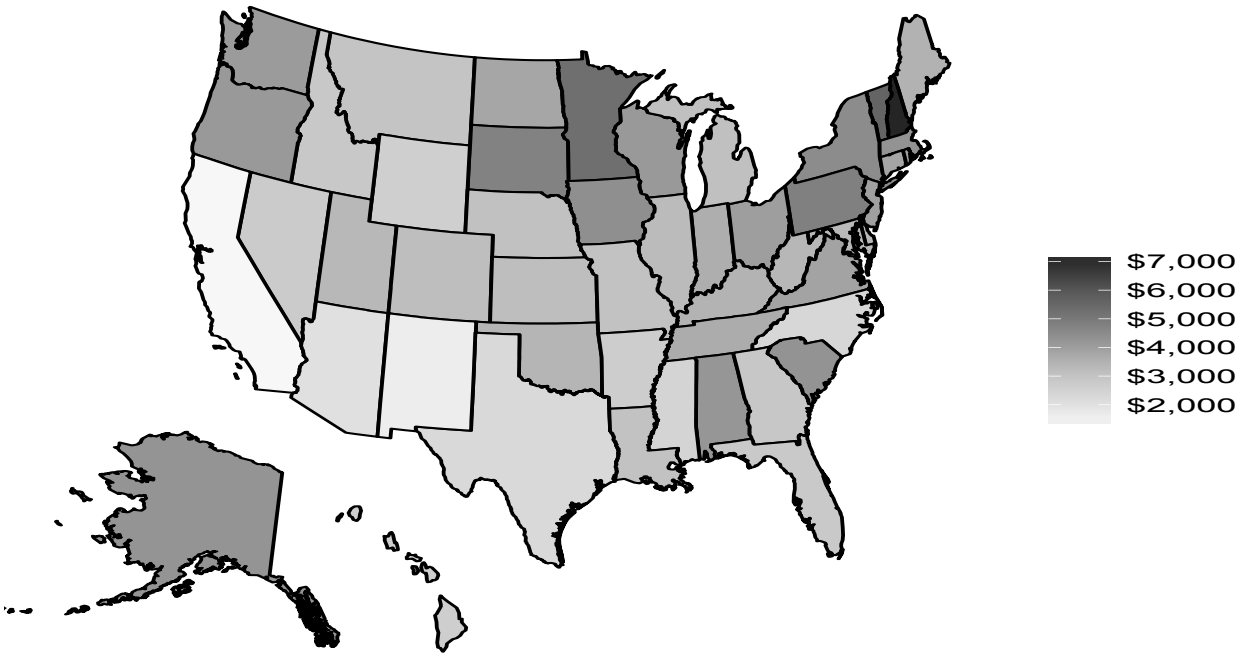
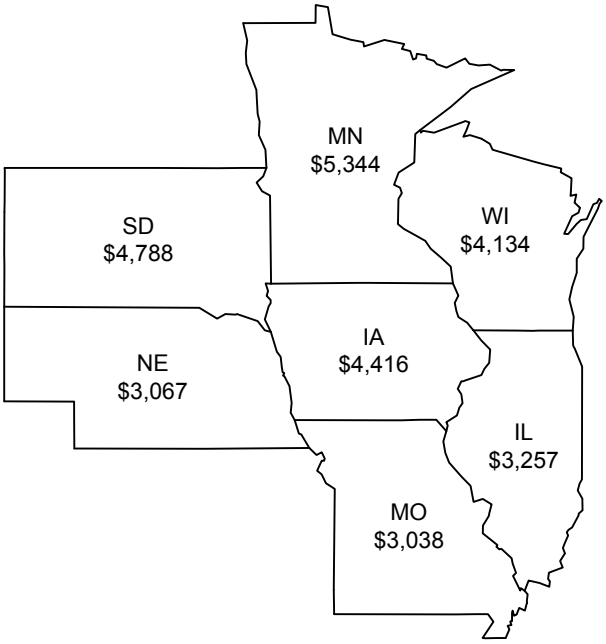


Table 13-1: Average TCE ($) of selected states in the Midwest.

Year	IA	IL	MN	MO	NE	SD	WI
2009	3,415	2,519	4,614	2,456	2,220	3,931	3,536
2010	3,549	2,670	4,791	2,406	2,248	4,357	3,543
2011	3,769	2,947	4,965	2,440	2,391	4,700	3,695
2012	4,269	3,135	5,320	2,933	3,021	5,046	3,962
2013	4,415	3,257	5,344	3,038	3,067	4,788	4,134

Source: [3]

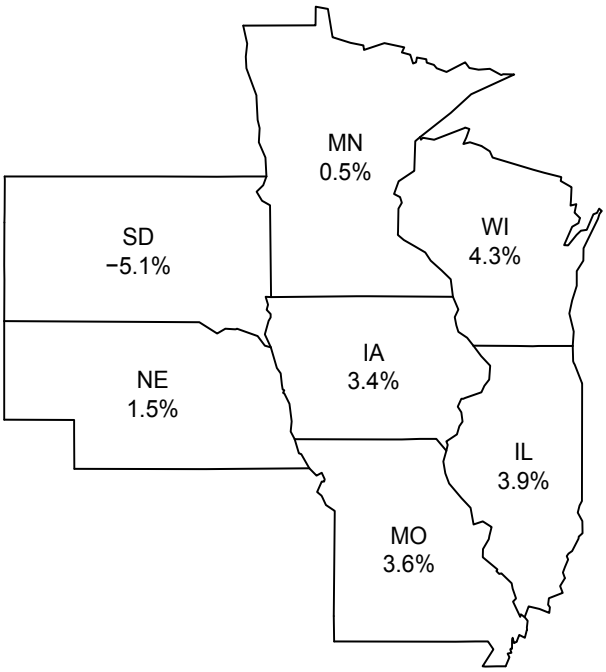
Figure 13-5: Average annual in-state TCE among selected states in the Midwest (2013).



Note: Averages were derived from IPEDS datasets for academic year 2014 and rounded up to the nearest whole dollar. Regional average = $3,982 per academic year.

Source: [2]

Figure 13-6: Change (%) of average annual in-state TCE among selected states in the Midwest.



Note: Percentages were derived from IPEDS Data Center for academic years 2013 and 2014. National percentage change = 4.48%. Regional percentage change = 2.52%

Source: [2]

14 Financial Aid

Iowa community college students receive financial aid from federal, state, institutional, and other sources. Student financial aid includes grants, scholarships, and loans. In analyzing aid by source for 2014 to the community colleges from the Iowa College Student Aid Commission, federal aid was $381,738,775, state aid was $10,014,836, institutional aid was $18,446,428, and other aid was $10,498,181. The breakdown of community college financial aid shows that 91 percent of all aid was from the federal government, four percent was from community colleges, two percent from other aid sources, and two percent from the state of Iowa (Table 14-1).

Various financial options are available to students who need assistance financing the cost of their postsecondary education. Such assistance may come in the form of federal, state, institutional, and/or other financial loans, grants, scholarships, or work-study.

Grants and Scholarships

Grants and scholarships are a form of financial assistance which, unlike loans, do not have to be repaid upon graduation from a postsecondary institution. Several state-funded grants and scholarships are managed by the Iowa College Student Aid Commission. Students of Iowa's community colleges currently receive assistance through the Iowa Vocational-Technical Tuition Grant, Kibbie Grant, Iowa National Guard Educational Assistance Program, Iowa Grant, All Iowa Opportunity Scholarship Program, Education Training Voucher Program, and All Iowa Opportunity Foster Grant Program (Table 14-2).

Through these state-funded programs a total of 9,191 students received over $10.1 million of financial assistance in FY 2015. The Kibbie Grant, awarded to students who enroll in certain career and technical education programs and demonstrate financial need, serves the largest population of community college students. Through this grant, over $5.1 million in financial assistance was awarded to 4,926 students in FY 2015.

After the Kibbie Grant, the largest state-funded aid programs are the Iowa Vocational-Technical Tuition Grant and the Iowa National Guard Education Assistance program. The Iowa Vocational-Technical Tuition grant is made available to students enrolled in community college career and technical education and career option courses. In FY 2015, 2,836 students received awards totaling $2,250,104 - an average of $793 per recipient.

Service members of the Iowa Air and National Guard are eligible to receive college financial assistance through the Iowa National Guard Educational Assistance Program. In FY 2015, a total of 1,073 service members received an average assistance of $4,033. Of the 1,073 recipients, 456 enrolled in a community college program, accounting for $1,176,035 of total awarded funding.

The federal government administers a number of need-based grants. The largest of these programs is the federal Pell Grant, awarded to students who demonstrate sufficient financial need. According to data from all 15 of Iowa's community colleges made available through the office of Federal Student Aid for the 2014-2015 award year, a total of 63,527 students received financial assistance totaling $124,097,224 through the federal Pell Grant – an average of approximately $1,953 per recipient (Table 14-3).

Table 14-1: 2011-2014 distribution of community college student aid.

	2011		2012		2013		2014	
Source	Amount	%	Amount	%	Amount	%	Amount	%
Federal	$489,012,519	93	$458,778,089	94	$431,346,206	92	$381,738,775	91
Institutional	$14,472,564	3	$21,577,612	3	$18,287,695	4	$18,446,428	4
Other	$9,842,949	2	$9,593,702	2	$10,084,527	2	$10,498,181	2
State	$6,272,339	2	$6,878,524	1	$10,015,102	1	$10,014,836	2
Total	$519,600,371		$496,827,927		$469,733,530		$420,698,220	

Source: Iowa College Student Aid Commission.

Table 14-2: FY 2015 summary of grant awards by institution.

District	School	Iowa Voc-Tech Tuition Grant Program		Iowa Grant Program		All Iowa Opportunity Scholarship Program		Iowa National Guard Education Assistance Program		Education Training Voucher Program		All Iowa Opportunity Foster Grant Program		Kibbie Grant	
		YTD Recipients	$ Award Amount	Recipients	$ Award Amount	Recipients	$ Award Amount	Recipients	$ Award Amount	Recipients	$ Award Amount	Recipients	$ Award Amount	Recipients	$ Award Amount
1	Northeast Iowa CC	196	153,740	27	9,278	2	8,103	14	38,100	10	23,750	9	9,316	262	300,379
2	North Iowa Area CC	63	52,929	13	5,415	2	5,469	4	13,467	5	13,750	4	8,114	158	147,630
3	Iowa Lakes CC	94	87,554	9	4,839	8	34,725	7	26,849	4	13,750	3	5,753	132	163,472
4	Northwest Iowa CC	78	65,946	5	2,168	2	6,510	7	26,296	3	11,203	2	4,207	146	189,366
5	Iowa Central CC	221	172,210	17	14,281	22	73,908	29	91,941	19	61,859	14	24,412	382	384,429
6	Iowa Valley CC District	74	61,285	53	8,279	13	55,560	15	38,632	4	13,750	3	5,710	140	158,749
7	Hawkeye CC	249	192,394	32	12,740	24	92,423	27	73,225	9	31,018	13	17,342	391	418,549
9	Eastern Iowa CC	129	107,916	38	16,647	3	7,816	18	44,663	2	3,750	2	2,404	331	332,413
10	Kirkwood CC	452	369,917	107	34,397	14	52,009	99	229,783	18	54,167	25	32,661	767	740,261
11	Des Moines Area CC	607	436,674	89	41,193	34	124,878	134	290,649	44	144,567	37	59,139	820	820,540
12	Western Iowa Tech CC	214	169,297	19	12,688	42	156,283	56	148,935	11	30,705	9	11,489	287	238,854
13	Iowa Western CC	137	113,992	14	12,623	9	39,355	16	53,386	13	53,750	11	20,434	330	348,791
14	Southwestern Iowa CC	56	51,875	9	3,082	21	89,128	5	11,854	4	15,000	2	4,207	106	126,963
15	Indian Hills CC	180	145,154	21	17,030	12	40,130	17	56,751	15	46,109	9	11,215	489	566,129
16	Southeasterm Iowa CC	86	69,221	19	6,806	2	6,945	8	31,504	1	5,000	1	1,202	185	173,907
	TOTAL	**2,836**	**2,250,104**	**472**	**201,466**	**210**	**793,242**	**456**	**1,176,035**	**162**	**522,128**	**144**	**217,605**	**4,926**	**5,110,432**

SOURCE: Iowa College Student Aid Commission, Preliminary Summary of Payments by Institution.

Table 14-3: 2014-2015 award year Pell grant volume by school.

District	School	YTD Recipients	YTD Disbursements
1	NORTHEAST IOWA COMMUNITY COLLEGE	2,991	$5,699,556
2	NORTH IOWA AREA COMMUNITY COLLEGE	1,727	$3,486,459
3	IOWA LAKES COMMUNITY COLLEGE	1,370	$2,952,968
4	NORTHWEST IOWA COMMUNITY COLLEGE	665	$1,252,839
5	IOWA CENTRAL COMMUNITY COLLEGE	5,186	$11,200,364
6	ELLSWORTH COMMUNITY COLLEGE	820	$1,808,618
6	MARSHALLTOWN COMMUNITY COLLEGE	1,247	$2,616,742
7	HAWKEYE COMMUNITY COLLEGE	3,650	$7,242,938
9	EASTERN IOWA COMMUNITY COLLEGES	5,471	$10,157,228
10	KIRKWOOD COMMUNITY COLLEGE	9,629	$18,819,994
11	DES MOINES AREA COMMUNITY COLLEGE	12,699	$23,628,034
12	WESTERN IOWA TECH COMMUNITY COLLEGE	4,295	$8,931,092
13	IOWA WESTERN COMMUNITY COLLEGE - COUNCIL BLUFFS	5,534	$11,558,179
14	SOUTHWESTERN COMMUNITY COLLEGE	1,084	$2,399,206
15	INDIAN HILLS COMMUNITY COLLEGE	4,892	$7,582,576
16	SOUTHEASTERN COMMUNITY COLLEGE	2,267	$4,760,431
	TOTAL	63,527	$124,097,224

Source: Federal Student Aid, Title IV Program Volume Reports, www.studentaid.ed.gov

Loans

Many federal financial assistance programs are run through the office of Federal Student Aid. Students may apply for federal financial aid by filing a Free Application for Federal Student Aid (FAFSA). The FAFSA is used to customize a student aid package, or financial aid offer. The offer may include an assortment of grants, loans, or other forms of financial assistance. In 2014-2015, Iowa residents filed 175,424 FAFSA applications, a five percent decrease from the previous year. Of these applicants, 24,323, or 14 percent of applicants, were high school seniors.

The largest federal student loan program is the William D. Ford Federal Direct Loan Program. This program includes four types of student loan: Direct Subsidized Loans, Direct Unsubsidized Loans, Direct PLUS Loans (for graduate and professional students and parents of undergraduate students), and Direct Consolidation Loans. In FY 2015, 33,845 community college students received Direct Subsidized Loans; 31,697 received Direct Unsubsidized Loans; and 942 individuals borrowed under the Direct Parent PLUS program. Total financial assistance disbursed to these borrowers equaled $197,189,788.

Default rates

Failure to make loan payments per the schedule stipulated in a student's signed promissory note results in the student defaulting on his or her student loans. The default rate indicates the percentage of students entering into default on an institutional basis. The default rate is the percentage of a school's borrowers who enter repayment on certain federal student loans during a particular federal fiscal year and default prior to the end of the next fiscal year. The federal government calculates a three-year cohort default rate. Cohorts are identified by the fiscal year in which a borrower entered repayment. This section includes information on the FY 2012 cohort, which consists of borrowers who entered repayment in FY 2012, and tracks whether the borrower defaulted on his or her loans in FY 2012, FY 2013, or FY 2014. As data shows, 32,429 community college students in Iowa entered into repayment in FY 2012. Of those students who entered repayment, 6,925 (21.4 percent) defaulted on their loans.[2]

[1]Iowa College Student Aid Commission. Free Applications for Student Aid (FAFSA) filed by Iowa Residents. 2014. https://www.iowacollegeaid.gov/sites/default/files/documents/FAFSAsFiled2015.pdf

[2]Federal Student Aid. Three-year Official Cohort Default Rates for Schools.2014. http://www2.ed.gov/offices/OSFAP/defaultmanagement/cdr.html

15 Financial

Unrestricted General Fund Revenues by Source

From fiscal year (FY) 2014 to FY 2015, collective Iowa community college unrestricted general revenues decreased $231,547 to a statewide total of $557,231,882 (Table 15-1), representing a nominal decrease of less than 0.01 percent. The decline was driven by decreases in tuition and other income, but offset by increases in local and state support. Unrestricted federal revenue continued to decrease as well, totaling $2,189,324, largely due to an accounting change mandated by the Iowa Department of Education in FY 2014. Pass-through funds to the community colleges, such as Carl Perkins funds and Adult Education and Family Literacy Act (AEFLA) funds from the federal government, were traditionally recorded in Fund 1 unrestricted general fund by the colleges for statewide reporting. FY 2014 marked a transition year wherein colleges were asked to move these funds to their Fund 2 restricted funds. This requirement was optional in FY 2014 but is mandatory as of FY 2015. The change is necessitated by the fact that many federal funds are marked for specific purposes and are therefore restricted in their use. In the event that the colleges receive federal funding that is not restricted in its use, the funds will remain in the Fund 1 unrestricted general fund. The recording of these funds in Fund 2 precipitated a drop in the percentage of revenue in their Fund 1 unrestricted general fund from federal sources during this fiscal year and will do the same in succeeding fiscal years.

Figure 15-1 depicts the percent distribution of revenue in the community colleges Fund 1 unrestricted general fund revenue sources for the fiscal year. Tuition and fees continue to be the leading source of unrestricted general fund revenue, accounting for 52 percent of total revenue. State support is the second largest source of revenue, increasing to 36 percent in FY 2015 from 34.7 percent in FY 2014. The change in reporting required by the state moving forward will decrease the amount of federal funding reported in the colleges' Fund 1 unrestricted general fund.

Total revenues adjusted to 2015 dollars (Table 15-2) show an overall decrease of less than 0.01 percent from the previous year. In real terms, tuition and fees revenue decreased two percent from FY 2014, while revenue for local and state sources showed a real increase of just under four percent.

Figure 15-1: Unrestricted fund revenue by source 2015.

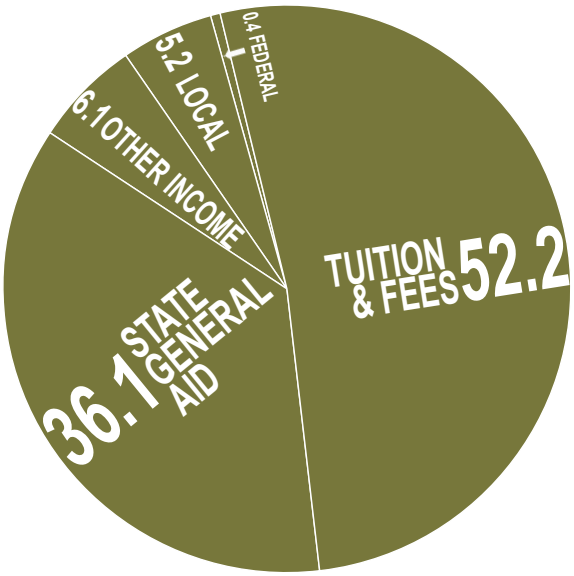


Table 15-1: Nominal revenue totals by source 2011-2015.

YEAR	Tuition & Fees, $	Local, $	State Support, $	Federal, $	Other Income, $	Total Revenue, $
2011	308,633,060	25,406,419	158,754,232	14,478,452	31,507,835	538,779,998
2012	314,657,804	26,471,137	163,774,647	10,142,936	29,392,828	544,439,352
2013	307,054,107	27,428,532	177,274,655	9,710,256	31,529,441	552,996,991
2014	295,035,559	28,505,519	193,274,647	6,421,205	34,226,499	557,463,429
2015	290,561,911	29,204,331	201,277,231	2,189,324	33,999,085	557,231,882

Table 15-2: Adjusted revenue totals by source (2015 dollars).

Year	Tuition & Fees, $	Local, $	State General Aid, $	Federal, $	Other Income, $	Total Revenue, $
2011	327,530,306	26,962,025	168,474,570	15,364,951	33,437,023	571,768,875
2012	324,433,553	27,293,539	168,862,777	10,458,055	30,306,001	561,353,926
2013	311,623,650	27,836,720	179,912,836	9,854,763	31,998,658	561,226,627
2014	294,771,950	28,480,050	193,101,959	6,415,467	34,195,919	556,965,345
2015	290,561,911	29,204,331	201,277,231	2,189,324	33,999,085	557,231,882

Unrestricted General Fund Expenditures by Source

The total unrestricted general fund expenditures in FY 2015 decreased $257,025 from the previous year in nominal terms, a decrease of less than .01 percent. By source, salaries and benefits increased about one percent, services increased one percent, and materials, supplies, and travel increased one percent. Table 15-3 shows the breakdown by category for the unrestricted general fund expenses statewide. Salaries continue to comprise the majority of community college expenditures at just over 75 percent while services come in second at 13 percent (Figure 15-2).

Expenditure categories are defined as follows:

- Salaries – All salaries paid by the community college including administrative, instructional, professional, secretarial and clerical, and service staff. Includes other payroll costs, such as fringe benefits and worker's compensation insurance.
- Services – Items such as professional fees, memberships, publications, rental of materials, buildings and equipment, and insurance.
- Materials, Supplies, and Travel – Expenses such as materials and supplies, periodicals, vehicle materials and supplies, and travel expenses.
- Current Expenses – Items such as purchase for resale, payment on debt principal, student compensation, and transfers.
- Capital Outlay – Items such as furniture, machinery, and equipment, lease purchase equipment, vehicles, land, buildings and fixed equipment, and other structures and improvements.

Figure 15-2: Unrestricted fund expenditures by category 2015.

Total unrestricted general fund expenditures, adjusted to 2015 dollars, increased slightly from the previous year, attributable primarily to an increase in expenditures associated with salaries and benefits (Table 15-4).

Table 15-3: Nominal expenditure totals by category 2011-2015.

Year	Salaries, $	Services, $	Matls, Supp & Travel, $	Current Expenses, $	Capital Outlay, $	Total, $
2011	388,716,147	74,592,882	32,105,574	28,309,254	5,388,948	529,112,805
2012	403,231,685	72,680,073	32,800,924	28,672,940	3,905,209	541,290,831
2013	415,637,586	73,268,714	31,376,295	28,884,390	3,321,037	552,488,022
2014	416,422,359	74,088,407	30,079,274	31,855,054	2,915,731	555,360,825
2015	419,317,986	74,691,961	30,486,783	28,807,522	1,799,548	555,103,800

Table 15-4: Adjusted expenses by source in 2015 dollars.

YEAR	Salaries	Services	Matls, Supp & Travel	Current Expenses	Capital Outlay	Total
2011	412,516,788	79,160,118	34,071,361	30,042,597	5,718,907	561,509,771
2012	415,759,237	74,938,088	33,819,979	29,563,747	4,026,536	558,107,587
2013	421,823,056	74,359,090	31,843,233	29,314,244	3,370,460	560,710,084
2014	416,050,293	74,022,210	30,052,399	31,826,592	2,913,126	554,864,619
2015	419,317,986	74,691,961	30,486,783	28,807,522	1,799,548	555,103,800

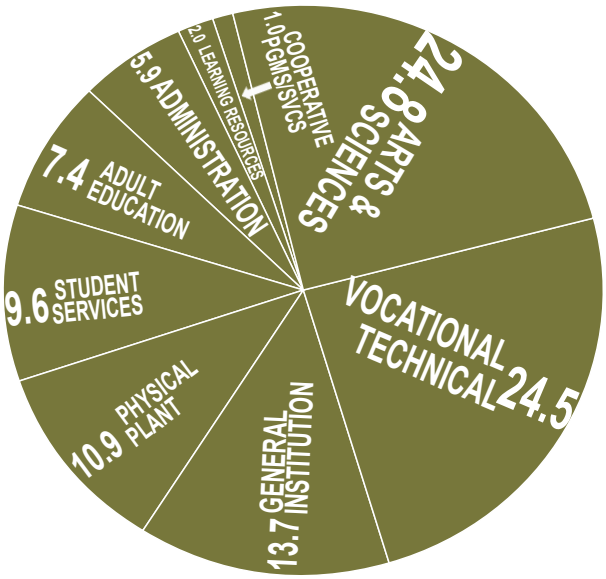
Unrestricted General Fund Expenditures by Function

Total Unrestricted General Fund expenditures by function adjusted to 2015 dollars indicate that arts and sciences remains the largest expenditure function, accounting for 25 percent of total expenditures. Vocational technical spending was close behind at 24 percent. Adult education represented seven percent of statewide unrestricted general fund spending. Adjusted for inflation, arts and science increased three percent from the previous year, vocational technical two percent. General institution costs increased by five percent. Physical plant spending was down statewide, showing a decrease of about five percent from the previous year.

Function categories are defined as follows:

- Arts and Sciences – All administrative and instructional organizational units of the community college that provide instruction in the area of college parallel and career option/college parallel (CO/CP).
- Career/Vocational Technical – All organizational units designed to provide vocational, technical, and semi-professional training.

Figure 15-3: Unrestricted fund expenditures by function 2015.



- Adult Education – All organizational units designed to provide services, courses, and programs intended mainly for part-time students who are not a part of one of the instructional divisions of arts and sciences or career/vocational technical functions. Some examples include Adult Basic Education (ABE), high school completion, and short-term preparatory.
- Cooperative Programs or Services – All organizational units designed to provide instruction for secondary joint effort activities and all activities concerning Chapter 260E (Industrial New Jobs Training) and Chapter 260F (Jobs Training).
- Administration – All expenses of the Community College Board of Trustees, the CEO, and business office, which serve the entire community college.
- Student Services – All organizational units, which are primarily concerned with providing services for students.
- Learning Resources – All organizational units, which provide for storage, distribution, and use of educational materials throughout the entire community college.
- Physical Plant – All organizational units, which are responsible for the operation and maintenance of the community college's physical facilities.
- General Institution – All other expenses except those included in the above functions. Some examples include institutional development, data processing, general printing, communication, alumni affairs, early retirement, and telecommunications.

Unrestricted General Fund Revenue vs. Expenditures

After adjusting for inflation (using 2015 dollars), total revenue increased by less than 0.01 percent from FY 2014 to FY 2015. Similarly, total expenditures increased by less than 0.01 percent. Since FY 2011, both unrestricted general fund revenues and expenditures have averaged an annual decrease of less than 0.01 percent (Figure 15-4).

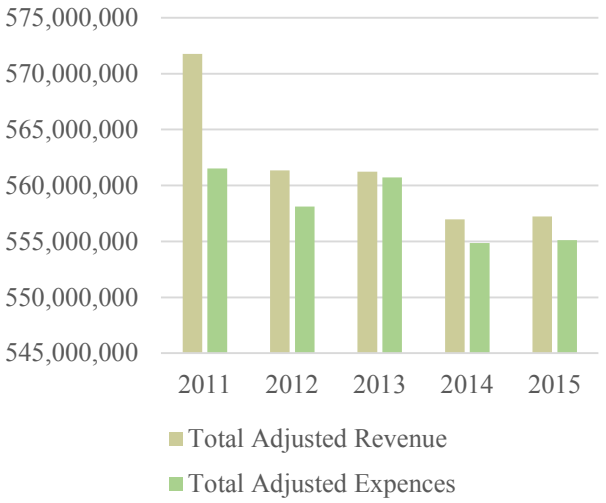
Table 15-5: Nominal expenditure total by function in 2011-2015.

YEAR	Arts & Science, $	Vocational Technical, $	Adult Education, $	Cooperative Pgms/Svcs., $	Administration, $	Student Services, $	Learning Resources, $	Physical Plant, $	General Institution, $	Total, $
2011	138,359,061	136,640,426	44,258,629	7,943,653	34,888,561	47,111,654	13,171,000	65,711,122	73,927,819	562,011,926
2012	139,324,677	134,553,808	46,189,460	9,005,642	36,255,119	49,746,291	11,904,958	59,929,208	71,697,528	558,606,691
2013	139,047,017	137,077,515	47,235,586	7,721,488	34,226,172	52,028,910	11,689,174	59,425,131	72,760,526	561,211,517
2014	133,927,078	133,603,435	43,358,594	8,330,886	35,024,744	53,747,409	11,540,103	63,386,497	72,442,077	555,360,825
2015	137,803,187	135,902,241	41,266,765	5,374,626	32,929,240	54,688,564	10,932,177	60,281,717	75,925,283	555,103,800

Table 15-6: Adjusted expenses by function in 2015 dollars.

YEAR	Arts & Science, $	Vocational Technical, $	Adult Education, $	Cooperative Pgms/Svcs., $	Administration, $	Student Services, $	Learning Resources, $	Physical Plant, $	General Institution, $	Total, $
2011	146,830,626	145,006,761	46,968,534	8,430,034	37,024,748	49,996,246	13,977,446	69,734,538	78,454,334	596,423,267
2012	143,653,199	138,734,109	47,624,468	9,285,428	37,381,489	51,291,802	12,274,819	61,791,081	73,925,018	575,961,414
2013	141,116,298	139,117,486	47,938,540	7,836,398	34,735,522	52,803,198	11,863,131	60,309,489	73,843,339	569,563,401
2014	133,807,417	133,484,062	43,319,854	8,323,443	34,993,450	53,699,387	11,529,792	63,329,862	72,377,351	554,864,619
2015	137,803,187	135,902,241	41,266,765	5,374,626	32,929,240	54,688,564	10,932,177	60,281,717	75,925,283	555,103,800

Figure 15-4: Total revenue and total expenditures 2011-2015 in 2015 dollars.



Full-Time Equivalent Enrollment (FTEE)

The Full-time Equivalent Enrollment (FTEE) calculation is utilized when determining state general aid (SGA) and is a standardized method for measuring enrollment. Due to timing of the calculation to meet Iowa Legislative deadlines, the enrollment used to calculate SGA is two years behind the year of the aid (i.e., FY 2013 enrollments were used to calculate FY 2015 SGA). Twenty-four (24) credit hours or 600 non-credit contact hours equal one FTEE.

FY 2015 saw a decrease of 2,456 FTEE from the previous year, with a total of 88,619 FTEE (Table 15-7). This represents a 0.03 percent decrease from the previous year. This enrollment figure has been decreasing for the last five years, matching other measures of enrollment both statewide and nationally.

Table 15-7: Adjusted revenue and expenditures/FTEE in 2015 dollars.

Year	Revenue	Expenditures	FTEE Total	Revenue / FTEE	Expenditures / FTEE
2011	571,768,875	561,509,771	107,251	5,336	5,240
2012	561,353,926	558,107,587	102,504	5,481	5,450
2013	561,226,627	560,710,084	96,696	5,809	5,804
2014	556,965,345	554,864,619	91,075	6,121	6,098
2015	557,231,882	555,103,800	88,619	4,564	6,264

State General Aid (SGA)

The FY 2015 State General Aid (SGA) was $193,774,647 (Table 15-8). After adjusting previous SGA amounts into 2015 dollars, the SGA has increased 13 percent in real dollars since FY 2005. As a percent of total revenue in inflation adjusted dollars, state general aid constitutes 35 percent of total revenue. The chart below indicates the changes in the percentage of total revenue in adjusted dollars over the last ten yearsthe first time since FY 2009.

The chart below indicates the changes in the percentage of total revenue in adjusted dollars over the last 10 years.

Figure 15-5: SGA as percent of revenue (2015 dollars).

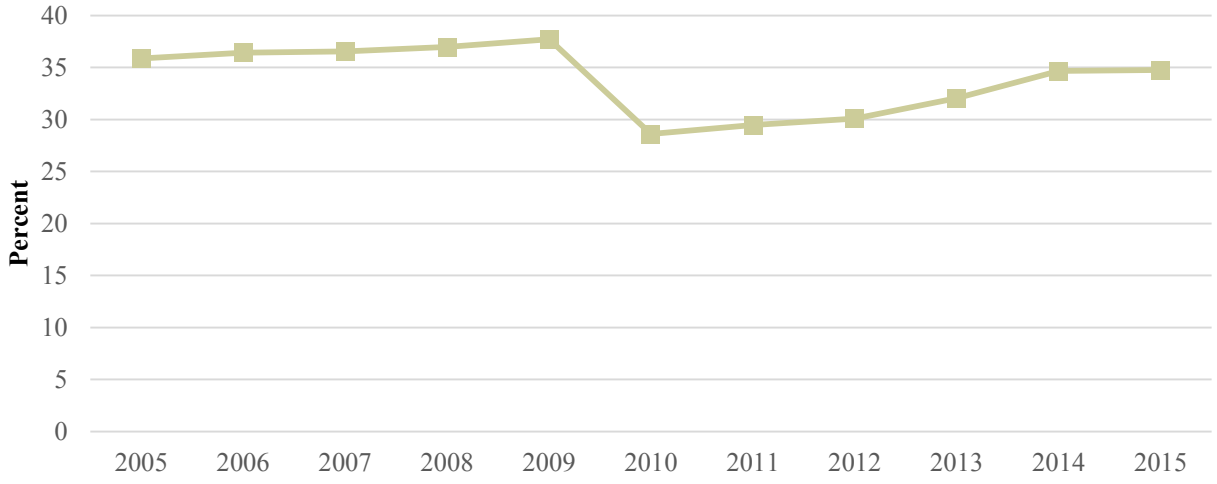


Table 15-8: State general aid (SGA) totals in 2015 dollars.

Year	Adjusted SGA Amount, $	FTEE, N	$/ FTEE
2005	171,302,505	86614.34	1,978
2006	176,287,022	86247.10	2,044
2007	184,248,213	88494.93	2,082
2008	190,396,153	89512.99	2,127
2009	199,586,172	92349.23	2,161
2010	160,438,354	104810.67	1,531
2011	168,474,570	107251.01	1,571
2012	168,862,777	102504.34	1,647
2013	179,912,828	96695.92	1,861
2014	193,101,959	91075.43	2,120
2015	193,774,647	88,619.43	2,187

16 Human Resources

During fiscal year (FY) 2015, Iowa community colleges had 13,935 employees, which included administrative, instructional, professional, secretarial and clerical, and service positions. Some employees were included in more than one reporting category; for example, an administrator might teach a course and be reported under instructional as well.

In FY 2015, there were 15,753* full-time, part-time, temporary, and adjunct positions reported. The Community College Management Information System (MIS) data does not include employees teaching only non-credit courses for community colleges, unless they are full-time non-credit instructors.

While the total number of employees decreased by 1.5 percent from 2014, the composition of community college employees has remained relatively stable for the past eight years. The largest group in FY 2015 continued to be instructional (49.4 percent), followed by professional (24.9 percent), secretarial and clerical (18.7 percent), service (13.9 percent), and administrative (0.9 percent). The biggest change in composition occured in 2005, when the professional staff began outnumbering the secretarial and clerical staff (Figure 16-1).

Community College Employees

Number of Employees:
13,935

Change since last year:
1.5%

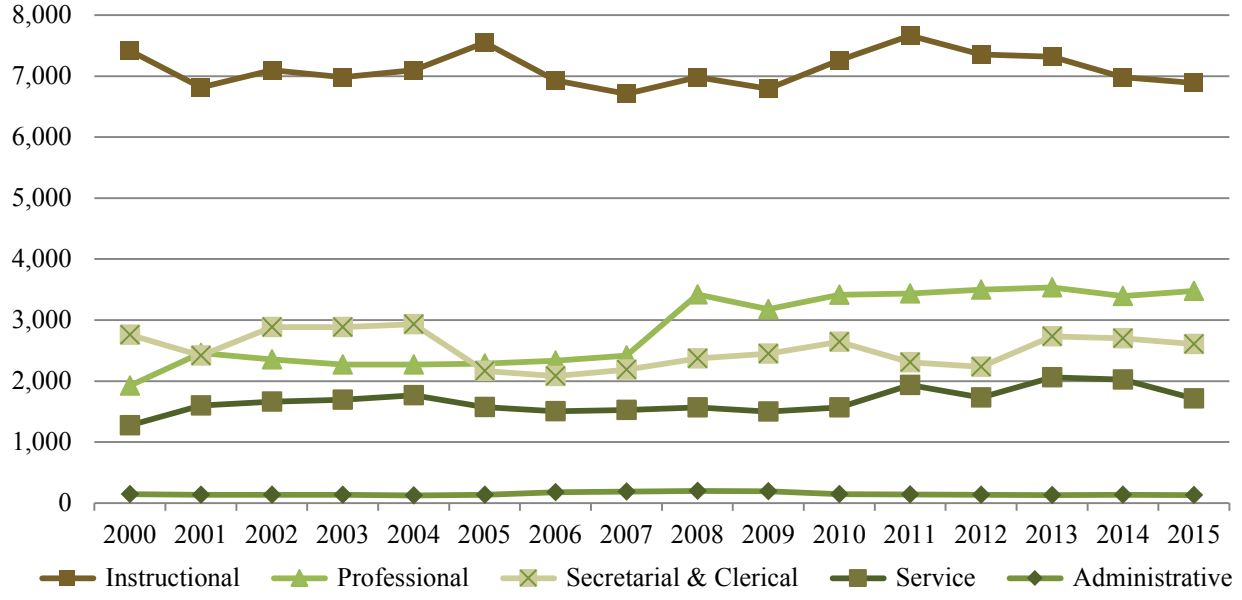
Faculty:
6,890
Down 1.4% since 2014

Faculty, of all employees:
49.4%
No change since 2014

The distribution by type of employment has been relatively stable since tracking began in 2000. In 2013, one deviation from the stable pattern occurred, which was the growth in the overall number of positions. This spike was mainly due to increased numbers of part-time and temporary workers rather than full-time employees and adjuncts.

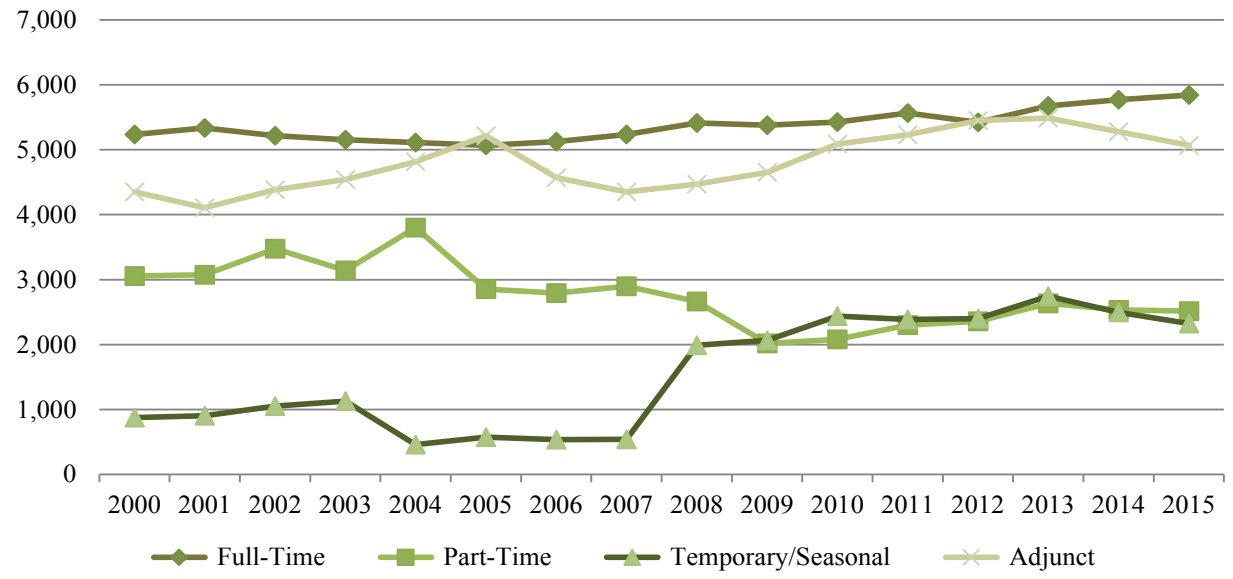
Temporary/seasonal staff positions have grown steadily since experiencing a dramatic change in 2008, when a sharp increase occurred that raised the number from 542 to 1,990 employees — a gain of 353 percent. In 2014, the distribution returned to the usual pattern, and in 2015, temporary/seasonal staff constituted 14.8 percent of all types of positions (Figure 16-2).

Figure 16-1: Iowa community college employees by position type: 2000-2015.



*Employees may hold more than one position, thus making number of positions exceed the number of employess.

Figure 16-2: Employment by type: 2000-2015.

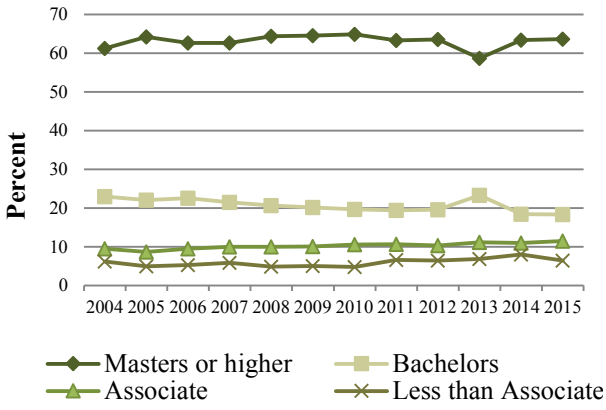


Employee Education and Demographics

Iowa community college instructors and administrators continuously improve their education. However, the number of full-time instructors and administrators with doctoral degrees, which demonstrated a steady 18 percent average growth between 2004 and 2011, dropped to 234 in 2012, then to 204 in 2013, and increased to 250 in 2015. The percentage for master's degree or higher fluctuated between 61.2 in 2004, with a record high of 64.9 in 2010. In 2013, it dropped to a record low 58.6 percent, and in 2015 it grew back to 63.6 percent.

The percentage of bachelor-degree instructors and administrators remained stable from 2008 through 2012 (19.9 percent on average), increased to a record high 23.3 percent in 2013, and dropped back to 18.4 in 2015. The percentage of associate degree holders has remained stable for the past ten years before increasing to a record-high 11.5 percent in 2015 (Figure 16-3).

Figure 16-3: Instructors and administrators degrees: 2004-2015.



The percentage of racial/ethnic minorities among employees grew between 2014 and 2015 from 8.6 to 9.1, and the 15-year trend depicts a steady increase in the number of racial/ethnic minorities among Iowa community college employees. The average growth between 2000 and 2015 was 6.3 percent (Figure 16-4).

The distribution within the racial minorities was not as linear. The percentage of American Indians fluctuated between 6.4 (2000) and record low 3.1 in 2015. Asians also demonstrated increases and declines between 2000 and 2015, and their representation dropped to a record low 16.1 percent in 2015. The percentage of Black employees increases consistently, but did show a two percent decline in 2015. The percentages of Hispanic employees increased to 33.4, a 3.1 percent increase since 2014. Hawaiians or other Pacific Islanders remain only one percent of all minorities.

Since 2010, when the new standards allowed reporting of more than one race, the population of more than one

Community College Instructor

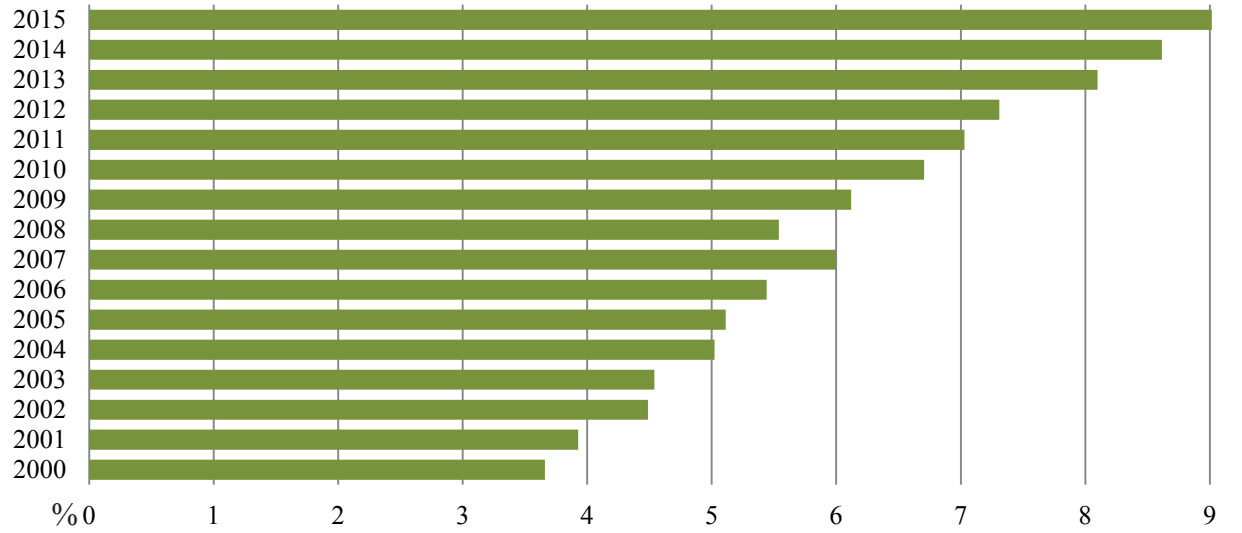
Race:
CAUCASIAN
91 percent

Gender:
FEMALE
58 percent

Age:
MID FORTIES
Mean age: 45 years-old

Education:
POSTGRAD
63.6 percent with Master's or higher

Figure 16-4: Percent of racial minorities among employees: 2000-2015.



race grew from three percent in 2010 to a high of 8.5 percent in 2012. In 2015, this percentage dropped to 6.8 (Figure 16-5).

Gender composition of Iowa community college employees has remained stable. In 2000, females composed close to 58 percent; in 2015 they were 58.0 percent of all employees (Figure 16-6).

In 2015, the age distribution of Iowa community college employees presented a wide palette of groups, from teens to mid-eighties. The largest groups were among those between 19-20, 33-34, and 52-58, with a mode of 19. Together, these 11 ages represented over a quarter of all community college employees. In 2015, the average age of community college employees was 44.9 years old, while the median age was 45 (Figure 16-7).

When analyzing the distribution among seven age groups, from under 17 to over 55, the largest group of employees in 2015 was between 40 and 55 years old. This group has remained the largest for the past 10 years. The fastest growing group, however, was over 55 years old. In 2004, this group comprised 19 percent of all employees. It steadily grew to 27.9 percent in 2012, descreased in 2013 to 27.5 percent, and rose back to 27.9 percent in 2015.

The largest group of community college administrators was between 56 and 59 years old in 2015. The average age of administrators was 53.5 years old and the median age was 56 years old (Figure 16-8). Similarly, in 2014, those numbers were 54 and 56, respectively.

Figure 16-5: Distribution of racial\ethnic minorities among employees: 2000-2015.

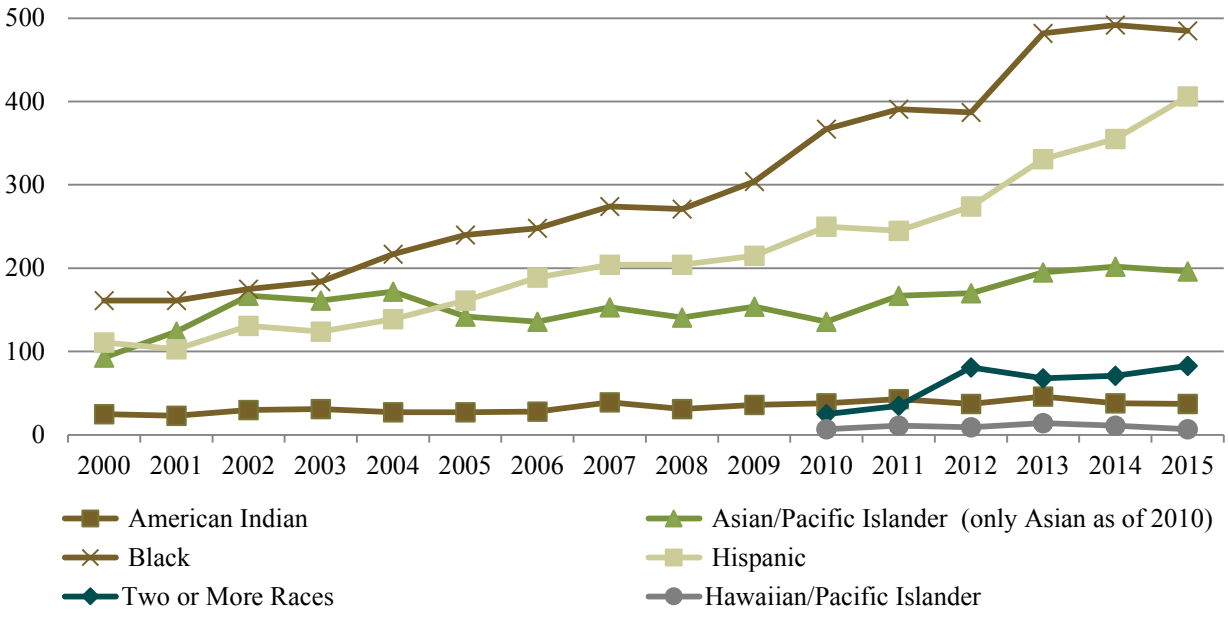
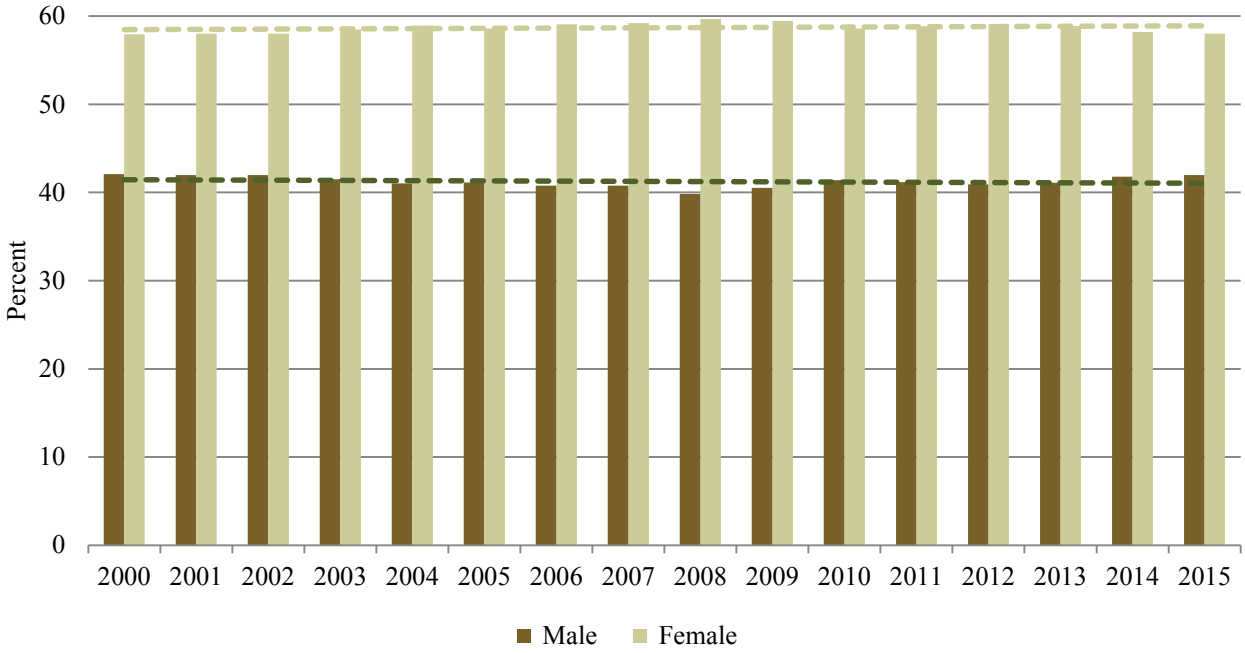


Figure 16-6: Gender distribution of employees: 2000-2015.

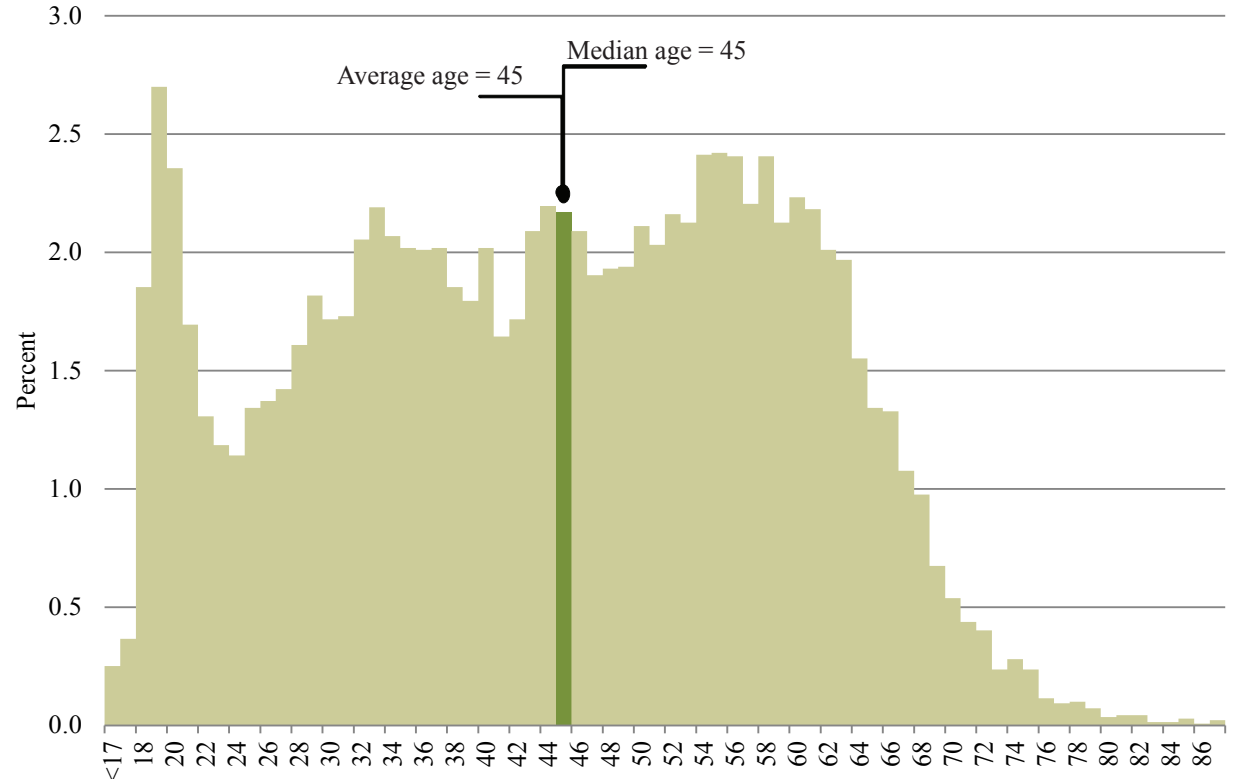


Iowa community college full-time instructional staff was comprised of all ages between 25 and 77, the largest groups being 50 and 61, with the mode of 54. The average age of community college full-time instructors was 49 years, and the median age was 51 (Figure 16-8).

The nationwide trend supports the notion of an aging faculty. For example, in 2012, 34.2 percent of full-time faculty in California community colleges were between ages 55 and 64, with the average age being 51.8.* The percentage of Iowa community college full-time faculty

*Faculty Association of California Community Colleges Education Institute, 2012.

Figure 16-7: Age of community college employees: 2015.



in the same age group was 30.5. The average age of full-time faculty in Iowa gradually increased from 2004 through 2011, when it peaked at 50.1. For the past four years, it has fluctuated between 48 and 50, with an average of 48.8 in 2015. The median age changed to 50, while it had remained at 51 since 2012 (Figure 16-8 and 16-9).

Instructional Staff Salaries

Full-time instructional staff average salaries have increased 2.9 percent annually since 2001 (Figure 16-10). However, the average base salary for a nine-month contract for full-time instructional employees actually decreased from $59,947 in 2014 to $59,108 in 2015.

In addition to the Management Information System

Figure 16-8: Distribution of administrators (left) and instructors (right) by age: 2015.

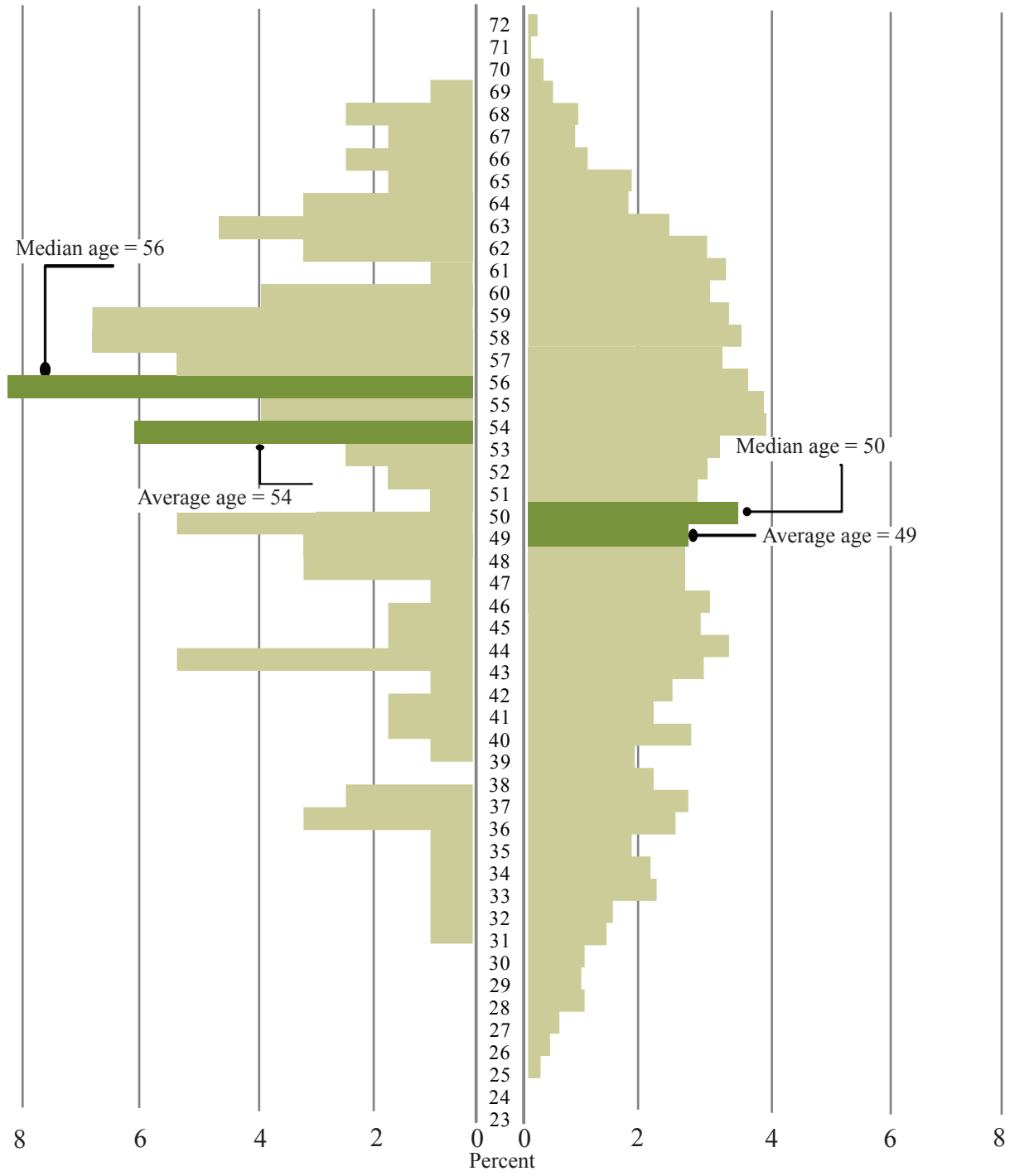


Figure 16-9: Average and median age of full-time instructors: 2005-2015.

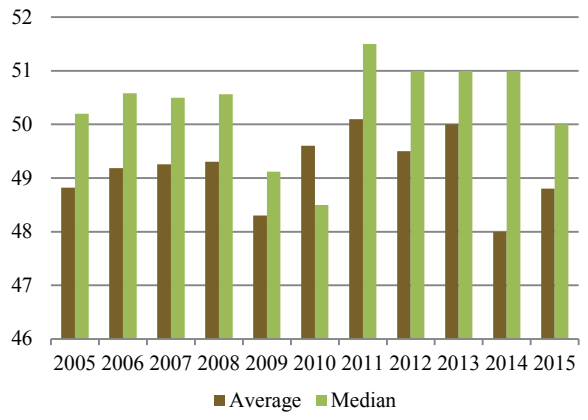
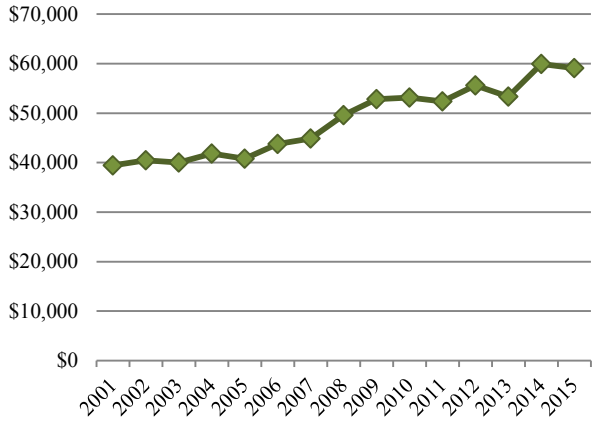


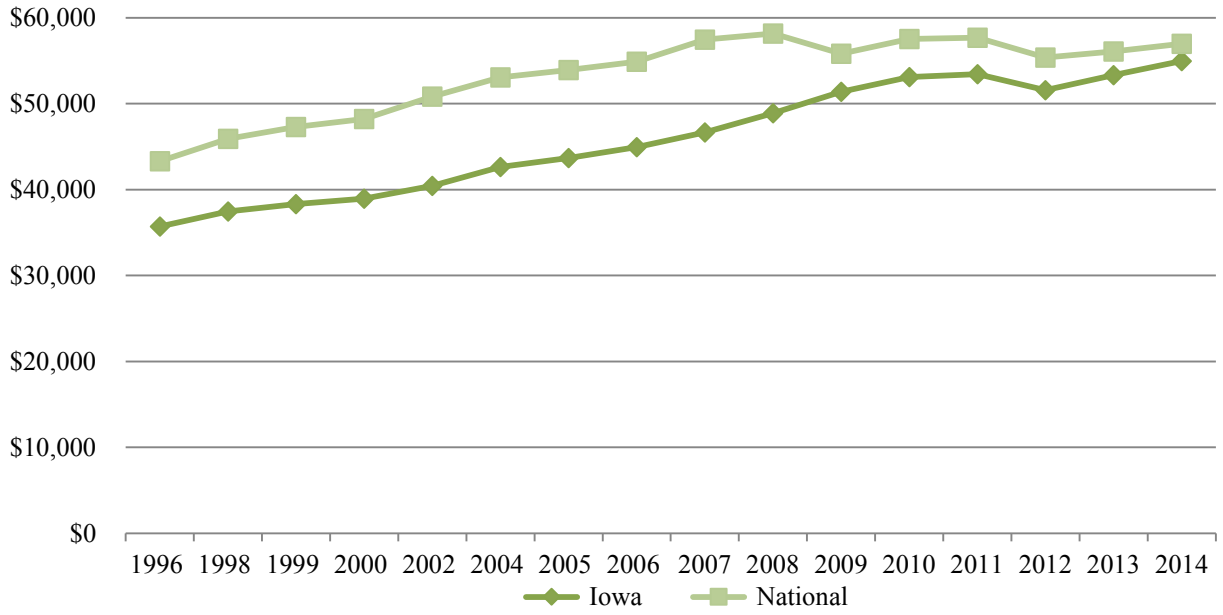
Figure 16-10: Average base salary of full-time instructors: 2001-2015.



(MIS), there are a number of other state and federal reports that publish faculty salaries. Variances among those reports are due to differences in factors (i.e., definitions, classification systems, and contract periods). For example, for FY 2014, the National Center for Educational Statistics (NCES) published $56,971 as an average salary of full-time instructors* in two-year public institutions based on nine-month contracts.

The *Chronicle of Higher Education Almanac* also publishes annual data for colleges nationwide and by state. According to their data from 1996 through 2014, the average salary steadily increased for Iowa full-time community college instructors. In 2014, the annual increase was 3.8 percent, while the average salary increase nationally was 1.6 percent (Figure 16-11). Iowa's 16-year average salaries demonstrated an increase of 2.9 percent since 1996, while the national average increased 1.9 percent annually during the same time period. However, despite larger salary percentage increases, this data reports that Iowa community college instructors were paid on average 96.5 percent of the national average salary for two-year public institutions in fiscal year 2014 (latest available data).

Figure 16-11: Comparison of Iowa and national average salaries for full-time faculty members: 1996-2014.



Source: *The Chronicle of Higher Education Almanac* Issues 1998 through 2014.
*Note: Before 2004, *The Chronicle of Higher Education Almanac* published the data every other year.

17 Special Supplement: Credit Student In-State Migration

Selecting a college for postsecondary education is a decision that involves multiple factors, from factual (distance, acceptance criteria, tuition) to third-party assessments (popularity, accreditation, program quality), to personal (climate preferences, friends, athletic activities). Colleges, in turn, market their programs and services to attract out-of-state and international students, as well as to retain as many in-state students as possible.

Nationwide data has been used for analyses of out-of-state student enrollment patterns. For example, the National Center for Higher Education Management Systems (NCHEMS, 2006) published a distribution of per-state ratios of "imported" and "exported" students for all colleges and universities. For this study, NCHEMS utilized a specific cohort of students, all first-time freshmen – not just those directly out of high school[1], and measured the levels of "imports" versus "exports" as a ratio (Figure 17-1).

The state ratios were calculated by comparing the number of first-time freshmen imported from other states divided by the number of first-time freshmen residing in the state who attended college out-of-state (i.e., import/export ratio). A ratio of "1" indicates that the number of students imported and exported are the same. A ratio greater than 1 means that more students were imported than exported; and a ratio less than 1 means that the state institutions exported more students than they imported. For example, Figure 17-1 shows Arizona's ratio was 6.17, meaning that their colleges and universities imported over six times more students than they exported to other states.

The American College Testing (ACT) organization's College Choice Report (2012) is another example of out-of-state student migration analysis. Its study established that 22 percent of the 2012 high school graduating class attended out-of-state colleges.[2]

In contrast to out-of-state migration, in-state student migration patterns have not been explored in any significant detail. One such study, an earlier (1972)

In-State Migration Patterns

Percentage of In-State Migrant Students, Six Year Average:

11.86%

Export/Import Ratio Range, Six Year Average:

0.5 - 3.9

[1]http://www.higheredinfo.org/dbrowser/index.php?submeasure=61year=2006&level=&mode=definitions&state=0
[2]https://www.act.org/collegechoice/12/

Figure 17-1: Import/export ratio of college-going students, 2006.

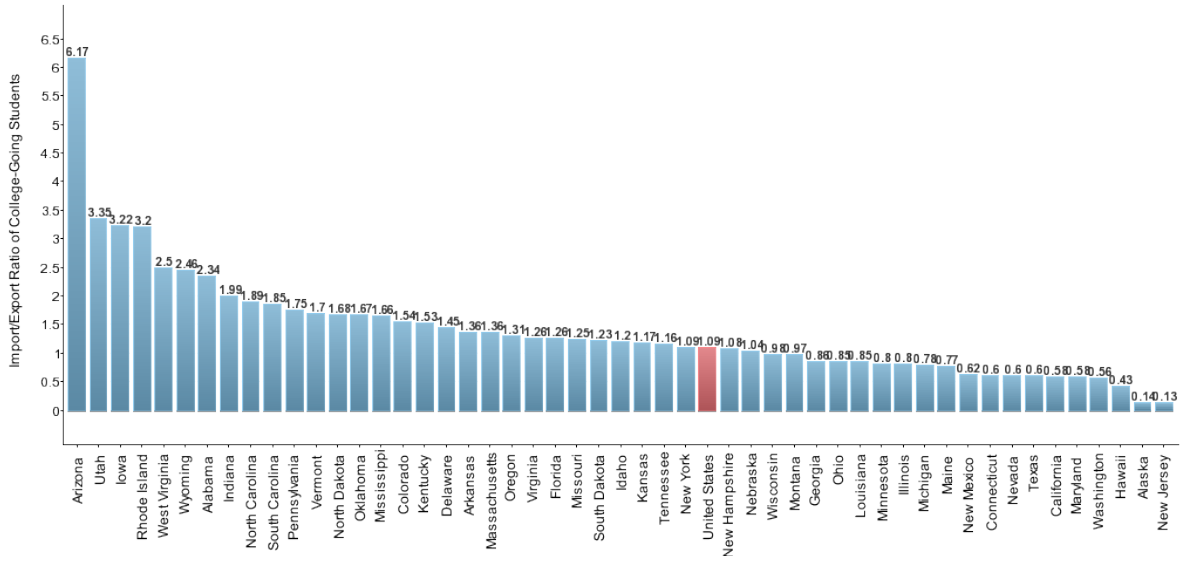
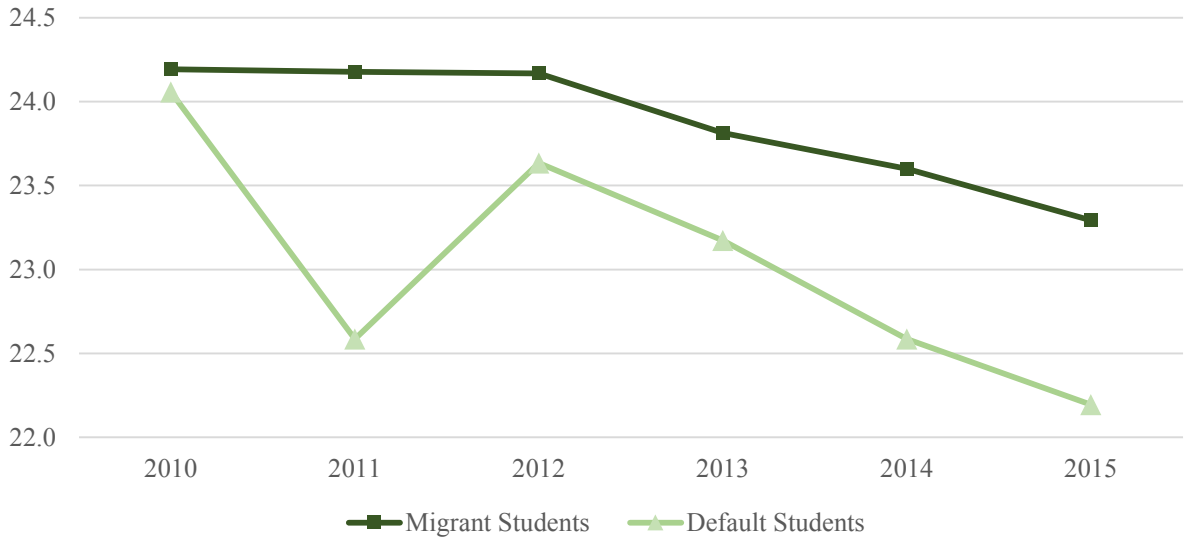


Figure 17-2: Six years average age of migrant and default students.

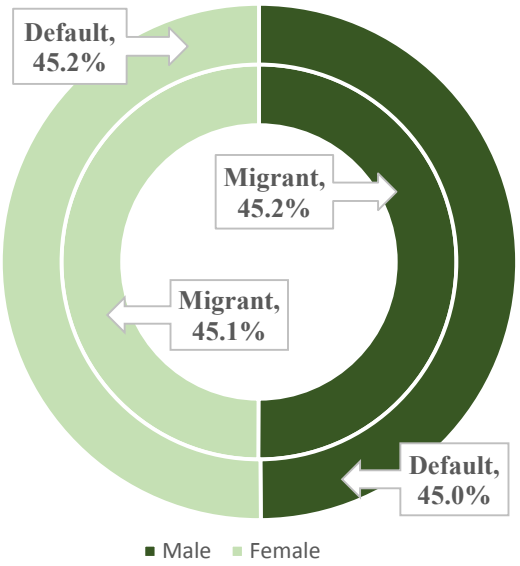


ACT report, explored students who "attended college within their state of residence but away from their home community."[3] This study involved all postsecondary institutions, leaving in-state migration of community college students as a separate category relatively unstudied. However, knowing such enrollment patterns could help community colleges retain their "home community" students more efficiently.

This section of the Condition of Iowa's Community Colleges report provides some general data for the comparison of Iowa community college students' enrollment patterns over the past six years. In 2010, the community college Management Information System (MIS) started collecting community college students' ZIP codes of domicile. Since some ZIP code areas do not coincide with the geographic boundaries of Iowa community college service regions, each ZIP code area was assigned to only one community college based on ZIP code area centroids (i.e., the physical center of the ZIP code area).

[3]https://www.act.org/research/researchers/reports/pdf/ACT_RR54.pdf

Figure 17-3: Gender of migrant and default students.

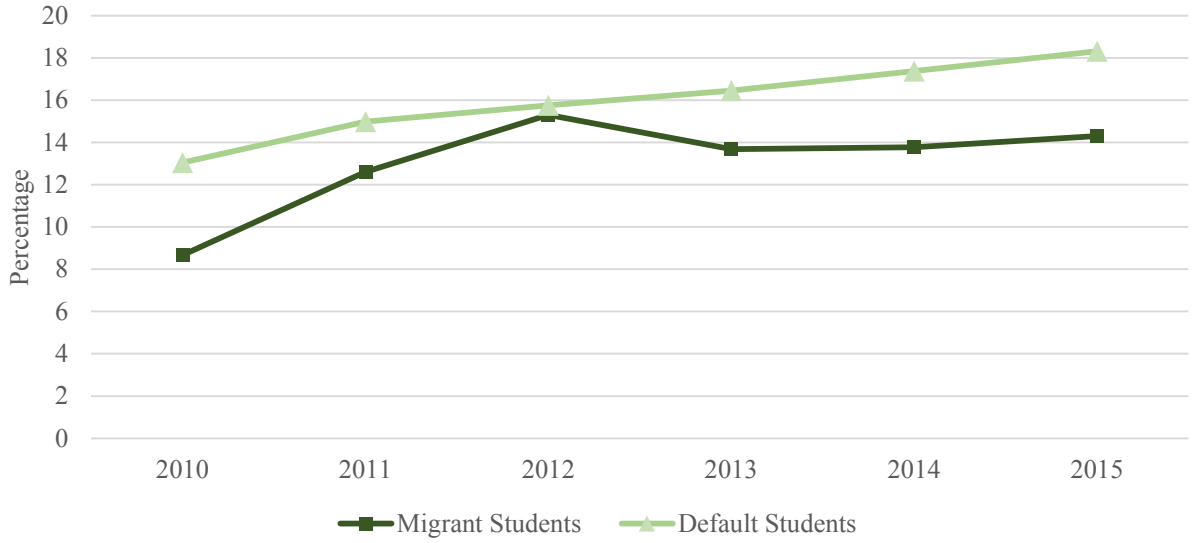


Distributions of students per ZIP code and community college regions were used to establish the number of students who live within each community college region and attend that college (default student population) versus the number of students who live in one community college region, but attend a different Iowa community college (migrant student population). For the purposes of this analysis, each Iowa community college is viewed as an institution with default and migrant (i.e., exported and imported) in-state students. Out-of-state and international students were excluded from this analysis because of its focus on in-state student migration.

The analysis involved several additional aggregations. Some key demographic characteristics of migrant students (age, gender, race, and ethnicity) were compared to those of the default students. Geographic Information System (GIS) analysis allowed for the calculation of the distance from each migrant student's domicile to the default college (main campus) and to the main campus of the college of attendance. In addition, the availability of the student's educational program of study at the default college was established for each migrant student.

On average, the percentages of in-state migration on an annual basis were remarkably stable. From 2010 through 2015, the percentages only fluctuated by 0.5 percent, from 11.58 to 12.03, with a six-year average of 11.9 percent. However, export versus import ratios among Iowa community colleges differed more significantly, from 0.5 to 3.9 as a six-year average. With this export/import calculation, a ratio of "1" indicates

Figure 17-4: Percentage of racial and ethnic minorities among of migrant and default students.



that the community college exports as many students as it imports, a ratio less than one means that the college imports more students than it exports, and a ratio greater than 1 means the college exports more students than it imports.

A typical Iowa community college in-state migrant student is only marginally different from a default student. Six-year averages demonstrate that a migrant student is predominantly female (54.9 percent versus a default of 55.7 percent), 23.9 years old (default student is 23.3 years old), and white (86.9 percent versus a default of 84.0 percent) (see figures 17-2, 17-3, and 17-4).

In terms of distance from home to the colleges, 87.4 migrant students traveled farther to their college of attendance than they would have to their default college. Regarding the availability of the migrant students' programs of study at their default community college, the six-year average shows that in 86.3 percent of all cases the program was available at the default college. In fact, only 11.6 percent of the migrant students traveled less in pursuit of a program of study that was not available in their default college (six year averages).

College regional distribution of all described enrollment categories can be discovered using the "College Area Interactive Maps and Charts" data sets, and the distribution by ZIP code of domicile can be found under the "Zip Code Area Interactive Maps and Charts" on the Department's web page:

https://www.educateiowa.gov/adult-career-community-college/publications

Known Limitations

1. Depending on the method of the data collection, some students might have reported their current, not original, ZIP code of domicile.
2. In some cases, the physical centroid of a ZIP code area might not represent the statistical majority of the area's populous.
3. Travel distance was calculated based on "point-to-point" linear distance between ZIP code area centroids and each community college main campus. Thus, it is shorter than actual road-based routes. Some students could have also attended classes offered at college sites other than the main campus.

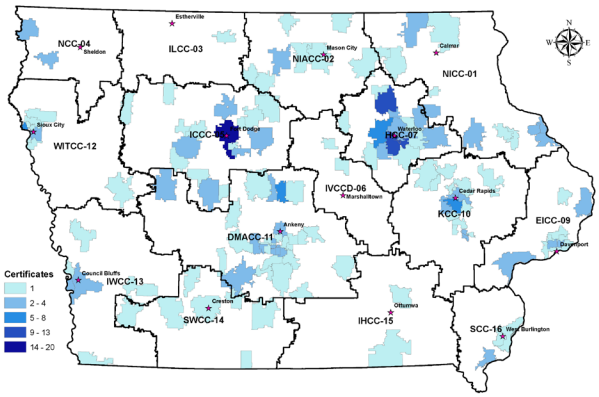
18 Special Supplement: Industry Recognized Credentials

The community college credential landscape extends beyond traditional academic awards to encompass industry certifications and state-issued licenses. With expansion of the credentialing landscape, questions have been raised about which credentials hold value in the labor market and how educational leaders determine the impact various credentials have on the workforce outcomes of students. While there has been significant progress on describing traditional academic credentials, data on third party certifications awarded outside the educational arena has been elusive.

Until recently, little was known about students earning industry certifications regarding the impact they have on employment and earnings. That is changing with initiatives like the Certification Data Exchange Project that matches third-party industry certification data with state education and workforce data systems. The Certification Data Exchange Project is part of a larger multi-state, multi-organization effort that seeks to expand and improve data exchange between industry certification organizations and state longitudinal data systems. More information is available at: https://www.acteonline.org/certification_data

Additionally, under the Carl D. Perkins Career and Technical Education (CTE) Act (known as Perkins IV), states have developed new measurement approaches for the core indicators of performance. Section 113 (b) (2) of the Act requires each eligible agency to identify core indicators of performance for CTE students that are valid and reliable. Every year, states are expected to report performance levels on each of these core indicators to the U.S. Department of Education. Performance indicators 1P1 (technical skill attainment), 2P1 (graduation), and 3P1 (retention and transfer) prescribe utilization of not only college-granted credentials, but also those granted by third parties, including industry associations, and other authorized organizations.

Figure 18-1: Examinees by residence.



Most states do not have access to industry-recognized credential data. Therefore, to improve data exchange between industry certification organizations and state education agencies, a pilot project is underway in Iowa to connect industry-recognized credentials data to Management Information System (MIS) data, and subsequently employment and wage data. Although the preliminary research described below is based on data exchanged with only one third-party industry certification organization, it has proven to be very valuable in developing the protocols and the process by which data can be collected, exchanged, and reported for all industry-recognized credentials.

CompTIA, an Information Technology certification organization, working with a six-state consortia, supported through technical assistance from the U.S. Department of Education's Office of Career, Technical, and Adult Education (OCTAE), offered to share their testing and credential data to illustrate the impact that CompTIA certificates have on Iowa's, and other states' workforce. CompTIA offers vendor-neutral IT certifications in the areas of PC support, networking, servers, Linux, security, and more. CompTIA professional certifications cover the technical skills and knowledge needed to succeed in a specific IT career.

There were 696 exams taken by 347 individuals throughout the state of Iowa from August of 2009 to June of 2014. Of those, 81.0 percent (564) resulted in a passing grade. Some examinees had taken an exam more than once and others had taken more than one type of exam (see chart below). For example, the A+ certification requires a passing grade on two exams in order to obtain certification.

Data Match Using Management Information Systems (MIS)

The biggest challenge in matching the records received from CompTIA was the lack of personally identifiable information (PII) because the dataset contained only first name, last name, and home zip code.

An attempt was made to match the 347 individuals to the MIS in order to acquire additional PII such as Social Security Number (SSN) and birthdate. Using name and ZIP code only, 171 individuals (49.3 percent) were identified as matches using education records from 2010 through 2014. Thirteen of the 15 colleges yielded a match based on the data (concentration by geography) (Figure 18-1). Hawkeye Community College had the highest match rate followed by Iowa Central and Kirkwood. Of the 171 people who were matched in the MIS, 55 percent had taken credit courses at the college and the remaining 45 percent had taken non-credit courses. The SSN or student identifier, birthdate, and select data elements from the MIS were attached to the file to use for further analysis.

Using the more detailed data elements allowed for in-depth analysis. Figures 18-2 and 18-3 provide basic demographics for those who took the certification exams. The highest number of examinees (78) were between the ages of 18 and 25. Additionally, 141 of those identified were male, 69 female, and two did not have reported gender.

After attaching the student's birthdate to the record, 171 records were sent to the National Student Clearinghouse (NSC) in order to gain detailed post-secondary education data including:

- Enrollment begin and end date
- Enrollment major

Figure 18-3: Gender of certified.

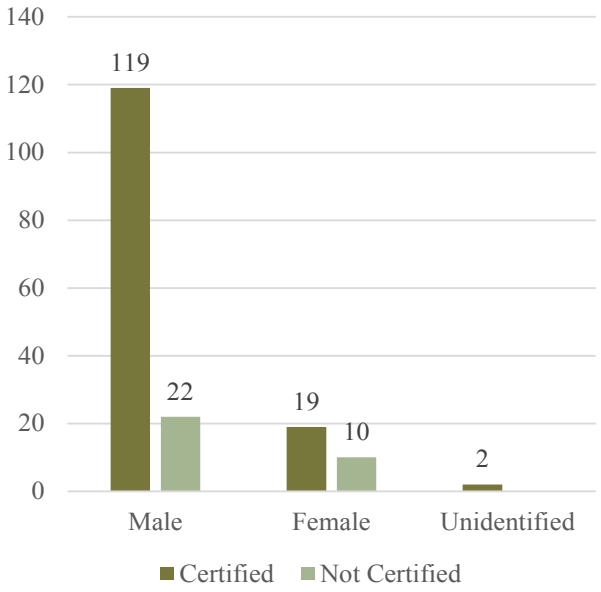
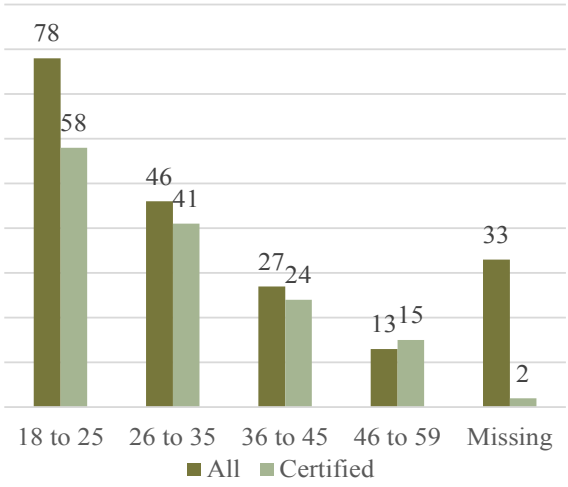


Figure 18-2: Examineers by Age Group.



- Enrollment Status (full- or part-time)
- Graduation and date
- Degree title
- Degree major and CIP code

Using the records received from the NSC, researchers were able to identify when recipients received their certification, and found that nearly half (47 percent) received their certification while attending a postsecondary institution. The remaining students took the exam either prior to entering postsecondary education or after they had finished (Figure 18-4).

The timing of exams helped researchers determine other data elements such as employment and wages for those who became certified. Breaks or decrease in employment and wages could be then explained by enrollment timing related to postsecondary enrollment.

Figure 18-4: Timing of exams as related to enrollment, percentage.

Wages and Employment for Examinees

Wage and employment data for examinees were acquired through a partnership with Iowa Workforce Development by matching the students to the Iowa Unemployment Insurance (UI) records. The most notable increase in employment and wages were for those who had become certified (Figure 18-5). Limitations of the UI wage records restrict research pertaining to the number of hours worked and job titles, therefore it could not be confirmed whether certificate recipients were employed part-time, nor if they held a different job prior to certification. However, additional analysis does show that the CompTIA certified study group did change industries following certification, moving predominantly from accommodation and food services or retail trade to the professional or educational services industries.

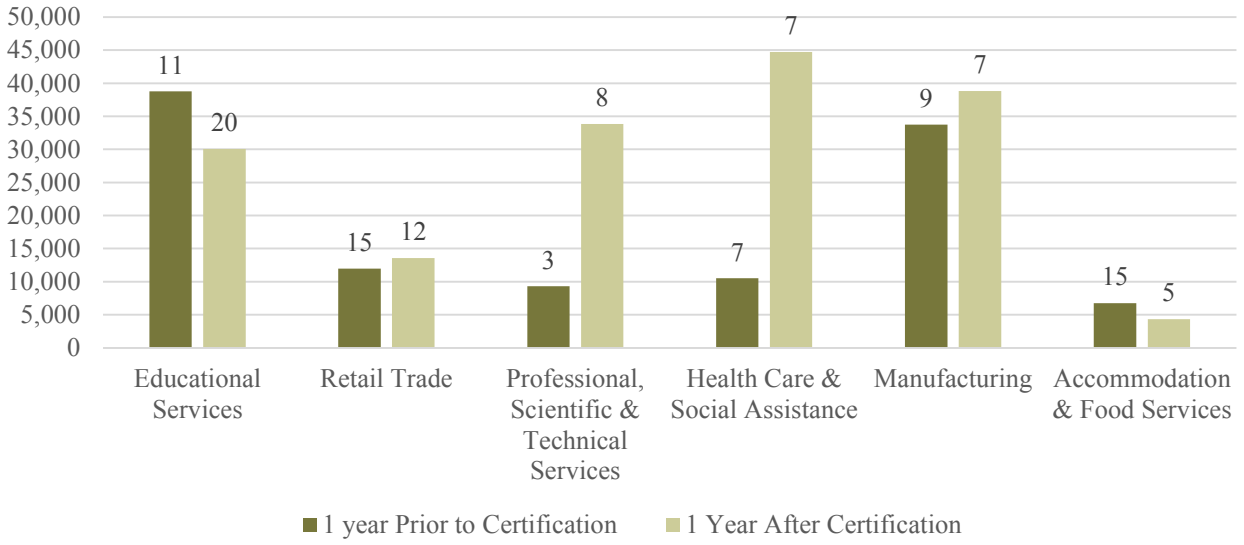
Wages in industries predominantly increased following certification except in educational services and accommodation and food services. Also, the median wage for new employees shifting from one industry to another can be affected by entry level wages, pulling down the median wage in that category. However, the individual's 'after certification' wage was noticeably higher than the wage he or she previously received in the previous industry.

Future Plans

The U.S. Department of Education has signaled its support of this effort through two years of technical assistance, from fall 2014 through summer 2016, to further the data exchange process. In the second year, the plan is to increase the number of states in the project, continue matching data, and develop standardized procedures and data-sharing protocols to streamline future efforts.

Long-term, these standardized protocols will form the creation of a national clearinghouse for certification data exchange, similar to the National Student Clearinghouse and the Federal Employee Data Exchange System. The protocols will facilitate the legal and functional aspects of the data-sharing process and improve the data matching process for more reliable analyses.

Figure 18-5: CompTIA pre- and post-certification employment and median wage.



Appendix Methods

Definitions

This appendix offers definitions of terms that appear throughout the condition report.

Academic year: A 12-month period that begins with the first day of the fall term for a community college and continues through the day preceding the start of the next fall term as indicated in the community college's official calendar.

Calendar year: A 12-month period that begins January 1 and ends December 31.

Cohort: A group of people who share a common set of characteristics or experiences within a defined period.

Contact hour: The number of minutes allocated for an instructional activity. The minimum requirement for one contact hour is 50 minutes.

Credit hour: A unit of measure awarded by a postsecondary institution in recognition of a student's completion of an activity, course, or program.

Fiscal year: A 12-month period that an organization uses to make appropriations and provide financial reporting. The state of Iowa uses a fiscal year beginning July 1 and ending June 30 the following year. The federal government uses a fiscal year beginning October 1 and ending September 30 the following year. Unless noted otherwise, "fiscal year" refers to that used by the state of Iowa.

Graduation rate: The percentage of students within a defined cohort who earn a two-year award in three years or less.

Success rate: The summed percentages of students within a defined cohort who achieved one of the following outcomes in three years or less:

- earned a two-year award, but did not transfer to a four-year college or university, or;
- transferred to a four-year college or university *before* earning a two-year award, or;
- transferred to a four-year college or university *after* earning a two-year award.

Transfer rate: The percentage of students within a defined cohort who transfer to a four-year college or university in three years or less.

Year: A calendar year, unless noted otherwise.

Sources

The primary data sources are each of Iowa's 15 community colleges. Every August, community colleges transmit data to the Iowa Department of Education. Upon receipt, Management Information System (MIS) staff members review the data for discrepancies, then return summary reports to confirm accuracy. After confirmation, data files are aggregated for analysis and subsequent reporting. The MIS staff's objective findings help guide policymakers as they make informed decisions about community colleges.

Secondary sources of data are also used, which help readers compare Iowa's community colleges with similar postsecondary institutions within the region and throughout the United States. Examples of secondary sources include the National Center for Education Statistics (NCES), Integrated Postsecondary Education Data System (IPEDS), and the National Student Clearinghouse (NSC). Data from Iowa Workforce Development are also utilized to offer insight into jobs and earnings of graduates.

The use of secondary source data calls for guarded inferences. Statistical bias is a major concern. Researchers are unable to confirm the veracity of secondary source data, because they were not in control during the collection process. Although we rely upon data from secondary sources to make certain comparisons, we acknowledge the shortcomings of its use. Please refer discrepancies within secondary sources to their respective owners.

Analyses

Analyses within the condition report are generally limited to descriptive statistics such as frequencies, means, medians, and percentages. Cross-tabulations are used wherever appropriate. The condition report also makes appropriate use of charts and graphs to help readers see trends over time.

Certain sections of the condition report contain discussions of inferential statistics. In such instances, an assumption was made that readers have limited knowledge of statistics; therefore, the discussions are written accordingly.

Suggested Usage

Best practices suggest integrating information from various parts of this report. Judgments about any particular college should especially include year-to-year indicators such as demographics, credit hours,

and non-credit contact hours. Focusing solely upon a specific indicator will provide an incomplete evaluation of a college, possibly leading one to make inaccurate judgments. Therefore, a holistic viewpoint is encouraged when making inferences from the data.

The FY 2015 Condition report contains numerous changes to past data as well as new data for the most recent fiscal year. Hence, analysts should rely primarily upon the latest report instead of data from prior condition reports.

Student Success

Cohorts

The procedure outlined below was used to define a cohort:

1. Distinct records of students who planned to earn two-year awards from three fiscal years earlier. For example:
   a. A cohort of students from fiscal year 2010 would be used to calculate student success in the 2012 Condition Report.
   b. Fiscal year 2012 would represent 150 percent of allocated time for these students to earn two-year awards.
2. Records were selected for inclusion from those in which students:
   a. Were enrolled any time during the initial fiscal year for the first time at a given community college; and
   b. Had completed at least 24 semester hours during that year.
3. Data elements
   a. Names of community colleges students attended.
   b. Sex;
   c. Race/ethnicity;
   d. Graduation status, indicating whether or not a student earned an associate degree within three years from the first date of enrollment.
   e. Transfer status, indicating, based on data from National Student Clearinghouse, whether or not a student transferred to a four-year college or university within three years from the first date of enrollment.

Calculations

Both graduation status and transfer status have two possible outcomes. Cross-tabulations were performed to calculate the numbers and percentages of students for each of the four possible outcomes as seen in table A-1:

- neither transferred nor earned a two-year award (cell "A");
- transferred before earning a two-year award (cell "B");
- earned a two-year award, but did not transfer (cell "C");
- transferred after earning a two-year award (cell "D").

Table A-1. Generic contingency table.

		X		
		Col 1	Col 2	Row totals
Y	Row 1	A	B	A+B
	Row 2	C	D	C+D
	Column totals	A+C	B+D	Grand total

Graduation Rate

Graduation rate describes the percentage of students from a given cohort who earned two-year awards within three years from the first date of enrollment, whether or not they transferred to a four-year college or university.

Equation A1 displays the formula to calculate graduation rate G:

$$G = \left(\frac{\text{Row 2 total}}{\text{Grand total}}\right) \times 100\%, \qquad \text{(A1)}$$

Transfer Rate

Transfer rate describes the percentage of students from a given cohort who transferred to a four-year college or university within three years from the first date of enrollment, whether or not they earned two-year awards.

Equation A2 displays the formula to calculate transfer rate T:

$$T = \left(\frac{\text{Col 2 total}}{\text{Grand total}}\right) \times 100\%, \qquad \text{(A2)}$$

Success Rate

Success rate describes the summed percentages of students from a given cohort who met one of the following criteria within three years from the first date of enrollment.

- transferred to a four-year college or university before earning a two-year award (cell "B");
- earned a two-year award, but did not transfer to a four-year college or university (cell "C");
- transferred to a four-year college or university after earning a two-year award (cell "D").

Although one could divide the sum of these three cells by the grand total to calculate success rate, equation A3 displays an easier method:

$$S = \left(\frac{\text{Grand total} - A}{\text{Grand total}}\right) \times 100\%, \qquad \text{(A3)}$$

Time to Award

Studies associated with time to degree usually attempt to follow certain cohorts from entry to completion [1] [2]. One study by Maryland [3] used focus groups. The University of California-Davis (US-Davis) eschewed cohorts, looking backwards, instead, "from completed degrees to where and when the degree recipient started" [4]. Following a selected cohort and moving forward can be quite difficult. Numerous data sets must be queried in order to capture as many records as possible.

The method described by UC-Davis queried earned undergraduate degrees for a given year, and then backtracked to individual students' matriculation dates. This method has the advantage of easy replication from one year to the next, which provides a consistent means of comparison.

Although all techniques have their limitations, the UC-Davis technique appeared to be the least onerous. The data sets available to MIS are similar to respective data sets that UC-Davis used. Based on this model, the following method was developed to estimate time to award for students who earned an associate degree during FY 2015.

A query selecting five data element—name of community college, student identification number, date of first enrollment at the listed community college, award date, and type of associate degree—was created from unique records based on student ID by an inner join of the current fiscal year student file and the current fiscal year awards file (Listing 1).

Listing 1. Query of records.

```
-- This SQL query selects records used
-- to calculate time to degree
SELECT
CommColl, -- community college
SSN, -- student's ID number
FirstEnroll, -- as char(6) text format
AwardCode, -- associate's degree codes 1-5
AwardDate -- as date format
FROM Awards_FY2015
WHERE (
(AwardCode) = "1" Or
(AwardCode) = "2" Or
(AwardCode) = "3" Or
(AwardCode) = "4" Or
(AwardCode) = "5");
```

In the MIS data base, a student's date of first enrollment (*FirstEnroll*) is stored as a text field in the format YYYYMM. However, the award date (*AwardDate*) is stored as a date field in the format YYYY-MM-DD. Any mathematical calculations with dates required recoding *FirstEnroll* to an actual date format.

After records were selected, *FirstEnroll* was renamed as *FirstEnrollRC* and recoded to a standard date format, using the 15th day of each month as the date. Thus, 201008 from *FirstEnroll*, for example, was recoded as 2010-08-15 for *FirstEnrollRC*.

Next, *FirstEnrollRC* was subtracted from *AwardDate* and then divided by 365.25 to estimate years of study (*YOS*). Records were retained for further analysis in R [5] if $.25 < YOS \leq 5$. Listing 2 displays the code used to calculate summary statistics in R.

Listing 2. Calculation of group statistics.

```
# Calculations performed in R
# use plyr package to calculate group statistics
require( plyr)
# read yos (years of study) data from a .csv file
yos <-read.csv (file.choose(),header=T)
# create a new summary table called ccsum
# round summary stats to 2 decimal places
# group by college
ccsum<-round(ddply (yos, ~ college, summarize,
headcount=table(college),
mean=mean(years),
sd=sd(years),
median=median(years)), 2)
# write ccsum to csv file
write.csv(ccsum,"path/to/ccsum.csv")
```

Fall Enrollment Projections

Autoregressive integrated moving average (ARIMA) is a statistical model used in time series analysis to describe an event and predict its future course. By filtering a signal from background noise, an ARIMA model can extrapolate the signal when calculating a predictive model. Independent variables in an ARIMA model are lags of the autoregressive dependent variable (AR), lags of the predictive errors from the moving average (MA), or both.

Using the latest ten year of fall enrollment data, an autoregressive integrated moving average (ARIMA) with default settings was used to estimate fall credit enrollment for 2016. Calculations were performed in R, with listing 3 displaying an R script for the ARIMA .

Listing 3. ARIMA code.

```
# Time series analysis with R
# Set working directory
# Call 'forecast' package.
library("forecast")
# Extract current year from system time
# and declare the year as numeric variable
y <- format(Sys.time(), "%Y")
y <- as.numeric(as.character(y))
#
# 'file.choose()' will prompt user to select
# a file for analysis.
# Import tab-delimited data with headers
fall <- read.table(file.choose(),head=T, sep='\t')
#
# Convert data to time series.
fall <- ts(fall, end=y, freq=1)
#
# Assign latest 10 years as row names.
rownames(fall) <- c((y-9):y)
# Calculate Holt-Winters
fithw <- holt(fall, h=3, damped=T, level=c(55,70),
 fan=F,initial="optimal", exponential=F)
#
# Create and save graph based on Holt-Winters model
# ylim describing enrollment numbers may need
# adjusting.
# R will save graph to current working directory,
# unless directed otherwise.
#
# Save as PNG image
png("hw_model.png") # calls png driver
# generate plot
plot(fithw,
 ylim=c(60000,110000),
 main="", xlab="Year",
 ylab="Enrollment",
 shadecols=c("gray90","gray75"))
# close device driver
dev.off()
#
# E O F
```

References

[1] Douglass S. Kalika. *Graduate Student Time-to-Degree Report*. University of Kentucky, 2001.

[2] Lap-Pun T. Lam. Enrollment patterns, time-to-degree, and degree progression for baccalaureate degree recipients at a large urban public university. A paper presented at the 47th annual forum of the Association for Institutional Research, June 2007.

[3] Maryland Higher Education Commission. Study of time-to-degree in Maryland, December 1996.

[4] Office of Resource Management & Planning. Undergraduate time to degree: Completion rates by college and division. Issue report, University of California-Davis, March 2004.

[5] R Core Team. *R: A Language and Environment for Statistical Computing*. R Foundation for Statistical Computing, Vienna, Austria, 2012.