

# ILLINOIS COMMUNITY COLLEGES' ECONOMIC IMPACTS

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By

The Center for Governmental Studies  
Northern Illinois University



A report to the Illinois Community College Board



The Illinois Community Colleges' Economic Impacts report was prepared by the Center for Governmental Studies at Northern Illinois University (NIU) under agreement with the Illinois Community College Board (ICCB). Questions and inquiries regarding the contents of this report may be directed to Brian Richard at NIU (815/753-0162) or Nathan Wilson at ICCB (217/558-2067).

The findings and conclusions presented in this report are those of the NIU project team alone and do not necessarily reflect the views, opinions, or policies of the officers and/or trustees of Northern Illinois University nor those of the employees, officers, and/or trustees of the Illinois Community College System.

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# INTRODUCTION

Illinois' community college system consists of 39 college districts, along with the East St. Louis Community College Center, and includes 48 colleges (see Figure 1). As the third largest community college system in the nation, Illinois community colleges serve nearly 1,000,000 Illinois residents each year in credit and non-credit courses and offer education and training in over 240 different occupations. Illinois community colleges contribute to the vitality of their regions and the state in many ways: educationally, culturally, recreationally, civically, and economically. Perhaps the least measured and understood of these are the economic contributions.

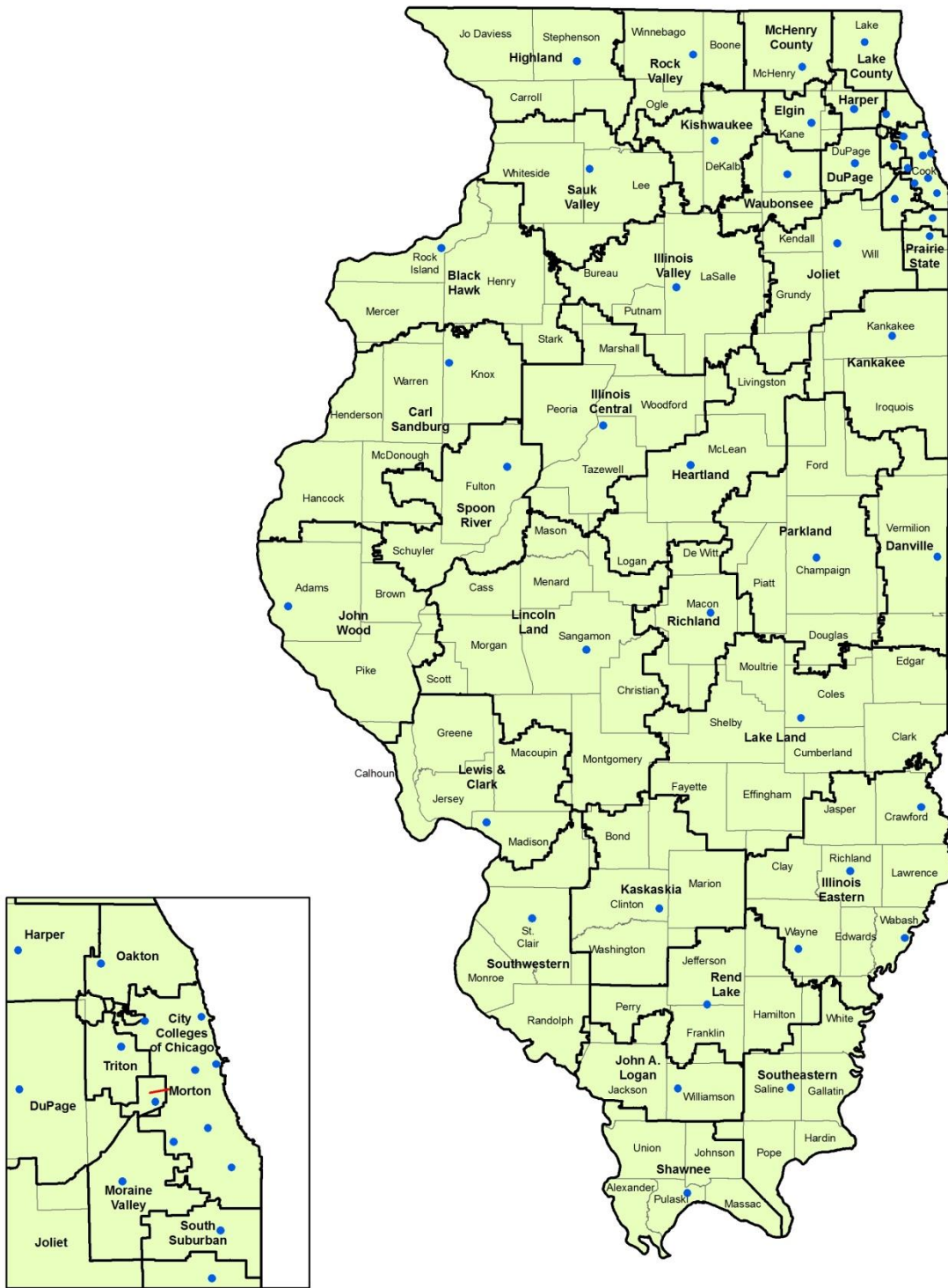
Consider that:

- Illinois community colleges add skills to our workforce and boost the competitiveness of our businesses.
- Illinois community college graduates generate billions of dollars in local, state, and federal tax revenues.
- An Illinois community college education increases earnings for workers. By completing courses, students gain skills that contribute to higher earnings and graduates enjoy even higher returns.
- As major employers and business entities, Illinois community colleges generate billions of dollars in local sales and wages and approximately 48,000 jobs.

Because of its size the Illinois Community College System (ICCS) produces substantial economic impacts for the state and the communities where community colleges are located. This is an in-depth study of these impacts. Overall the impacts are positive and are achieved on two fronts. First the study looks at community college students of the ICCS who generate economic impacts by their employment and earnings gains, as well as increased tax revenues. Then the study turns to evaluating economic impacts generated by the Illinois Community College System in the form of increased expenditures and employment.

**BECAUSE OF ITS SIZE THE ILLINOIS COMMUNITY COLLEGE SYSTEM (ICCS) PRODUCES SUBSTANTIAL ECONOMIC IMPACTS FOR THE STATE AND THE COMMUNITIES WHERE COMMUNITY COLLEGES ARE LOCATED.**

**Figure 1. Illinois Community College Districts Map**



The current study is unique from many other state and national higher education economic impact analyses because the Illinois Community College Board (ICCB), in collaboration with Illinois Department of Employment Security (IDES) and Northern Illinois University (NIU) Center for Governmental Studies

**ILLINOIS COMMUNITY COLLEGES  
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AND ECONOMICALLY.**

(CGS), maximized student-level and employee-level data through Illinois Longitudinal Data Systems. Specifically, ICCB Centralized Data System student-level data and IDES Workforce Longitudinal Data System employee-level wage data were matched by NIU CGS to determine student economic impact through their employment and earning gains.

The economic impacts of the Illinois community colleges were identified through employee-level data, operations expenditures, and capital expenditures from ICCB's Centralized Data System and annual ICCB financial submissions.

A summary of key findings is presented in the next section followed by the detailed study results. These address the characteristics of Illinois community college students taking credit courses, student Return on Investment (ROI) and economic outcomes, estimated tax revenues paid by Illinois community college students, community college market penetration, and the economic impact of Illinois community colleges.

Tables and charts are used throughout the body of the report to graphically depict trends and characteristics. These graphics are supported by data presented in the report appendices. It is important to note that the numbers reflect unduplicated counts of student enrollees and completers and include adult education and English as a Second Language (ESL) students. As a result, they may vary from totals in previously published ICCB reports that represent unduplicated counts of enrollments and duplicated counts of graduates who complete multiple certificates or degrees in the same fiscal year.

## HIGHLIGHTS OF SIGNIFICANT FINDINGS

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Illinois community colleges serve three integral educational purposes: they strengthen individuals' foundational academic skills, they offer occupation-specific education and training, and they prepare students for transfer to four-year post-secondary institutions. These activities represent significant economic contributions by increasing workers' earnings potential and generating additional tax revenues. Moreover, community colleges are generally among the largest employers in the area where they are located and generate substantial additional economic benefits for their communities through local expenditures and employment impacts.

This economic impact analysis of the Illinois Community College System considers changes in student characteristics over a 12-year period, student outcomes, tax revenues generated, and economic impacts. Following are a number of significant findings from the analysis.

**COMMUNITY COLLEGES ARE GENERALLY AMONG THE LARGEST EMPLOYERS IN THE AREA WHERE THEY ARE LOCATED AND GENERATE SUBSTANTIAL ADDITIONAL ECONOMIC BENEFITS FOR THEIR COMMUNITIES.**

### Students who complete their program of study realize the greatest benefits:

- Over a 40 year career, an Illinois community college program graduate can expect a total lifetime earnings gain of over \$570,000. This is a 44% increase over the \$1.3 million average total lifetime earnings of those not completing a community college program.
- These earnings gains are realized with an average investment of about \$34,000, including foregone earnings while in college. The annual rate of return on this initial investment in an Illinois community college degree is over 14%.

### An Illinois community college education increases earnings for workers:

- On average, all students who completed their Illinois community college education in FY11 saw a gain of almost \$3,587, a 30% increase in earnings over their pre-enrollment wages.
- When looking at just completers in Associate of Applied Science and long-term certificate programs, the first year earnings increase was \$7,595.



### **Illinois businesses benefit from Illinois community colleges:**

- In the year following completion, about 77 percent of 2011 completers were employed in Illinois.
- About 87 percent of 2005 completers were employed in Illinois within five years of completion.

### **Illinois community college graduates generate billions of dollars in local, state, and federal taxes:**

- Illinois community college students who attended school in 2002 paid an estimated \$4.0 billion in state taxes and \$13.2 billion in federal taxes between 2003 and 2012.
- Illinois community college students who graduated in 2002 paid an estimated \$285 million in state taxes and \$942 million in federal taxes over the next 10 years.

### **As major employers and business entities, Illinois community colleges generate billions of dollars in local sales and wages annually and almost 51,000 jobs:**

- In FY2012, Illinois community colleges directly employed 14,730 full-time and 19,767 part-time staff with a total payroll of \$1.5 billion.
- In addition to wages and salaries, Illinois community colleges reported \$1.05 billion in operating and capital expenditures.

### **By including the multiplier effect, the total economic impact of the community colleges on the Illinois economy is increased to an even greater level:**

- In FY2012 the total economic impact is estimated at \$3.1 billion and 50,973 jobs.

### **Between 2000 and 2012 Illinois community colleges increased completions by over 57 percent.**

### **Illinois community colleges are responding to the state's changing demographics and educational needs:**

- The most significant demographic changes in enrolling students over the 2000 - 2012 period included increases in the number of students 19 years old and younger who now make up almost one quarter of enrollees, Hispanic students, and students with post high school credentials.
- More enrolling students are preparing for college transfer or preparing for a future job. Baccalaureate/ transfer instruction continues to represent the largest number of enrollments and more students are enrolling in health-related programs and liberal arts and sciences courses.

# SECTION 1: ILLINOIS COMMUNITY COLLEGE STUDENT ECONOMIC OUTCOMES

This section examines the economic outcomes for individuals who were students of the Illinois Community College System. The source of community college student employment and earnings data is the Unemployment Insurance (UI) wage record data reported by Illinois employers for each of their employees. UI data are collected on a quarterly basis by the Illinois Department of Employment Security (IDES).

This comprehensive employment data source is estimated to cover 96 percent of total wage and salary civilian jobs.<sup>1</sup> While it is an immense database, there are certain limitations. The UI wage records contain neither the number of hours worked by participants nor the position they held. IDES provided the Center for Governmental Studies at NIU access to these data for the purposes of this study.

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<sup>1</sup> See <http://www.bls.gov/opub/hom/pdf/homch5.pdf>. Examples of employment not covered by UI laws include self-employment and some agricultural and domestic work.

## ILLINOIS COMMUNITY COLLEGE STUDENT ECONOMIC OUTCOMES – RETURN ON INVESTMENT

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To begin assessing the economic impact of an ICCS student, it must be realized that education at a community college is an investment. Students attending college pay for their education in both cash and in foregone earnings. The net cash price is the cost of tuition, fees, books, and room and board. Foregone earnings result when a student spends time going to school and studying in place of earning money at work.

The analysis in this section focuses on the return on investment of students that completed a program that was not focused on transfer to a 4-year institution in FY2011. The cost of attending school during the FY2010 and FY2011 school years is compared with projected earnings over a 40 year post graduation time frame. The results are net present value (NPV) and internal rate of return (IRR) estimates for the average completer in FY2011.

The net price of attending school was obtained from the National Center for Education Statistics' College Navigator tool. College Navigator employs Integrated Postsecondary Education Data System (IPEDS) data from the National Center for Education Statistics to calculate the 'average net price' for annual attendance at each school. The statewide figure is the average (weighted by student enrollment counts) of individual Illinois community colleges.

The other major cost for college attendees is their foregone earnings, often referred to as the 'opportunity cost' of attending college. The estimate for foregone earnings is based on completers' earnings in the 12 months prior to their enrollment in the college. It is assumed that their average income would have increased by 3% per year during their two years in college.

**THE RETURN ON  
INVESTMENT OCCURS  
OVER A 40 YEAR  
WORKING LIFE.**

**TO ASSESS THE  
ECONOMIC IMPACT  
OF AN ICCS STUDENT,  
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THAT EDUCATION AT  
A COMMUNITY  
COLLEGE IS AN  
INVESTMENT.**

The major benefit of completing college is the resulting increased earnings. Pre-enrollment to post-completion earnings gains were calculated for graduates of 2 year Associate of Applied Science and 2 year certificate programs at Illinois community colleges. Gains for these graduates averaged \$7,595 in the first year.

Figure 2 presents the net return analysis based on the calculations noted above. The total cost during the two years the student is in school, including out of pocket expenses<sup>2</sup> and foregone earnings is \$43,331. The return on investment occurs over a 40 year working life, where increased earnings for a degree completer are estimated to total over \$572,000 (compared to someone not attending community college).

**Figure 2. Estimated Net Return for Associates Degree Completers**

Year	Net Price	Opportunity Cost	Total Cost	Increased Earnings	Discounted Cash Flow
-1	\$4,945	\$16,298	\$21,243		-\$22,093
0	\$5,301	\$16,787	\$22,088		-\$22,088
1				\$7,595	\$7,291
2				\$7,823	\$7,210
3				\$8,058	\$7,129
4				\$8,299	\$7,049
5				\$8,548	\$6,970
⋮				⋮	.....
38				\$22,673	\$4,806
39				\$23,353	\$4,752
40				\$24,054	\$4,699
<b>Total Increased Earnings</b>				\$572,673	<b>NPV</b> \$191,943
					<b>IRR</b> 14.2%

The net present value of investing in a community college associate degree is almost \$192,000. The internal rate of return on their investment is 14.2%. In other words, if a student put \$43,331 in an investment that returned 40 annual payments equivalent to the earnings gains from an associate degree, they would earn interest at a rate of 14.2%.

This analysis is conservative because it is based on increased earnings in the first post-completion year. Earnings for many program completers grow significantly in the second through fifth post-completion years.

**THE NET PRESENT VALUE OF INVESTING IN A COMMUNITY COLLEGE ASSOCIATE DEGREE IS ALMOST \$192,000. INCREASED EARNINGS FOR A DEGREE COMPLETER ARE ESTIMATED TO TOTAL OVER \$572,000.**

<sup>2</sup>

## ILLINOIS COMMUNITY COLLEGE STUDENT ECONOMIC OUTCOMES – STUDENT LOAN DEBT AND ITS IMPACT ON RETURN ON INVESTMENT

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Media stories related to student loan debt have been increasingly common in recent years. According to the Federal Reserve Bank of New York, in 2012 the average student loan balance for Americans under 30 was about \$21,000<sup>3</sup>. That was up from about \$13,500 in 2005. About 42% of 25-year-olds have some amount of student debt.

Average student loans for Illinois community college students tend to be significantly smaller than the national averages. According to College Navigator, about 10.4% of students took out student loans in 2012. Those loans averaged about \$4,200.

When used responsibly, student loans can actually increase the rate of return of a college education. Student loans reduce the upfront cash cost of college. Loan repayment reduces the cash flow associated with earnings gains for several years after program completion. The rate of return on paying for college is increased if the average interest rate on federal student loans is lower than the rate of return from education.

The benefits to using student loans to pay for education only occur if the student receives a strong return on their educational investment. The analysis in this report shows the majority of ICCS students do receive a good return in terms of earnings.

While many college graduates find suitable work upon graduation some have difficulty obtaining employment in competitive fields. The recent recession compounded this issue. Nationally, there are more student loan delinquencies. In 2012, 17 percent of borrowers

### **AVERAGE STUDENT LOANS FOR ILLINOIS COMMUNITY COLLEGE STUDENTS TEND TO BE SIGNIFICANTLY SMALLER THAN THE NATIONAL AVERAGES.**

were over 90 days delinquent, up from under 10 percent in 2004<sup>4</sup>. Student loan data for individuals are not available to analyze how these loans are impacting ICCS students. However, it is clear from national trends that counseling students on the proper use and management of student loans is becoming increasingly important.

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<sup>3</sup> Federal Reserve Bank of New York (2013). *Student Loan Debt by Age Group*. Retrieved from <http://www.newyorkfed.org/studentloandebt>.

<sup>4</sup> Lee, D. (2013). *Household Debt and Credit: Student Debt*. Federal Reserve Bank of New York. Retrieved from <http://www.newyorkfed.org/newsevents/mediaadvisory/2013/Lee022813.pdf>.

The following sections investigate student economic outcomes from a variety of perspectives. First economic outcomes measured by employment and earnings are calculated. Next, average earnings gains are presented.

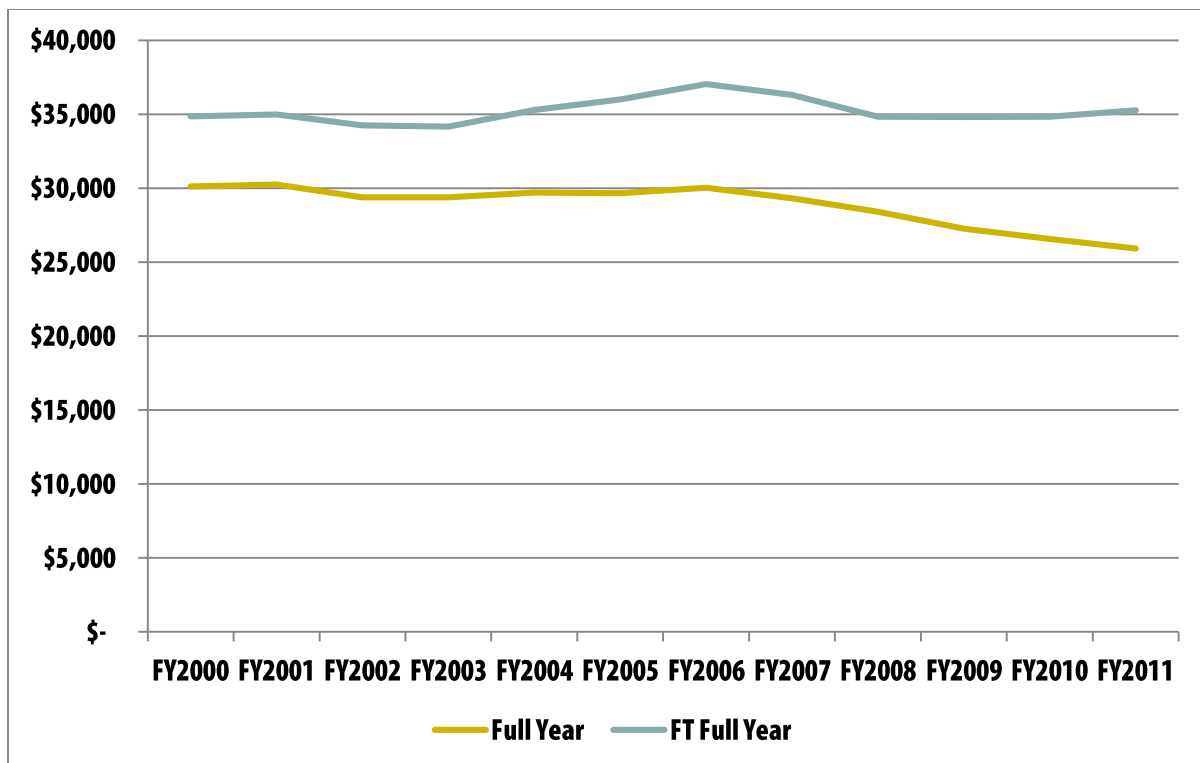
## ILLINOIS COMMUNITY COLLEGE STUDENT ECONOMIC OUTCOMES – EMPLOYMENT AND EARNINGS ANALYSIS

Figure 3 displays the average annual post-completion earnings (inflation adjusted to 2012 dollars) for two groups of program completers from 2000 to 2011. The first group is the set of program completers that worked in each of the four post-program quarters (full-year), and the second group is the set of those that

**COMPLETERS WORKING FULL TIME EARNED OVER \$35,000 IN THEIR FIRST POST-COMPLETION YEAR.**

worked each of the quarters at an earnings level that was above minimum wage for 30 hours per week (full-time, full-year). Full-year workers that completed a program in FY2011 earned an average of almost \$26,000. Completers working full time earned over \$35,000 in their first post-completion year.

**Figure 3. Average Annual Earnings (Inflation Adjusted \$) - Program Completers 2000-2011**



Initial post-completion earnings for those identified as full-year workers remained relatively flat from 2000 to 2006. Beginning in 2007, this group saw a steady decline in real earnings, ending in 2011 about 14% lower than 2000. The group identified as full-time, full-year experienced gains in their real (inflation adjusted) earnings from 2000 to 2006. However, those gains were reversed with the recession beginning in 2007. By 2011, real earnings for full-time, full-year workers were only about 1% higher than in 2000. When averaging earnings for all completers, 2011 real earnings were about 24% lower than 2000 earnings.

The UI data from IDES only includes individuals earning wages in Illinois. Program completers that successfully find employment in another state are not included. This data limitation substantially impacts community colleges near Illinois borders and have graduates that are employed in other states. Additionally, self-employed small business owners and certain agricultural workers are not covered by unemployment insurance and thus, are not included. Finally, since this measure only looks at the initial post-completion year, students delaying employment to continue their education will have very low or no earnings. These students, who intend to transfer to a four-year college, are becoming an increasingly large portion of community college graduates. Between 2006 and 2012, the percentage of completers stating their intention to transfer grew from 33% to 38.5%. Longer term earnings gains of certain program completers are reported later in this document. They show that earnings can grow significantly in the several years following completion.

National income measures exhibit similar trends. According to the Bureau of Labor Statistics, average inflation adjusted earnings of individuals employed full-time that had some college or an associate degree rose by about 2.6% between 2000 and 2011<sup>5</sup>.

**OVERALL, EARNINGS  
GAINS AVERAGED  
\$159 PER CREDIT HOUR.**

gains, as the number of credit hours increases the average gain per credit hour decreases. Further exploration of the contributing factors could involve the actual pre-program earning (absolute dollar amount), age, and workforce experience of the exiters versus the completers. For example, a mid-career professional engaged in skill upgrading could see greater returns than someone who is initially entering the workforce. The chosen field of endeavor also influences outcomes.

Figure 4 explores the relationship between credit hours and earnings gains. Overall, earnings gains averaged \$159 per credit hour. The results show that while there is a strong positive relationship between the number of credit hours earned and earnings

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<sup>5</sup>U.S. Department of Labor, Bureau of Labor Statistics, Current Population Survey.

**Figure 4. Earnings Gain and Average Gain per Credit Hour by Earned Credit Hour Groups – Exiters FY2011 (Completers and Non-Completers)**

<b>Earned Credit Hours</b>	<b>Total Number of Exiters</b>	<b>Percent of Total</b>	<b>Average Earnings Gains</b>	<b>Average Earnings Gain Per Credit Hour</b>
Total	396,556	100.0%	\$2,948	\$159
Missing	1,017	0.3%	\$945	**
.5 to 04 hours	136,963	34.5%	\$897	\$385
05 to 09	75,971	19.2%	\$2,402	\$345
10 to 14	39,981	10.1%	\$3,463	\$292
15 to 19	26,031	6.6%	\$3,888	\$232
20 to 24	18,709	4.7%	\$4,101	\$186
25 to 29	13,886	3.5%	\$4,505	\$167
30 to 34	11,835	3.0%	\$4,775	\$150
35 to 39	9,271	2.3%	\$5,218	\$141
40 to 44	7,805	2.0%	\$5,358	\$128
45 to 49	6,888	1.7%	\$5,157	\$110
50 to 54	6,786	1.7%	\$7,052	\$135
55 to 59	5,758	1.5%	\$5,829	\$102
60 and up	35,655	9.0%	\$6,175	\$80

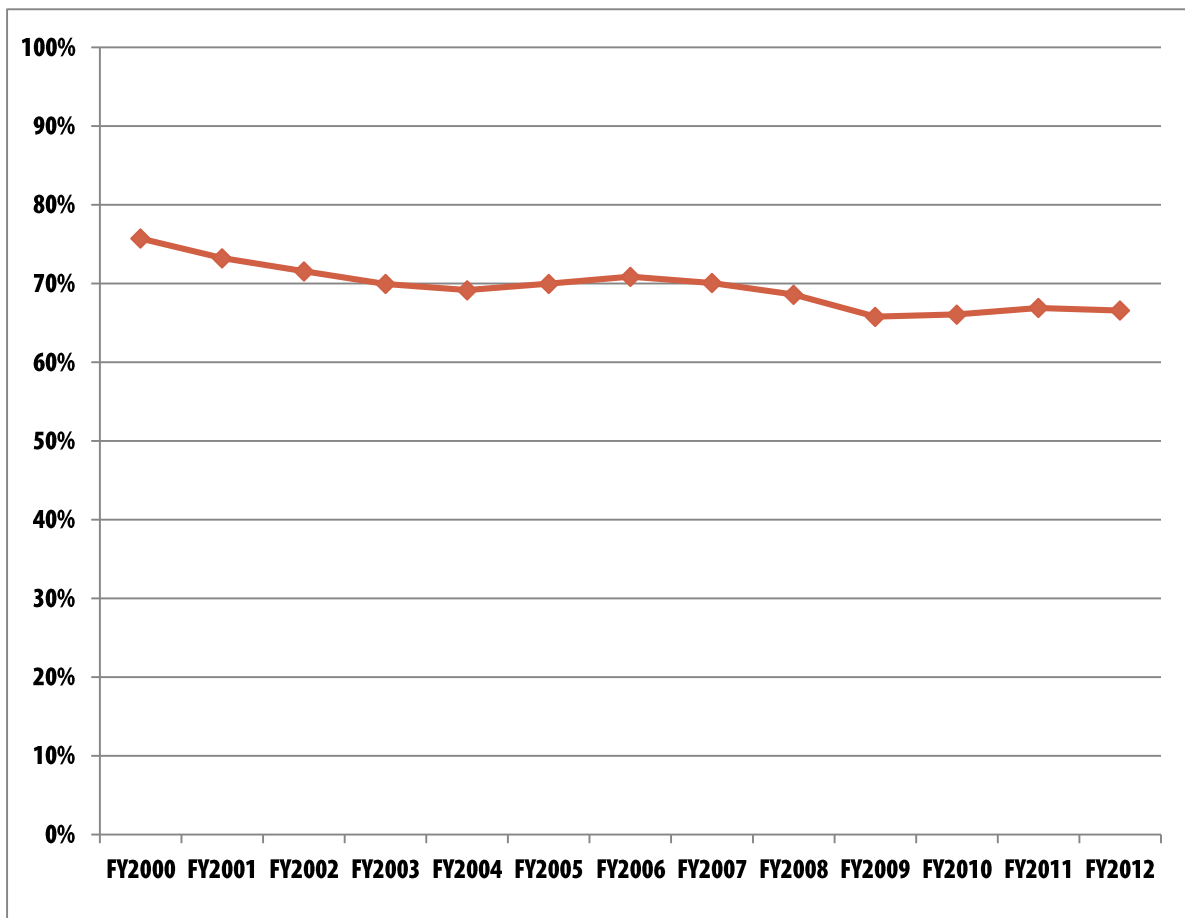
The focus now turns to the percentage of community college program completers who are identified as employed in the first or second full post-completion quarter.<sup>6</sup> Figure 5 displays employment rates of students who complete a program of at least one credit hour for each year from 2000 to 2012. Over this period there has been a decline in the employment rate from 75.7% in 2000 to 66.6% in 2012. This outcome should not be viewed as the most important measure of success since many completers do not seek employment because they immediately transfer to a four-year college.

To some extent, the decline in employment rates can be explained by overall economic conditions. According to the U.S. Census Bureau's American Community Survey, between 2007 and 2012, the unemployment rate for Illinois' population ages 25 to 64 with some college increased from 5.8% to 8.9%.

<sup>6</sup> The 1<sup>st</sup> full post completion quarter is the first full quarter after the completion of the program. This is to avoid using wages that were earned while the student was in the program.



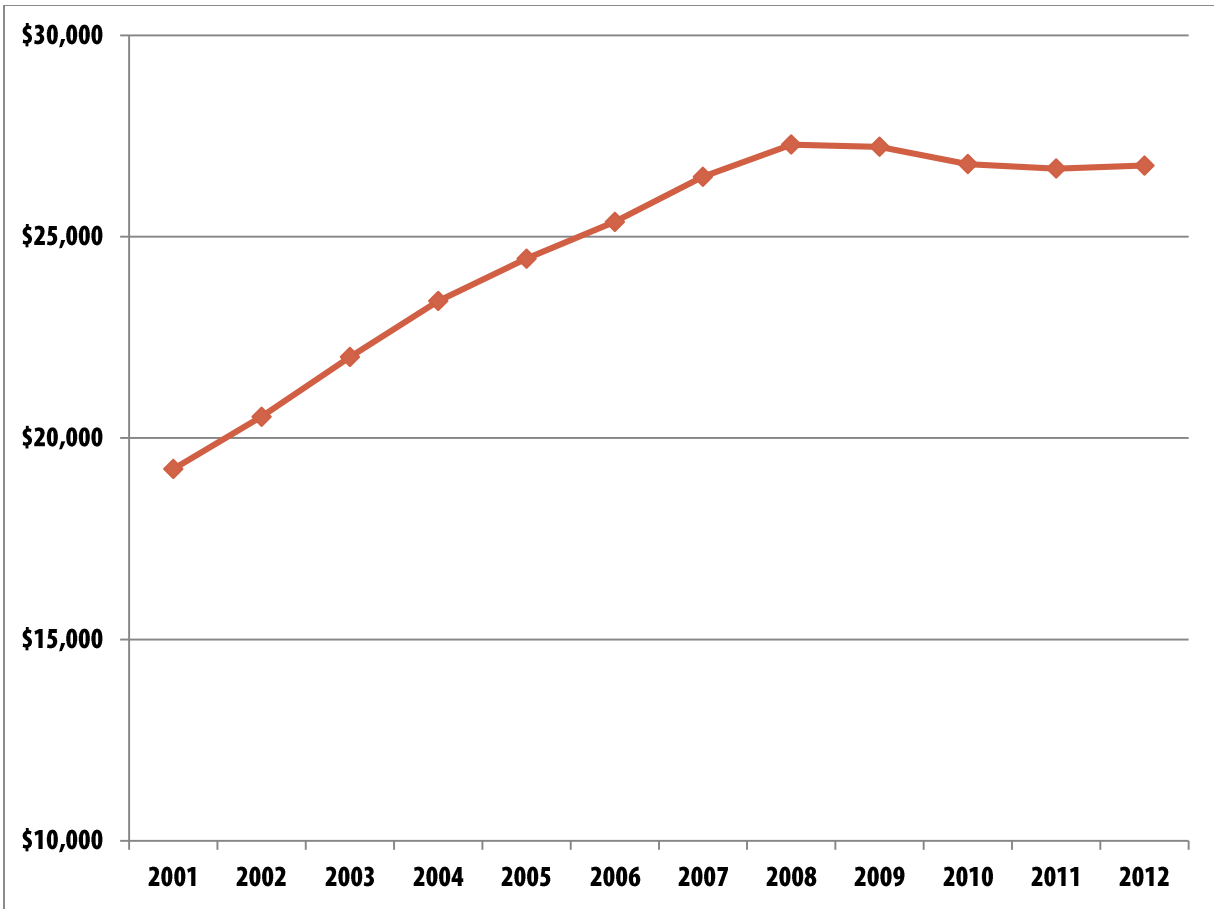
**Figure 5. Employed During the 1<sup>st</sup> or 2<sup>nd</sup> Post-Completion Quarter - Program Completers**



Another method of examining the post-completion earnings of community college students is to track the earnings of a specific cohort of completers over time. For this analysis, the average annual earnings of all completers during the year 2000 were tracked over a 12-year period (see Figure 6). Figure 6 is a comprehensive view of all ICCS completers which includes certificate and degree graduates as well as completers of Adult Education and Basic Skills programs. Additionally, earnings outcomes are included if graduates are working part-time or full-time. The results indicate that the former students had the largest earnings increases in the years immediately after program completion. Earnings gains flattened out about eight years after program completion, which for this group also coincided with the national recession.

**STUDENTS HAD THE LARGEST EARNINGS INCREASES IN THE YEARS IMMEDIATELY AFTER PROGRAM COMPLETION.**

**Figure 6. Average Annual Earnings (Inflation Adjusted \$) - Program Completers FY2000**



One of the major advantages of using longitudinal measurement of UI wage data is the possibility of examining pre-enrollment and post-completion wages. The major difficulty in performing such an analysis is identifying the appropriate pre-enrollment period. Since community college students vary widely in their course-taking behavior (they can attend classes full-time, part-time, or intermittently), identifying the entry date for a student in a program can be challenging. The approach taken for this study was to examine each

**THE AVERAGE PRE-ENROLLMENT TO POST-COMPLETION EARNINGS GAIN OVER THE EIGHT-YEAR PERIOD FROM 2005 TO 2011 WAS \$4,387. THIS TRANSLATES TO A \$2.41 PER HOUR INCREASE IN EARNINGS ASSUMING FULL-TIME, FULL-YEAR EMPLOYMENT.**

of the years prior to the date of program completion. If there were no earned hours during a given year, the enrollment date was set to the first day of the semester in which credit hours were earned<sup>7</sup>.

Once the enrollment date for each completer was determined, UI earnings for the four full pre-enrollment quarters were used to produce an annual pre-enrollment earnings amount. Similarly, UI earnings for the four full post-completion quarters were used to determine the annual post-completion earnings. The results obtained for all program completers and completers most likely to directly enter the workforce following completion (AAS and long-term certificate programs) from 2005 to 2011 are displayed in Figure 7.

In the year following completion, about 77 percent of 2011 completers were employed in Illinois. Looking at a longer time horizon, about 87 percent of 2005 completers were employed in Illinois in the five years following program completion. See the *Limitations* section at the end of this report for a discussion of potential under-reporting in these and other outcomes.

The average pre-enrollment to post-completion earnings gain over the eight-year period from 2005 to 2011 was \$4,387<sup>8</sup>. This translates to a \$2.41 per hour increase in earnings assuming full-time, full-year employment ( $\$4,387 / \{52 \text{ weeks} \times 35 \text{ hours}\}$ ). The trend indicates a decline in earnings gains from 2007 to 2009 with a slight recovery in earnings gains beginning in 2010. This period of decline coincides with the national economic recession.

For completers in Associate of Applied Science and long term (more than 30 semester hours) certificate programs, earnings gains were higher. The average pre-enrollment to post-completion earnings gain for completers in these programs was \$9,846. Earnings gains peaked in 2007 at almost \$12,000 then declined during the recession.

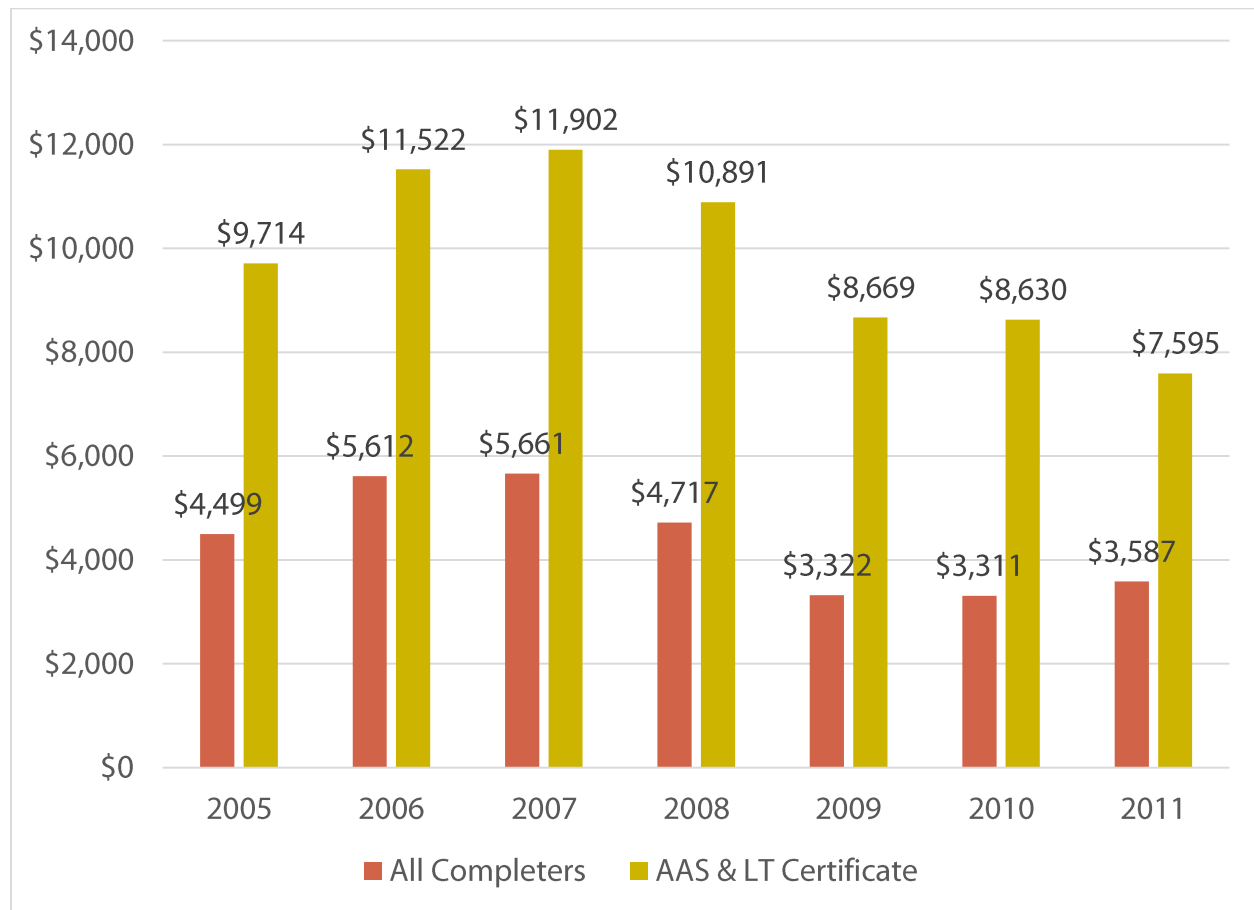
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<sup>7</sup> For example, if a student completed a program in 2010, the procedure was to look at the credit hours earned in 2009, 2008, etc. If no credit hours were earned in 2008, then the start date of the earliest semester in 2009 in which credits were earned was defined as the enrollment date.

<sup>8</sup> The data series ends in 2011 due to the lack of a full year of post-completion data, and begins in 2005 due to the lack of sufficient hours earned by semester for the earlier completion cohorts.

In real terms, average earnings decreased for workers of all educational levels during the recession. According to the U.S. Census Bureau's American Community Survey, between 2007 and 2012, the median earnings of Illinois' population ages 25 to 64 decreased by \$2,006, adjusted for inflation during this time. Median earnings for Illinois residents with some college or an associate degree decreased by \$3,028.

**Figure 7. Pre-Enrollment to Post-Completion Earnings Gains - Program Completers 2005-2011**



As with the measure of employment used previously (Figure 5), post-completion earnings as measured here tend to understate the success of program completers. The data does not capture certain workers (self-employed, certain agricultural workers, etc.), nor do they capture workers who have successfully found employment in other states. Importantly, since this measure only looks at the initial post-completion year, students delaying employment to continue their education will have very low or no earnings.

## ILLINOIS COMMUNITY COLLEGE STUDENT ECONOMIC OUTCOMES – GENERATED TAX REVENUES

Illinois Community College System students generate significant tax revenues. In this section, the amount of tax dollars contributed by Illinois community college students to the federal and state tax base over a period of 10 years is estimated. Separate estimates are produced for students who were enrolled in a community college during 2002 and for the subset of those students who completed programs in 2002.

For these analyses, students enrolled in an Illinois community college in FY2002 were identified. The annual total UI earnings for these individuals were obtained for each year from 2003 to 2012. Taxable earnings were estimated by subtracting the standard deduction for an individual from the annual earnings for each tax year. Federal taxes were estimated by applying the average marginal tax rate for a given year to the taxable earnings for that year. State taxes were estimated by applying the appropriate Illinois state tax rate (3% up to 2010 and 5% after 2011) to annual taxable earnings.

**\$13.2 BILLION IN FEDERAL TAXES WAS GENERATED BETWEEN 2003 AND 2012 BY STUDENTS WHO ATTENDED ILLINOIS COMMUNITY COLLEGES IN 2002.**

Although this is a simplistic approach for estimating tax revenues in both cases, given the limitations of available data, it may be used to reasonably approximate the magnitude of taxes paid by this cohort of Illinois community college students. The results of this analysis are presented in Figure 8.

**Figure 8. Estimated Federal and State Taxes Paid by Enrollees and Completers (2002 Cohort) 2003 – 2012**

2002 Cohort	Federal Taxes	State Taxes
Enrollees	\$13,175,724,017	\$3,974,563,329
Completers	\$941,940,119	\$284,886,870

Substantial federal and state tax revenue is produced by Illinois community college students. It is estimated that \$13.2 billion in federal taxes was generated between 2003 and 2012 by students who attended Illinois community colleges in 2002. Of that total, about 7.1% was contributed by students who completed in 2002. Similarly, of the estimated \$4 billion in state tax dollars generated by 2002 enrollees, a similar percentage or \$285 million would have been generated by 2002 completers.

## ILLINOIS COMMUNITY COLLEGE STUDENT ECONOMIC OUTCOMES – MARKET PENETRATION

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Market penetration of Illinois' community colleges may be measured in two different and complementary ways. One is to determine the number of employees in the workforce that have attended an Illinois community college. To this end a database was compiled that contained an unduplicated list of all workers who had wages reported to the Unemployment Insurance system during 2012. Next, a second database was compiled

of all students (again unduplicated) who earned credit hours between 2002 and 2012. The two databases were merged to determine the percentage of all workers in 2012 who had received some education or training in the community college system between 2002 and 2012. The result was a determination that 26.1% of all workers in 2012 had attended an Illinois community college during the previous 10 years.

**26.1% OF ALL WORKERS  
IN 2012 HAD ATTENDED  
AN ILLINOIS COMMUNITY  
COLLEGE DURING THE  
PREVIOUS 10 YEARS.**

The other method of determining community college market penetration is to estimate the number of Illinois employers who have hired a former Illinois community college student. To obtain this number the unduplicated database of students who earned credit hours from 2002 to 2012 was merged with a database of all reported UI wage records from the same period of time. This produced a list of all employers who had hired an Illinois community college student from 2002 to 2012. This list of employers was then merged with

**ALMOST 74% OF  
EMPLOYERS HAD HIRED  
AN ILLINOIS COMMUNITY  
COLLEGE STUDENT AT  
SOME POINT IN THE  
PREVIOUS 10 YEARS.**

a database of employers who reported wages during the first quarter of 2012. The result indicated that almost 74% of employers who reported wages in the first quarter of 2012 (73.7%) had hired an Illinois community college student at some point in the previous 10 years.

# SECTION 2: ILLINOIS COMMUNITY COLLEGES' ECONOMIC IMPACTS

Illinois' 48 community colleges are important sources of expenditures and employment for the communities and regions they serve. As part of their day-to-day operations, each college purchases goods and services, many of them from the local economy. In addition, the income earned by their employees is spent in the local economy. Additionally, the community colleges invest in site improvements, remodeling, and new construction that generate additional expenditures and jobs.

Any change in economic activity, such as the purchase of a commodity or a service, has direct and indirect effects. The direct effects are the employment, payroll and purchases of goods and services directly by the colleges. The indirect effects occur through a variety of channels. For example, when a community college hires a local printer to produce its catalogues and brochures, these orders contribute to the income of the local printing industry. The printers' employees spend at least some of their income locally, and these purchases contribute to the employment and the income of other local industries and services. The printers spend part of their income from the community college's orders on the supplies that they need to run their businesses. To the extent that these purchases are local, they contribute to the incomes of employees in other industries, who in turn spend their incomes on still other goods and services with these effects again induced by the college's initial purchase.

IMPLAN Pro economic modeling software was used to produce estimates of the indirect economic impacts of Illinois community colleges, based on the direct impacts. Direct impacts are simply the set of expenditures or employment applied to the economic model for impact analysis. Indirect impacts are then derived as additional effects caused by industries purchasing from other industries. Induced impacts take into account the spending in the local economy of the new income generated by the new employment produced from the impact.

**IN FY2012 THE TOTAL  
ECONOMIC IMPACT IS  
ESTIMATED AT \$3.1  
BILLION AND 50,973 JOBS.**

Taken together, direct and indirect expenditures directly attributable to Illinois community college activities in fiscal year 2012 approached \$3.1 billion in value added (equivalent to gross state product) and an estimated 50,973 jobs. Summary data are provided in Figure 9.

**Figure 9. Illinois Community Colleges' Economic Impact Summary  
FY2012**

Impact Type	Operations	Construction	Total	Employment
Direct	\$1,533,190,540	\$146,042,328	\$1,679,232,868	36,465
Indirect	\$1,241,576,084	\$177,367,565	\$1,418,943,649	14,508
Total	\$2,774,766,624	\$323,409,893	\$3,098,176,517	50,973

## OPERATIONAL EXPENDITURES

Data provided by the individual community colleges to the Illinois Community College Board identified \$2.03 billion in operating expenditures during fiscal year 2012<sup>9</sup> (including wages and salaries, but excluding capital investments, which are analyzed in the next section). Illinois community colleges paid over \$1.5 billion in wages and benefits to their 34,480 employees that lived in the state. These direct impacts rippled through the economy creating additional jobs, payrolls, and other economic activity. These impacts are summarized in Figure 10. Over 47,000 jobs could be attributed to statewide college operations. These operations were associated with about \$4 billion in economic output (equivalent to total sales of a business or total spending of a government enterprise). Value added, which is a measure similar to gross state product, totaled over \$2.78 billion.

**ILLINOIS COMMUNITY COLLEGES PAID OVER \$1.5 BILLION IN WAGES AND BENEFITS TO THEIR 34,480 EMPLOYEES THAT LIVED IN THE STATE.**

**Figure 10. Illinois Community Colleges' Operational Expenditures  
Output and Employment Impact – FY2012**

Employment and Operations Spending FY2012			
Impact Type	Direct Effect	Indirect Effect	Total Effect
Employment	34,480	12,642	47,122
Output	\$2,031,014,103	\$1,939,330,793	\$3,970,344,896
Total Value Added	\$1,533,190,540	\$1,241,576,084	\$2,774,766,624
Employee Compensation	\$1,533,190,540	\$678,389,446	\$2,211,579,985

<sup>9</sup>Data and Characteristics of the Illinois Public Community College System, Table IV-13 - Fiscal Year 2012 Audited Operating Expenditures by Object (2013).



## CAPITAL EXPENDITURES

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### **SINCE FY2008, ILLINOIS COMMUNITY COLLEGES HAVE INVESTED OVER \$1.5 BILLION IN CAPITAL PROJECTS IN THE 39 DISTRICTS.**

In FY2012, the \$322.5 million in expenditures generated an estimated \$288 million in indirect output for a total impact of \$610.4 million. These expenditures also generated an estimated 3,851 jobs throughout the state. As can be seen in Figure 11, construction expenditures and resulting economic impacts vary from year to year.

In addition to the economic activity generated by Illinois community colleges' operating and employee expenditures, the colleges' capital development projects also contribute significantly to local economies.

Since FY2008, Illinois community colleges have invested over \$1.5 billion in capital projects in the 39 districts.

### **CONSTRUCTION EXPENDITURES AND RESULTING ECONOMIC IMPACTS VARY FROM YEAR TO YEAR.**

**Figure 11. Illinois Community Colleges' Construction Expenditures  
Economic Impact – FY2008-2012**

<b>Construction Spending 2008</b>			
<b>Impact Type</b>	<b>Direct</b>	<b>Indirect</b>	<b>Total</b>
Employment	1,707	1,604	3,311
Output	\$276,584,536	\$232,412,632	\$508,997,167
Value-Added	\$118,669,904	\$144,123,913	\$262,793,817
Employee Compensation	\$88,826,289	\$75,506,257	\$164,332,545
<b>Construction Spending 2009</b>			
<b>Impact Type</b>	<b>Direct</b>	<b>Indirect</b>	<b>Total</b>
Employment	1,453	1,366	2,818
Output	\$236,123,989	\$196,322,535	\$432,446,524
Value-Added	\$101,784,307	\$123,616,453	\$225,400,759
Employee Compensation	\$76,187,153	\$64,762,436	\$140,949,589
<b>Construction Spending 2010</b>			
<b>Impact Type</b>	<b>Direct</b>	<b>Indirect</b>	<b>Total</b>
Employment	1,887	1,774	3,661
Output	\$297,364,436	\$260,815,622	\$558,180,059
Value-Added	\$133,810,092	\$162,511,584	\$296,321,675
Employee Compensation	\$100,158,957	\$85,139,524	\$185,298,481
<b>Construction Spending 2011</b>			
<b>Impact Type</b>	<b>Direct</b>	<b>Indirect</b>	<b>Total</b>
Employment	2,301	2,163	4,464
Output	\$368,964,085	\$326,741,852	\$695,705,937
Value-Added	\$166,361,609	\$202,045,214	\$368,406,824
- Employee Compensation	\$124,524,280	\$105,851,121	\$230,375,401
<b>Construction Spending 2012</b>			
<b>Impact Type</b>	<b>Direct</b>	<b>Indirect</b>	<b>Total</b>
Employment	1,985	1,866	3,851
Output	\$322,455,677	\$287,939,173	\$610,394,850
Value-Added	\$146,042,328	\$177,367,565	\$323,409,893
Employee Compensation	\$109,314,978	\$92,922,546	\$202,237,524

# SECTION 3: CHARACTERISTICS OF ILLINOIS COMMUNITY COLLEGE STUDENTS

To provide a context for understanding the economic impacts of Illinois' community colleges, an analysis of student characteristics and program enrollment and completion between 2000 and 2012 for credit classes was undertaken. While not the primary focus of this report, it is nonetheless useful to identify significant changes in the student population that occurred over this 12-year period.

This section highlights the noteworthy changes over this period in enrollments and completions in credit courses for 15 characteristics of Illinois community college students. These include:

- |   |                           |
|---|---------------------------|
| 9. Total enrollments and completions      | 1. Residence              |
| 10. Degrees and certificates              | 2. Student intent         |
| 11. Age                                   | 3. Educational objective  |
| 12. Race and ethnicity                    | 4. Program classification |
| 13. Gender                                | 5. Instructional program  |
| 14. Students with disabilities            | 6. Veteran status         |
| 15. Highest grade completed at enrollment | 7. Online status          |
|   | 8. Student level status   |

In reviewing these enrollment and completion trends, it is important to keep in mind the distinction between these two groups of students.

**ENROLLMENTS** are not first-time entrants into the community college system. Rather, they are all students who have taken one or more courses and earned academic credit in a given year. Some have taken courses in the previous year and others will take courses in subsequent years. Enrollments reflect a point-in-time figure of active students in the year under consideration.

**COMPLETERS** are students who have completed a course of study and have earned either a certificate or degree in a given year. For short-term certificates, these students may have been enrolled for a single year, the time necessary to earn that certificate. Other completers may have been enrolled in previous years and still others may enroll in the future to take additional courses after finishing an initial program. Completers received a certificate or degree in the year under consideration.

## 1. Total Enrollments and Completions.

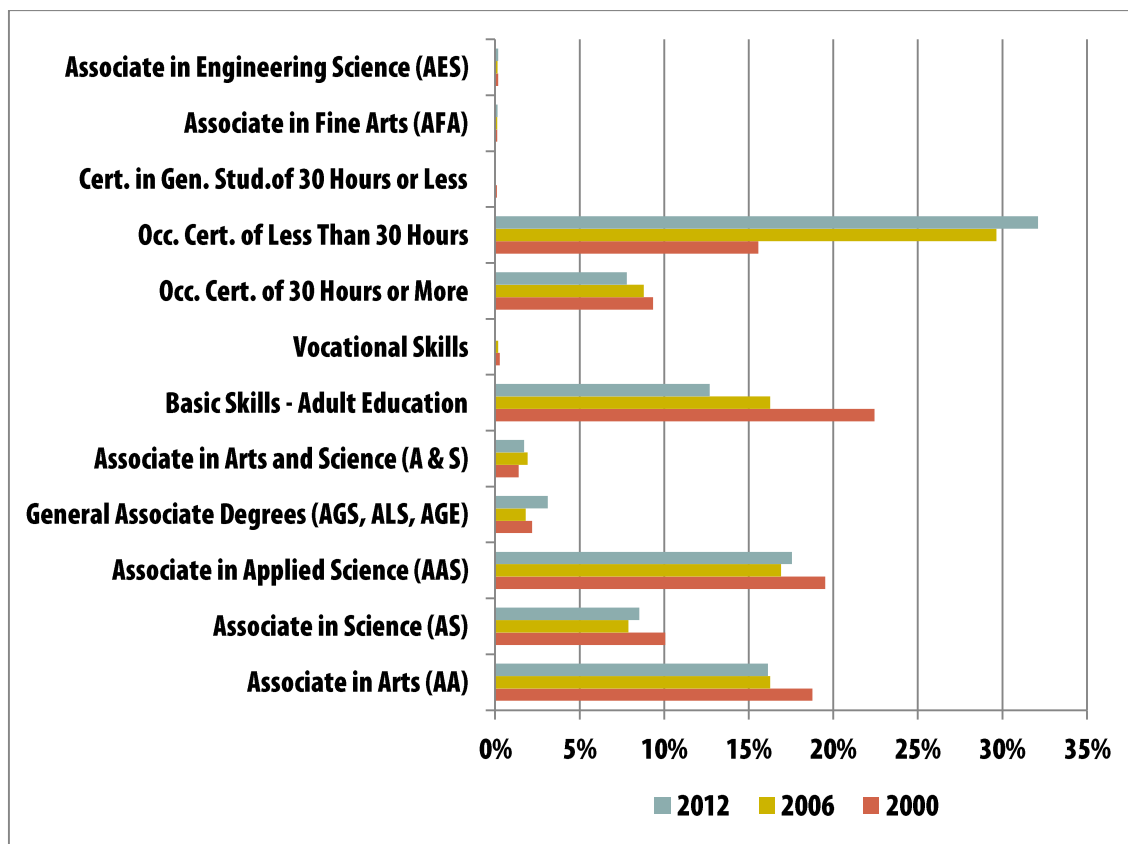
Overall, there was an increase of 45,062 in Illinois community college enrollments in credit courses, from 657,953 in 2000 to 670,262 in 2006, to 703,015 in 2012 or a 6.8% increase over 12 years.

The rate of increase in program completers has been even more significant. Statewide there was a 57.2% increase in students who completed their programs of study during this same period. There were 41,182 completers in 2000, 53,447 completers in 2006, and 64,772 completers in 2012.

## 2. Degrees and Certificates.

Certificate completion growth outpaced degree completion growth. The percentage of program completers earning a career certificate of less than 30 hours increased strongly from 2000 to 2012 (15.6% to 32.1%). Conversely, basic skills program credentials fell sharply (22.4% to 12.7%). Three associate degree programs - Science, Arts, and Applied Science - experienced declines over this period. The Associate in Applied Science and Associate in Science degrees saw small increases in 2012 after declining between 2000 and 2006. Figure 12 shows these changes over the 12-year period.

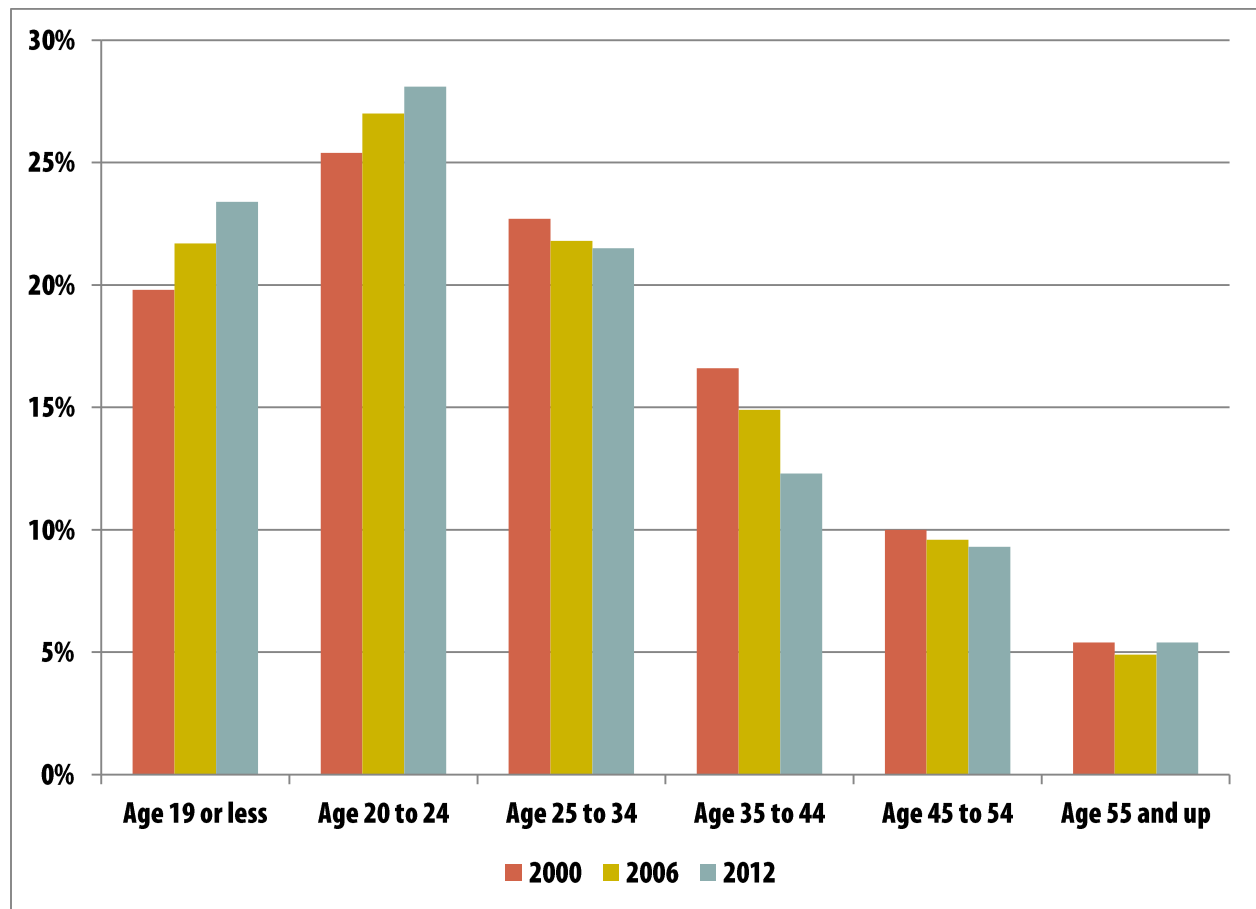
**Figure 12. Program Completers by Degree Type  
2000, 2006, 2012**



### 3. Age.

More students are enrolling in Illinois community colleges directly after high school in recent years. The average age of enrollees declined from 30.5 years of age in 2000 to 28 in 2012. The percentage of enrollees aged 24 or less increased from 45.2% to 51.5% of the total.<sup>10</sup> The enrollments of the oldest age group remained relatively steady (55 and over). Figure 13 illustrates the percentages of enrollees by age grouping.

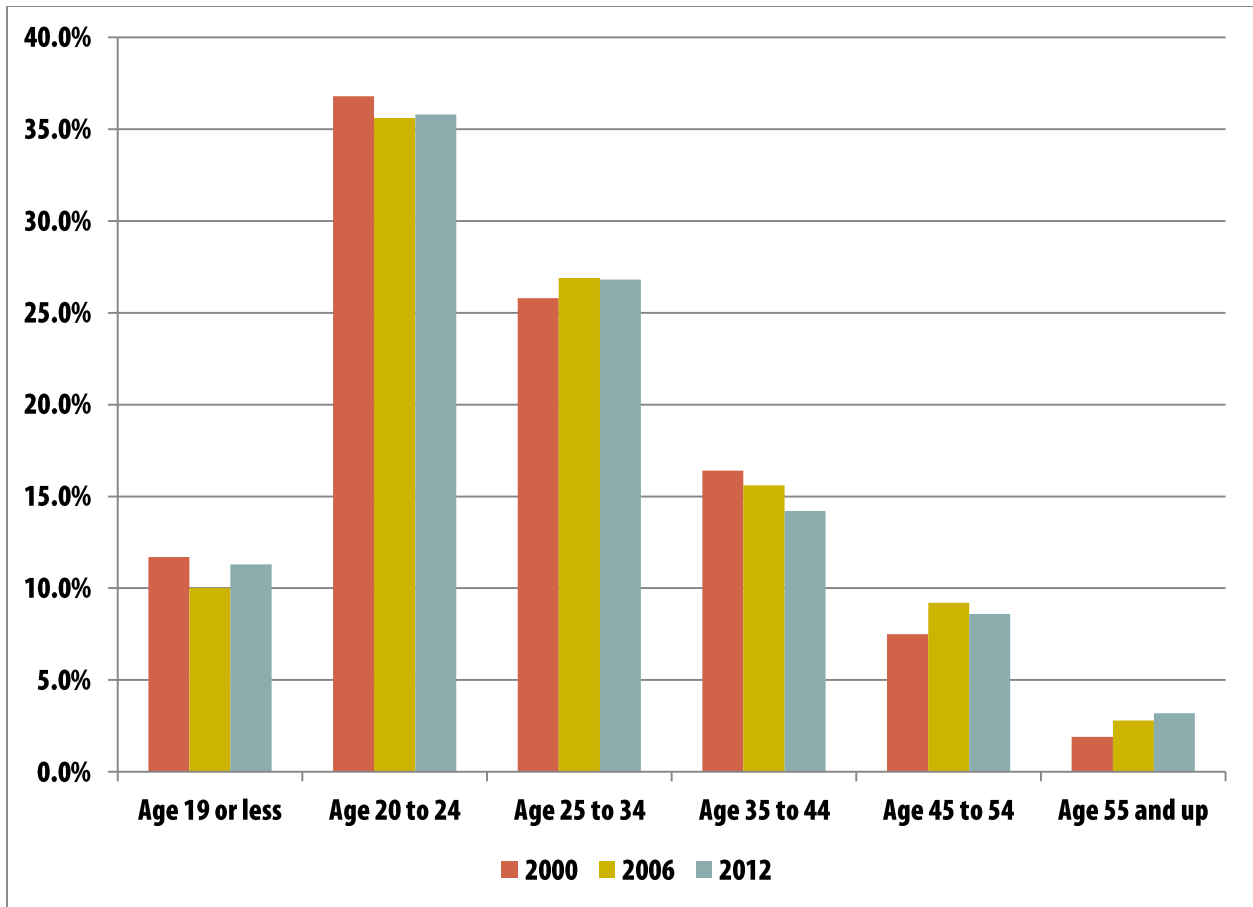
**Figure 13. Program Enrollments by Age at Enrollment  
2000, 2006, 2012**



<sup>10</sup> These percentages excluded 29,612 individuals for whom age information was missing over the three reference years. This group represented 2.9% of all 2000 enrollees and less than 1% of 2006 and 2012 enrollees.

The age profile of students who completed their program of study did not change appreciably over this period. The average age at program completion increased slightly from 28.7 to 29.5 years from 2000 to 2006. The average age of completers then declined to 29.2 years by 2012. As indicated in Figure 14, the largest age cohort of completers was age 20 to 24 at about 36% followed by age 25 to 34 at 27%.

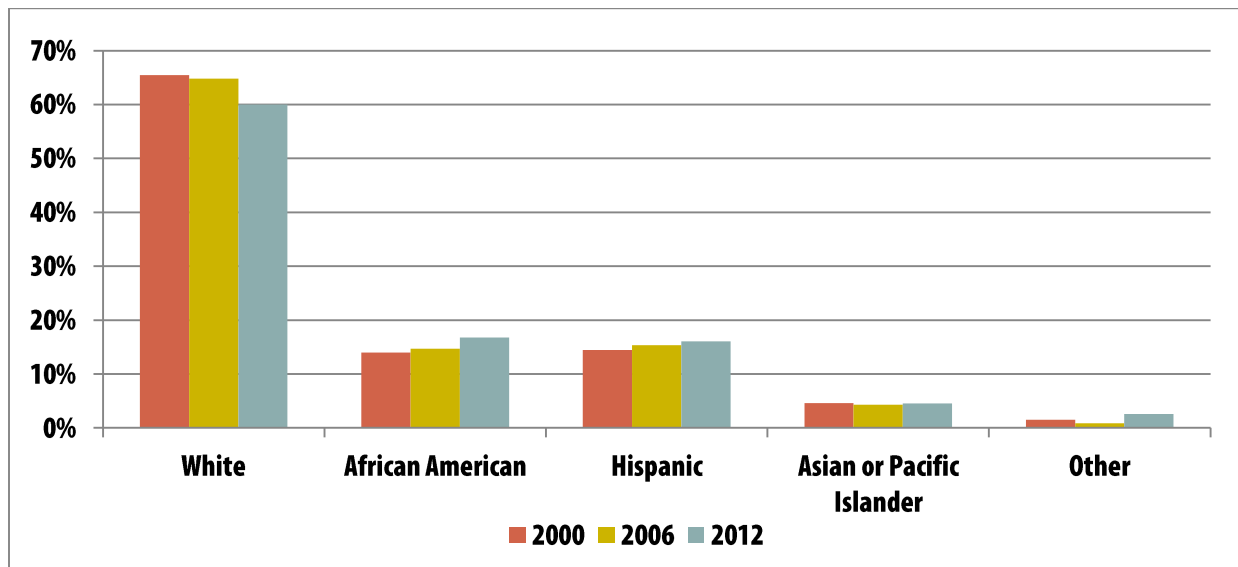
**Figure 14. Program Completers by Age at Enrollment  
2000, 2006, 2012**



## 4. Race and Ethnicity.

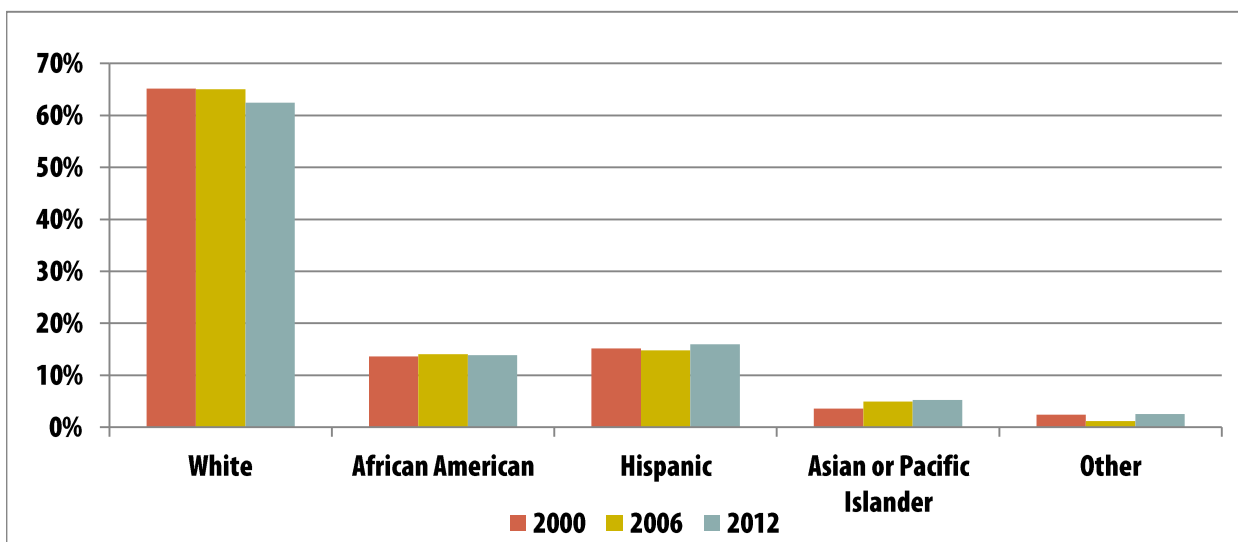
Enrollments in Illinois community colleges have increased for minorities from 2000 to 2012, while enrollments for whites during the same period have decreased. Hispanic enrollees comprised the largest non-white group in 2000 (14.4% of the total) and 2006 (15.3%). In 2012, African American enrollees made up a slightly larger percentage of the total at 16.8%. White enrollees as a percentage of the total decreased by 5.5 percent over this period. Figure 15 depicts these changes.

**Figure 15. Program Enrollments by Race/Ethnicity  
2000, 2006, 2012**



As illustrated in Figure 16, the percentage of program completers who were white has decreased while the percentage of all minority groups has increased. In 2012 Hispanics represented 16% of all completers and

**Figure 16. Program Completers by Race/Ethnicity  
2000, 2006, 2012**



African Americans represented 13.8%. While being a relatively small number of completers, Asian/Pacific Islander completers have grown strongly in percentage terms.

## 5. Gender.

Females enroll at higher rates than males in Illinois community colleges. For both 2000 and 2006 women comprised just over 55% of all enrollees. Though by 2012, the percentage of female enrollees had declined slightly to 54.2%. Females make up an even higher percentage of program completers: 59% in 2000 and 2006. In 2012 females comprised 57.5% of all completers.

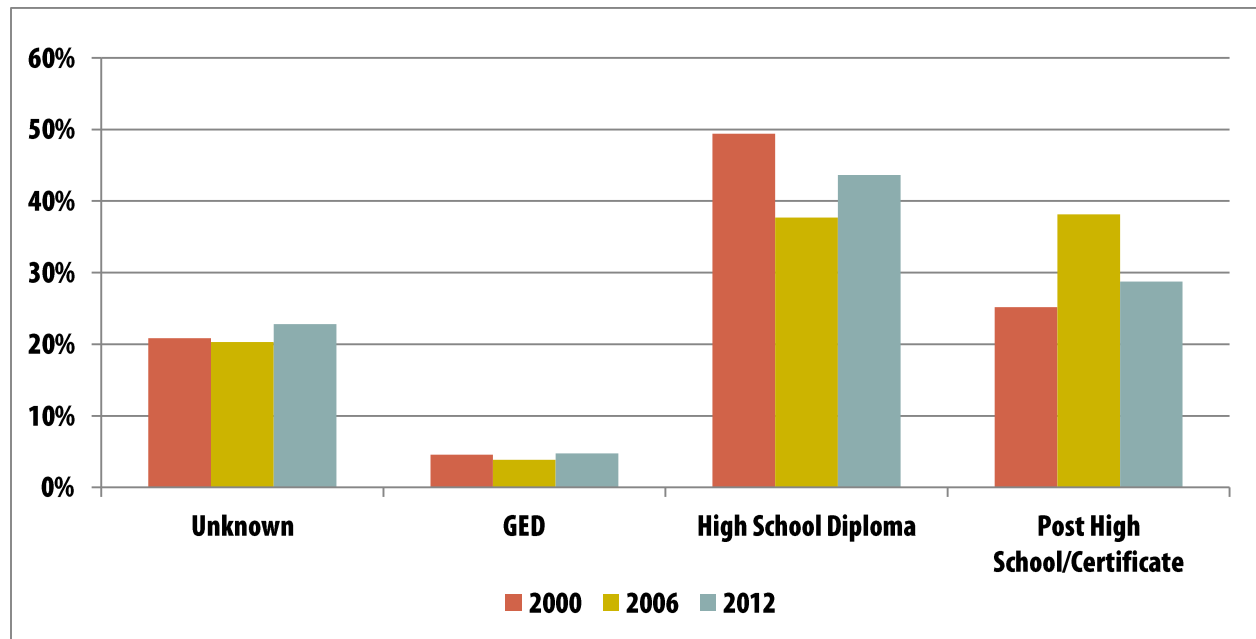
## 6. Students with Disabilities.

The percentage of enrolled individuals reporting a disability at the time of enrollment increased from 1.3% in 2000 to 1.7% in 2006 to 2.2% in 2012. The percentage of completers reporting a disability also increased steadily, going from 1.6% in 2000 to 2.3% in 2012.

## 7. Highest Grade Completed at Enrollment.

For enrollees for whom a specific level of education was indicated, the percentage with a post-secondary credential (i.e., associate degree, master's degree, doctorate degree, certificate, or first professional degree) increased from 25.2% in 2000 to 38.2% in 2006 then declined back to 28.8% in 2012. Figure 17 illustrates the percentage of enrollees by highest grade completed.

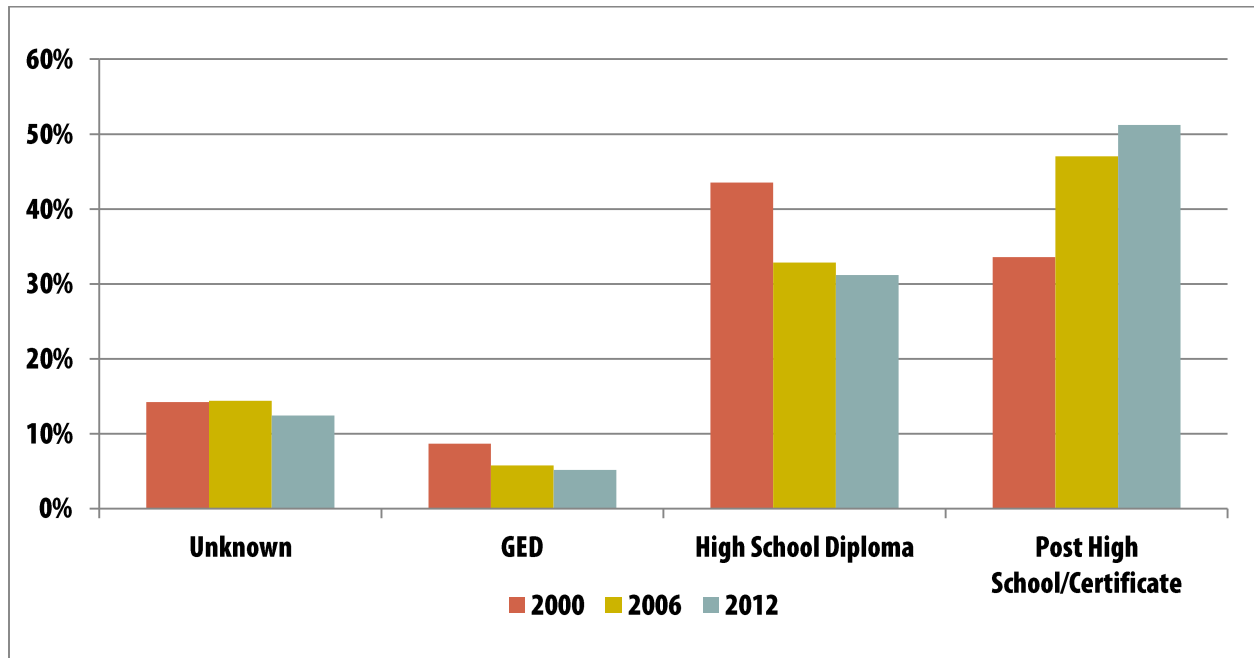
**Figure 17. Program Enrollments by Highest Grade Completed at Enrollment  
2000, 2006, 2012**





Completers with a post-secondary credential increased for all completers from 33.6% to 47.0% to 51.2% for the period 2000, 2006 and 2012. As shown in Figure 18, a commensurate decrease occurred in completers with only a high school diploma at enrollment - from 43.5% to 31.2% over the same period.

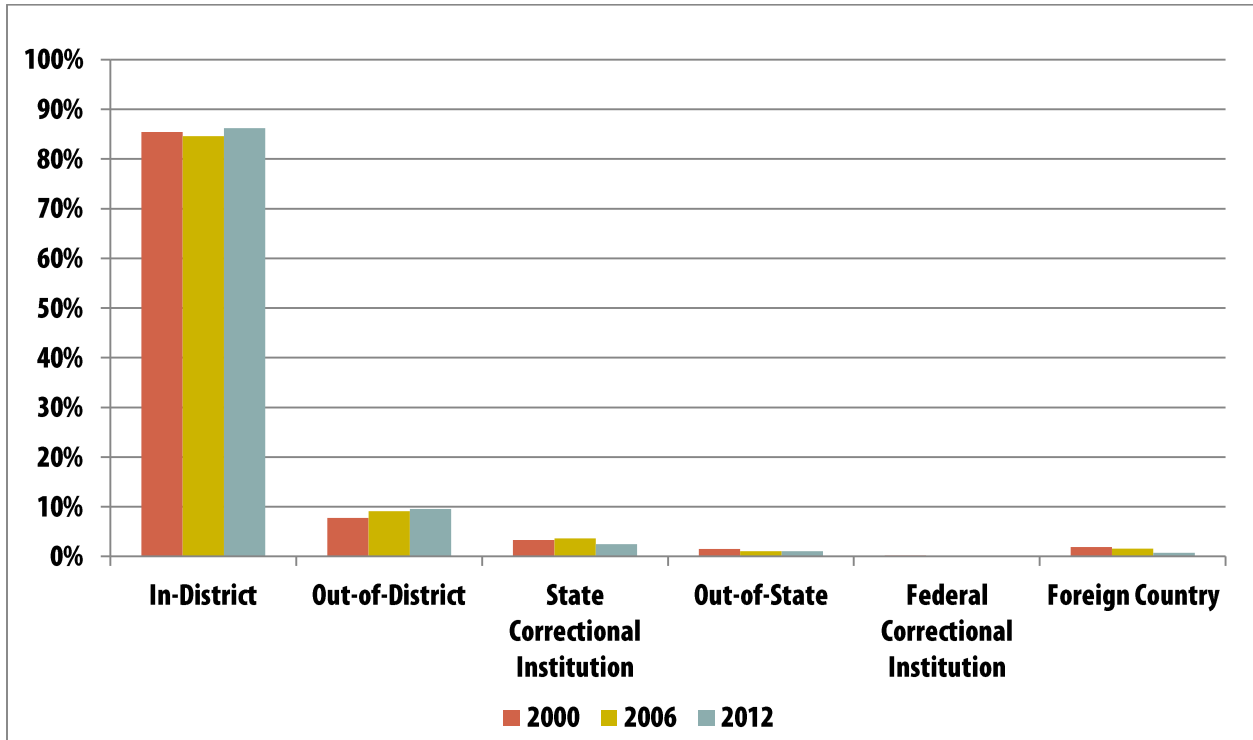
**Figure 18. Program Completers by Highest Grade Completed at Enrollment  
2000, 2006, 2012**



## 8. Residence.

As shown in Figures 19 and 20, when comparing program enrollments by residence, the vast majority of students resided in-district at the time of enrollment (83.7% in 2000, 82.9% in 2006, and 80.9% in 2012). The percentage of students from out-of-district grew during this period from 12.6 to 16.0. Enrollees from correctional institutions grew from 8,734 in 2000 to 13,454 in 2006 (2.0% of total enrollment). Correctional institution enrollees, which comprise 1.3% of all enrolled students, declined to 9,120 in 2012.

**Figure 19. Program Enrollments by Residency at Enrollment  
2000, 2006, 2012**



**Figure 20. Program Completers by Residency at Enrollment  
2000, 2006, 2012**

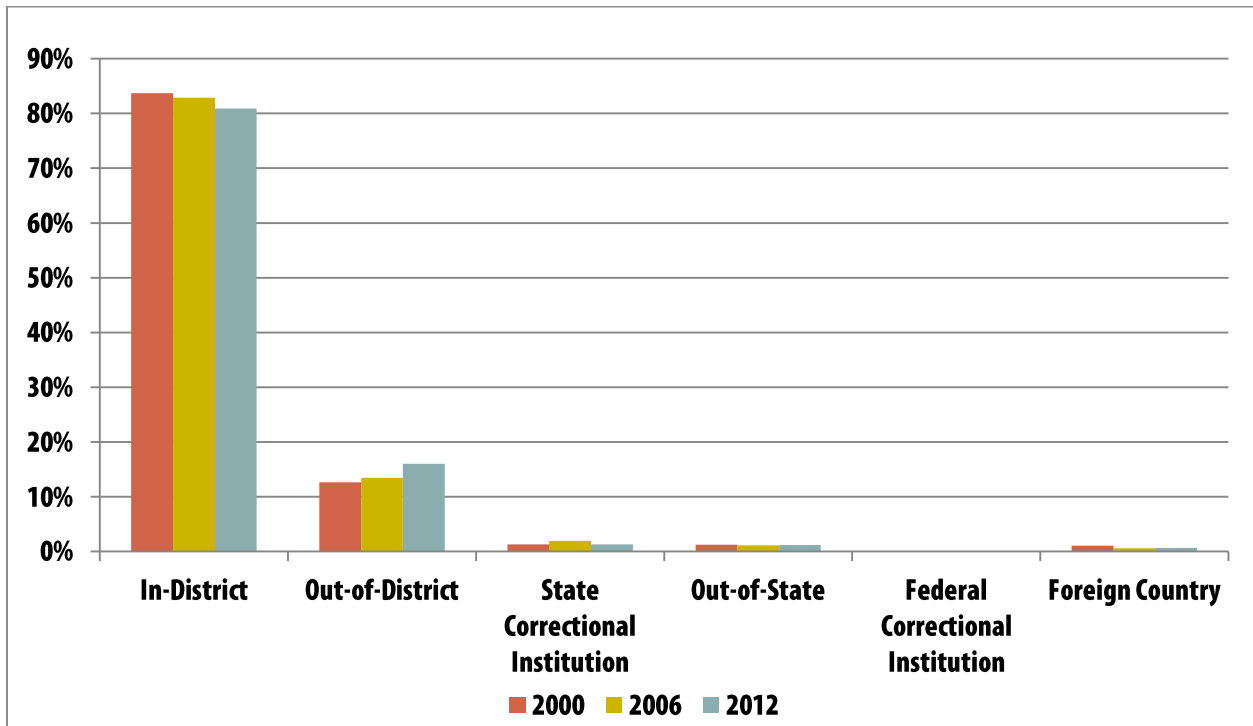
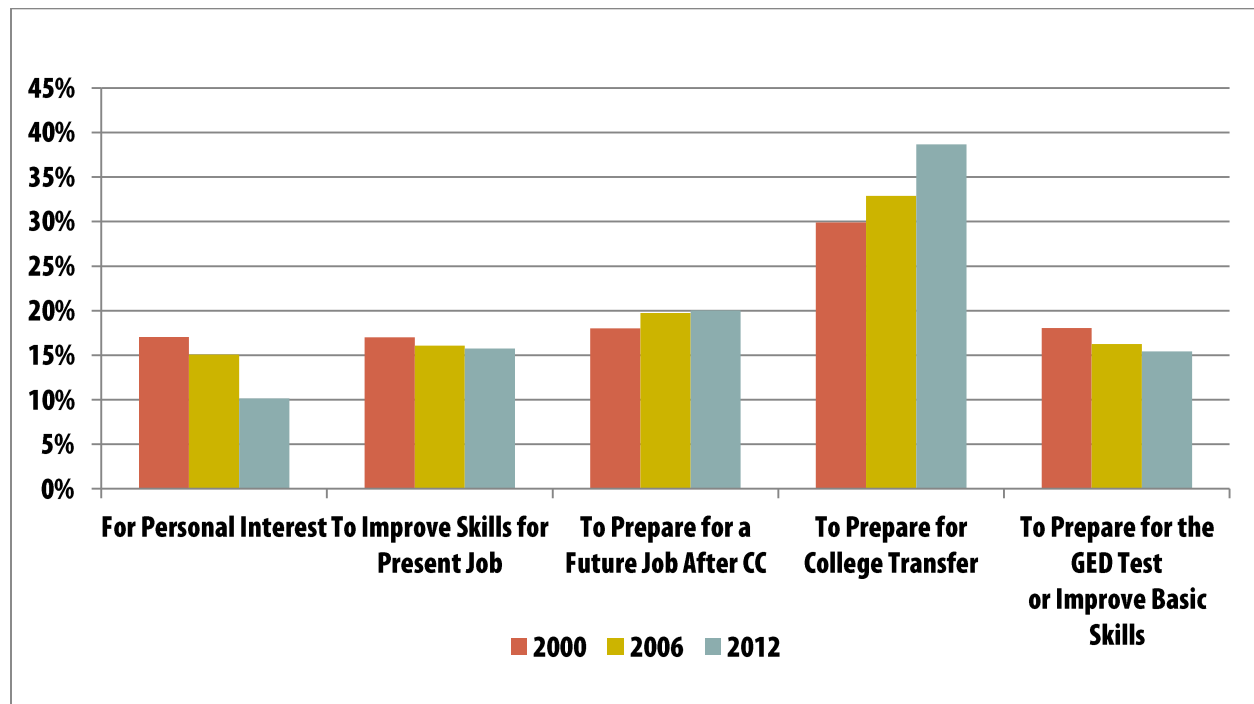


Figure 20 shows program completers by residency at enrollment. Program completers that reside in state correctional institutions represented 3.4% of all completers in 2000, 3.7% in 2006, and 2.5% in 2012. Out-of-district completers as a percentage of the total increased steadily over this period: 7.8% in 2000, 9.1% in 2006, and 9.5% in 2012.

## 9. Student Intent.

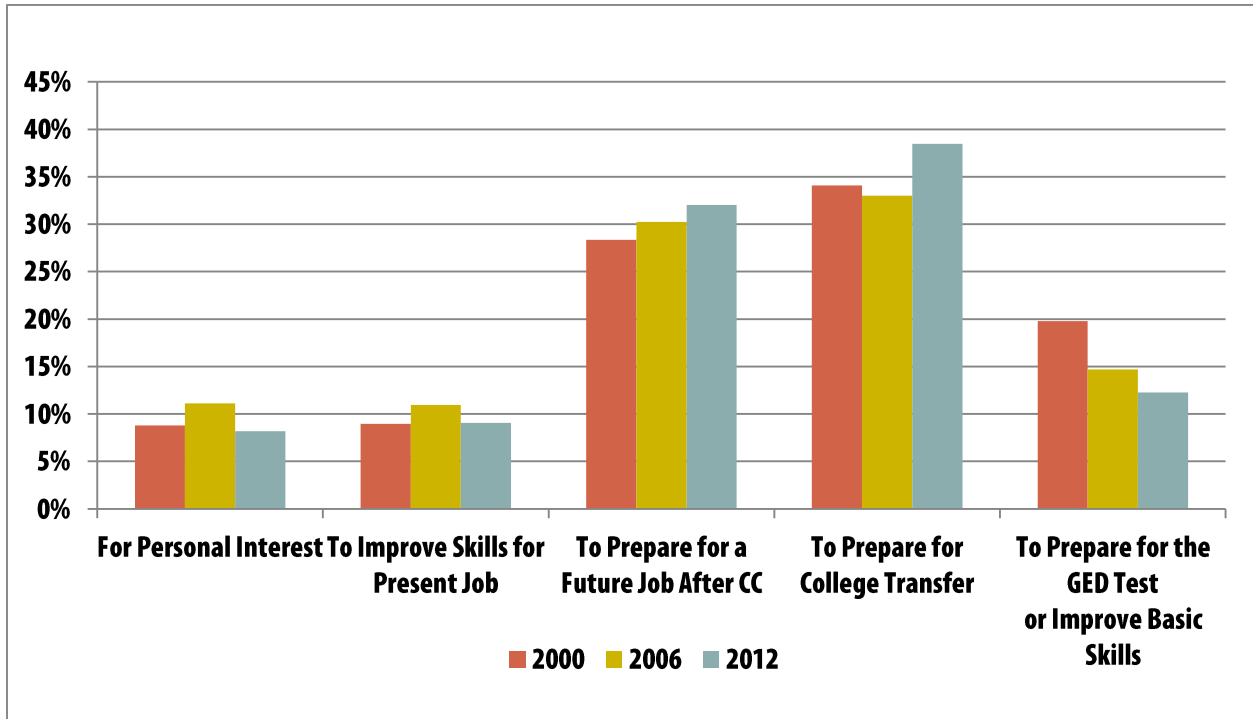
Preparing for college transfer is the intent of the largest percentage of enrollees. In addition, students intending to transfer are the fastest growing group, increasing from 30% in 2000 to 38.7% in 2012. In 2000 similar percentages of Illinois community college enrollees indicated their educational goals were either personal interest, improving skills for their current job, or preparing for a job after school (18%). By 2012, students enrolled for personal interest had declined to 10% of the total. Enrollees preparing for the GED or improving their basic skills also decreased between 2000 and 2012. Figure 21 presents student intent data for individuals enrolled in 2000, 2006 and 2012.

**Figure 21. Program Enrollments by Student Intent at Enrollment  
2000, 2006, 2012**



Completions were highest in 2000 for students who were preparing for college transfer (34.1%) followed by students preparing for a job after community college (28.4%). As evident in Figure 22, these percentages both grew by 2012. College transfers grew to 38.5% and students preparing for jobs increased to 32.0% of all completers. Completions were lowest for completers preparing for the GED or to improve basic skills, decreasing from 19.8% to 12.3% during this period.

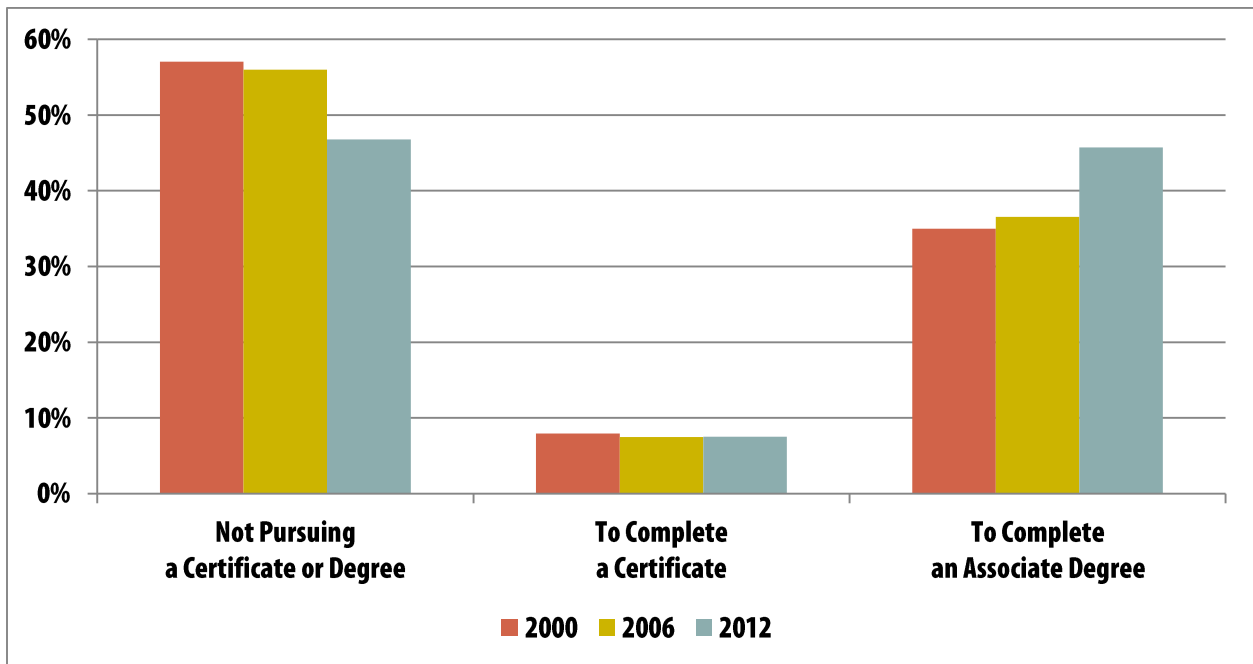
**Figure 22. Program Completers by Student Intent at Enrollment  
2000, 2006, 2012**



## 10. Educational Objective.

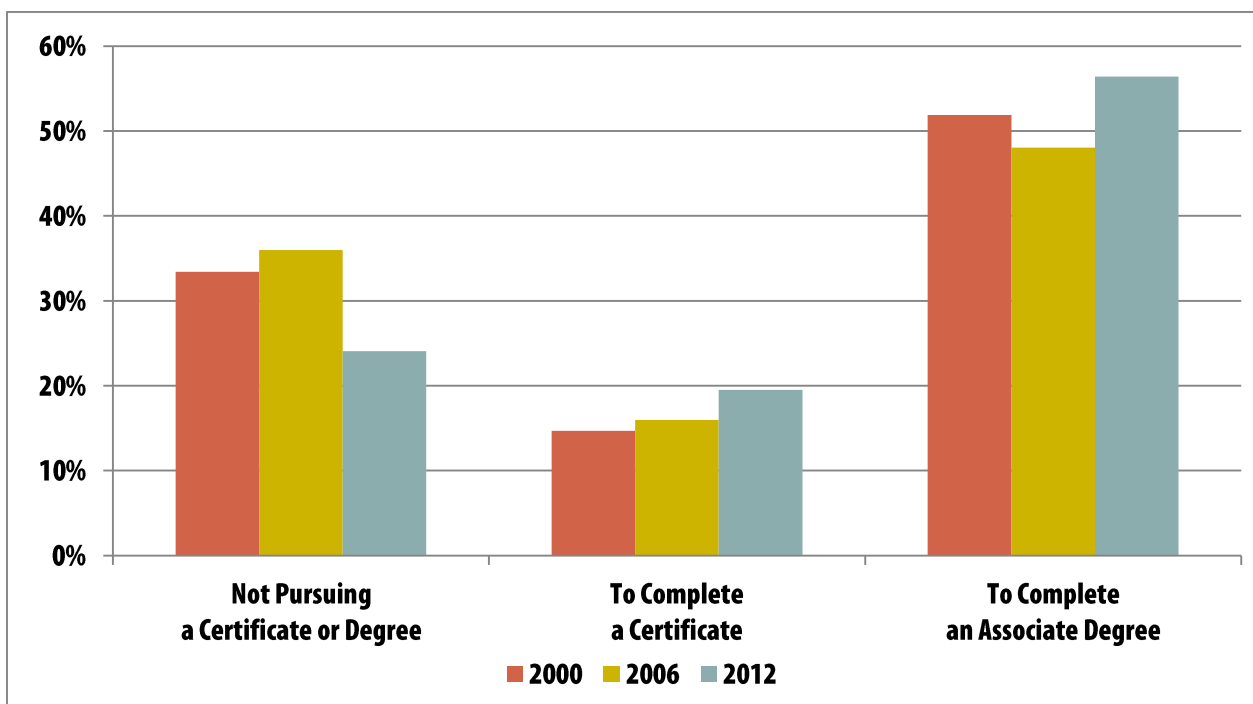
As illustrated in Figure 23, the percentage of enrollees who were not pursuing a certificate or associate degree decreased from 57.1% in 2000 to 46.8% in 2012. A slight increase occurred from 2000 to 2006 for students enrolling to complete an associate degree, from 35.0% to 37.5%. By 2012, there was a strong increase to 45.7% for students with the objective of obtaining an associate degree.

**Figure 23. Program Enrollments by Student Objective at Enrollment  
2000, 2006, 2012**



As shown in Figure 24, students pursuing an associate degree made up the largest percentage of total completers from 2000 to 2012. After dropping from 2000 to 2006, this figure increased significantly in 2012. Completers that had the intent to complete a certificate make up a small but growing portion of the total.

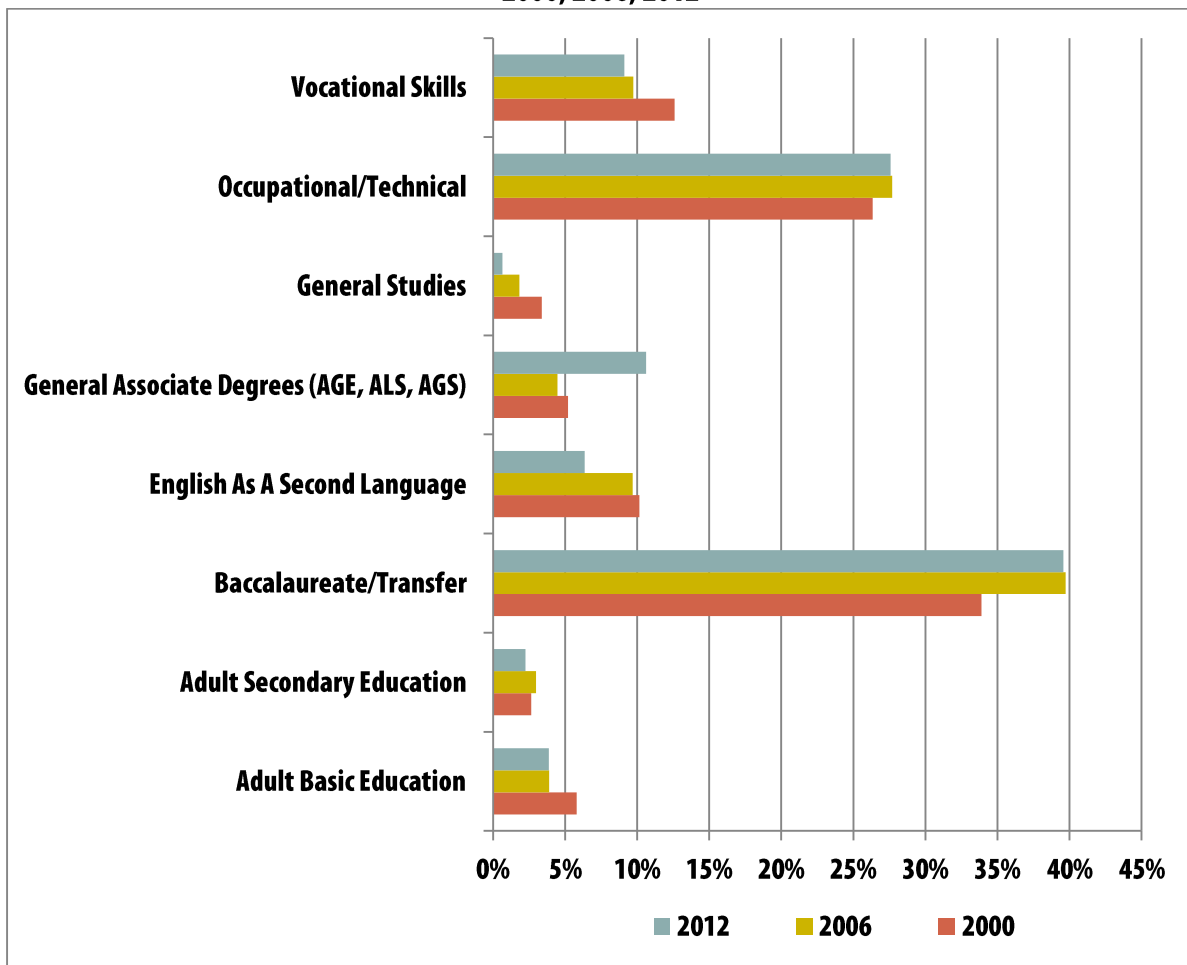
**Figure 24. Program Completers by Student Objective at Enrollment  
2000, 2006, 2012**



## 11. Program Classification.

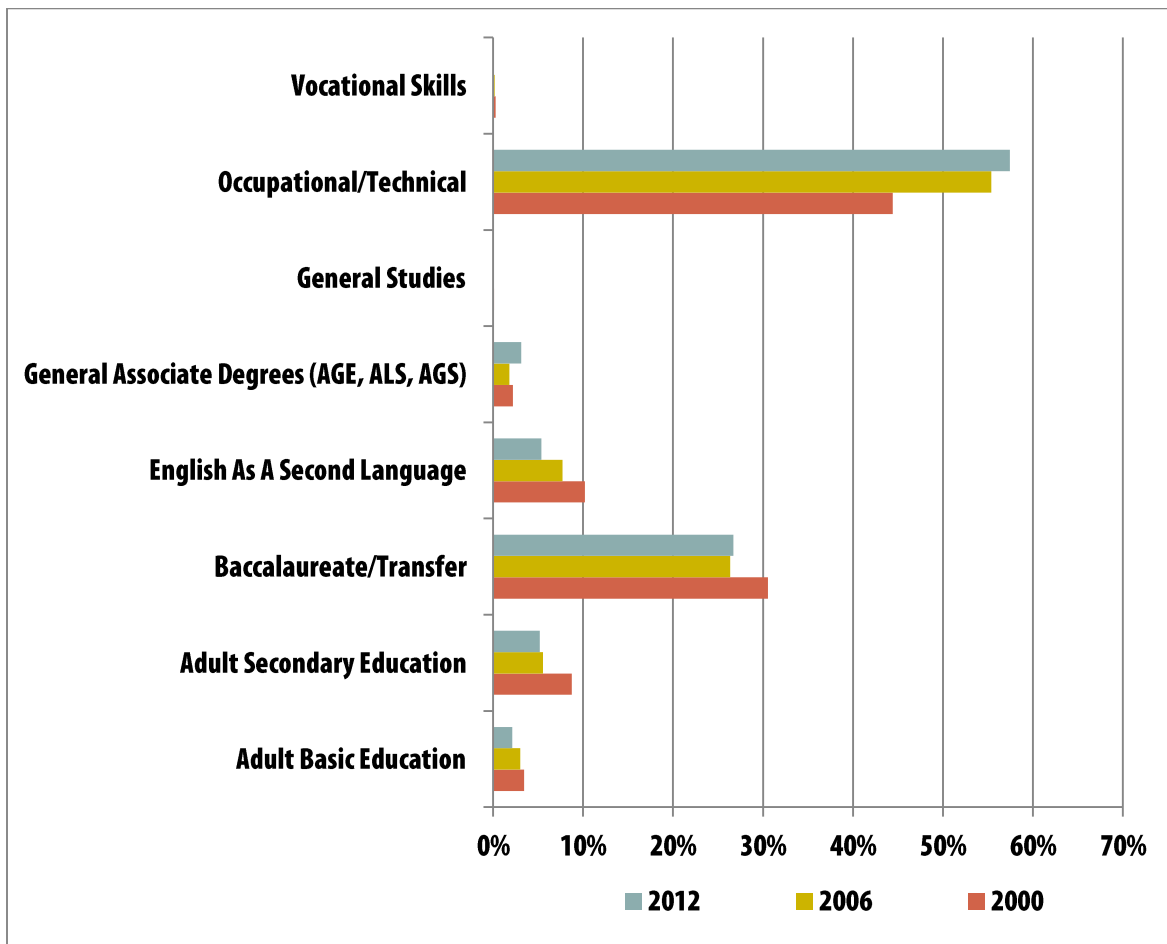
Between 2000 and 2012 the top programs in terms of total overall enrollments have remained baccalaureate/transfer and occupational/technical instruction. These two programs represented over two-thirds of all enrollments in 2000 and 2012. Enrollees in vocational skills, English as a second language, and adult basic education all declined as a percentage of the total between 2000 and 2012. There was strong growth in enrollment in general associate degree programs from 2006 to 2012. Figure 25 illustrates these trends.

**Figure 25. Program Enrollments by Program Classification Structure at Enrollment  
2000, 2006, 2012**



As evident in Figure 26, in both 2006 and 2012, occupational and technical instruction was selected by the majority of program completers. The second highest percentage of program completers was in baccalaureate/transfer programs, but this number declined from 30.6% in 2000 to 26.7% in 2012. Third highest is English as a second language which declined from 10.2% in 2000 to 5.4% in 2012.

**Figure 26. Program Completers by Program Classification Structure at Enrollment  
2000, 2006, 2012**



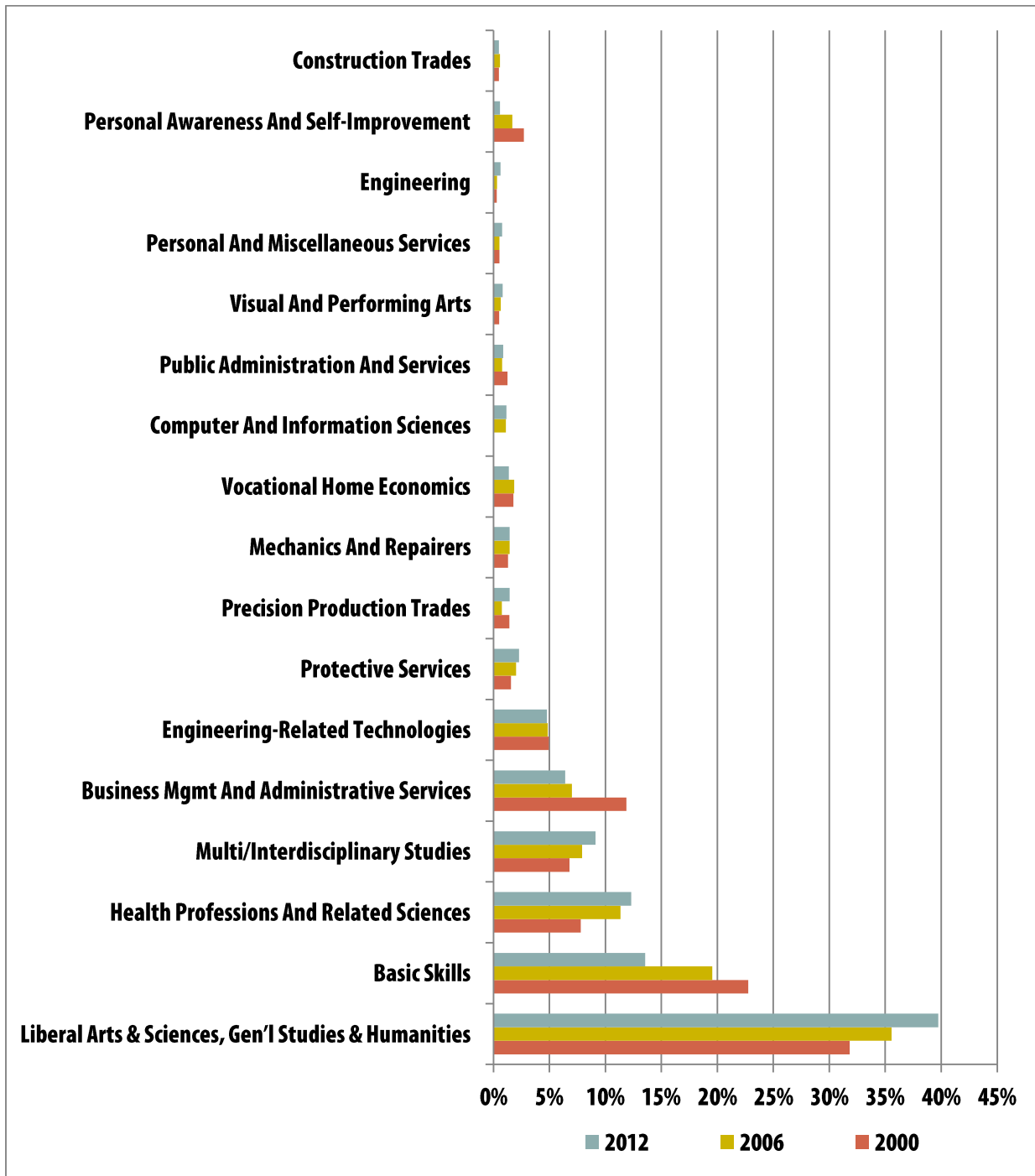
## 12. Instructional Program.

Using the national CIP (Classification of Instructional Programs) typology at the two-digit level, students enrolling in an Illinois community college may select from 35 programs of instruction. Overall, the general pattern of enrollments remained stable from 2000 to 2012. Five broad CIPs stand out as representing 81% of enrollments in all three years evaluated:

- Liberal Arts and Sciences, General Studies and Humanities
- Basic Skills
- Business Management and Administrative Services
- Health Professions and Related Sciences
- Multi/Interdisciplinary Studies

As portrayed in Figure 27, the most significant changes were increases in the percentage of students enrolling in Liberal Arts and Sciences, General Studies and Humanities (31.8% in 2000 to 39.7% in 2012) and Health-related professions (7.8% to 12.3%). There were declines in Basic Skills (22.8% to 13.6%) and in Business-related (11.9% to 6.4%) enrollments.

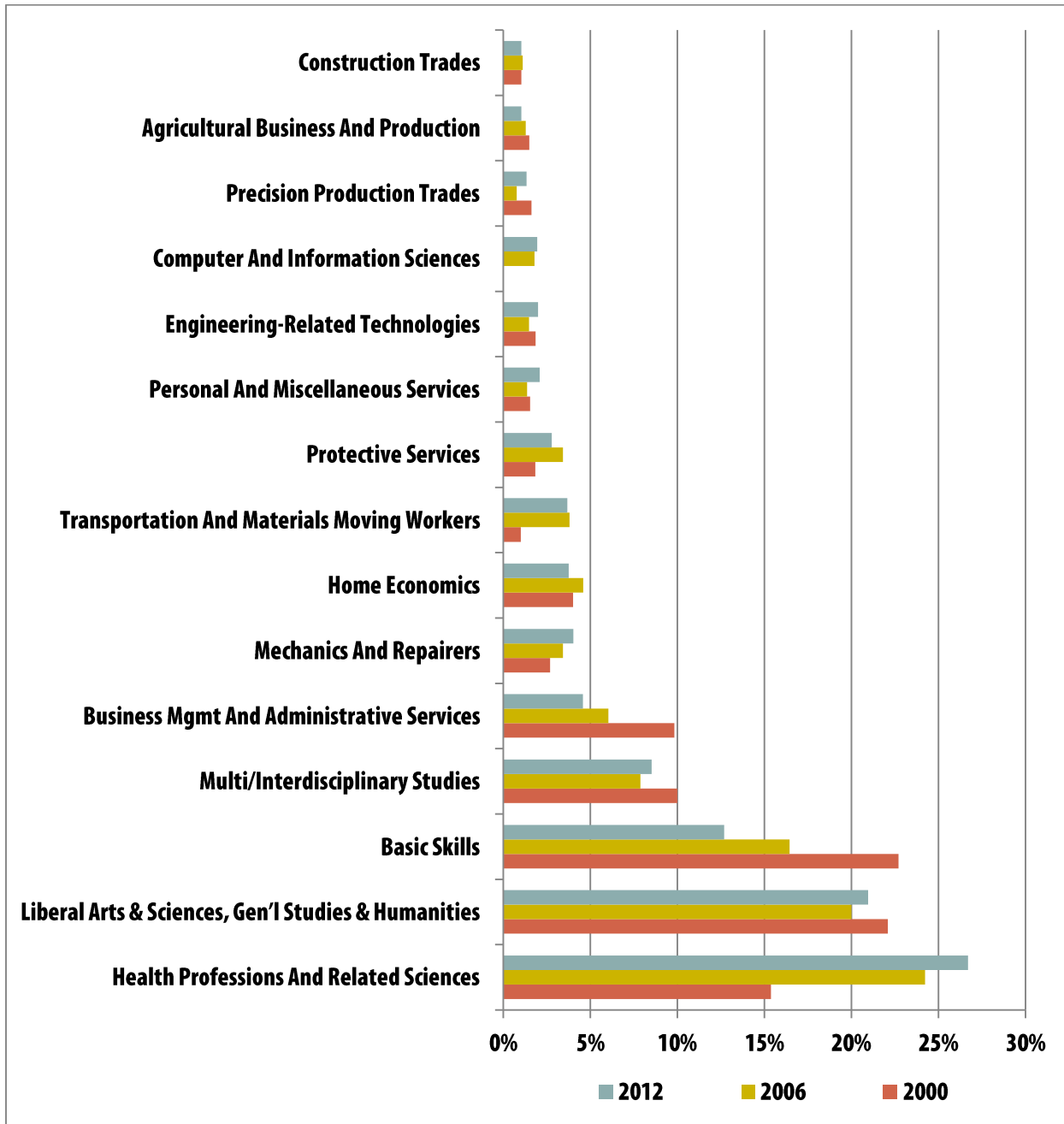
**Figure 27. Program Enrollments by Classification of Instructional Program at Enrollment 2000, 2006, 2012**





Completer data reveal the same top five CIPs but the rank order differs. Basic Skills had the largest percentage of completers in 2000 at 22.7% but was eclipsed by Health Professions and Related Sciences in 2012 at 26.7%. Liberal Arts and Sciences programs saw a slight decrease from 22.1% to 20% and Transportation and Materials Moving increased strongly from 1.0% to 3.7% of all completers in 2012. Programs with the largest decreases in their percentage of all completers included Basic Skills and Business Management and Administrative Services. Figure 28 displays these data.

**Figure 28. Program Completers by Classification of Instructional Program at Enrollment  
2000, 2006, 2012**



### 13. Veteran Status.

Veteran enrollment at Illinois community colleges is growing. In 2000, 8,323 students identified themselves as veterans – about 1.2% of total enrollees. This number grew to 11,102 (1.6%) in 2006, and grew again by 2012, when 13,225 veterans made up 1.8% of total enrollment.

Veterans make up an even larger percentage of completers. In 2000, 1.5% of completers (622) reported veteran status. Veterans made up 2% of 2006 completers (1,069) and 2.5% of 2012 completers (1,643).

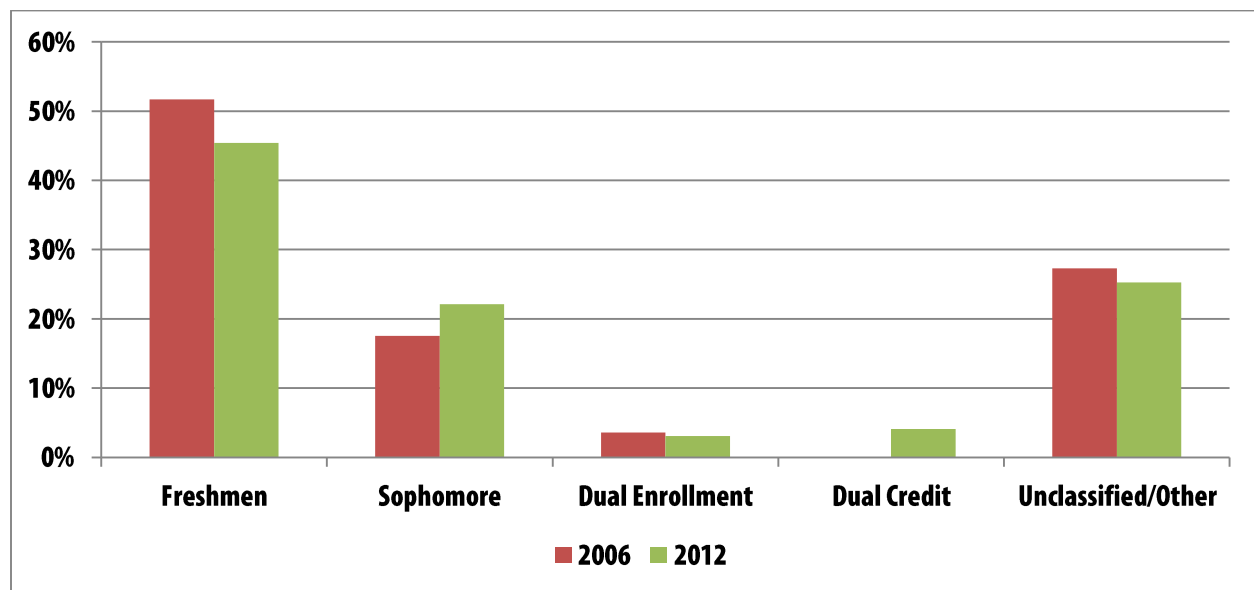
### 14. Online Status.

In 2006, 49,517 Illinois community college students took at least one online course for credit. That was 7.3% of the total annual headcount. Over the next six years, online students almost doubled. By 2012, 105,536 students took at least one online class for credit, about 14.8% of total students.

### 15. Student Level Status.

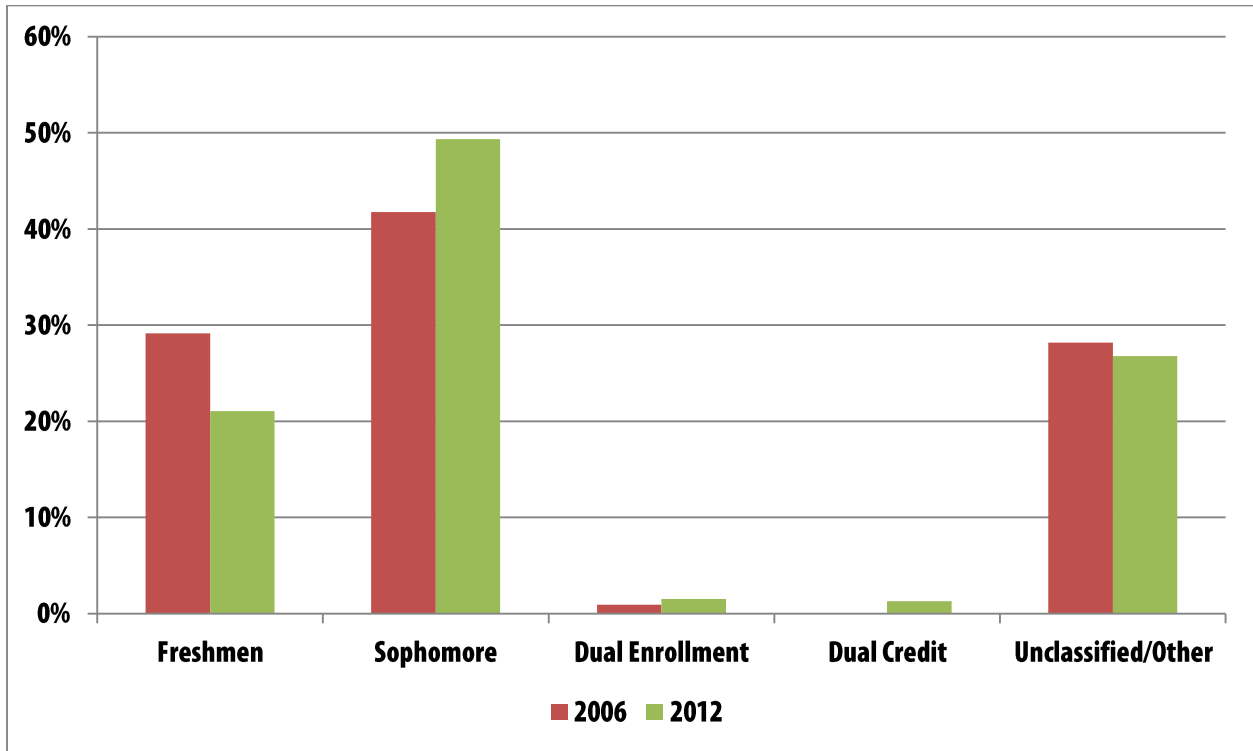
Dual credit students are high school students that are receiving both high school and college credit for courses they complete at an Illinois community college. Dual enrollment students are high school students that receive college credit but not high school credit for courses they complete. Dual enrollment students made up between 3% and 4% of enrollees (Figure 29). Freshmen make up the largest group of Illinois community college enrollees. Sophomores grew as a portion of total enrollment between 2006 and 2012 (data were not collected in 2000). Dual credit enrollments were only tracked in more recent years so there is not an earlier year to compare this to. These students made up just over 4 percent of enrollments in 2012.

**Figure 29. Program Enrollments by Student Level  
2006 and 2012**



Sophomores make up the largest groups of completers, growing from 41.7% in 2006 to 49.3% in 2012 (Figure 30). Dual enrollment students made up less than 1% of completers in 2006. Dual enrollment and dual credit students each made up about 1.5% of completers in 2012.

**Figure 30. Program Completers by Student Level  
2006 and 2012**



## DATA LIMITATIONS AND POTENTIAL FUTURE ENHANCEMENTS

Throughout the study, the source of community college student employment and earnings data is the Unemployment Insurance (UI) wage record data reported by Illinois employers for each of their employees. UI wage record data are collected on a quarterly basis by the Illinois Department of Employment Security (IDES). While the matching of ICCB student records and IDES UI wage record data grounds the analysis in empirical evidence it also provides some limitations. Several categories of workers are not included in the UI dataset used for this analysis.

Employees not included in the UI dataset include self-employed individuals, agricultural workers on small farms, railroad workers, and federal workers. The last group, federal workers, is likely the most significant exclusion from the data. Statewide, federal workers make up about 1.5% of total employment. However, the percentage is significantly higher in some districts.

Individual earnings are reported based on the location of the employer. Thus, workers earning income in other states are not reported to the Illinois UI system, even if the worker resides in Illinois. This has the potential to impact the earnings outcomes for individual districts along the border. This impact is likely significantly more important in border districts adjacent to major out of state employment centers such as St. Louis, MO, Davenport/ Bettendorf, IA, Kenosha/Racine, WI, and Terre Haute, IN.

These limitations have the potential of skewing the earnings outcomes. If a student was employed in Illinois prior to entering the community college system, but became employed in another state (or in one of the excluded employment categories), the data would show that they had no post-completion earnings. A worker in this situation may be counted as having a negative pre to post completion earnings gain when in fact they may have experienced a significant earnings increase.

Additionally, wage records were only supplied by IDES for individuals who had attended an Illinois community college. This limited the analysis to a comparison of individual earnings before entering a college and after completions. A preferred approach would have been to compare earnings outcomes of college attendees to similar individuals that had not attended a community college. However, the data were not available to perform this analysis.

Finally, the approach employed to analyze student outcomes also has limitations. Earnings gains were calculated by comparing an individual's earnings in the four quarters prior to earnings their first community college credits to their earnings in the four quarters after completion. Students that were in high school prior to entering a college (or even as they entered a college) would have limited earning potential prior to entrance. Likewise, students that enrolled in a four year college after graduation would have limited earnings potential in

the year immediately following completion. Data were not available to identify students that transferred to another school after completing a program.

The next iteration of the Economic Impact Study will look to utilize additional data sources to enhance the study. IDES currently participates as a member of the Wage Record Interchange System (WRIS). WRIS facilitates the exchange of wage data among participating states for the purpose of assessing and reporting on state and local employment and training performance. If given permission to access WRIS data, ICCB and NIU CGS could more effectively track Illinois community college student employment in border states. The use of National Student Clearinghouse (NSC) data will also be investigated by ICCB and NIU CGS. NSC is the nation's trusted source for student-level enrollment and degree verification. By matching ICCB student records to NCS student-level data, students continuing to persist in higher education after exiting an Illinois community college (such as baccalaureate/transfer students) could be excluded from certain economic student outcomes.

## GLOSSARY

*Completer.* A student who has completed a degree or certificate program of study.

*Direct Impacts (Direct Effect).* The set of expenditures (college purchases and payrolls) or employment applied to the economic model for impact analysis.

*Enrollments.* Students who took one or more courses in a given year.

*Exiter.* A student that exits the community college system. Can be a *completer* or *non-completer*.

*Indirect Impact (Indirect Effect).* The impacts derived as additional effects caused by industries purchasing from other industries. In the case of community colleges, these might occur through local purchases of goods such as office supplies and services such as consulting or auditing services.

*Induced Impacts (Indirect Effect).* The impacts derived from college employees spending their income in the local economy. For the purposes of this report, induced impact are added to indirect impacts and reported as a single figure labeled indirect impacts.

*Internal Rate of Return (IRR).* The average annual return earned through the life of an investment. (Source: BusinessDictionary.com)

*Net Present Value (NPV).* The difference between the present value of the future cash flows from an investment and the amount of investment. Present value of the expected cash flows is computed by discounting them at the required rate of return. (Source: BusinessDictionary.com)

*Net price of attending school.* Average net price is generated by subtracting the average amount of federal, state/local government, or institutional grant or scholarship aid from the total cost of attendance. Total cost of attendance is the sum of published tuition and required fees (lower of in-district or in-state), books and supplies, and the weighted average for room and board and other expenses. (Source: College Navigator, National Center for Education Statistics)

*Non-completer.* A student who exits the community college system without completing a degree or certificate program of study.

*Total Impacts.* The sum of the *direct*, *indirect* and *induced* impacts.

*Value added.* Gross value added is the value of output less the value of intermediate consumption; it is a measure of the contribution to GDP made by an individual producer, industry or sector. It equals gross output (sales or receipts and other operating income, plus inventory change) minus intermediate inputs (consumption of goods and services purchased from other industries or imported). Value added consists of compensation of employees, taxes on production and imports less subsidies, and gross operating surplus (profits). (Source: IMPLAN)

## DATA SOURCES

Illinois Department of Employment Security. Unemployment Insurance (UI) Wage Data Records.

Illinois Community College Board Centralized Data System.

- ICCB Annual Enrollment and Completion (A1) Data Records
- ICCB Faculty, Staff and Salary (C1/C2) Data Records
- ICCB College Financial Submissions

IMPLAN Economic Impact Modeling System (Input-Output)

National Center for Education Statistics. Integrated Postsecondary Education Data System (IPEDS).