

RESEARCH REPORT | APRIL 2025

Which Community College Awards Are Likely to Prepare Students for Post-Completion Success?

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Three years after the onset of the COVID-19 pandemic, nearly three-quarters of community colleges had not fully restored their enrollments to pre-pandemic levels (Fink, 2025). Enrollments had already been declining since around 2011, when labor markets began to recover after the Great Recession (Jenkins & Fink, 2020). The decrease in community college enrollments nationally over more than a decade has been accompanied by growing skepticism among prospective students and large segments of the public about the value of a college education. A 2023 survey of students who had recently attended a community college (including some graduates and some who stopped out before completing) found that respondents earning less than the median of \$48,000 annually were markedly less likely to say their education was worth the cost or helped them achieve their goals than those who earned more than that amount (Strada, 2023). The survey also found that students who completed an associate degree or transferred to a four-year institution valued their education more than those who did not.

However, most students who start at a community college do not complete any credential. According to the latest data from the National Student Clearinghouse, only 43% of students who start at a community college complete a degree or certificate at any institution within six years, meaning that most come away with no credential (Lee & Shapiro, 2023).¹ Among those who do earn a credential, too many earn one that is not well designed to prepare them for success in employment or further education.

Over 90% of the credentials that community colleges award each year are designed to lead to direct employment or transfer to a bachelor's program rather than for personal enrichment. Students who enroll in these programs should expect them to lead efficiently to a living-wage job and career advancement or to a bachelor's degree program in their field of interest. Yet many community college workforce and transfer programs do not enable students to secure a good job or transfer in a major without excess credits. What is more, graduates of programs that do prepare students for good jobs or transfer are too often not demographically representative of the overall student population and communities that the colleges serve.

The causes of community college enrollment declines in recent years are complex (Jenkins, 2023). However, it is clear that to recruit and retain students in today's fiercely competitive higher education marketplace, community colleges must ensure that their programs are worth the time and resources to complete (Jenkins & Wyner, 2022). Moreover, colleges cannot meet their goals to support upward mobility for their communities solely by increasing completion rates for just any credential by low-income students, students of color, and those from other underserved populations. To achieve more equitable outcomes, community colleges must enable students from underserved groups to earn credentials that lead to well-paying career-path jobs directly or prepare them to transfer efficiently to a bachelor's degree program in students' major fields of interest.

In this report, we use Integrated Postsecondary Education Data System (IPEDS) data to classify the more than 1.425 million degrees and certificates that community colleges awarded in credit-bearing programs during academic year 2022-23 by intent, level (associate degree, bachelor's degree, long certificate, or short certificate), and field. By "intent," we mean whether the program is designed to enable students to (1) enter the workforce, (2) transfer to a bachelor's degree program, or (3) take general education courses to explore college or for personal fulfillment. We then use College Scorecard (collegescorecard.ed.gov) earnings data matched to the awards data and evidence from research on the outcomes of community college workforce and transfer credential completers to provide a rough assessment of which credentials by intent, level, and field are more likely to enable students to secure a living-wage job or transfer efficiently in a major and which are not. We also examine the gender and racial/ethnic characteristics of program awardees to assess whether graduates of programs with potentially higher post-completion value for employment or transfer are representative of graduates overall.

Exploring Your Own Data

This report and an accompanying [data tool](#) are intended to encourage community colleges to examine their own data on what degrees and certificates they are awarding, which of those credentials enable students to secure good jobs directly or transfer efficiently to a bachelor's degree program in students' major fields of interest, and whether certain demographic groups are underrepresented among graduates of programs that have strong post-completion value for employment and transfer or are overrepresented among lower value program graduates. Addressing these questions is an important first step toward ensuring that all community college workforce and transfer programs enable students to achieve their goals and thus make the investment of effort, money, and time to enroll in and complete community college worthwhile.

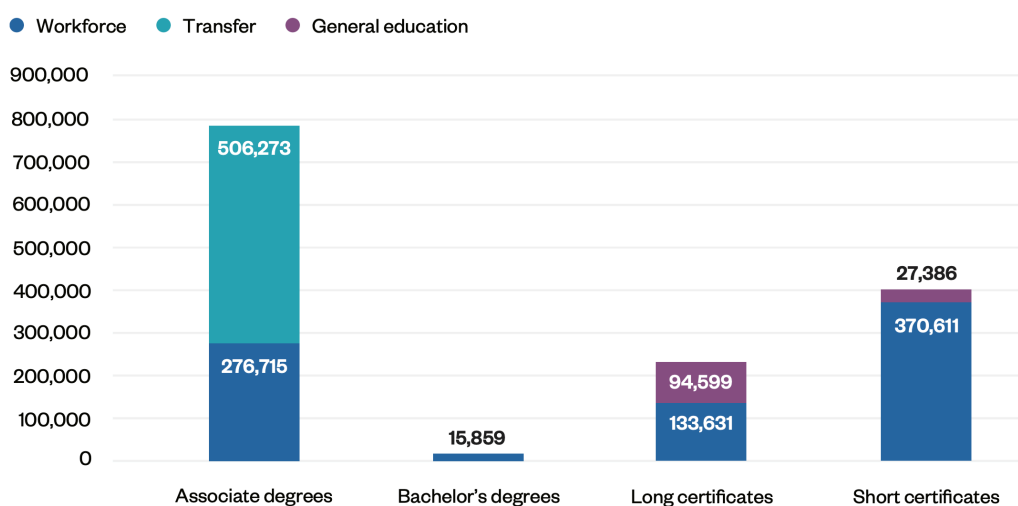
Assessing the Potential Post-Completion Value of Community College Credentials

Efforts to examine the post-completion value of community college credentials tend to focus on employment earnings. Not surprisingly, they find differences in value by the level of the credential and the field. Graduates with degrees generally earn more than those with certificates. Credentials in high-paying technical fields such as allied health and nursing, engineering technology, and industrial and construction technology and trades are associated with higher earnings than those in social services and other lower wage fields (Belfield & Bailey, 2017).

But not all community college credentials are designed to prepare students to enter the workforce directly; in fact, about two thirds of associate degrees awarded are intended to enable students to transfer to a bachelor’s program. And while some community college workforce certificates are intended to help students enter a new career field, many are designed to enable workers already in a field to learn new skills. Still other certificates are designed for students interested in taking general education courses to explore college or advance their learning for personal reasons.

In this analysis, we classify community college awards by their intent, level, and field. Using IPEDS awards data, we identify three intents: (1) workforce, (2) transfer, and (3) general education. Figure 1 shows the breakdown by intent of the 1.425 million community college credentials awarded in 2022-23.

Figure 1. Community College Awards by Level and Intent (2022-23)



Source. Authors’ analysis of IPEDS data on more than 1.425 million credentials awarded by 920 community colleges in 2022-23.

- 1. Workforce credentials** are designed to prepare students to enter the workforce directly or advance in jobs. We identified them in IPEDS based on the program name, which typically indicates the occupations each program is intended to prepare students for. Workforce credentials include a third of associate degrees awarded by community colleges, virtually all bachelor’s degrees, and 80% of certificates.
- 2. Transfer credentials** are associate degrees in program tracks intended to prepare students to transfer and earn a bachelor’s degree. These credentials, which comprise two thirds of community college associate degree awards, include associate degrees in liberal arts and sciences subjects and in career fields such as business, healthcare, and engineering that are labeled “general” or “pre-baccalaureate” (as opposed to “technology” or “technician”). They also include associate degrees in liberal, general, or interdisciplinary studies because community colleges often advise transfer-intending students into these tracks.
- 3. General education credentials** are certificates awarded in general or liberal studies, humanities, or social sciences. We refer to these as general education certificates, following a term used for lower division coursework in liberal arts and sciences.

Table 1 provides more detail on the number and share of awards by level and intent for the 1.425 million credit-bearing program degrees and certificates awarded by community colleges in 2022-23.² From this table, we can see the following:

- Over half (56%) of the awards in 2022-23 are workforce credentials designed to prepare students to directly enter or advance in jobs.
- More than a third (36%) of all awards—and two thirds of associate degrees—are designed to prepare students to transfer to a bachelor’s program.
- The remaining 9% are general education certificates in liberal or general studies, humanities, and social sciences.

Table 1. Community College Credit Awards by Level and Intent (2022-23)

Level	Number of Awards			
	Workforce	Transfer	General education	Total
Associate degrees	276,715	506,273	N/A	782,988
Bachelor’s degrees	15,859	N/A	N/A	15,859
Long certificates	133,631	N/A	94,599	228,230
Short certificates	370,611	N/A	27,386	398,073
Total	796,816	506,273	121,985	1,425,074

Level	Share of Awards			
	Workforce	Transfer	General education	Total
Associate degrees	35%	65%	N/A	100%
Bachelor’s degrees	100%	N/A	N/A	100%
Long certificates	59%	N/A	41%	100%
Short certificates	93%	N/A	7%	100%
Total	56%	36%	9%	100%

Source. Authors’ analysis of IPEDS data on more than 1.425 million credentials awarded by 920 community colleges in 2022-23.

Note. IPEDS classifies certificates as those that are at least one year long (equivalent to at least 30 semester credits) and those that are less than one year long (or fewer than 30 semester credits). The long certificates include 4,140 “post-AA certificates,” which are credentials for workers in a field who already have an associate or bachelor’s degree. Percentages may not add up to 100% due to rounding.

The subsequent sections of this report analyze the post-completion value of community college credentials by level and field and examine whether certain groups of students are equitably represented among graduates of programs assessed to have higher potential value for employment or transfer.

Post-Completion Value of Community College Workforce Credentials

In the following, we enumerate the number of workforce or career-technical credentials awarded by community colleges in 2022-23 by level and field. We match earnings data from the College Scorecard to IPEDS awards data to calculate the median annual earnings associated with awards of a given level and field two years after completion, averaged across colleges.³ For ease of exposition, we call these median earnings. We then classify awards in a given field into three groups by their association with median earnings that are (1) well above a living wage, (2) near a living wage, and (3) well below a living wage.

The College Scorecard two-years post-completion median earnings are expressed in 2019 dollars; we use the MIT Living Wage Calculator to make a very rough annual income estimate of \$35,000 as a living wage nationally in 2019. We then classify median earnings higher than \$40,000 as “well above a living wage” and median earnings less than \$30,000 as “well below a living wage.” We classify median earnings within the \$30,000–\$40,000 range as “near a living wage.” These ranges are not based on a systematic analysis of the data; rather, they provide a rough approximation of the earnings associated with particular types of completed programs relative to a standard estimate of a living wage.

The College Scorecard data represent median earnings based on federal tax records of former Title IV financial aid recipients who earned a given credential and were not still enrolled in higher education during the measurement period following completion. The College Scorecard data have several limitations as measures of earnings associated with particular credentials.⁴ They should not be seen as measures of the economic returns to particular credentials or earnings by particular groups of awardees. Still, they provide a rough but useful approximation of the level of annual earnings associated with credentials in a field relative to a living wage.

Workforce Associate Degrees

Community colleges offer a substantial number of associate degrees in workforce or career-technical fields that can lead to jobs paying a living wage and facilitate career advancement. Table 2 shows the number of the over 275,000 workforce associate degrees awarded by community colleges in 2022-23 by field, the median earnings associated with credentials in each field, and the percentage of graduates who are female, Black, Hispanic, and White. From this table, we can see the following:

- About half (48%) of these awards are associated with median earnings well above a living wage two years after completion. These are in nursing and allied health technology, industrial and construction technology and trades, and engineering and science technology.
- Almost 30% of the awards are associated with median earnings near a living wage. The largest numbers are in public safety and corrections and computer and information technology.
- Still, over 63,000 (23%) are associated with median earnings well below a living wage. The largest numbers are in business, communications and design, early childhood education, health administrative services, and culinary services.

Which Community College Awards Are Likely to Prepare Students for Post-Completion Success?

- Women are underrepresented among graduates in industrial and construction technology and trades and engineering technology compared to workforce associate degree graduates overall. Black and Hispanic students are equitably represented among graduates in nursing and allied health technology but underrepresented in industrial and construction technology and trades and engineering technology.

Table 2. Community College Workforce Associate Degrees by Field (2022-23)

Field	Number of awards	Associated median earnings two years after completion (2019 dollars)	Female	Black	Hispanic	White
Well above living wage						
Nursing	58,026	\$57,943	86%	12%	17%	58%
Allied health technology	34,125	\$44,453	79%	8%	18%	60%
Industrial & construction technology & trades	32,982	\$40,966	12%	7%	20%	61%
Engineering technology	5,820	\$47,844	15%	8%	15%	62%
Science technology	2,778	\$46,636	63%	18%	17%	47%
Subtotal	133,731					
Share of all workforce associate degrees	48%					
Near living wage						
Public safety & corrections	28,751	\$31,905	53%	10%	35%	43%
Computer & info. technology	26,383	\$35,324	25%	12%	18%	49%
Allied health admin. services	15,050	\$32,946	72%	10%	38%	32%
Agriculture & natural resources	8,867	\$31,894	58%	2%	15%	74%
Funeral & mortuary science	893	\$36,752	76%	17%	14%	64%
Subtotal	79,944					
Share of all workforce associate degrees	29%					
Well below living wage						
Business	17,777	\$29,089	67%	13%	21%	47%
Communications & design	14,327	\$26,459	59%	8%	28%	46%
Early childhood education	13,559	\$20,581	96%	14%	38%	37%
Health admin. services	5,869	\$29,568	93%	20%	15%	52%
Culinary services	3,668	\$25,567	63%	18%	23%	42%
Human serv. & public admin.	3,136	\$26,298	83%	20%	26%	43%
Mental & public health	3,465	\$28,314	82%	23%	17%	49%
Cosmetology	1,239	\$18,838	96%	17%	29%	43%
Subtotal	63,040					
Share of all workforce associate degrees	23%					
Total	276,715		61%	11%	23%	52%

Source for this and subsequent tables on awards and associated earnings. Authors' analysis of IPEDS data on more than 1.425 million credentials awarded by 920 community colleges in 2022-23. Associated earnings are averages of College Scorecard data on median earnings of 2014-15 and 2015-16 community college program awardees in the given field two years after completion, in 2019 dollars. See also endnote 4.

Note. Light gray cells indicate program areas associated with earnings well above a living wage in which women or students of color are underrepresented among graduates. Dark gray shaded cells indicate program areas associated with earnings well below a living wage in which women or students of color are overrepresented among graduates. In 2019, the living wage for an individual was about \$35,000.

The proliferation of advanced technologies across fields has increased demand for skilled workers to fill technician jobs that pay well above a living wage and provide opportunities for career advancement. Most of the projected new jobs in these fields will require a bachelor’s degree or higher, but demand is expected to remain strong for “middle-skill” workers who have less than a bachelor’s degree, particularly those with a workforce associate degree (Carnevale et al., 2023).⁵ These developments create both a need and an opportunity for community colleges to expand workforce programs that will increase upward mobility for students and communities and build talent to meet employer demand and help their local economies thrive.

Table 3 shows the annual projected net new openings for middle-skill workers in health technology, STEM technology, and industrial and construction technology and trades, compared to the number of workforce associate degrees in these fields awarded by community colleges nationally in 2022-23.⁶

Table 3. Projected Annual Middle-Skill Job Openings in Technology Fields (2021-31) Compared to Community College Workforce Associate Degrees Awarded (2022-23)

	Health technology	STEM technology	Industrial & construction technology & trades
Projected annual middle-skill job openings	142,830	98,520	608,670
Workforce associate degrees	92,151	34,981	32,982

Source. Middle-skill job projections come from Carnevale et al. (2023).

As is clear from Table 3, the number of associate degrees awarded by community colleges in 2022-23 is below the projected annual demand for middle-skill workers in these fields. The number of health technology associate degrees awarded by community colleges is less than two thirds of the projected annual middle-skill job openings in health technology. Community college associate degrees in STEM technology fields are only about a third of the projected demand, and in industrial and construction technology and trades, the number of awards is only about 5% of the projected demand.⁷

The technician workforce in many high-demand fields is aging and predominantly male and White. To replace retiring workers and fill new jobs, employers will need a diverse workforce that reflects their customers and the communities in which they operate. As Table 2 shows, women (outside of healthcare) and Black and Hispanic students are underrepresented among graduates of many of the workforce programs associated with higher earnings, especially in computer and information technology, engineering technology, and industrial and construction technology and trades.

To meet the projected demand for technicians in technology fields, community colleges will need to expand and diversify enrollments and graduates from programs in these fields. They will also need to expand, diversify, and strengthen transfer pathways in computer and information technology and engineering as well as in education and other fields projected to have many openings for well-paying jobs that offer career advancement.

Community College Workforce Bachelor's Degrees

A growing number of community colleges nationally offer bachelor's degree programs, virtually all of which are in career-technical fields. Students in bachelor's programs at community colleges tend to be more diverse in age, race/ethnicity, and income than those in four-year institutions. Evidence also suggests that these programs generally lead to good job opportunities for students, especially older students and those who are place-bound (Meza & Love, 2022). Though such programs are growing, the number of bachelor's degrees awarded by community colleges is still small: less than 16,000 compared to more than 1.3 million awarded by public universities.

Table 4. Community College Bachelor's Degrees by Field (2022-23)

Field	Number of awards	Associated median earnings two years after completion (2019 dollars)	Female	Black	Hispanic	White
Well above living wage						
Business	5,952	\$41,107	66%	13%	30%	44%
Allied health & nursing	3,934	\$59,400	86%	14%	24%	48%
Computer & info. technology	1,803	\$40,886	25%	11%	24%	45%
Industrial & construction technology & trades	378	\$62,591	31%	7%	19%	56%
Engineering & engineering tech.	180	\$50,287	12%	4%	26%	55%
Subtotal	12,247					
Share of all bachelor's degrees	77%					
Near living wage						
Communications & design	1,227	\$38,815	79%	7%	23%	39%
Education	565	\$39,820	85%	8%	22%	53%
Public safety and corrections	530	\$37,608	54%	17%	32%	45%
Childcare	514	\$37,131	89%	9%	34%	45%
Agriculture & natural resources	143	\$39,375	66%	5%	19%	65%
Subtotal	2,979					
Share of all workforce associate degrees	19%					
Well below living wage						
Human services & public admin.	326	\$27,669	83%	31%	21%	40%
Science & science technology	242	\$30,776	60%	9%	34%	37%
Liberal/general studies	33	\$30,251	45%	6%	3%	82%
Social & behavioral sciences	26	N/A	81%	4%	19%	50%
Personal services	6	N/A	67%	17%	33%	33%
Subtotal	633					
Share of all workforce associate degrees	4%					
Total	15,859		67%	12%	27%	46%

Note. Light gray cells indicate program areas associated with earnings well above a living wage in which women or students of color are underrepresented among graduates. Dark gray shaded cells indicate program areas associated with earnings well below a living wage in which women or students of color are overrepresented among graduates. In 2019, the living wage for an individual was about \$35,000.

Table 4 shows the number of bachelor's awards by field in 2022-23, the median earnings associated with these awards, and the percentage of graduates in each field who are female, Black, Hispanic, and White. From this table, we can see the following:

- Over three-quarters of community college bachelor's degrees are associated with median earnings well above a living wage two years after completion.
- The largest number is in business (5,952), followed by allied health and nursing (3,934) and computer and information technology (1,803).
- Community colleges awarded few bachelor's degrees in other fields where demand in many parts of the country is high, including education (565), engineering and science technology (422), and industrial and construction technology and trades (378).
- As indicated by shading, women and students of color are underrepresented among bachelor's graduates in some higher earning fields and overrepresented among graduates in some lower earning fields.

Workforce Long Certificates

Table 5 shows the relevant statistics on the more than 130,000 community college workforce certificates awarded in 2022-23 for programs at least one year long (equivalent to at least 30 semester credits)—sometimes called “advanced certificates” or “technical diplomas.” From this table, we can see the following:

- A little more than 5% of these long certificates are associated with median earnings well above a living wage. Most of these are in public safety and corrections and engineering technology.
- Three fourths are associated with median earnings near a living wage. The largest numbers of these are in industrial and construction technology and trades, nursing and allied health technology, and business.
- About one fifth (19%) are associated with earnings well below a living wage. Most of these are in cosmetology, early childhood education, and healthcare administrative services.
- Women and Black students are underrepresented among graduates of most programs associated with earnings well above a living wage and are overrepresented among graduates of most programs associated with earnings well below a living wage.

Table 5. Community College Workforce Long Certificates by Field (2022-23)

Field	Number of awards	Associated median earnings two years after completion (2019 dollars)	Female	Black	Hispanic	White
Well above living wage						
Public safety & corrections	7,048	\$43,018	44%	10%	28%	51%
Engineering technology	1,299	\$43,144	12%	7%	20%	59%
Funeral & mortuary science	246	\$46,790	65%	28%	7%	61%
Subtotal	8,593					
Share of all workforce long certificates	6%					
Near living wage						
Industrial & construction technology & trades	40,363	\$34,318	9%	10%	20%	59%
Nursing	17,997	\$35,448	90%	21%	15%	54%
Allied health technology	14,873	\$34,488	56%	14%	28%	54%
Business	14,298	\$33,163	69%	15%	20%	52%
Computer & information technology	7,020	\$38,737	26%	13%	19%	52%
Communications & design	3,050	\$34,944	62%	12%	25%	48%
Agriculture & natural resources	2,123	\$36,597	45%	4%	12%	73%
Subtotal	99,724					
Share of all workforce long certificates	75%					
Well below living wage						
Cosmetology	6,895	\$16,740	93%	18%	29%	45%
Early childhood education	5,623	\$18,378	95%	18%	26%	43%
Health administrative services	5,128	\$28,230	94%	16%	11%	62%
Culinary services	2,337	\$22,214	63%	24%	20%	41%
Allied health assistance	1,880	\$28,509	76%	18%	21%	51%
Mental health & counseling	1,867	\$29,306	73%	17%	20%	50%
Other	1,614	N/A	59%	9%	38%	36%
Subtotal	25,344					
Share of all workforce long certificates	19%					
Total	133,661		55%	13%	19%	56%

Note. These workforce long certificates include 4,140 “post-AA certificates,” which are credentials for workers in a field who already have an associate or bachelor’s degree. Light gray shaded cells indicate program areas associated with earnings well above a living wage in which women or students of color are underrepresented among graduates. Dark gray shaded cells indicate program areas associated with earnings well below a living wage in which women or students of color are overrepresented among graduates. In 2019, the living wage for an individual was about \$35,000.

Community college long certificates in fields such as nursing and allied health, public safety and corrections, computer and information technology, and industrial and construction technology and trades can provide stepping stones to jobs that pay at or above a living wage. Examples include licensed practical nursing, phlebotomy, machining technology, and welding. However, while long certificate programs in these fields appear to improve employment rates and stability, workers with these certificates generally need to earn a degree to advance to jobs that pay well above a living wage and provide strong career advancement opportunities (Minaya & Scott-Clayton, 2022).

Workforce Short Certificates

Table 6 shows the relevant statistics on the more than 370,000 community college workforce certificates awarded in 2022-23 for programs of less than one year in length (equivalent to fewer than 30 semester credits). From this table, we can see the following:

- Almost one fourth of these certificates are associated with median earnings well above a living wage.
- Over half of these certificates are associated with earnings near a living wage; many of these are in industrial technology fields such as welding or in allied health and nursing.
- Although only about one fifth of workforce short certificates are associated with median earnings well below a living wage, these still account for over 75,000 awards.
- Outside of business, women are underrepresented among completers of workforce short certificate programs associated with earnings well above a living wage and are overrepresented among completers of programs associated with earnings well below a living wage. Black and Hispanic students are underrepresented among completers of programs in some higher earning fields and are overrepresented in certain lower earning fields.

Table 6. Community College Workforce Short Certificates by Field (2022-23)

Field	Number of awards	Associated median earnings two years after completion (2019 dollars)	Female	Black	Hispanic	White
Well above living wage						
Business	56,583	\$41,262	62%	16%	27%	42%
Public safety & corrections	23,070	\$42,094	35%	13%	29%	49%
Engineering technology	6,123	\$42,086	14%	10%	18%	60%
Subtotal	85,776					
Share of all workforce short certificates	23%					
Near living wage						
Industrial & construction technology & trades	99,399	\$33,193	11%	12%	21%	57%
Allied health technology	34,931	\$35,198	62%	10%	22%	55%
Nursing	36,820	\$32,849	89%	14%	18%	54%
Computer & information technology	32,730	\$37,389	27%	14%	20%	50%
Mental & public health	3,235	\$31,967	73%	23%	19%	46%
Subtotal	207,115					
Share of all workforce short certificates	56%					
Well below living wage						
Early childhood education	22,537	\$22,974	95%	15%	32%	37%
Secretarial & admin. assistance	9,122	\$21,548	54%	23%	15%	47%
Communications & design	10,107	\$26,786	60%	14%	27%	44%
Health administrative services	7,664	\$27,480	94%	20%	15%	54%
Cosmetology	6,822	\$16,521	93%	28%	25%	38%
Agriculture & natural resources	5,416	\$24,370	54%	5%	18%	66%
Allied health other	4,292	\$26,702	79%	16%	26%	42%
Culinary services	5,146	\$22,551	62%	22%	24%	41%
Health/pharm. assistance	1,921	\$19,184	92%	21%	11%	58%
Other	4,693	N/A	73%	12%	25%	39%
Subtotal	77,720					
Share of all workforce long certificates	21%					
Total	370,611		49%	14%	23%	50%

Note. Light gray shaded cells indicate program areas associated with earnings well above a living wage in which women or students of color are underrepresented among graduates. Dark gray shaded cells indicate program areas associated with earnings well below a living wage in which women or students of color are overrepresented among graduates. In 2019, the living wage for an individual was about \$35,000.

Short workforce programs are generally insufficient for preparing graduates to secure jobs that pay at least a living wage (Minaya & Scott-Clayton, 2022). Short certificates can theoretically provide access for underemployed workers to career ladders in high-paying fields. Other research indicates that women and low-income students are overrepresented in certificate programs in low-wage fields (e.g., childcare and nursing assistance) and underrepresented in short certificate programs in high-paying fields (e.g., engineering technology, manufacturing, and information

technology), which tend to enroll workers already in the occupational field who are seeking to enhance their skills (Baum et al., 2020; Daugherty et al., 2023).

Community college workforce short and long certificate programs are often designed to be stackable (meaning they give credit toward degrees while also enabling students to advance to better jobs in the field). In reality, however, relatively few students stack certificates in this way (Ositelu et al., 2021). Most of those who combine certificate training with degrees already have degrees and experience in the industry (which explains why some short certificates are associated with earnings above a living wage). Community colleges need to ensure that their workforce certificate and degree programs are designed for working students and that students receive advising and support so that underemployed workers can enter and advance up job ladders in high-opportunity, high-demand fields. This will also help build a more diverse pipeline for college degree programs.

Post-Completion Value of Community College Transfer Credentials

About two thirds (over 500,000) of the associate degrees awarded by community colleges in 2022-23 are designed to enable students to transfer to a bachelor's degree program. That so many community college students seek a bachelor's degree is not surprising, since most jobs that pay a living wage for one person—much less support a family—are held by workers with at least a bachelor's degree (Strohl et al., 2024).

Yet only about one third of students who start at a community college transfer to a four-year institution; fewer than half (48%) of those who do transfer earn a bachelor's degree within six years of starting college (Velasco et al., 2024). Many students who successfully transfer and earn a bachelor's degree take far more credits than required for their degrees, which costs them unnecessary money and time (U.S. Government Accountability Office, 2017).

Misalignment of Transfer Associate Degrees with Bachelor's Degree Fields

A key root of the transfer problem is the conventional 2+2 model, which many community colleges and universities subscribe to. Under this model, students seeking to transfer are advised to delay selecting a major and instead take general education liberal arts and sciences courses in their first two years, leaving major courses for junior and senior years at a four-year institution. Students who earn an associate degree under this model often accumulate a variety of liberal arts and sciences credits that they have trouble transferring to specific majors. Advising transfer students to take general education courses before choosing a major is one reason why they end up with excess credits, since they need to take the right lower division credits for their intended major while they are still in the community college (Fink et al., 2018). This can also prevent transfer students from pursuing bachelor's degrees in high-remuneration fields such as STEM, nursing, and business, which have strict lower division requirements. For example, students seeking to major in a STEM field may need to take an advanced introductory chemistry course rather than a general chemistry course (Fink et al., 2023). Transfer-intending students who are unaware of pre-major requirements may lock themselves out of these fields. Unfortunately, many find out too late that they have taken courses that do not apply to their majors. This may be one reason why a smaller proportion of community college transfer students who complete a bachelor's degree do so in STEM fields compared to students who start at a four-year institution (Velasco et al., 2024).

Which Community College Awards Are Likely to Prepare Students for Post-Completion Success?

The misalignment of community college transfer associate degrees with bachelor's degree fields is evident in Table 7, which compares the field of study of the transfer associate degrees awarded by community colleges in 2022-23 to those of the nearly 1.35 million bachelor's degrees awarded by public four-year institutions in that period. Note that nearly 60% of community college transfer associate degrees are in liberal or general studies, compared to only 3% of public four-year bachelor's degrees.⁸ Of the transfer associate degrees aligned with four-year major fields, most are in business (12%), social and behavioral sciences (9%), or art, humanities, and English (6%). Only 10% of transfer associate degrees are in STEM fields, compared to 23% of bachelor's degrees awarded by public four-year institutions. This misalignment is likely one reason why fewer than half (44%) of community college students who transfer to a four-year institution earn an associate degree before transferring (Velasco et al., 2024). If earning an associate degree means taking more courses toward a bachelor's that may not be accepted by the four-year institution, students have an incentive to transfer early.

Table 7. Community College Transfer Associate Degrees and Public Four-Year Bachelor's Degrees by Field (2022-23)

Field	Community college transfer associate degrees		Public four-year university bachelor's degrees	
	Number of awards	Share of all awards	Number of awards	Share of all awards
Liberal/general studies	300,391	59%	47,177	3%
Art, humanities, & English	30,602	6%	82,692	6%
Communications & design	4,622	1%	72,642	5%
Social & behavioral sciences	43,121	9%	215,746	16%
Education & childcare	9,157	2%	62,118	5%
Human services & public admin.*	1,843	0%	33,552	2%
Law, public safety, corrections*	443	0%	47,153	3%
Business	62,468	12%	247,394	18%
Allied health*	2,366	0%	168,792	13%
STEM				
Biosciences	32,016	6%	101,142	7%
Physical sciences	5,016	1%	22,894	2%
Mathematics	3,796	1%	19,234	1%
Computer & information sciences	5,088	1%	85,271	6%
Engineering	5,227	1%	96,359	7%
Industrial & applied technology	0	0%	12,313	1%
Agriculture & natural resources	117	0%	34,771	3%
Total	506,273	100%	1,349,250	100%

* Most community college associate degrees in these fields are designed to prepare students for direct entry into the workforce rather than to transfer; therefore, the numbers of transfer degrees awarded are small.

Transfer Associate Degree Alignment and Post-Completion Value

Because research indicates that associate degrees in liberal or general studies do not give students the coursework they need for particular majors, we consider these poorly aligned programs to have potentially lower value for transfer than associate degree transfer programs aligned to particular

majors. Table 8 shows the number of community college transfer associate degrees by field organized into those that are aligned with specific majors and those that are not. From this table, we can see the following:

- Nearly 60% of community college transfer programs are in liberal or general studies, which are generally not aligned with a bachelor’s major.
- Of the remaining credentials aligned with a bachelor’s major, the most common are in business, social and behavioral sciences, biosciences, and art, humanities, and English.
- Women and students of color are underrepresented among graduates with transfer associate degrees in engineering, computer and information sciences, and physical sciences, where there is both strong demand for bachelor’s graduates to fill well-paying jobs and a lack of gender and racial diversity in the workforce.

Table 8. Community College Transfer Associate Degrees by Field (2022-23)

Field	Number of awards	Associated median earnings two years after completion (2019 dollars)	Female	Black	Hispanic	White
Major-aligned						
Art, humanities, & English	30,602	\$23,532	63%	7%	43%	7%
Communications & design	4,622	\$22,034	59%	10%	39%	6%
Social & behavioral sciences	43,121	\$23,789	68%	6%	45%	4%
Education & childcare	9,157	\$21,067	84%	8%	29%	9%
Human services & public admin.*	1,843	\$25,835	87%	18%	29%	10%
Law, public safety, corrections*	443	\$24,369	70%	9%	40%	19%
Business	62,468	\$30,166	56%	10%	28%	3%
Allied health*	2,366	\$27,765	84%	24%	19%	12%
STEM						
Biosciences	32,016	\$25,634	65%	6%	39%	2%
Physical sciences	5,016	\$23,269	44%	4%	30%	14%
Mathematics	3,796	\$32,546	29%	3%	36%	7%
Computer & information sciences	5,088	\$34,342	20%	8%	22%	6%
Engineering	5,227	\$36,975	19%	7%	24%	12%
Agriculture & natural resources	117	\$35,060	51%	2%	8%	30%
Subtotal	205,882					
Share of all transfer associate degrees	41%					
Not major-aligned						
Liberal or general studies	300,391	\$24,047	64%	11%	27%	1%
Subtotal	300,391					
Share of all transfer associate degrees	59%					

Note. Gray cells indicate STEM transfer degrees in which women or students of color are underrepresented among graduates.

* Most community college associate degrees in these fields are designed to prepare students for direct entry into the workforce rather than to transfer; therefore, the numbers of transfer degrees awarded are small.

It is sometimes assumed that students who earn a community college transfer degree but do not transfer to a bachelor’s program can nevertheless secure a good job with that associate degree. The data presented in Table 8 of the median earnings of awardees who are not enrolled in a postsecondary institution two years after completion suggest that this is not the case. Among transfer associate degrees, only 24%—those in engineering, computer and information sciences, business, and agriculture and natural resources—are associated with median earnings near a living wage two years after completion.⁹ Most of the other associate transfer degrees are associated with earnings well below a living wage. For example, the liberal or general studies degree, which accounts for nearly 6 in 10 transfer associate degrees, is associated with annual earnings of around \$24,000 (around \$12 per hour for full-time work). Thus, transfer associate degrees have economic value mainly to the extent that they enable students to transfer and earn a bachelor’s degree.¹⁰

All of this points to the need for community colleges to work with university partners to strengthen transfer pathways. It is crucial that colleges not only work with four-year institutions to increase the rate at which transfer students complete a bachelor’s degree but also ensure that students can complete in a reasonable time period, as the earnings statistics above indicate that many transfer associate degree graduates who are no longer enrolled two years later (and thus likely have not completed a bachelor’s) are working in relatively lower paying jobs.

Post-Completion Value of General Education Certificates

As shown in Table 1, 41% of long certificates and 7% of short certificates awarded by community colleges are in general education: liberal or general studies, humanities, and social sciences. Table 9 shows the demographics of awardees and earnings associated with these certificates. Some colleges in some states award long general education certificates to students who have passed at least 30 semester credits in liberal arts and sciences disciplines. In some cases, these certificates may be awarded to individuals who are taking general education courses for their own edification. In other cases, students who earn these awards may be taking college courses to explore their interest in pursuing a degree. However, universities generally do not recognize them, and their curriculum is not aligned to particular majors; therefore, we consider these credentials—like the liberal or general studies associate degree—to offer inadequate preparation for transfer in a major. Moreover, the low median earnings associated with these awards indicates that they also have limited labor market value.

Table 9. Community College General Education Certificates (2022-23)

	Number of awards	Associated median earnings two years after completion (2019 dollars)	Female	Black	Hispanic	White
General education long certificates	94,599	\$25,000	62%	7%	36%	39%
General education short certificates	27,386	\$31,606	65%	15%	32%	40%

Conclusion

If community colleges are to build back enrollments and address concerns about the value of a college education, they must ensure that their workforce and transfer programs prepare students to secure good jobs or transfer successfully.

Our analysis finds that while many community college workforce credentials are associated with earnings near or above a living wage, many are not, and most transfer awards are not well aligned with specific majors. This suggests that they may not enable students to transfer and earn a bachelor's degree in their field of interest without excess credits. We also find that women and students of color are underrepresented among graduates of many workforce and transfer programs aligned with strong employment and transfer outcomes.

To better achieve their missions to support upward mobility and talent development in their communities, community colleges will need to redesign programs that do not currently have strong post-completion workforce or transfer outcomes and expand and diversify enrollment and completions in those that do.

A key first step is assessing existing programs' potential post-completion value. This report provides a framework that college and state system leaders can use to analyze the potential value of their awards for employment and transfer. In addition, using IPEDS data and this framework, CCRC has developed an interactive [online data tool](#) that individuals can use to examine community college awards in particular states and institutions.

The measures of the post-completion value of workforce and transfer credentials that we employ are admittedly rough proxies. Our findings are meant to suggest that some credentials may benefit students more than others and thus to motivate college and state leaders to interrogate the value of their programs. To determine whether their programs enable students to achieve their career and education goals, colleges will need data on the actual employment and transfer outcomes of their graduates, along with local labor market data. CCRC and the Aspen Institute's College Excellence Program have developed a [guide and data tool](#) (Jenkins et al., 2024) to help colleges analyze both the post-completion value of their workforce and transfer program awards and their current program enrollments using local labor market and transfer outcome data.

We recognize that colleges face many challenges as they seek to expand and diversify higher value workforce and transfer programs and revamp lower value programs to ensure they prepare students for success after completion. How to do this affordably and sustainably is a major ongoing focus of CCRC's research and field education.

Endnotes

1. A third of students complete a credential at their starting college, while an additional 11% complete one at another two-year or a four-year institution.
2. IPEDS collects data only on “credit awards,” which refer to awards from programs eligible for federal financial aid under Title IV. There is no source of national data on awards from “noncredit” certificates—including those in workforce fields—which are not eligible for federal financial aid, though they might qualify for state funding.
3. We match earnings data from the College Scorecard to IPEDS data on credentials awarded by 920 community colleges nationally in 2022-23. The College Scorecard earnings data on each college are based on tax records of awardees who received federal financial aid. We use College-Scorecard-calculated median earnings (inflation-adjusted to 2019 dollars) during the 2017 and 2018 calendar years of employed, federal financial aid recipient awardees who completed a community college workforce program of the given level and field in the 2014-15 and 2015-16 academic years and were not enrolled in an institution of higher education during the measurement years. We use an average of the College Scorecard median earnings across colleges of program credentials with available data at a given level and field; for ease of exposition, we call these median earnings. We use data from the MIT Living Wage Calculator (livingwage.mit.edu) to make a rough estimate of \$35,000 annually (in 2019 dollars) as the living wage in the U.S. for an individual with no children. Note that this is a very rough estimate, as the living wage varies substantially by region.
4. It is important to recognize that the College Scorecard earnings data used here are not the earnings of the individuals who earned the credentials reported in IPEDS for 2022-23; rather, they are the historical earnings of awardees who earned a given credential from an institution that conferred the IPEDS awards. This is why we refer to earnings “associated with” particular credentials. Moreover, College Scorecard earnings data are for recipients of a given credential who had received federal financial aid and are no longer enrolled at any college and thus are not for all awardees. Also, earnings data are not available for all community college credentials awarded. Still, when averaged for relevant credentials by level and field across all community colleges nationally, we contend that the earnings calculated here represent a very rough but useful approximation of the level of earnings, relative to a living wage, that a group of awardees of particular interest to policymakers (i.e., those who received federal financial aid) might expect. Note that for the over 1.425 million community college awards reported in IPEDS for 2022-23, 44% have non-zero College Scorecard earnings data. Another 50% are masked in the College Scorecard due to small cell sizes. The remaining 6% have no data. Note also that because the earnings data pertain to particular award programs and not to the specific awards counted in IPEDS, the earnings data we report are unweighted by the number of awards at a given level of analysis.
5. Note that apprenticeships are also a pathway to technician jobs in industrial and construction technology and trades. However, the number of individuals enrolled in community college apprenticeships in these fields is small.
6. Health technology programs include those in nursing and allied health technology. STEM technology programs include those in engineering technology, science technology, and computer and information technology. Industrial and construction technology jobs include those in manufacturing, construction, and related fields (not counting system-level installers or operators).
7. Figure 1 shows that community colleges are producing only a small number of bachelor’s degrees in these fields. Moreover, looking at community college transfer degrees (Table 8), we see that the number of transfer associate degree graduates in computer and information technology and science and engineering—where the best jobs are generally held by workers with at least a bachelor’s degree is also small.
8. Associate of arts degrees in liberal or general studies correspond to Classification of Instructional Program (CIP) code 24.01. They are distinct from associate degrees in English, history, sociology, or other liberal arts and sciences subjects.

9. Note that the earnings for transfer associate degrees in engineering and computer and information sciences are below those associated with community college workforce or career-technical associate degrees in these same fields (see Table 2).
10. Among students who transfer to a four-year institution, bachelor's completion rates are higher for students who first earn a community college associate degree (67%, within four years of transferring) compared to students who come without a degree (52%). Yet, as mentioned, only about 44% of community college starters who transfer earn an associate degree before transferring, and a third of students who transfer with an associate degree do not graduate. See Velasco et al. (2024).

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