

Louisiana's Employment Outcomes

Linking Postsecondary Pathways to Post-Completion Employment

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Executive Summary

The Louisiana's Employment Outcomes (LEO) report series is produced annually as part of Louisiana's Foundational Integrated Research System for Transformation (LA FIRST) (La. Rev. Stat. § 17:3138.12). The goal of this report series is to provide policymakers with data-driven insights into employment and career dynamics in Louisiana, particularly where they intersect with public postsecondary education and training systems. Building on a pilot analysis in the first LEO report, the 2026 report surveys employment and wage outcomes for completers of bachelor's degrees, associate degrees, and shorter-term credentials (certificates and technical diplomas) at Louisiana Board of Regents (BOR) institutions. While the findings emphasize headline outcomes like typical wage earnings and rates of in-state employment for completers, the report also examines the diversity of pathways through higher education, state and regional employment retention, instructional program-occupation alignment, and other topics at the intersection of postsecondary education and the labor market.

On average, among adults of prime working age, higher levels of educational attainment are associated with higher rates of employment and higher wage-and-salary earnings. However, these outcomes vary by the level of degree or credential and by the field of study. A large portion of this year's report is devoted to describing the range of early-career outcomes for completers through the first few years after completion. We do this by linking postsecondary pathways with in-state employment outcomes, as observed in linked administrative data. The report also emphasizes several running themes, like the complexity of student pathways, systematic differences in pathways and outcomes by demographics (especially by gender), and the relationship between instructional programs and the jobs their completers hold. The remainder of this executive summary reviews key findings.

First, diverse, dynamic pathways characterize the student experience with postsecondary education. Most students are employed while enrolled, and only 40 percent of enrollees ever complete a degree or credential. A quarter of all completers since 2010 completed multiple degrees or credentials from BOR institutions. Bachelor's degrees account for the largest share of completions, but growth has been flat in recent years. Meanwhile, certificates have been growing, and these credentials also appear frequently in multiple-credential pathways. By detailing these pathways, the findings offer critical context for Louisiana's attainment goal that 60 percent of all working-age adults hold a degree or high-value credential by 2030. The prevalence of multiple-credential completers also complicates the link of completers with employment and earnings outcomes, that is, the link at the center of this report's findings.

Second, transitions into associate and short-term programs and from those credentials into employment are highly regionalized. Across all regions of the state, most of these completers originate from local high schools and exhibit higher rates of regional and in-state employment retention than bachelor's completers. Initial employment rates are lower for certificate completers than for associate and bachelor's degree completers. However, by year 10 after completion, employment rates are similar across degree or credential levels, even for people with more advanced degrees.

Third, in-state outcomes vary by program, which we examine extensively by degree level and program and at a more intensive level across five case studies covering a significant proportion of all undergraduate completers – general studies; humanities, liberal arts, and social sciences; healthcare; skilled trades; and engineering technology. For associate and short-term degrees, engineering tech programs are an outlier, with median wages exceeding \$100,000 five years after completion. We also document the tight alignment between these programs and Louisiana's manufacturing sector. Healthcare programs include both high-earning nursing and technical programs and lower-earning healthcare support programs. Earnings for skilled trades hover closer to the statewide average. Across both the associate and certificate levels, general studies remains one of the most common credentials. While these programs lack the occupational alignment of other common credentials, median earnings of their completers exceed those of young high school graduates. General studies credentials also serve as a common starting point for the 37 percent of multiple-credential pathways that begin with a certificate.

Bachelor's degree outcomes reflect a tension between high individual earnings and state retention. Engineering, computer science, and other STEM degrees produce the state's highest-earning graduates, but some higher-paying programs also show the highest rates of out-of-state migration. Conversely, in-state retention is higher for programs in healthcare, business, and education. While liberal arts and humanities completers often show lower starting salaries, they demonstrate robust wage growth in the first five years and frequently go on to the state's graduate and professional programs. For most programs, earnings grow rapidly in the first five or six years after completion, though median earnings relative to other programs remain fairly consistent. Notable exceptions include healthcare and education programs, which have high initial median earnings but less earnings growth than other programs in the first several years after completion.

Fourth, other factors – including demographics – shape program completion patterns and outcomes. For example, older completers tend to make more than younger completers but experience a smaller earnings boost relative to what they were making before completion. We also document pervasive differences in programs by gender, especially for associate and short-term degrees. Men overwhelmingly make up most skilled trades and engineering tech completers, while women similarly outnumber men among healthcare program completers by a large margin and

among general studies completions by a smaller but still substantial margin. With the critical exception of nursing, earnings in majority-female fields tend to be less than in majority-male fields. Even within a single program like nursing, among completers, men make more. With pervasive gender-based sorting and pay differences even for completers of the same programs, women's median earnings five years after completion are only 71 percent of men's median earnings for certificates and 68 percent of men's median earnings for associate degrees. This is larger than the difference for bachelor's degrees, where women's median earnings are 81 percent of men's median earnings five years after completion.

Finally, postsecondary employment outcomes are deeply nuanced and cannot be boiled down to singular metrics alone. This is demonstrated by the variety of pathways and wide range of outcomes summarized above, as well as a by a set of novel analyses leveraging LA FIRST occupation records to examine the concept of "alignment": the extent to which specific academic and technical programs correspond with specific jobs. Comparing occupational outcomes with standard, widely used program-occupation "crosswalks," measures of alignment vary, but tight alignment is difficult to demonstrate for many programs, likely reflecting a mix of both the limitations of these crosswalks and looser outcomes for some fields of study than might be expected. In a separate pilot analysis of demand at the program level, which extrapolates from recent trends and observed outcomes for completers to statewide projections of occupational employment through 2032, we paint a mixed picture of alignment. For some programs, completion trends roughly match up with high wage outcomes or projected occupational growth; for others, such alignment is less clear. Conclusions can even vary widely depending on whether the targeted benchmark for alignment with demand is projected job growth or job openings.

As pushes toward accountability and outcomes-based funding gain steam at the federal and state levels, these exploratory findings combine with the complexity of postsecondary pathways (illustrated across a handful of case studies) to illustrate the pitfalls of a one-size-fits-all approach to measurement. Perhaps more than any single finding or implication, this LEO report highlights the need for nuance in comprehensive outcomes measurement.

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Introduction

As part of Act 394 of the 2023 Regular Session of the Louisiana Legislature, Louisiana's Foundational Integrated Research System for Transformation (LA FIRST) was created as an initiative of the Louisiana Board of Regents (BOR) to be administered by the Kathleen Blanco Public Policy Center. LA FIRST produces three annual legislative research reports: (1) Launch Louisiana, (2) Louisiana's Employment Outcomes (LEO), and (3) Causes and Consequences of Criminal and Delinquent Acts.

The first Louisiana's Employment Outcomes report (Habans et al. 2025) illustrated several important trends at the intersection of education and training, skills, and employment, in many cases drawing on key trends in Louisiana. The report also assessed and demonstrated the potential of linking longitudinal wage records from LA Works with student records from BOR. Leveraging linked data, the findings examined three topics: trends in public postsecondary completions, career mobility, and a pilot analysis of detailed earnings and occupational outcomes after completion for a small set of degree programs. This year's report takes up the last topic with a significantly expanded scope.

Building on last year's foundations, the 2026 report surveys employment and wage outcomes for completers, broken down by degree and credential levels and with detail on specific instructional programs. The findings foreground bachelor's degrees, associate degrees, and shorter-term credentials (certificates and technical diplomas), likely constituting the most extensive, most in-depth analysis of postsecondary outcomes in Louisiana to date for completers up to the point of graduate school. In addition to its focus on outcomes like typical wage earnings and rates of in-state employment for completers, the report also includes novel analysis of the diversity of pathways through higher education, instructional program-occupation alignment, and other topics.

Plan of the report

The second section of this report offers a brief **background** on postsecondary employment outcomes, reviewing major themes from the 2025 LEO report and introducing the topics covered in this year's findings. The third section summarizes the **data and methods** used in this report, highlighting the use of linked LA FIRST data and the ways that higher education pathways and their outcomes are measured in the findings.

In the fourth section of the report, **findings** are broken down into five topical subsections.

1. **Pathways through postsecondary education** summarizes the public postsecondary student records at the heart of the analysis while exploring how the diversity of experiences in postsecondary education is reflected in those data. Specifically, it examines how student pathways are traced across enrollment and completion records, highlighting individuals who complete multiple degrees and/or credentials and the overlap between the populations of students and employed workers in LA FIRST data. While the remaining findings focus on post-completion outcomes, this first subsection helps to situate the milestone of completion within the broader scope of postsecondary student experiences in Louisiana.
2. **Where completers work** investigates migration and retention by examining the extent to which completers are observed as employed in Louisiana or employed in another state – or not observed in stable employment. LA FIRST data is limited to those earning wages covered by the Louisiana unemployment insurance system, so this portion of the findings incorporates less-detailed but publicly available data from the U.S. Census Bureau with national scope. Then, we explore the relationship between postsecondary institutions and Louisiana’s eight regional labor markets. We quantify regional retention and visualize geographic flows across regions for two transitions: high school to postsecondary completion and postsecondary completion to in-state employment.
3. **Detailed outcomes for completers working in Louisiana** reports and discusses several breakdowns of employment outcomes for completers by degree level and instructional program. It focuses on employment and wage outcomes, with detail on how these outcomes vary over time and across fields of academic study and training. The subsection also touches on demographic differences.
4. In **Five case studies: Pathways and outcomes by program area**, each of five case studies draws from the preceding analysis to highlight a broad program area in greater detail. Together, the selected program areas – general studies; humanities, liberal arts, and social sciences; healthcare; skilled trades; and engineering technology – cover a significant proportion of all completers and encompass a range of undergraduate academic programs and career and technical education programs. The case studies also identify common multi-credential pathways.

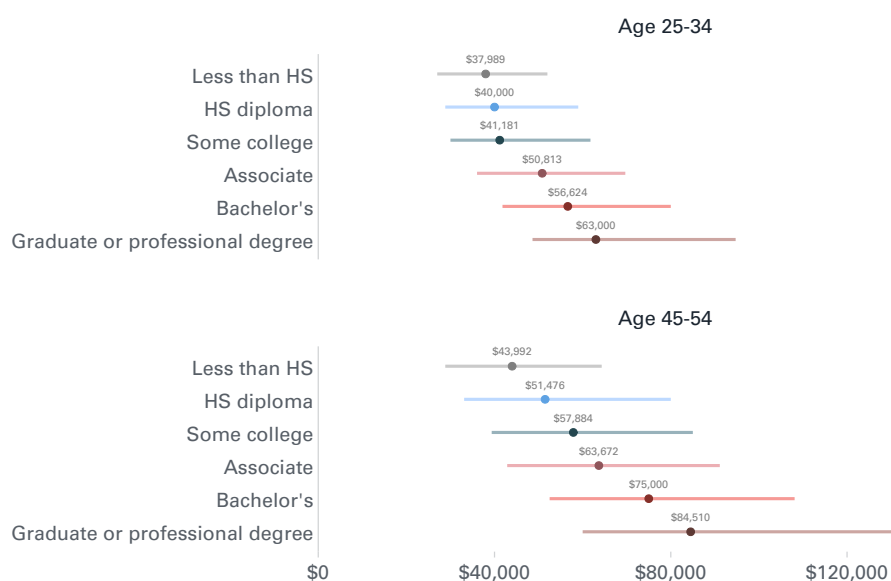
5. Exploring questions of alignment engages with the relationship between specific degree and credential programs and post-completion jobs through several different lenses, each leveraging the occupational outcomes uniquely available through LA FIRST data. We first compare observed outcomes against commonly used benchmark resources that relate specific occupations to levels of educational attainment and the content of instructional programs. Then, also at the program level, we examine how trends in the volume of annual completions and real-world occupational outcomes for recent completers align with expected job growth and openings through 2032, using LA Works' occupational projections as a reference point. In other words, we combine projections and recently observed outcomes to extrapolate the effective size of the labor market for completers of different programs.

The report ends with a **conclusion**, giving context to the main takeaways from the findings and suggesting areas for future research.

Background

Economic research has consistently demonstrated that, on average, higher education represents a sound investment. Higher levels of educational attainment are reliably associated with progressively higher lifetime earnings, lower risks of unemployment, and a wide range of other positive outcomes, a pattern documented extensively across national studies and academic literature (Oreopoulos and Petronijevic 2013; Autor 2014; C. Goldin and Katz 2008; Card 1999). Illustrated for full-time workers in Louisiana in Figure 2.1, the “wage premium” – the additional wage and salary earnings of college graduates compared to those with only a high school diploma – has long served as the primary justification for both public and personal investment in postsecondary education. While concerns have proliferated about increasing costs and declining prospects for student success, extensive evidence shows that the benefits of college still substantially outweigh the costs for most people (Abel and Dietz 2025, 2014).

Figure 2.1 Median and 25-75 percentile range of wage and salary earnings by education and age, Louisiana 2021-2024

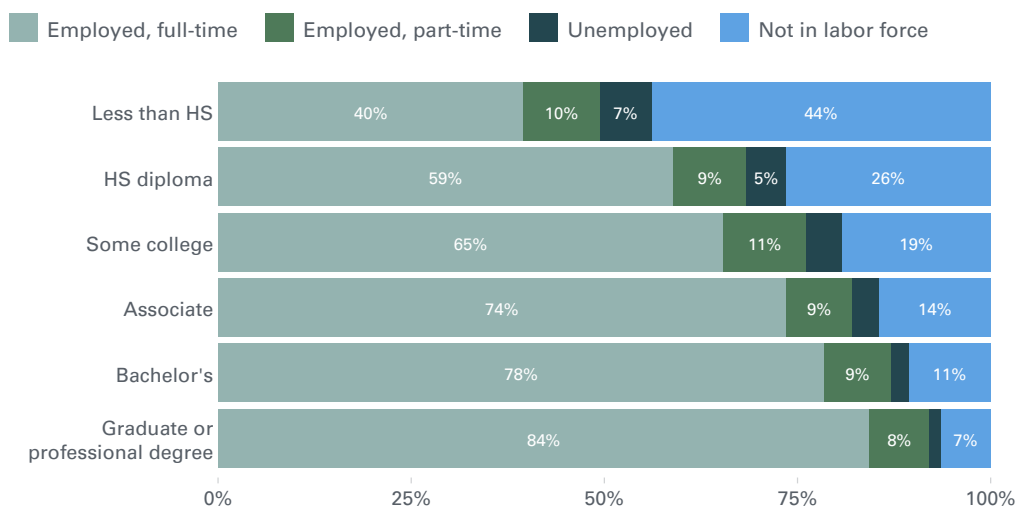


Source: Blanco Center analysis of IPUMS USA (American Community Survey)

Note: Estimate includes wage and salary earnings for full-time year-round workers.

As with wage earnings, employment and labor force participation rates increase with educational attainment (Figure 2.2). Louisiana’s low and declining aggregate labor force participation rate – which stood at about 58 percent in 2024 according to the Bureau of Labor Statistics – has been a common reference point for the state’s systemic challenges at the intersection of job creation, workforce training, and education. This metric represents the share of the total civilian non-institutional population over age 16 that is working or looking for work, including residents who are retired or currently in school. The participation rate for prime working-age Louisianans (age 25-54) is over 78 percent and does not exhibit a clear long-term downward trend.¹ Most of the decline over the past two decades in all-age participation is due to demographic aging and retirements. Nonetheless, Louisiana consistently ranks with West Virginia, Mississippi, Alabama, and New Mexico at the bottom of state rankings on prime-age participation rates.² Unpacking these headline indicators for prime-age Louisiana residents not currently in school, Figure 2.2 shows how the proportion of residents who are unemployed or otherwise not working falls dramatically as education levels rise.

Figure 2.2 Age 25-54 labor force participation by educational attainment, Louisiana 2021-2024



Source: Blanco Center analysis of IPUMS USA (American Community Survey)

¹ Prime-age participation rates were calculated starting in 2003, where we found slightly higher rates (max of 80.5 percent) in the years after the 2005 hurricanes and slightly lower rates (minimum of 76.8 percent) in the early 2010s. It increased to 78.9 percent before the pandemic, fell slightly, and has increased from 2022-2024. We note that these estimates are based on a survey and subject to sampling uncertainty, so our interpretation emphasizes consistent trends rather than year-over-year differences.

² These are the only states where the 2024 estimate for prime-age participation rate is below 80 percent.

On the whole, postsecondary employment outcomes are positive, but focusing solely on population averages can mask substantial variation in outcomes. While the higher education wage premium remains large in absolute terms, it has shifted over time. National research indicates that, after decades of robust growth, the expansion of this premium has slowed significantly since the late 2000s rather than continued to widen (Bengali et al. 2025; Valetta 2018). Last year's LEO report documented a parallel trend in Louisiana, as an analysis of average wages in Louisiana dating back to 1980 confirms that the divide between those with and without a college degree has been essentially flat for over a decade (Habans et al. 2025), though the higher education wage premium remains near its all-time high. The national trend accompanies rising skepticism over the role of college education in paving a guaranteed route to a stable career, especially as costs increase. Driven in part by technology, fundamental changes in the landscape of job opportunities and career prospects have further fueled the sentiment that the evolving labor market for workers with different skill backgrounds is outpacing changes in the postsecondary education system.

Beyond the general pattern where higher attainment means better job prospects, the outcomes of postsecondary education heavily depend on the specifics about degrees and fields of study. Postsecondary education serves a wide range of students with differing needs and goals, ranging from career-oriented shorter-term credentials to traditional four-year and advanced graduate and professional degrees. Typical earnings also depend on the student's choice of undergraduate majors, career-aligned programs at two-year institutions, and professional graduate programs. While earnings potential is not the only relevant consideration for pursuing post-secondary education, it plays a central role in discussions about the value of a college education and whether it is (still) worth the considerable investment from students and state fiscal resources (Abel and Dietz 2025). The increasing attention paid to shorter-term credentials raises a parallel set of questions about whether these more accessible postsecondary options provide a viable career trajectory for more workers while alleviating skill shortages for in-demand jobs, such as health care and construction. The value of postsecondary education, at least as understood in the economic sense, hinges on seriously considering the diversity of pathways into postsecondary education and the range of career outcomes afterward.

The major task of this report is to document a relatively comprehensive baseline of information on the outcomes from public postsecondary institutions in Louisiana. To that end, the report links data from the BOR and LA Works to examine detailed breakdowns of employment outcomes by degree level and instructional program. We emphasize outcomes like annual wage earnings and employment in the state of Louisiana while exploring other intersecting issues like demographic differences and alignment between specific education pathways and jobs. Though we consider the full scope of degrees offered by Louisiana's public higher education institutions, including graduate degrees, our emphasis is

on shorter-term one- and two-year programs (associate degrees, certificates, and technical diplomas) and four-year bachelor's degrees.

Pathways through postsecondary education

Like other studies that explore college outcomes using linked data, this report focuses on employment records for completers – those who complete a degree or credential – in the years following their completions. However, for many students, postsecondary education is not a straight line. Earning multiple degrees is also common, including when students earn multiple short-term credentials, transfer from two-year to four-year programs, and pursue an advanced degree after completing a bachelor's degree.

The language of *pathways* has become salient in settings focused on education policy, workforce development, and career training, although with varied definitions. As an organizational concept, the term often signals or motivates orderly, efficient progress through postsecondary education and/or career training, usually towards an objective of attaining high-quality employment and a promising career. The BOR has also explicitly adopted the model of intentionally designed and well-marked pathways as a central component of meeting its attainment goal that 60 percent of all working-age adults hold a degree or high-value credential by 2030 (Louisiana Board of Regents 2019). In this report, we use the term pathways as a descriptive concept to indicate the range of experiences in postsecondary education and training – across degree levels, instructional programs and fields of study, and multiple degrees and credentials – reflected in student enrollment and completion records available to LA FIRST. This is distinct from our use of the term outcomes, which solely describes employment outcomes (see Figure 2.3).

Figure 2.3 Foundational terms in the report: Postsecondary pathways and employment outcomes



Longitudinal data offers a window into how work histories are interwoven with educational pathways. Indeed, a significant portion of the student population simultaneously engages in both work and study. The findings section thus begins with an exploration of student pathways through higher education and into employment. We place particular emphasis on intersecting pathways for associate degrees, certificates, and other short-term credentials, which often serve as accessible bridges to employment or other education and career training goals. The concept of “stackable” credentials is closely mirrored in what we observe as short-term credential pathways with multiple completions. We also include a preliminary look at new data from the BOR on non-credit and industry-based certification programs from both BOR and proprietary schools, which BOR formally labels *Validated Skills and Learning*. We also touch on bachelor’s degrees and bachelor’s-to-graduate degree pathways.

Degree levels and instructional programs

Though the earnings of those with postsecondary degrees and credentials tend to outpace the earnings of those with a high school diploma and increase with additional educational attainment, there is considerable variation by instructional program. This variation has a strong relationship with the occupations and industries where completers work and, in turn, with the field of study of their degree or credential – the major for four-year degrees and the program area for shorter-term, graduate, and professional degrees. Much of the content of this report aims to explore variation in outcomes by degree level and by instructional program for completers of public higher education in Louisiana.

For example, one of the loudest messages for students at four-year universities has been to stress the value of STEM degrees (science, technology, engineering, and mathematics), as well as business- and health care-related fields (Morris et al. 2025). Nationally, this has led to more completers in areas like computer science and fewer completers in lower-paying fields, like humanities and the arts, education, and public service (Morris et al. 2025).

Two-year institutions have seen a renewed emphasis on demand-targeted career and technical education, especially for higher-paying “middle-skill” jobs in engineering and technology-related fields, health care professions, and skilled construction trades that do not require a four-year degree (Smith et al. 2025). Certificates and industry-based credentials have also expanded alongside associate degrees and technical diplomas. With what is for many a more realistic investment of time and resources, shorter-term credentials provide an accessible route to potentially higher-paying jobs while offering a remedy to skills shortages that, according to employers, provide significant friction to job creation and hiring potential. However, according to recent national research, only one in four early-career workers with a middle-skill credential (certificate or associate degree) earns more than \$55,000 annually, though there is wide variation by occupation

(Smith et al. 2025). In this report, we contribute to similar findings with a focus on Louisiana and detailed breakdowns by instructional programs.

Job outcomes and the question of alignment

Many of the findings documented in this report emphasize two key questions: To what extent are completers employed within Louisiana, and how much are they earning from that employment? Employment and earnings outcomes are the bedrock of assessing broad state policy goals like enhancing access to career success and economic opportunity within the state, as well as informing assessments of the return-on-investment from postsecondary education and outcomes-based funding models (Louisiana Board of Regents 2019). However, we also examine *what kinds of jobs* students get, a question of deep significance both to understanding the Louisiana labor market and to planning academic programs. To do so, we develop measures based on the industry (type of business) and occupation (type of job) of completers' employment. While all states collect administrative data on industry of employment, few collect such data on occupations as comprehensively as Louisiana, as discussed in last year's LEO report. This year's report expands the use of this unique data asset (although as discussed at greater length in the Data and Methods section, care is required in its interpretation).

We summarize these outcomes in ways that illuminate the question of *alignment* from different angles. In practice, alignment can refer to the correspondence between the subject matter and content of a degree program or academic pathway and the skills, tasks, and qualifications associated with specific jobs. This relationship can be described as a prescriptive, codified relationship or in terms of the actual jobs ultimately obtained by the student, that is, in terms of real-world empirical outcomes. At more of an education and workforce systems level, alignment also implies correspondence between the volume and mix of postsecondary completers on the supply side of the labor market and the specific opportunities generated on the demand side. These notions of alignment pervade discussions around higher education, whether at the level of policymaking and funding decisions or for academic program planners and curriculum designers, workforce and economic development professionals, and academic advisors. Obviously, students also consider alignment with job prospects when making decisions to enroll in specific programs and even to take certain courses. Alignment is a common-sense concept, but its measurement is a complex undertaking.

This report explores alignment in two main ways:

- The extent to which occupational outcomes empirically observed in linked LA FIRST data correspond with commonly used, though largely hypothetical, benchmarks for degree and instructional program alignment with specific occupations.
- Alignment between trends in the rate at which BOR institutions generate completers for a given degree level and instructional program and projections in the size of the effective labor market for those completers, based on recent occupational outcomes.

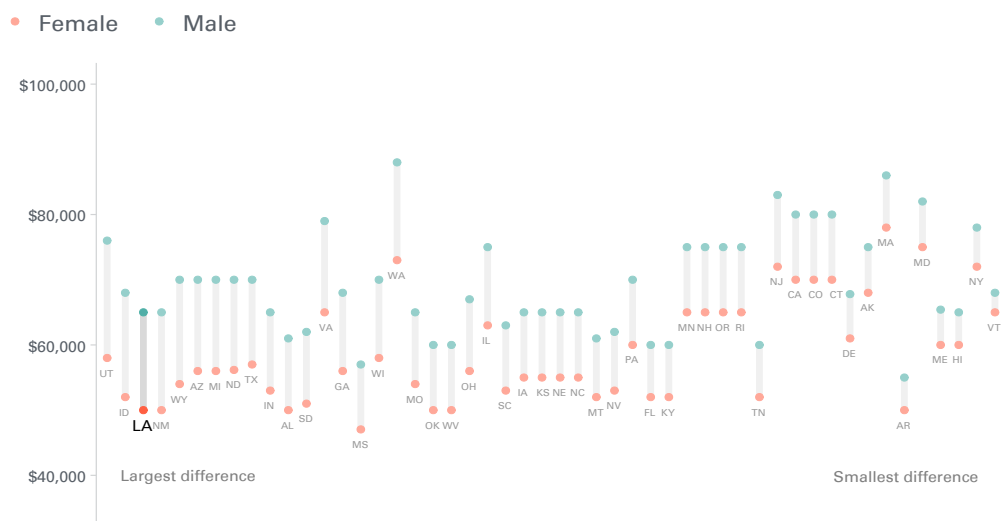
These analyses rely on a large, detailed matrix linking specific degree levels and instructional programs (CIP code) to detailed occupations (SOC code), based on observed employment in Louisiana. These outcomes are then summarized and presented in this report. While detailed outcomes are not discussed, as a supplement to the report, we publish a full matrix of occupational outcomes by degree and instructional program separately as a downloadable data set (available from the Blanco Center upon request). This is a preliminary data resource, though one that supports a range of use cases without a direct, publicly available alternative.

Demographic dimensions of employment outcomes

On average, women and men have very different experiences in postsecondary education and in the labor market. These have been major themes of national research, and last year's LEO report highlighted that in Louisiana, women substantially and increasingly outpace men in terms of completed degrees, while men tend to earn more than women regardless of their degree level (Habans et al. 2025).

While these patterns are common nationally, they may be amplified in Louisiana by the mix of industries and occupations in the state, as well as other aspects of the state's employment landscape. Figure 2.4 shows median wages for employed prime-age men and women by state. Louisiana ranks among the states with the largest differences.

Figure 2.4 Male and female median wages by state, age 25-54, 2024



Source: Blanco Center analysis of IPUMS USA (American Community Survey)

Note: Estimate includes wage and salary earnings for full-time year-round workers.

In part, these wage differences reflect the structural sorting of women and men into different educational pathways, occupations and industries, and career trajectories. They also intersect with broader trends in educational attainment and workforce participation. Nationally, women have outpaced men in degree attainment across nearly all racial groups and now outnumber men among all U.S. workers with at least a four-year degree (Fry 2022). However, men continue to maintain higher labor force participation and higher median earnings, though earnings differences closed substantially between the 1980s and the 2010s as the higher education wage premium expanded, as wages stagnated for men without a college degree, and as women increasingly gained entry into highly paid professions (Blau and Kahn 2017).

One explanation for the attainment gap is that men experience a wider range of options for high-paying employment. Two-thirds of high-paying jobs for those with an associate degree or certificate (less than a bachelor's degree) are held by men, particularly in sectors where skill-based training is valued over formal degrees (McLeod et al. 2025). For women, the path to high-paying jobs tends to be narrower and more often includes a four-year degree. Indeed, our preliminary analysis in last year's LEO report found especially large wage differences for men and women with associate degrees and short-term credentials, where men and women are also highly concentrated in different program areas (for example, men in construction trades and women in healthcare).

A wide body of research has studied gender wage differences, with contributing factors including labor force participation and hours, child care and family responsibilities, career mobility and promotion, employment histories, and discrimination, among other factors inside and outside of the workplace (Blau and Kahn 2017; Vafa et al. 2025; C. D. Goldin 2006). Sorting by occupation and industry and, by extension, the education pathways leading into specific careers, remains among the major contributing factors to wage outcomes. For example, women historically have been and remain highly represented in care-related and education occupations (England et al. 2002). Among short-term degrees and credentials in Louisiana, women are more likely to complete programs in health and arts and humanities and less likely to complete programs in construction and engineering-related fields (Habans et al. 2025). National analysis has found that this “degree sorting” translates into employment outcomes, as men dominate employment in high-paying “middle-skill” occupations that do not require a four-year degree, including blue-collar, office and professional, and STEM-related jobs (Smith et al. 2025). For bachelor’s degrees, men are overrepresented in STEM and other career-focused degree programs, while women disproportionately specialize in healthcare, education, public service, arts and humanities, and social sciences programs (Morris et al. 2025; Habans et al. 2025). As we document details related to these broad trends in the findings of this report, we stress that the frontiers of career opportunity may be very different for women with a four-year or advanced degree than for women with shorter-term education and training pathways.

Migration and retention

For Louisiana and other states, public postsecondary education has a dual mandate: to maximize the individual potential of every student while simultaneously serving as a primary engine for the state’s talent pipeline (Louisiana Board of Regents 2019). At the same time, highly educated workers also tend to be more geographically mobile. The “brain drain” of younger, highly skilled, geographically mobile workers has long been a concern for Louisiana, especially as the state has experienced net outmigration and meager population and employment growth for a prolonged period. To be sure, migration is shaped by a mix of economic factors (wage opportunities, housing and other costs, and quality of life) and non-economic factors (social and family relationships, preferences), but job-related reasons are the most common reasons for moving across state lines (Jia et al. 2023).

The movement of college-educated workers is a critical factor in the economic dynamism of the labor market, reflecting the interplay between the supply and demand for workers, both in general and with specific skill backgrounds. Migration is highly selective by skill level, with college-educated workers being significantly more mobile than their non-college-educated peers. This mobility is not random; it drives skill-based sorting, whereby high-skilled workers relocate to regions offering higher wages and better career matches (Card et al. 2025).

In addition to out-of-state migration, the transitions into post-secondary education and into employment also serve as episodes of heightened mobility within the state. Many students who seek technical credentials or direct entry to four-year universities from high school might be more likely to attend institutions in their home region, whereas other students may be more likely to travel across the state, or beyond it, to seek education. Likewise, students are likely to end up working near where they went to college or where they originated. These patterns certainly vary by institution and by region, as Louisiana's larger labor markets – the New Orleans and Baton Rouge regions – likely attract and retain more students than smaller regions simply as a function of size.

Since its inception, an implicit goal of the state's Taylor Opportunity Program for Students (TOPS), a merit-based student financial aid program for eligible Louisiana high school students matriculating to a Louisiana public higher education institution or other qualifying institution, has been to retain high-achieving high school graduates in-state for college. The policy logic is that subsidizing in-state tuition will reduce the incentive for top students to leave for out-of-state universities, where they may be more likely to establish new roots and remain as they enter prime working age. However, the scholarship's effectiveness as a long-term retention mechanism (i.e., keeping graduates working in the state after completion) remains a subject of policy debate. While this report does not engage directly with TOPS outcomes, we track patterns of regional retention in the transitions from high school to postsecondary and from postsecondary to employment. Additionally, we examine in-state employment retention for Louisiana postsecondary completers.

Introduction to case studies

The findings section includes five case studies. As context, we provide background on each case study below.

Healthcare. The healthcare sector has been the largest employer both in Louisiana and nationally since 2010, with over 18 million Americans employed nationally and 328,000 in Louisiana alone (Gottlieb et al. 2025; U.S. Bureau of Labor Statistics 2024). The sector provides opportunities at a range of skill levels, from the highest-paid professionals (physicians and surgeons) to lower-paid hospital service and home health workers. Frontline healthcare careers provide employment opportunities for skilled Louisianians in a high-demand industry while addressing healthcare system capacity concerns, many of which are tied to shortages of skilled nurses, primary care physicians, and other essential workers.

The healthcare sector has seen employment growth at double the annual rate of non-healthcare jobs since the 1980s and individual earnings growth also has outpaced the rest of the economy (Gottlieb et al. 2025). Some of the strongest earnings and employment growth has been among mid-level healthcare

occupations, including physician assistants (PA's) and nurse practitioners (NP's). Healthcare remains a female-dominated job market (approximately 76 percent women, 24 percent men) though specific occupations traditionally have had strong concentrations of male or female workers. However, the physician workforce has shifted to include more women since the 1980s, while nursing has seen a rise in male workers (Gottlieb et al. 2025).

Nationally, the education pipeline has adapted in some ways to meet the strong wage growth and employment in healthcare. Entry-level bachelor of science in nursing degrees have seen steady and growing enrollment in the past 20 years, with a minor dip during the pandemic (American Association of Colleges of Nursing 2024). The traditional pathway from associate of science in nursing (ASN) to registered nurse (RN) has increased dramatically from 2002 to 2018 (355 percent), but has leveled off since, with more students choosing to go directly into four-year nursing programs nationally (American Association of Colleges of Nursing 2022, 2024). Though retention and the lure of high pay for travel nurses remain issues, Louisiana institutions have experimented with models to increase capacity in the nurse education pipeline (Thibodaux and Barnes 2023). As medical school enrollment has increased by roughly 50 percent since the 1980's (Association of American Medical Colleges 2025; American Association of Colleges of Osteopathic Medicine 2025), Black enrollment in medical schools has also increased, led by a disproportionate influence from HBCU graduates (Weiss et al. 2025), a trend mirrored in the announcement of the new Xavier Ochsner College of Medicine in New Orleans.

The healthcare labor market plays an important role in communities, both as a source of employment opportunities and by shaping access to high-quality care. Despite the sector's growth in Louisiana, residents still face persistent shortages of clinicians, especially in rural primary care and nursing roles where turnover remains high. Large portions of Louisiana are designated as Health Professional Shortage Areas (HPSAs), which includes shortages in primary care, dental health, and mental health care (Well-Ahead 2022). Louisiana's total nursing workforce continues to grow, particularly among Registered Nurses (RNs) and Advanced Practice Registered Nurses (APRNs). However, this growth has not kept pace with projected demand, especially in rural and high-poverty parishes (Louisiana Center for Nursing 2024).

Skilled trades and high-paying technical fields. The skilled trades, including plumbers, carpenters, HVAC technicians, welders, and electricians, rely heavily on continuous entry-level hiring and apprenticeship programs to replenish an aging workforce. That pipeline has been slow to replenish since the Great Recession (2007-2009), an issue of national significance which takes a special form in Louisiana. While the state's residential and commercial construction markets have been slow, skilled trades also play a role in critical infrastructure, timely disaster recovery and resiliency, and waves of industrial construction affecting parts of the state since the 2010s (Habans et al. 2026).

Policy researchers have described this period as one of long-term “scarring” rather than a cyclical adjustment due to the lasting effects of a downturn that discourages workers from entering these fields, creating shortages of experienced workers that impact the workforce many years beyond the initial downturn (Elsby et al. 2010; Irons 2009). The pandemic represented an acute downturn, with a quick recovery in the industrial labor market. Since the pandemic, apprenticeship and workforce training systems have not scaled quickly enough to meet demand (Kobes and Nayak 2025).

According to Brookings, nearly 17 million U.S. workers are expected to leave the skilled trades in the next decade (Kane 2023). Separations, or the rate at which employees leave their jobs, are 12 percent annually – above the national average. The infrastructure workforce skews predominantly towards workers who are older, White, and male. Only 11 percent are 24 years old or younger, 18.5 percent are women, and less than one-third are people of color (Kane 2023). Pay in the skilled trades is 30 percent higher than current roles held by low-income workers, offering a potentially more lucrative career.

Construction is a major contributor to Louisiana employment, accounting for nearly 9 percent of private-sector jobs statewide. Even if these jobs are currently held predominantly by men, construction and other technical, repair, and mechanic jobs represent an important part of the high-paying opportunities that do not require a college degree but often involve short-term, accessible postsecondary training – often termed “middle-skill” pathways (McLeod et al. 2025).

In last year’s LEO report, our preliminary look at wages found that shorter-term degrees yield strikingly high median earnings for men. Further cursory analysis suggested that this finding, while driven somewhat by skilled trades, was strongly influenced by programs in the engineering technologies/technicians field, which are often related to industrial applications. The same group stands apart in our more comprehensive analysis of this year’s report, and we also examine these completers more closely in a case study.

General Studies and Liberal Arts and Sciences/Humanities. Liberal Arts and Sciences, General Studies and Humanities (CIP 24) was the most common program area for associate degrees conferred nationally, representing 38 percent of all credentials conferred in the 2021-22 academic year (National Center for Education Statistics 2022a). Humanities and the arts and social sciences rank among the most popular bachelor’s degree fields nationally, along with health, business, and architecture and engineering (Morris et al. 2025). As both policy and recent enrollment trends emphasize industry-aligned skills and direct career links, the employment outcomes for general studies certificates and associates and for broad-based liberal arts bachelor’s degrees have come under increasing scrutiny.

A recent report from Burning Glass Institute and Strada (2024) found that humanities and cultural studies bachelor's degree graduates suffered from high rates of underemployment, similar to those of communication, psychology, and business program graduates. They found these degrees have among the lowest earnings premia over high school and the lowest career median annual earnings for college graduates. Completers in general studies also typically earn less than those in career-oriented fields (Carnevale et al. 2020, 6).

General studies is categorized within the Liberal Arts and Science, General Studies and Humanities and is defined as an undifferentiated instructional program encompassing general arts, general science, or unstructured studies. General studies also serves as the category for degrees awarded without a specified major. Nationally, general studies remains one of the most awarded associate degrees, especially in public two-year colleges (National Center for Education Statistics 2022b). Recently, there has been a noticeable downtrend in completions for general studies degrees, as students forego traditional two-year associate degrees for more-specialized credentials or four-year programs (Fischer 2024). At the bachelor's degree level, general studies does not represent a major share of total awards, as business, health, and STEM fields have grown more rapidly over the past two decades.

Data and methods

The main data sets for this report were made available to LA FIRST via a data-sharing agreement with Louisiana Works and the Louisiana Board of Regents. These include the following:

LA Works:

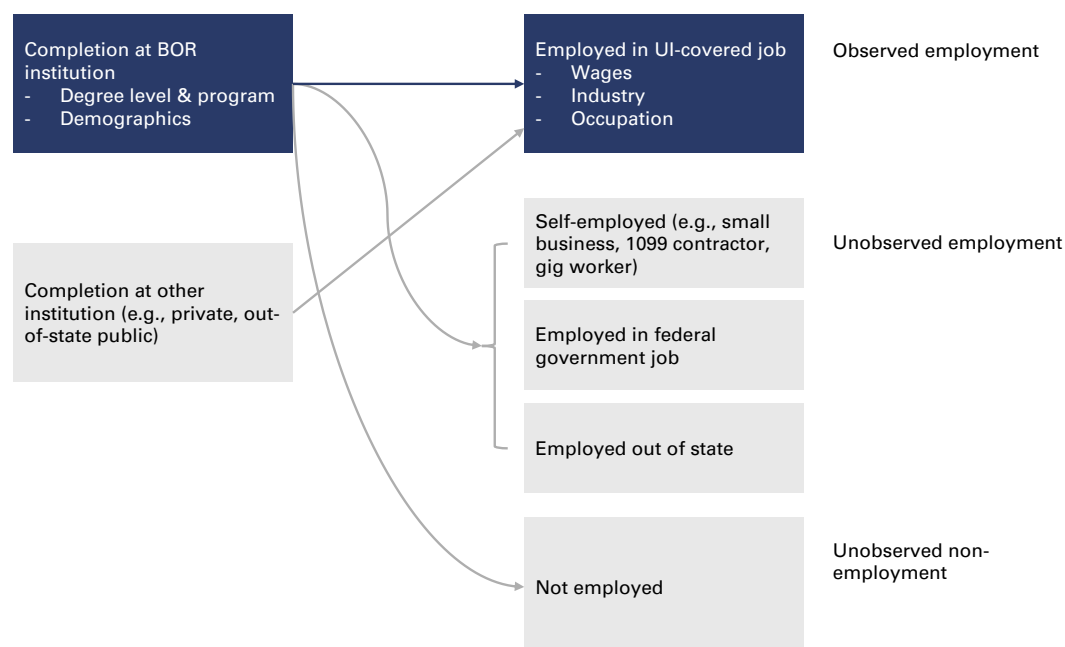
- Unemployment insurance (UI) wage records
- UI claims

BOR:

- Statewide Completers System (SCS)
- Statewide Student Profiles System (SSPS)
- Licensed and Workforce Validated Skills and Learning (VSL)

To explore the outcomes of postsecondary education, most of the findings involve linking longitudinal wage histories from UI wage records with student records from the BOR. This linkage is illustrated in Figure 3.1, highlighting important coverage gaps in the data discussed below. Based on this linkage, most of the findings focus on employment outcomes for completers, though the findings section begins with an exploration of student pathways through postsecondary education.

Figure 3.1 Coverage (blue) and gaps (grey) in completers and wage records data sets



The remainder of this section contains a general description of how the data are prepared for these analyses. Additional details are covered in the Appendix. For a more comprehensive discussion of measuring employment outcomes from LA FIRST longitudinal administrative data, see last year's report (Habans et al. 2025).

Quick reference for key concepts used in the report

- **Pathways** through postsecondary education refer to individual histories of enrollment statuses and completions at public institutions, as traced across linked, longitudinal BOR data. Completers' pathways are identified with specific **degree levels** (various degrees or credentials awarded for a recognized course of study) and **instructional programs** (specific subject areas, courses of study, or training specializations, analogous to an undergraduate major).
- **Unique completers** represent deduplicated completions that are joined to worker-level employment outcomes derived from UI wage records.
- **Employment outcomes** for completers include UI-covered wage earnings, employment rates, and characteristics of jobs. In most cases, we focus on **stable annual** employment and wages rather than all employment and wages captured by UI records.
- Most outcomes are reported for specific **years relative to the academic year of completion**, for example, 2 or 5 years after completion.
- **Industries** are groups of business establishments or organizations that produce similar goods or services or perform similar economic activities. **Occupations** are types of jobs or professions.

Student pathways and completions

The main sources of data on student completions and enrollment pathways are the BOR Statewide Completers System (SCS) and Statewide Student Profiles System (SSPS). These data sets offer detailed information on student demographics, academic progress, and credentials obtained at Louisiana's public institutions of higher education. The data encompass all institutions in the four systems overseen by the BOR: Louisiana State University (LSU), Southern University (SU), University of Louisiana (UL), and Louisiana Community and Technical Colleges (LCTC). However, it does not cover attendance or completion at private or out-of-state institutions. Here, we summarize the main points of how the data are used; additional details are in the Appendix.

Degree levels and instructional programs. The term *degree level* indicates the specific degree or credential associated with a student's completion or enrollment. As used by the BOR and in this report, the term encompasses short-term credentials like certificates and technical diplomas; associate, bachelor's, and graduate degrees; and a range of specialized and post-degree awards. In some cases, the findings group multiple degree levels together, for example, into associate degrees and short-term credentials (technical diplomas, certificates, and CareerTech). The findings focus on these shorter-term degrees and credentials and bachelor's degrees but also touch on other degree levels.

Instructional programs indicate the specific academic subjects and training associated with a student's field of study. The term instructional program distinguishes between history and computer science undergraduate majors or between allied health and welding certificates. They are standardized via the 2020 Classification of Instructional Programs (CIP), a comprehensive hierarchical coding system published by the National Center for Education Statistics (NCES).³ The report breaks down findings at different levels of CIP detail, mostly at the level of a broad academic category (two-digit) or intermediate grouping (four-digit). In some cases, we also use a condensed set of twelve categories adapted from a report from the Urban Institute (Blagg and Rainer 2020).

Deduplication of records. Student records are complex and frequently include multiple overlapping completions and enrollment records. We implement several deduplication techniques as appropriate to describe student pathways: unique completions, unique completers, and unique completer-degree levels (see Appendix for details).

³ When older data is provided in 2010 CIP codes, we use the NCES crosswalk to convert these to 2020 CIP codes.

Employment outcomes are deduplicated at the level they are reported. When analyzing outcomes for specific cohorts of completers, we usually focus on unique completers within each academic year. This is accomplished by ranking degree levels and retaining only the highest ranked completion in a single academic year. For each individual unique identifier, only credentials at the same degree level and the same six-digit CIP in the same academic year are deduplicated. Where students have completions in more than one CIP at the same degree level in the same academic year, we count completers under both CIP codes. Examples include completers with a double-major bachelor's degree or with two different certificate completions in the same academic year. For employment and wage outcomes, we also report completions based on the highest, last degree completed across all academic years in the data. This has the effect of roughly aligning the outcome measure to the terminal point in the student's BOR pathway.

Student demographics. Student records are the source of demographic information for this report. We examine differences by age, race and ethnicity, and sex/gender. We condense race and ethnicity groups into Asian, Black, Hispanic, White, and Other.

Age is not provided in SCS, so we add age from the SSPS data for each individual and academic year. To roughly align with typical K-12 age cohorts, we report age relative to September 30, the cutoff date for kindergarten in Louisiana. This has the effect of grouping people together by age in a way that reflects their typical high school graduating class rather than by birth year or age at completion. Under this adjustment, most high school graduates would be 18 in the year that they complete high school, even if they were 17 for most of the school year. This minor adjustment is convenient for examining age for younger postsecondary students and nearly inconsequential for students more than a few years removed from K-12 education.

Analysis of student pathways through postsecondary education. The primary focus of the BOR analysis in this year's report is tracking students' enrollments and completions over time, including multiple and sequential completion pathways as well as employment and enrollment statuses before, during, and after the year(s) in which credentials were completed. Using data spanning from academic year 2010-11 through 2024-25, we explore the diversity of student pathways across linked data in the following ways:

- **Multiple-credential completions** identifies the combinations of credentials students complete when they complete more than one credential.

- **Sequential completions** explores the order in which students complete multiple credentials.⁴
- **Enrollment and employment before and after completion** traces overlapping statuses across student enrollment, completion, and employment records. Statuses are assigned when a student appears in wage, enrollment, or completion records in a given year. For example, a person in the enrollment records with a non-zero wage in the employment data in the same year has a status of “enrolled and working” for the given year.

Employment and wages

Much of the report’s findings summarize outcomes for specific cohorts of completers. The cohorts are defined at varying levels of specificity with respect to the level of detail for the degree level and the instructional program (CIP code). All employment outcomes are based on unemployment insurance (UI) records from 2014 to 2024, which include data on individual workers’ wage earnings and employment histories.⁵ In most cases, we pool together multiple years of completions and describe outcomes relative to the academic year of completion, and we limit outcomes for completers to those who completed in academic year 2014-15 and later to correspond with a complete record of post-completion employment outcomes.

To determine an individual’s eligibility and level of unemployment benefits, Louisiana requires employers quarterly to report wages paid to individual employees covered by the UI system. In essence, this reporting process generates a record of wages that approximates a near-census of employment on a quarterly basis. These records can be linked over time to create a longitudinal history of employment in the state, following a worker across multiple jobs. In addition to wages, Louisiana UI records include standard employer characteristics (industry, firm size, and parish) and additional information like occupation and hourly wage.

While UI records provide the most comprehensive available picture of employment, they have important exclusions. Most importantly, the records only include work in UI-covered employment in Louisiana. Thus, they do not include Louisiana completers’ employment in other states. UI records also do not include paid work that is not covered by the UI system, which excludes many

⁴ The retained credential records are ranked at the individual level by the time-order of completion. If a person earned multiple credentials within a year, the lowest-ranked credential (according to the Board of Regents definition) is ranked as earned ahead of any higher-level credential. For example, a person who completes a certificate in AY2012-2013 and then a certificate and an associate in AY 2013-2014 would appear as having followed the sequence certificate, certificate, associate (C1, C1, 10).

⁵ Records shared with LA FIRST begin in 2014. However, occupational information is only available beginning in 2016.

kinds of self-employment (some incorporated small businesses, unincorporated independent contractors, informal and “gig” work, etc.) and federal employment. As a result, gaps in an individual’s UI wage record do not necessarily imply gaps in employment, and longitudinal employment histories cannot be considered complete for workers with spells of non-covered or out-of-state employment. As described later in this section, we partially address this limitation with a Census Bureau data product, Postsecondary Employment Outcomes (PSEO), which also reports employment and wage outcomes for completers at BOR institutions but includes records from peer UI systems in other states. PSEO has broader coverage but provides only a more general set of information than can be gleaned using LA FIRST data. These two data sources together help to provide a more complete understanding of outcomes.

Annualizing employment and wages. UI records include any wage earned at any covered job over the course of a quarter. We report annual employment and wages at the worker level, which can include multiple jobs held over the course of a year. This requires converting wage records at the “job-quarter” level to outcome measures at the “worker-year” level, which we accomplish by first summing wage earnings from all jobs held by the worker over a calendar year and then implementing other steps detailed below.

While we report some outcomes derived from all individuals with linked wage records, most of the detailed findings focus on more restrictive measures that approximately reflect a concept of individuals with *stable annual employment*. This restriction aligns more closely with what a typical completer can expect to earn from full-time employment on an annual basis, and it reduces the influence of turnover (starting and stopping spells of UI-covered employment) on summary measures. However, it also has the effect of excluding many low-wage, part-time workers and workers who did not earn a wage in Louisiana for most of the year (again, see last year’s report for an extended discussion of these issues). To meet the criteria for stable annual employment in a given calendar year, a worker must:

- Have non-zero wages from any job for at least three quarters of the year;
- Earn total annual wages across all jobs that exceed the federal minimum wage for full-time, year-round workers (\$7.25 times 35 hours and 50 weeks per year).

Wages for stable employment are based on total wages across all jobs within a calendar year and must meet both criteria. Outcomes based on stable employment are preferred for two reasons. First, the restrictions give a more consistent measure of annual wages and stable employment by reducing variability due to starting and stopping spells of work, interstate migration, and part-time or variable work schedules. Wages from stable employment also tend to be much more closely aligned to publicly available benchmarks than raw

annual wage earnings. Second, such restrictions are common in studies utilizing UI records, and the restrictions identified above balance precise measurement with inclusiveness. Our approach closely aligns with PSEO, which is based on a similar linking concept and the same underlying data sources.

In addition to wages, we also convert other characteristics from raw UI job-quarters to worker-year characteristics as follows:

- *Employer characteristics (industry, employer size, and location)* are assigned in two steps. First, a worker's main employer for each year is assigned as the employer that accounts for the largest source of earnings in that year. Industry and employer size for the worker are then assigned based on the quarter with the main employer that accounts for the highest earnings in the year.
- *Occupation* is assigned to worker-years based on the occupation that accounts for the highest earnings in a year. Because occupation is not reported in some of the data, occupational outcomes are also weighted when reported in the findings, as described below.

We focus on median wages, but we also frequently report wages at the 10th, 25th, 75th, and 90th percentile. When reporting average wages, we Winsorize at the 1st and 99th percentile for all completers.⁶ All annual wages are deflated with CPI-U to 2024 dollars and rounded to the nearest \$10.

LA FIRST data provides extensive detail and flexibility for examining employment outcomes. However, attrition from administrative data is a known issue in analysis relying solely on single-state administrative records to characterize post-completion outcomes. Essentially, earnings are not observed when completers are employed out-of-state or self-employed, leaving these outcomes indistinguishable from non-employment. A recent analysis of PSEO data found that out-of-state migration approached 30 percent for graduates attached to the labor force (Foote and Strange 2022). Geographic mobility was higher for completers at the higher end of the earnings distribution and for certain majors and institutions, namely STEM majors and selective institutions. As a result, the authors found earnings bias from attrition in single-state administrative data is about 10 percent for a flagship university. Given these limitations and as described below, we also report earnings and employment rates from PSEO, which also covers out-of-state employment.

⁶ Winsorizing data is a process of replacing extreme values to reduce their influence on findings or to correct for inaccurate data. In this case, values below the 1st percentile were bottom coded (replaced with the 1st percentile) and values above the 99th percentile were top coded (replaced with the 99th percentile).

Years relative to completion. Outcomes are reported at time relative to completion and pooled together across the years of available data (UI data is available since 2014 and with SOC codes since 2016), such that year 2 outcomes may occur in different calendar years for students who graduated in different academic years. In the raw records, UI wages are reported in calendar years and completions in academic years (following BOR data, the AY is named by the first calendar year). To determine years relative to completion, we simply subtract the calendar year of employment from the beginning of the academic year of completion (for example, outcomes from 2019 wage records are two-year outcomes for completers in AY 2017-18). While in some cases we show employment rates and earnings trajectories across a full complement of available years (including pre-completion), we mostly focus on post-completion years 2 and 5, roughly interpreted as short-term and medium-term outcomes.

Occupations and industries. Louisiana is one of only a handful of states that collects *occupational* information via UI wage reporting. By contrast, every state collects *industry* information. This conventional terminology is used throughout the report: industry refers to group of business establishments or organizations providing similar goods or services or performing similar economic activities (hospitals, offices of lawyers, full-service restaurants, etc.); and occupation refers to a type of job or profession (registered nurses, paralegals and legal assistants, waiters, etc.). As with CIP, each has a standardized, hierarchical coding system: North American Industrial Classification System (NAICS) for industry and Standard Occupational Classification (SOC) for occupation. While both are relevant to the employment outcomes of higher education, occupation has a stronger association with individual outcomes like wages, working conditions, and career trajectories. Occupations also align more directly with distinct skill and training requirements and, consequently, with specific postsecondary education pathways. Indeed, many short-term credentials, some bachelor's degree majors, and many master's and professional degrees are designed for direct occupational entry.

Occupational information is included in Louisiana wage records beginning in the calendar year 2016. While nearly 80 percent of records in some quarters have some response entered into either the occupation or job title fields, only about half of job-quarter records in the raw data and a similar proportion of the worker-year records in the annualized data have standardized occupational information (SOC code) in any given year prior to 2024, when SOC coverage rates increased substantially. To mitigate potential bias where reporting occupational outcomes, we implement a reweighting procedure, such that observed occupations are weighted to be representative of the population based on other observed characteristics: wage levels, employer size, and industry. Details on this procedure are described in the Appendix. All other outcomes are based on complete data (or extremely close to complete), so the reweighting procedure is only applied to occupation-related outcomes.

Occupational alignment

Our pilot analysis of alignment between postsecondary pathways and employment outcomes makes use of occupational information contained in LA FIRST data. Beyond its provisional findings, this analysis aims to present a range of perspectives, illustrating conceptual and measurement challenges along the way.

Alignment between degree, field of study, and occupation. We summarize the concept of “alignment” in several different ways. Each leverages the occupational information of completers:

- **Alignment with typical educational attainment level.** The U.S. Bureau of Labor Statistics (BLS) publishes a table with the typical educational requirements of individual occupations. While this table provides a standardized reference point as a widely used, national benchmark, it is based on a mix of expert-review and survey data and may not accurately reflect typical minimum requirements for all occupations. In our analysis, a job is considered “aligned” if the observed degree level of the completer matches the typical degree level required for the occupation, as published by the BLS. We report the percentage of working completers in a degree-aligned occupation by degree and CIP cohort.
- **Alignment with the instructional program or field of study.** This is measured by comparing the CIP-SOC relationships observed in LA FIRST data to relationships identified in a “CIP-SOC crosswalk” – a table that associates instructional programs (CIP) with occupations (SOC) where the job skills and field of study have a clear relationship, as determined by expert judgement. As a decision-support tool, these crosswalks are used to support degree and program planning and student advising, and they allow information on job opportunities to be “crosswalked” or linked to inform practical decisions about academic programs. We use two such crosswalks: the NCES CIP-SOC crosswalk and the Advance CTE Career Clusters crosswalk. In the analysis, a job is considered “aligned” if it matches a relationship in either crosswalk.⁷ We report the percentage of working completers in an aligned occupation by degree and CIP cohort.
- **Concentration within a specific set of occupations.** We calculate an index of occupational concentration, sometimes called a concentration index or field-occupation index (see Appendix), which combines the occupational outcomes for a given cohort of completers with the distribution of jobs by occupation across the entire workforce.

⁷ Using either crosswalk alone resulted in very similar rates of alignment for most completers.

Higher values indicate tight alignment between completers in a field of study and a specific set of occupations, such that completers work in a narrower range of occupations. Cohorts with lower values have more diffuse occupational outcomes that more closely resemble the composition of occupations across the entire labor market. For example, engineers are a relatively small part of the total workforce, but many engineering bachelor's degree completers work as engineers while relatively few work in other common occupations – this cohort has a high concentration index value.

Alignment between projected employment and completers. To examine alignment between occupational outcomes and expectations about employment trends and job openings, we combine outcomes observed in LA FIRST data with occupational projections published by LA Works. We first link UI employment records in calendar year 2024 with unique completers in academic years 2021 and 2022. This yields rates of employment and occupations observed in Louisiana 2 or 3 years after completion. To adjust for unobserved occupations, we then reweight and rescale the observed occupations to reflect proportions of completers, along with the proportion not employed. These proportions are calculated for every degree level and four-digit CIP code cohort. In this analysis, we only consider stable annual wages as employment and treat marginally attached workers as not employed. We only focus on programs with at least 100 annual average completers.

We apply these proportions to official occupational employment projections published by LA Works. The projections are based on employment in 2022 and projections for 2032, focusing on net change in employment and total openings (total openings reflect net change as well as openings that occur when employees switch occupations or leave employment in Louisiana without changing the level of employment). Essentially, for every completer cohort, we take an average of the projected occupational employment and openings weighted by the proportion of completers observed in each occupation, yielding a measure of expected employment change and job openings for every degree-CIP cohort. Intuitively, the results show how projected job growth (and decline) and new openings are aligned with each degree-CIP cohort's early-career outcomes, based on recently observed occupations for completers.

Note that this analysis is based on empirical links between completers and occupations, but these links are agnostic to the quality of outcomes or the alignment between the content of the degree program and the occupation. Some cohorts could get good jobs in fields that are declining and have few openings. Other cohorts could be well-aligned with growing occupations that pay low wages or have poor alignment with the instructional program's content. Indeed, many lower-wage jobs have more openings simply because these jobs have

higher turnover rates. As such, we present the results in a series of large tables and detailed comparisons and encourage holistic interpretation. We report the following summary measures (see Appendix for additional details):

- **Completers by degree level and instructional program.** For this analysis, we show unique completers that have been deduplicated by academic year as described above. To measure trends, we compare the annual average completers in academic years 2017-18 and 2018-19 with the same number for academic years 2023-24 and 2024-25. This roughly corresponds with the period before the current BOR master plan in 2019 and the period reflected in the most recent data, and pooling multiple years reduces the influence of year-to-year variability.
- **Change in effective labor market size.** We calculate the average number of workers in Louisiana in occupations observed for completers, weighted by the percentage of those completers in each observed occupation. We report the percentage change in this measure between 2022 and 2032, showing programs where employment in the whole economy is projected to grow or decline based on recent occupational outcomes for completers.
- **Average annual openings.** This is a similar average of projected openings, weighted by the percentage of those completers in each observed occupation. Intuitively, this shows the number of positions available to the average completer in each cohort.
- **Occupational concentration.** As described above, this index provides context for occupational projections by indicating how diffuse or concentrated the cohort of completers is in certain occupations.

Degree-CIP-SOC matrix. Finally, we report detailed outcomes linking specific SOC codes to degree levels and four-digit CIP codes. The resulting table is too large to include as a report appendix in a traditional page-layout format, so we provide an Excel data set as a separate Appendix (available from the Blanco Center upon request). Essentially, a version of this table is used as an intermediate step when quantifying alignment in the ways described above, but the table also may be of interest to users wishing to explore detailed occupational outcomes. While the previously published CIP-SOC crosswalks described above are based on expert judgement and ultimately hypothetical relationships between programs and occupations, the data set we publish is based on empirically observed occupations for completers of each program. The data is reported at the degree level and four-digit CIP level for completers in academic years 2021-22 and 2022-23 and employment in calendar year 2024. Additional description of the data set is in the Appendix, including steps taken during analysis and developing final groupings to maintain confidentiality.

Migration and retention

Out-of-state employment (PSEO data). To follow Louisiana completers to employment in other states, we use PSEO, a set of experimental tabulations published by the Census Bureau. PSEO is based on a similar longitudinal data linking concept described above for LA FIRST data: postsecondary completions linked to UI wage records. While PSEO includes UI records in other states, the aggregated publicly available data provides much less detail and flexibility than LA FIRST-based tabulations. As such, we use PSEO as a supplementary data source to examine the percentage employed in other states after completion at a Louisiana institution, as well as completers' wages (25th, 50th, and 75th percentiles). Because PSEO encompasses out-of-state employment, wage outcomes are pooled for those earning wages in Louisiana and those earning wages in other states. PSEO also publishes the number of completers with no or marginal employment – when completers do not meet the criteria for stable annual employment across all states' UI records. PSEO applies the same restrictions as our definition of stable annual employment, only reports wages that meet these criteria, and only considers completers earning such wages as employed.

PSEO reports all outcomes at one, five, and ten years after completion for multi-year cohorts of completers. The number of years from completion in PSEO is based on the calendar year of completion. A minor difference is that, for LA FIRST data, we base the number of years from completion on the academic year of completion and the calendar year of wages. For example, for the modal Spring semester completer, LA FIRST outcomes for year two correspond with PSEO year one outcomes; and although year 5 outcomes are reported for both, they reflect different lengths of post-completion time for most completers. We caution against directly comparing PSEO wages against in-state LA FIRST wages due to PSEO's pooling of wages across the entire US, the differences in calculating time relative to completion, differences in overall time frames, and other discrepancies in data processing and provenance.

PSEO-based outcomes in this report focus on the pooled PSEO cohort, which includes all BOR completions between 2001 and 2021, and the detailed breakdowns by CIP code only report year 5 outcomes. We report in- versus out-of-state percentages, which are only available at the two-digit level. To simplify the reporting, we combine the PSEO degree levels "certificate 1-2 years" and "associates" into an "associate and short-term" category, and we report approximate combined wage percentiles for those completers by taking a weighted average.

Regional employment in Louisiana. To explore the relationship between postsecondary education and migration within the state, we leverage employer locations contained within the UI wage records. To meet specific confidentiality

restrictions embedded in the LA FIRST statute, the only location information available to the researchers is generalized to the level of Louisiana's eight Regional Labor Market Areas (RLMA). These locations are based on the parish of the employer as reported to the UI system. We note that the UI records' location information has known limitations, as employers with multiple worksites in a state may report a worker's wages through a single reporting location that may not correspond to the actual workplace for some employees.⁸ For example, this limitation may unevenly affect employees at large employers like chains, large retailers, or multi-regional health systems. Comparing the distribution of employment against benchmark totals published by LA Works that capture more accurately the location of work for each worker, we find that the proportion of wage records observed in each region are within one or two percentage points of a Quarterly Census of Employment and Wages (QCEW) benchmark published by LA Works. This suggests that only minimal bias affects the high-level summaries we report: the percentage of completers at institutions in each RLMA who are working in each RLMA. Nonetheless, we urge caution when interpreting the figures.

The analysis also uses the region of high school graduation in the SCS data to summarize geographic flows from secondary into postsecondary completion. These flows are all illustrated at the RLMA level, except for LSU A&M (Baton Rouge) and Historically Black Colleges and Universities, which are illustrated separately. We show flows only at two grouped degree levels: short-term credentials and associate degrees (pre-baccalaureate) and bachelor's degrees. Some RLMAs only contain one bachelor's degree-granting institution or LCTC campus (for example, RLMA 4 is equivalent to UL Lafayette for bachelor's completers), but others contain multiple institutions. Employment location is determined for year 2 after completion for those who completed their highest, last observed degree between AY 2014-15 and 2022-23.

Attending postsecondary education and taking a job after completion are both life events with heightened rates of residential mobility, and a large portion of all moves are within the same region or to nearby regions. The geographic flows indirectly reflected through linked BOR and UI records intuitively illustrate how students move across regional labor markets when they transition from high school into postsecondary completion and then into employment. For example, some students remain in the same region throughout, others move to attend college and then return home, and others move to other parts of the state for employment.

⁸ UI records available to LA FIRST are also a key input to the Quarterly Census of Employment and Wages, which takes additional steps to adjust for employers with multiple worksites and make parish/county-level totals more reliable. These steps are not reflected in the UI records available to LA FIRST.

Additional data sets

Licensed and Workforce Validated Skills and Learning (VSL) is a data collection of enrollment and completion records intended to aid the BOR in recognizing all credentials of value in accordance with the BOR Master Plan. This new data from BOR aggregates submissions from BOR institutions as well as proprietary schools and other entities that offer industry-based credentials and non-credit training programs. Only a preliminary summary appears in the report, focusing on general characteristics of VSL students as a supplement to a broader scan of student pathways. When describing the characteristics of VSL students at the time of entry, records are deduplicated to reflect unique students.

A data set on UI claims records is also summarized briefly in the findings.⁹ Specifically, we report the percentage of claimants by self-reported educational attainment as supplemental context alongside employment outcomes.¹⁰ American Community Survey estimates for 2024 are also provided as a benchmark for educational attainment among the employed population.

Case studies

For the case studies of pathways and employment outcomes, we use the following groups of CIP codes to identify completers for each case study:

- **General studies** includes the 6-digit CIPs 24.0102 (General Studies) and 24.0199 (Liberal Arts and Sciences, General Studies and Humanities, Other).
- **Humanities, liberal arts, and social sciences** includes all CIPs within the 2-digit categories:
 - 05: Area, Ethnic, Cultural, and Gender Studies
 - 16: Foreign Languages, Literatures, and Linguistics
 - 23: English Language and Literature
 - 24: Liberal Arts and Sciences, General Studies, and Humanities
(minus the two 6-digit codes in the general studies case)
 - 38: Philosophy and Religious Studies
 - 45: Social Sciences
 - 54: History
- **Healthcare** includes all CIPs in the 2-digit CIP code for Health Professions and Related Clinical Sciences (51).

⁹ Note that educational attainment is reported with various codes that do not clearly align with American Community Survey or BOR codes, so we focus on high-school diploma or less and bachelor's degree.

¹⁰ When education is unreported, we do not include it in the denominator so that records with missing education information do not influence estimates.

- **Skilled trades** includes the CIPs defined by AdvanceCTE’s CIP career clusters as being in the skilled trades subcluster of the construction cluster.¹¹
- **Engineering tech** includes the 6-digit CIPs 15.0404 (Instrumentation Technology/Technician) and 15.0699 (Industrial Production Technology/Technicians, Other.)

When reporting outcomes at the level of these broad groups, we use the highest, last completion *within* the relevant case study group of programs, such that these completers may also have a higher completion in another field. However, when reporting outcomes at a more detailed level within each case study (for example, registered nursing programs within the healthcare case study), we use the highest, last completion across all degree levels and instructional programs.

¹¹ The full list of career clusters is available in the AdvanceCTE [website](#).

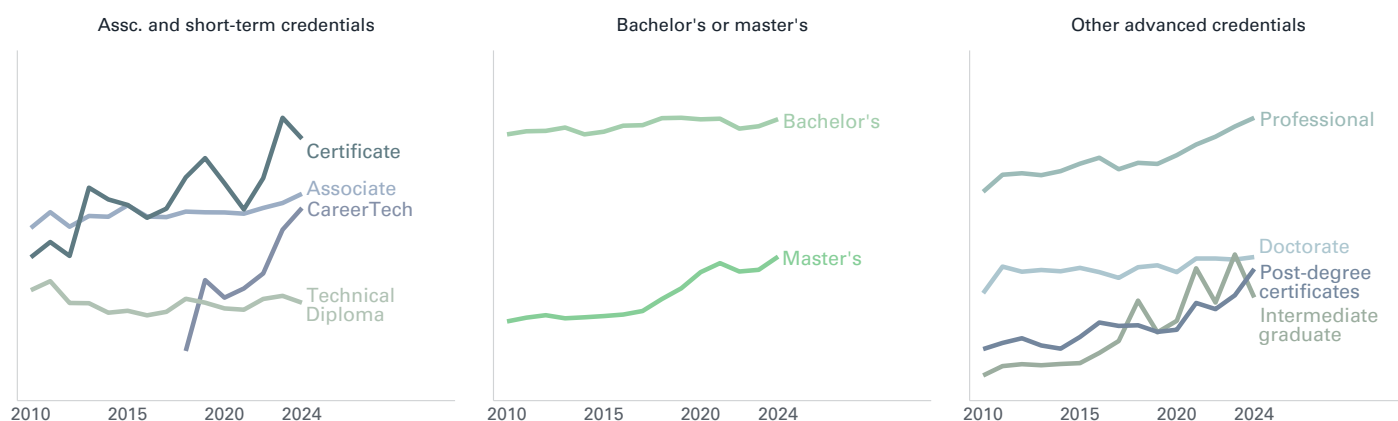
Findings

Pathways through postsecondary education

Every year, thousands of students in Louisiana enroll in hundreds of degree and credential programs across over thirty BOR institutions. Students' journeys through higher education sometimes adhere to a structured program, sometimes entail multiple degrees and credentials, and often simply end with no degree or credential obtained. First, let's consider two broad groups, completers and non-completers. Across 12 years of BOR data, we see over 1.2 million unique individuals who have enrolled at a BOR institution at any point. Of these students, only about 490,000 (39 percent) completed a degree or credential at a BOR institution. This includes the ten percent of BOR enrollees who complete more than one degree or credential.

Figure 4.1 shows the trends in credential completions since AY2010-2011. Overall, associate and most short-term credentials (except for technical diplomas) increased through the 2010s and into the 2020s, while bachelor's completions levelled off in the late 2010s. Between the most recent 2023-24 to 2024-25 academic years, certificates saw a drop, but the number of bachelor's completions recovered slightly from a post-2020 dip. Long-term trends reflect the many years of investment the BOR has made in shorter-term and accessible credentials to increase higher education in the state generally, and recent fluctuations serve as a reminder that students' decisions about how to pursue post-secondary degrees and credentials are complex and dynamic.

Figure 4.1 Annual completions at Louisiana public institutions by credential level, AY2010-11 to 2024-25



Source: Blanco Center analysis of LA FIRST data

Enrollment and non-completion: takeaways with caveats

Enrollment records from the BOR include all students who enroll at an institution, including those who did not complete a degree or credential. Certainly, a good number of non-completing students followed a transfer pathway, accruing credits from a community college before enrolling in a private or out-of-state institution. However, national data show that many of these students likely did pause or abandon their education (Palmer 2024; Irwin et al. 2024). A multi-state survey from the American Council on Education found that top reasons students leave a program are family caregiving responsibilities, academic performance, affordability, medical issues, and career or work-related reasons (Swirsky et al. 2024). As 18 percent of the total United States population between 18 and 64 years old has some college but no credential, this is a significant issue for the nation and for states like Louisiana that have set ambitious postsecondary attainment goals (National Student Clearinghouse Research Center 2024).

The student experience often defies standard institutional tracking, as seen in the frequent divergence between enrollment goals and final completion records. For many students, the degree and field of study initially recorded by the institution may not align with their ultimate completions, particularly for those earning shorter-term credentials. Some may find an attractive job opportunity or face demanding caregiving responsibilities and opt for an earlier exit point than the educational plan on record with the institution. Often, a student earns a certificate or a CareerTech credential while officially recorded as enrolled for another credential, whether they complete the credential that they were initially enrolled to earn or not. For example, 29,491 people in our data earned one or more certificates from a BOR institution without completing any other degree or credential. However, among these students, only 9,779 were formally enrolled in a certificate program, whereas 19,639 were enrolled in an associate program. And, while many certificate completers appear to earn these credentials while enrolled in another, more advanced program, it is not the case that all students enrolled in a more advanced program are picking up certificates along the way. For example, 88,275 people have earned at least one certificate, 40,787 people have earned at least one technical diploma, and 23,972 people have earned both a certificate and a technical diploma. These numbers show how varied and unpredictable students' experiences may be, even among those students completing the same credential as part of their educational pathway.

Given these concerns, we limit ourselves to some broad observations about non-completers. About 50 percent of White and Asian students who appear in the enrollment records do not show up as completers; about 70 percent of Black students and students of other races enroll but do not or have not yet completed any credential. International (non-resident) students have the lowest non-completion rate of about 42 percent. These students tend to be in more advanced programs, which show higher completion rates among all students. The proportion of enrollees who complete their degree or credential varies by degree

type, with more advanced degrees seeing higher rates of completion. About half of bachelor's, 73 percent of master's, and 85 percent of professional and doctorate enrollees completed their degree. Only about a quarter of associate degree enrollees completed an associate degree, though 46 percent of technical diploma enrollees and over 90 percent of CareerTech enrollees complete the corresponding credential.

On average, students earn substantial course credit before their records stop appearing in the enrollment data. These students may be dropping or stopping out (stopping out refers to a student pausing their education with an intent to return to school). Among those who enroll but do not complete any degree with a BOR institution, bachelor's degree students earn an average of 38 hours of credit, associate degree students earn 25 hours, and certificate students earn 19 hours before stopping out, or perhaps transferring to a different educational program. Non-degree seeking students average 9 credit hours, among the lowest number of credit hours before dropping or stopping out. Professional degree students earn 35 hours and doctoral degree students earn 25 before discontinuing, transferring, or otherwise falling out of the enrollment data.

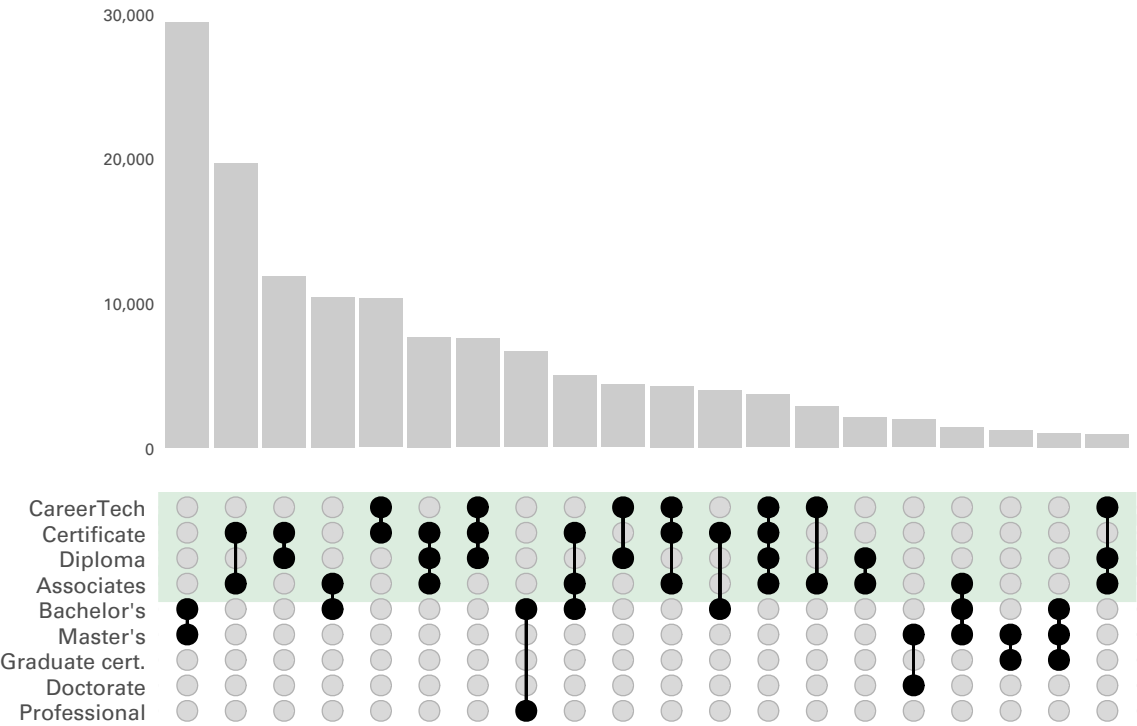
After leaving their BOR institution, these non-completers tend to disappear from the view provided by Louisiana enrollment and UI wage records. Two years after their final enrollment observation, 63 percent of non-completers also do not appear in Louisiana wage records, meaning they are not earning a wage at a UI-covered job in the state. Five years after they were seen in the enrollment data, this rate grows to 75 percent. These patterns are explored in more detail below.

Completers and the prevalence of multiple completions

Our data covers 273,203 people who completed a bachelor's degree, by far the most common degree or credential. With 95,115, master's completers come in a distant second to the number of bachelor's completers. Certificate completers are not far behind, with 88,275 completers, followed closely by associate completers, who number 83,641. Though far smaller, substantial numbers of completers earned technical diplomas (40,787) and CareerTech credentials (23,065 since the program's implementation in AY2016-2017).

From academic year 2010-2011 through 2024-2025, BOR institutions have awarded multiple degrees or credentials to more than a quarter of all completers. Figure 4.2 summarizes the frequency with which degrees and credentials are combined in pathways of completers of multiple credentials. Of all bachelor's completers, 77 percent (210,960) obtained only a bachelor's degree from a BOR institution, and 23 percent (62,243) completed at least one additional credential. The most common credential to combine with a bachelor's degree is a master's degree; 12 percent (29,430) of bachelor's completers have this combination. Another 1.5 percent (4,183) of bachelor's completers have a bachelor's and a master's in addition to some other credential(s). For example, 1,390 completers have an associate, bachelor's, and master's degree.

Figure 4.2 Most common degree combinations for multiple completers, AY2010-11 to 2024-25



Source: Blanco Center analysis of LA FIRST data

The role of certificates for completers of multiple credentials. Certificates can serve as steppingstones to other more time-intensive degrees or credentials. For example, 41 percent of people who earned a certificate also earned an associate degree, and 43 percent of associate degree completers also have a certificate. However, as described above, certificates are sometimes the only credential earned by students enrolled in associate programs. For thousands of students, a certificate is indeed a steppingstone, but for thousands of others, it may serve more as a backstop.

Certificate pathways are less likely to intersect with bachelor’s degree completions. Twelve percent of certificate completers also earned a bachelor’s, and only four percent of bachelor’s completers also earned a certificate. Associate completers are more likely to have gone on to earn a bachelor’s than certificate completers, with 22 percent of associate completers doing so – an unsurprising count given that associate degrees provide an accessible entry point to a four-year degree via traditional transfer pathways. Twelve percent of bachelor’s completers go on to get a master’s from a BOR institution. The pool of graduates from each degree level are a significant source of students for the next level, with seven percent of bachelor’s completers having first completed an associate degree at a BOR institution and 35 percent of master’s completers having first completed a bachelor’s degree at a BOR institution.

Sequential completions. The order in which students pursue multiple credentials tends to follow the conventional hierarchy of degrees, by and large. For example, many students start with a certificate and continue on to an associate degree, and very few students return to earn a certificate after completing a bachelor's or master's (about 1,000 students got a certificate after a bachelor's, and just over 30 got a certificate after a master's).¹² About 37 percent of multiple-completion pathways start with a certificate, almost all of which end with a more advanced credential. The ten most-common multi-completion pathways in Figure 4.2 cover two-thirds of all unique multiple degree-level pathways at BOR institutions that completers have found through their education.

As described above, bachelor's-to-master's is the most common multiple-completion pathway, with 28,386 completers. Certificate-to-associate comes next with 16,988 completers, followed by certificate-to-diploma with 9,700 completers. The associate-to-bachelor's pathway is the fourth-most common, with 8,789 completers. Another 3,986 students follow a certificate-associate-bachelor's pathway, and if we add these to the two-degree associate-bachelor's path, this traditional two-to-four-year transfer pathway becomes third-most common sequence of completions, with 12,775 students. Another three-credential pathway, certificate-diploma-associate, is also in the top ten, with 5,365 completers. These longer pathways again show how frequently certificate completions feature on pathways to more advanced credentials and degrees, as suggested above. It may be surprising that despite the high numbers of people earning an associate followed by a bachelor's and a bachelor's followed by a master's (the number four and number one pathways, respectively), there are relatively few students (1,158) progressing from an associate to a bachelor's and then on to a master's degree.

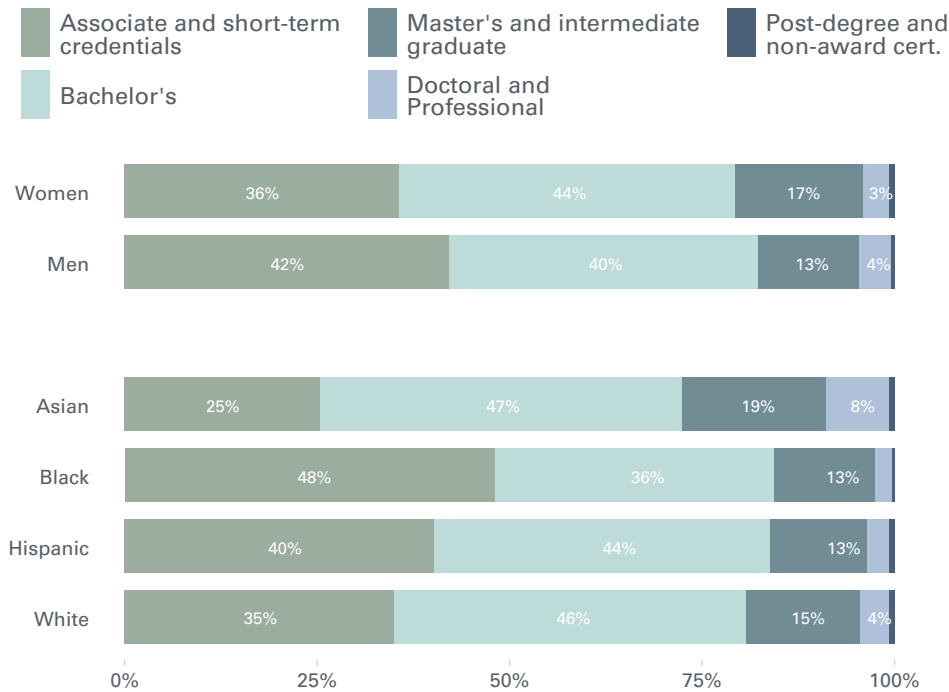
Some specific fields of study have a strong association with multiple-completion pathways. A certificate in general studies to an associate in general studies (with no additional degree) is the most common pathway when considering field of study, followed by a bachelor's degree to a master's in business, then bachelor's to master's in healthcare. There's also a very common pathway for certificate to diploma to associate in engineering technologies. The next most common pathway is certificate in general studies to associate in health (later, the case studies explore general studies pathways in greater detail). The next two are certificate-to-diploma pathways in mechanic and repair programs followed by precision production. Some professional pathways are also common: a bachelor's in biological science to a professional degree in health and a bachelor's to a master's in education are among the most common pathways.

Completer demographics. Figures 4.3, 4.4, and 4.5 illustrate how completion pathways differ by age, race, and gender. More people complete their first

¹² Note that certificates here refer to the most common type, which are typically one-year credentials offered at LCTC campuses. It excludes the much smaller category of students who completed post-degree awards, also frequently called "certificates," which are also offered at the post-bachelor's and post-graduate degree level.

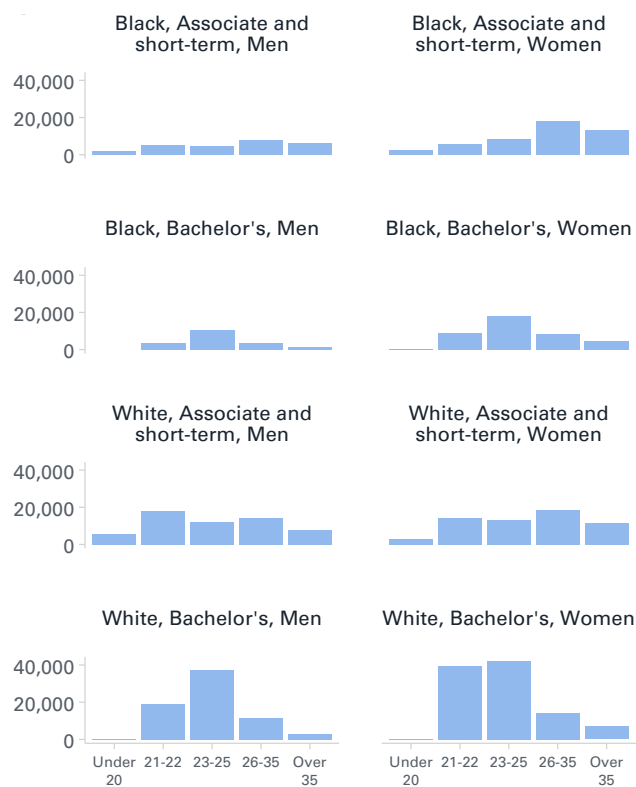
credential at age 22 than at any other age, but the median age at which people earn their first credential is 24. The median age for a second credential is just two years later at 26, and for the third is age 30. The ages at which people progress through multiple credentials varies among demographic groups. Women tend to be a bit older than men when completing credentials, especially by the time they are earning a third credential. Black students tend to complete older as well, largely due to the higher relative concentration of Black women earning shorter-term credentials and associate's degrees after age 25 compared to other demographic groups.

Figure 4.3 Total credentials earned by degree level and demographic group, AY2010-11 to 2024-25



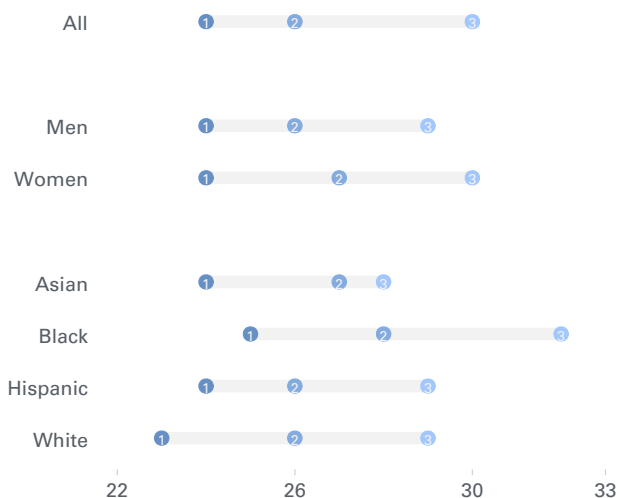
Source: Blanco Center analysis of LA FIRST data

Figure 4.4 Number of completions of short-term credentials and bachelor's degrees by age group and gender for Black and White completers, AY2010-11 to 2024-25



Source: Blanco Center analysis of LA FIRST data

Figure 4.5 Median age at completion of first, second, and third credentials by demographic group, AY2010-11 to 2024-25



Source: Blanco Center analysis of LA FIRST data

Note: Only one completion per individual per year is retained for this analysis. That is, if a person earns two credentials in the same year at age 22, then a third credential two years later at 25, the first credential is reported at age 22 and the second credential is reported at age 25.

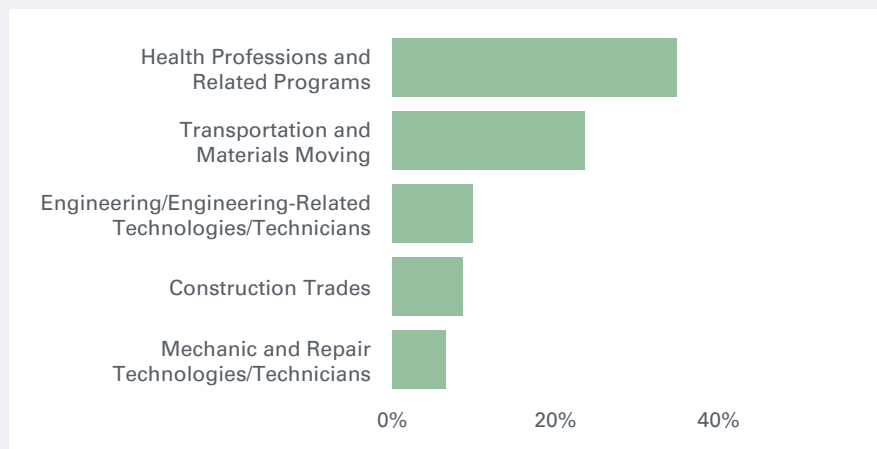
Black and White men and women tend to earn bachelor's degrees according to similar patterns. Women earn more bachelor's degrees than men; and most people tend to complete from age 21 to 25, though a higher percentage comes after age 25 for Black completers. However, these patterns diverge for associate and shorter-term credentials. Among Black completers, short-term credentials account for a disproportionately large share of total awards compared to their White counterparts, whose completions are more heavily concentrated at the bachelor's level. White men tend to complete their shorter-term credentials younger, most before age 23. For other groups, most associate and shorter-term completions come after age 25. This is especially pronounced for Black women, who earn 68 percent of their shorter-term credentials after age 25.

A preliminary look at Licensed and Workforce Validated Skills and Learning pathways

While data is limited on Licensed and Workforce Validated Skills and Learning (VSL, or non-credit and industry-based credentials), bringing these pathways into closer alignment with more traditional postsecondary degrees and credentials is a focus of BOR and many other states' postsecondary systems, whether framed as an accessible alternative pathway to career-aligned training, a supplement to more conventional credit-based degrees, or as a means to connect students to specific occupational licensing or job requirements. These programs are more varied in terms of providers and standards than traditional degree programs.

Ninety-one thousand unique individuals appear in the VSL records, with enrollment of 40,000 in 2024. About 6 percent of individuals in the sample of BOR data on completers also appear in the VSL records since 2021. Most VSL completions were in specific, career-aligned fields. By far, the largest VSL programs were in health professions and related fields and transportation and materials moving, accounting for 59 percent of total completions. Adding in the next largest programs – engineering-related technologies/technicians, construction trades, and mechanic and repair technologies/technicians – brings the total to 84 percent of completions (Figure 4.6). Twenty-nine percent were age 35 and older at the start of enrollment, with the majority over 26, and enrollees were more likely to be male and Black than the average for-credit enrollee at a BOR institution. While this brief discussion should be read as a cursory summary of a new data set, it helps to illustrate who the VSL population is in comparison with more conventional credit-based pathways.

Figure 4.6 Completions of Validated Skills and Learning credentials by field, AY2024-25



Source: Blanco Center analysis of LA FIRST data

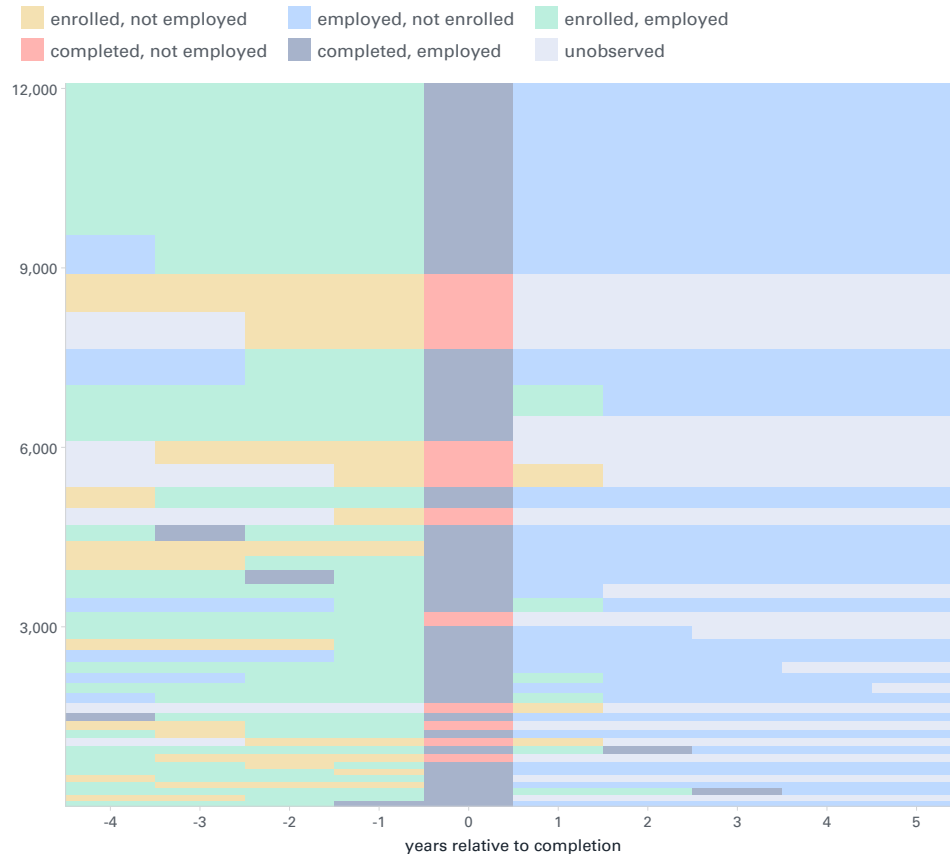
BOR students in employment records

To this point, our analysis has traced student records through enrollment and completion. Here, we examine the interplay between education pathways and employment status. This serves as a transition to the remainder of the findings, which focus on employment outcomes. The analysis shows that, while the nature of education and employment records renders many individuals “unseen” at any given time in the available data, there is significant overlap between spells of education and spells of employment. This illustrates that many students work while in school and gives context to the comparison of employment outcomes before and after completion in later parts of the findings.

Annual status leading to and following completion. To explore how employment histories overlap with completion, we focus on a cohort of completers from calendar year 2018 and report their enrollment and work status (at a BOR institution and/or in Louisiana UI-covered employment) during the time leading up to and following completion. Figure 4.7 summarizes the sequences of annual employment and enrollment statuses of 2018 completers four years prior to and five years following completion of a degree or credential. Of the 38,836 completers in 2018, 43 percent (16,649 individuals) follow a sequence that describes fewer than ten individuals. The figure only reflects the 12,090 individuals on more common paths that were followed by at least 100 individuals. Each path is ordered by the frequency of its status sequences. For example, the top row of tiles represents the single path that the greatest number of people followed (enrolled and employed, completed and employed, then just employed). The figure shows the following specific statuses with respect to in-state enrollment and in-state employment:

- *Employed, not enrolled:* receiving a wage at a Louisiana UI-covered job but not observed enrolled in a BOR institution;
- *Completed, employed:* completed a credential within the calendar year and observed in employment records during the year;
- *Completed, not employed:* completed a credential within the calendar year but not observed in employment records during the year;
- *Enrolled, employed:* enrolled within the calendar year without completing a credential and also seen in employment records during the year;
- *Enrolled, not employed:* enrolled within the calendar year without completing a credential but not observed in employment records during the year; and
- *Unobserved:* not observed in a BOR institution or employed in a UI-covered job in Louisiana.

Figure 4.7 Status four years before and five years after completion, unique sequences with at least 100 completers



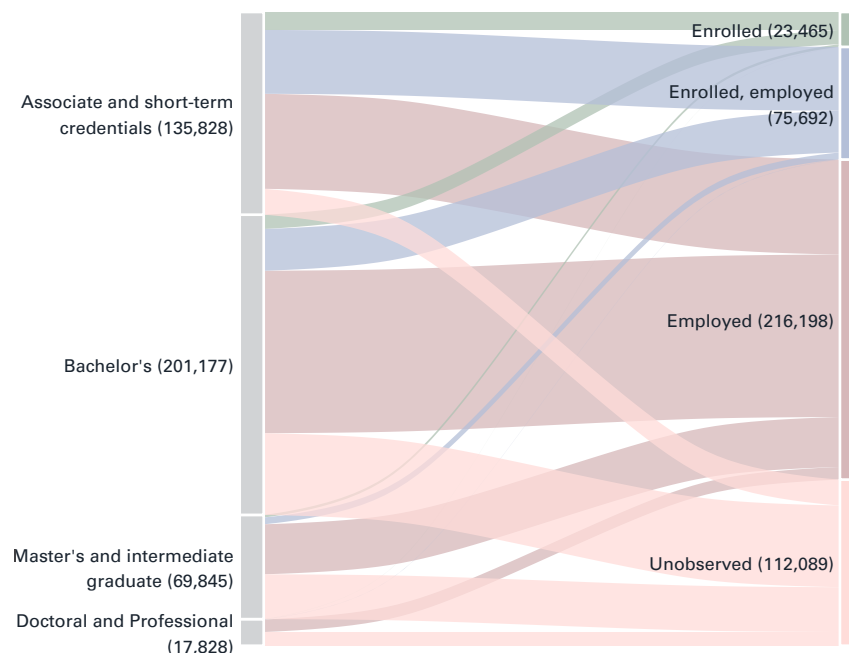
Source: Blanco Center analysis of LA FIRST data

Six percent (2,355) of all completers follow the most common single sequence: enrolled and working for all four years prior to completion, working during the year of completion, and then working for the five years following completion without enrolling or completing another credential. These individuals are seen continuously over the ten-year period (they are not unseen by our data in any year). The next most-common sequence, which 3.5 percent (1,356) follow, is nearly identical, with a period of working with no enrollment prior to enrolling in school. Next most common is unobserved followed by enrollment without working, then, after completing, disappearing from the data again as unobserved. It is likely that many of these 1,277 people are out-of-state students.

Of the known sequences, 22 percent (6,310) change status at least five times over the ten-year period. It's likely that many of the extremely unique (followed by ten or fewer individuals and therefore undisclosed) sequences likewise include many status changes. This is a significant number of people who follow more complex pathways than simple enrollment to completion to work. These include, for example, periods of taking up then stopping work during enrollment, completing additional credentials, or dropping out of the data at one or more points throughout the ten years reviewed.

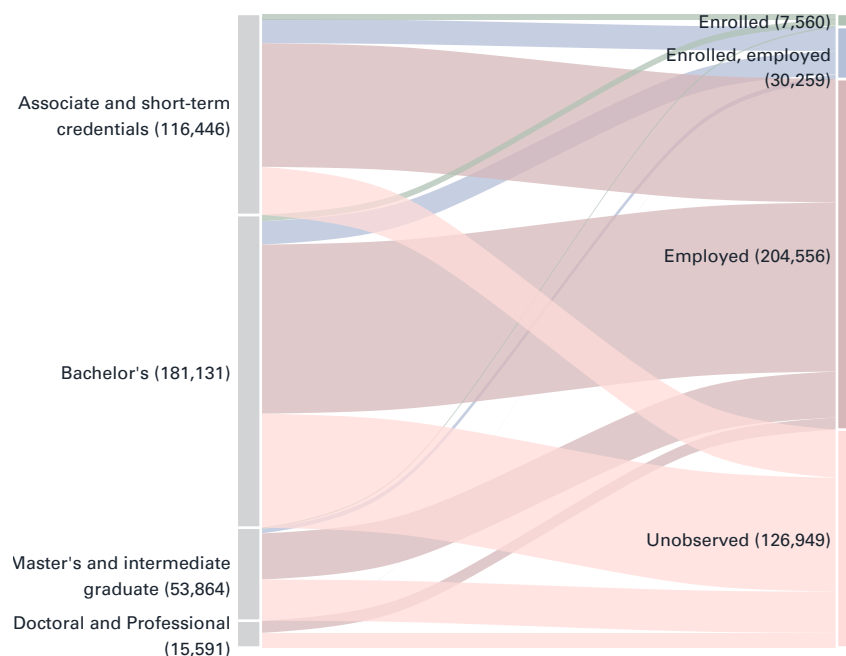
Completer destinations 2 and 5 years later. Figures 4.8 and 4.9 follow our full pooled sample of students after a period of enrollment ends – whether by completing a credential or ceasing enrollment. Specifically, the charts show the status after two and five years of students who enrolled from academic year 2010 to 2022 (two-year outcomes) or 2019 (five-year outcomes) either complete their program or cease enrollment without completing (stop out or drop out, or transfer to private/ out-of-state institutions). Two years after completing a degree or credential, many completers are still enrolled or have re-enrolled, and most of these are also working. About half of students are unobserved in our data, meaning they aren’t enrolled in a BOR institution or earning a wage in a UI-covered job. These rates range significantly by degree level, as expected given the assessment of the enrollment data shared above. Doctoral and professional degrees show the highest rates unobserved two years after stopping or dropping out, while certificate and associate noncompleters are among the lowest. Completers are more likely to be enrolled or observed in employment in our data two or five years after completion than non-completers after stop- or drop-out. Far fewer students are enrolled five years after completing or ceasing enrollment than two years after, and a larger proportion are unobserved in our data.

Figure 4.8 Enrollment and employment status two years after completion by degree group



Source: Blanco Center analysis of LA FIRST data

Figure 4.9. Enrollment and employment status five years after completion by degree group



Source: Blanco Center analysis of LA FIRST data

Overall, it can be hard to define an “expected” pathway for a Louisiana student from enrollment to completion and then into employment. This variety surely reflects the diversity of life experiences of our state’s students, while it also influences the trajectory of employment outcomes after higher education.

Where completers work

Employment, non-employment, and out-of-state employment

As discussed in the background section, completers are more likely to be employed and generally earn more than those with less education. In Louisiana, a long-standing question among policymakers is whether Louisiana’s postsecondary completers are retained as workers in-state after graduation. This section examines the location where completers are observed earning a UI-covered wage. Specifically, we examine three main questions for completers at Louisiana BOR institutions:

- To what extent are Louisiana BOR institution completers earning a UI-covered wage?
- Are they doing so in-state or out-of-state?

- Focusing on Louisiana’s regional labor markets, to what extent do students attend high school and postsecondary education within the same region or work in the same region where they complete a degree or credential?

For the first two of these questions, we rely on publicly available data from the Census Bureau’s Postsecondary Employment Outcomes (PSEO). Though less detailed than the LA FIRST data underlying most of the findings of this report, this data source is built on the same concept of linking public post-secondary completions with UI wage records but includes UI system records from LA Works as well as from peer agencies in other states. Thus, the PSEO data complements LA FIRST wage records by including people who are not observed earning a UI-covered wage in Louisiana but may be doing so in another state.¹³ Our analysis focuses on the main outcomes included in the PSEO data:

- **Percentage of completers employed.** PSEO uses two criteria for stable attachment to employment over the course of a year to measure “employed” completers: earning a wage in at least three quarters and at a level higher than the federal full time minimum wage (for consistency, we also use these criteria in the following section focusing on LA FIRST data, which we describe as “stable annual employment”). Completers’ employment is further broken down into **in-state** and **out-of-state**.
- **Percentage of completers not- or marginally employed.** If no wage records are observed or if the wage records do not meet the criteria for labor market attachment, PSEO classifies these completers as “non- or marginally employed” for the year.
- **Typical wages (median and 25th-75th percentile range) for completers.** Wages are only reported for completers meeting the criteria for employed as described above.

Note that, in other sections that follow, we use LA FIRST data to examine similar measures, as well as additional outcomes, at a greater level of detail than available through PSEO. Here, we focus first on high-level employment rates by degree or credential level. Then, we further break down employment rates by institution for bachelor’s completers and compare employment and wage outcomes by degree level for undergraduate completers.

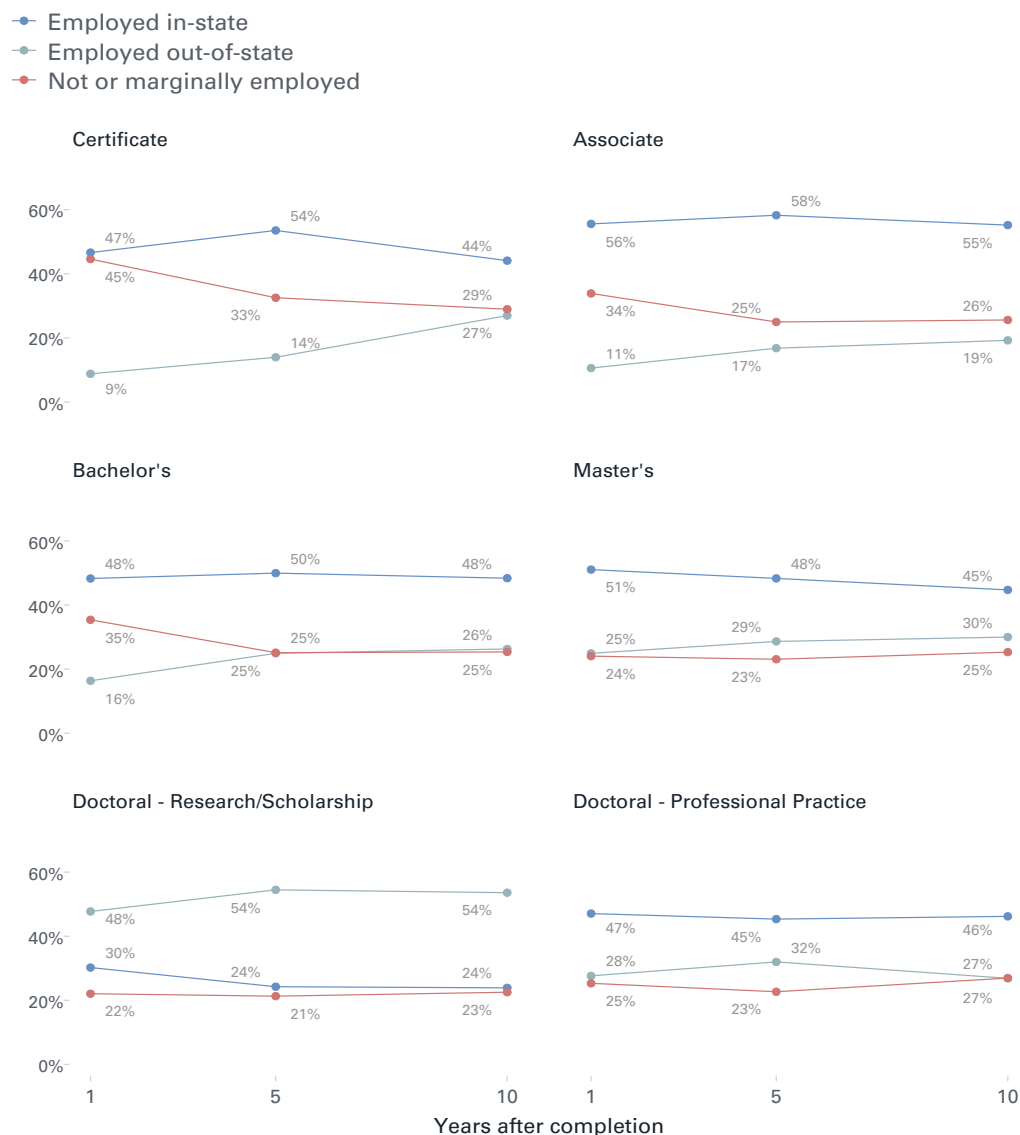
A few general patterns emerge from the detailed breakdowns examined below. First, across the board, short-term degree and credential completers are more

¹³ Note that as PSEO also depends on UI wage records, it still shares another main limitation of LA FIRST data: Most forms of self-employment are not captured.

likely to remain in-state than bachelor's completers. Second, employment outcomes vary by instructional program. For example, bachelor's completers of liberal arts and sciences degrees have decent though not especially high median wages, just below the median for all majors. These completers also stay in the state at higher rates than those with STEM degrees with higher wage outcomes, but the association between high levels of pay and high levels of out-of-state work is not perfectly consistent across degree programs. Third, bachelor's completers and associate and short-term completers had similar rates of non- or marginal employment, though rates were higher for some associate and short-term instructional programs. While bachelor's wages were higher overall, earnings vary across and within instructional programs at both levels.

Postsecondary employment after completion by level of degree or credential. We begin by summarizing the main PSEO employment outcomes by degree level, as shown in Figure 4.10. The chart shows three mutually exclusive outcomes for each degree level: the percentage not or marginally employed, the percentage working in Louisiana, and the percentage working in another state. These percentages are shown in three time periods relative to the completion year (one, five, and ten years later), which can be interpreted as immediate, medium-term, and long-term outcomes. Note that five- and ten-year outcomes are not available for recent completers (a summary of PSEO's cohorts is included in the Appendix).

Figure 4.10 Employment by degree level and year after completion



Source: Blanco Center analysis of LA FIRST data

Note: Employment reported by PSEO is comparable to stable annual employment based on LA FIRST data.

Across all levels of degree and credential, between 55 and 78 percent of completers were employed (in- or out-of-state) in year one, and those rates increased by year five. Between years one and five, employment grew from 55 to 68 percent for certificates, 66 to 75 percent for associates, and 65 to 75 percent for bachelors. Rates of employment then remain relatively stable through year ten. The proportion working out of state also varies by degree: about 10 percent of associate and certificate completers and 16 percent of bachelor's completers in year one. By year five, a more sizeable portion was working out of state, ranging from around 15 percent for associate degrees and short-term credentials to 24 percent for bachelor's

degrees. More advanced graduate degrees exhibit higher percentages of year one employment and out-of-state work (especially research/scholarship doctorates). However, by year 10, overall rates of employment converged to within a few percentage points of 75 percent across all degree or credential levels.

Certificate completers had notably higher rates of non- or marginal employment initially in year one. As alluded to in the earlier discussion of postsecondary pathways, this may be due in part to the way that certificates are often earned while in school for other short-term degrees (as PSEO does not deduplicate completers). Rates of non- or marginal employment one year after completion were also high for bachelor's and associate completers, which may be inflated in part due to graduate school and two-to-four-year transfers. Of course, some of the elevated pattern of limited or no work at the one-year mark may represent challenges in transitions to employment, but PSEO data do not allow for more detailed analysis that would be necessary to capture those dynamics. Consequently, our interpretation emphasizes outcomes five years after completion.

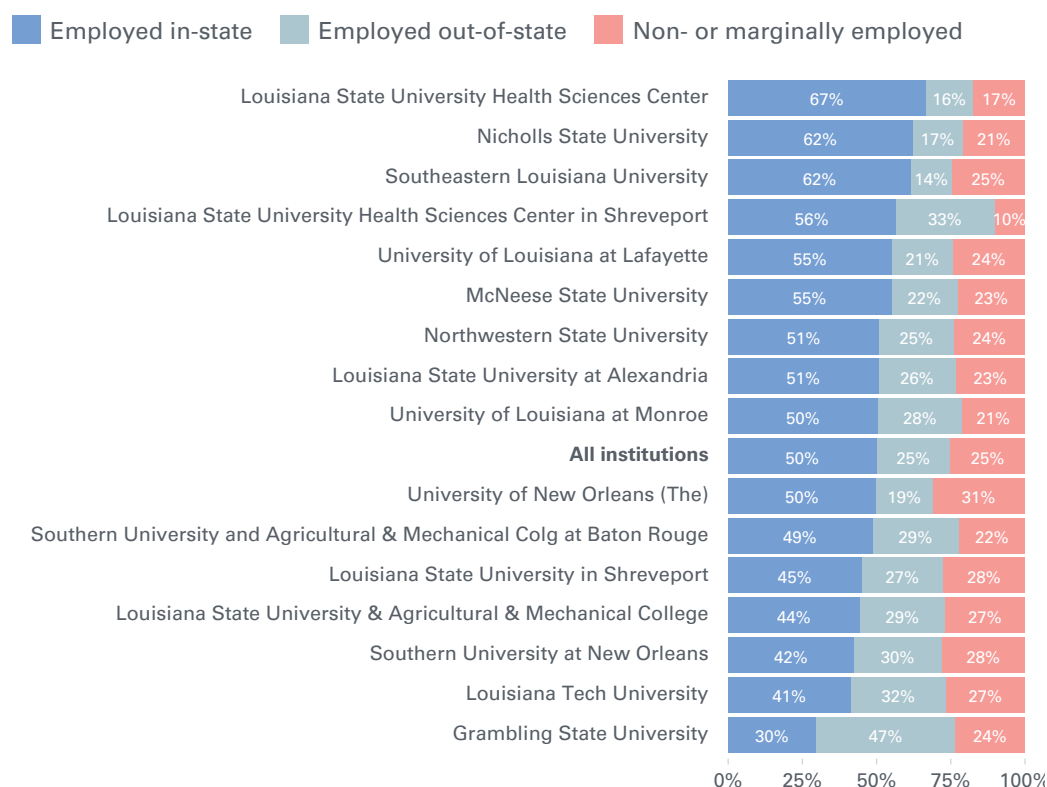
Associate and bachelor's degree completers had roughly similar rates of non- or marginal employment, and about 75 percent were in stable UI-covered employment five years after completion. Certificate completers had a higher rate of non- or marginal employment and thus a lower rate of stable employment at 67 percent.

Fifty percent of bachelor's completers were working in-state five years after completion. Associate (58 percent) and certificate (53 percent) completers were working in-state in slightly higher proportions. Conversely, 25 percent of bachelor's completers worked out-of-state five years after completion, higher than 17 percent for associate and 14 percent for certificate completers. All degree levels have only a slight decline in the proportion working in-state from years five to ten after completion. This is likely attributable to the regular, gradual demographic churn of interstate migration, contrasting with heightened geographic mobility closer to the date of completion. New completers are more likely to be younger, less settled in their work and personal lives, and potentially more likely to explore opportunities outside of their local region's labor market, all of which can lead to elevated rates of inter-state mobility relative to their older, more established counterparts.

At a rate of 28 percent five years after completion, master's completers work outside of Louisiana at slightly higher rates than bachelor's completers. Unlike bachelor's degree, associate, and certificate completers, master's and other graduate degree completers do not show lagging employment in year one, as these degrees are more likely to be the terminal point of the completer's education. Research/scholarship doctoral completers work out of state at much higher rates than professional practice doctoral completers. The former are typically academically oriented PhDs, who participate in a national (or even international) labor market, and the latter include terminal medical and law degrees, among other degrees linked to highly skilled, highly paid professions.

Bachelor’s employment by institution. As stated above, across all institutions, about 75 percent of bachelor’s completers were employed at year five, and overall employment rates were within a few percentage points of the overall average across most institutions, as shown in Figure 4.11. About 50 percent of all completers were employed in-state. However, institutions differ on the mix of in- and out-of-state employment. Figure 4.12 shows these differences more directly by removing non- or marginally employed completers and showing the percentage of employed students who are employed out-of-state. LSU A&M (Baton Rouge), Louisiana’s largest four-year university, has a moderately high proportion of students employed outside of the state: 29 percent of all completers and 39 percent of employed completers. However, Grambling State leads in this respect by a large margin, followed by Louisiana Tech. On average, about one in three employed completers are employed out-of-state. Institutions with the highest in-state worker retention rates (less than 30 percent of employed completers work out of state) were LSU Health Sciences Center in New Orleans, Southeastern, Nicholls, UL Lafayette, UNO, and McNeese.

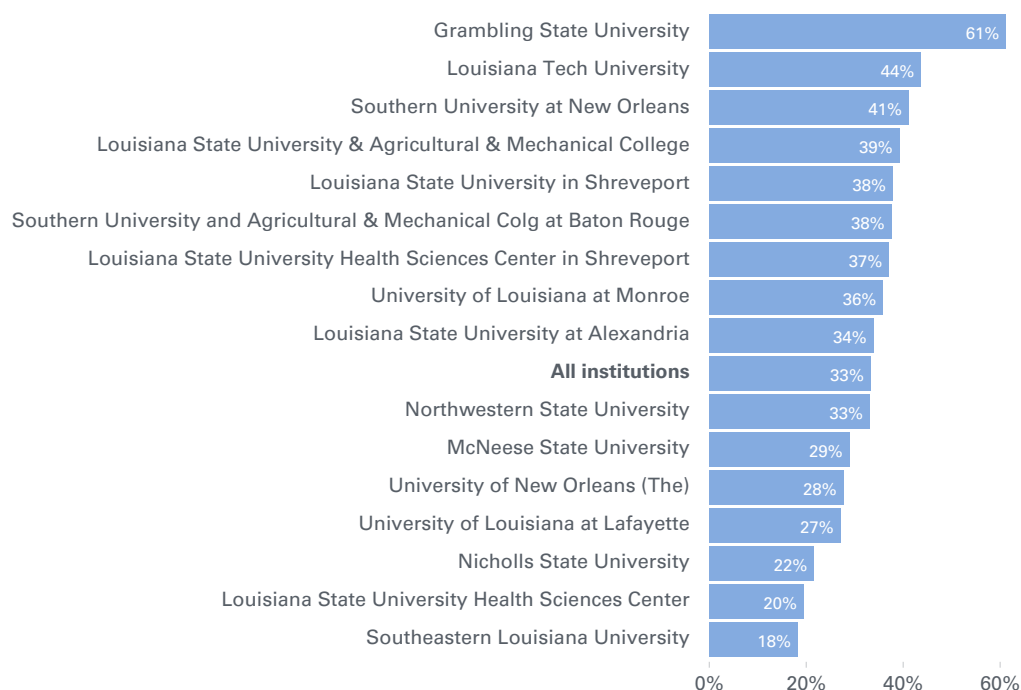
Figure 4.11 Louisiana bachelor’s employment five years after completion by institution



Source: Blanco Center analysis of PSEO (U.S. Census Bureau)

Note: Employment reported by PSEO is comparable to stable annual employment based on LA FIRST data.

Figure 4.12 Out-of-state proportion of Louisiana bachelor's employment five years after completion by institution



Source: Blanco Center analysis of PSEO (U.S. Census Bureau)

Note: The denominator is the sum of in-state and out-of-state bachelor's employment. Employment reported by PSEO is comparable to stable annual employment based on LA FIRST data.

Employment by instructional program. Wages and employment vary not only by degree level but also by instructional program (defined here as a two-digit CIP code). Figure 4.13 details wage and employment outcomes at the instructional program area level (two-digit CIP code) for bachelor's degrees five years after completion, and Figure 4.14 does the same for associate degrees and short-term credentials. Starting with bachelor's degrees, most instructional programs range from about \$45,000 up to \$60,000 for median wages for stable annual employment (here, wages include both in-state and out-of-state wages). Programs with completers earning above \$65,000 are mostly STEM-related fields: Engineering (CIP 14), Engineering-related Technologies/Technicians (15), Computer and Information Sciences and Support Services (11), Health Professions and Related Programs (51, including nursing), and Physical Sciences (40).

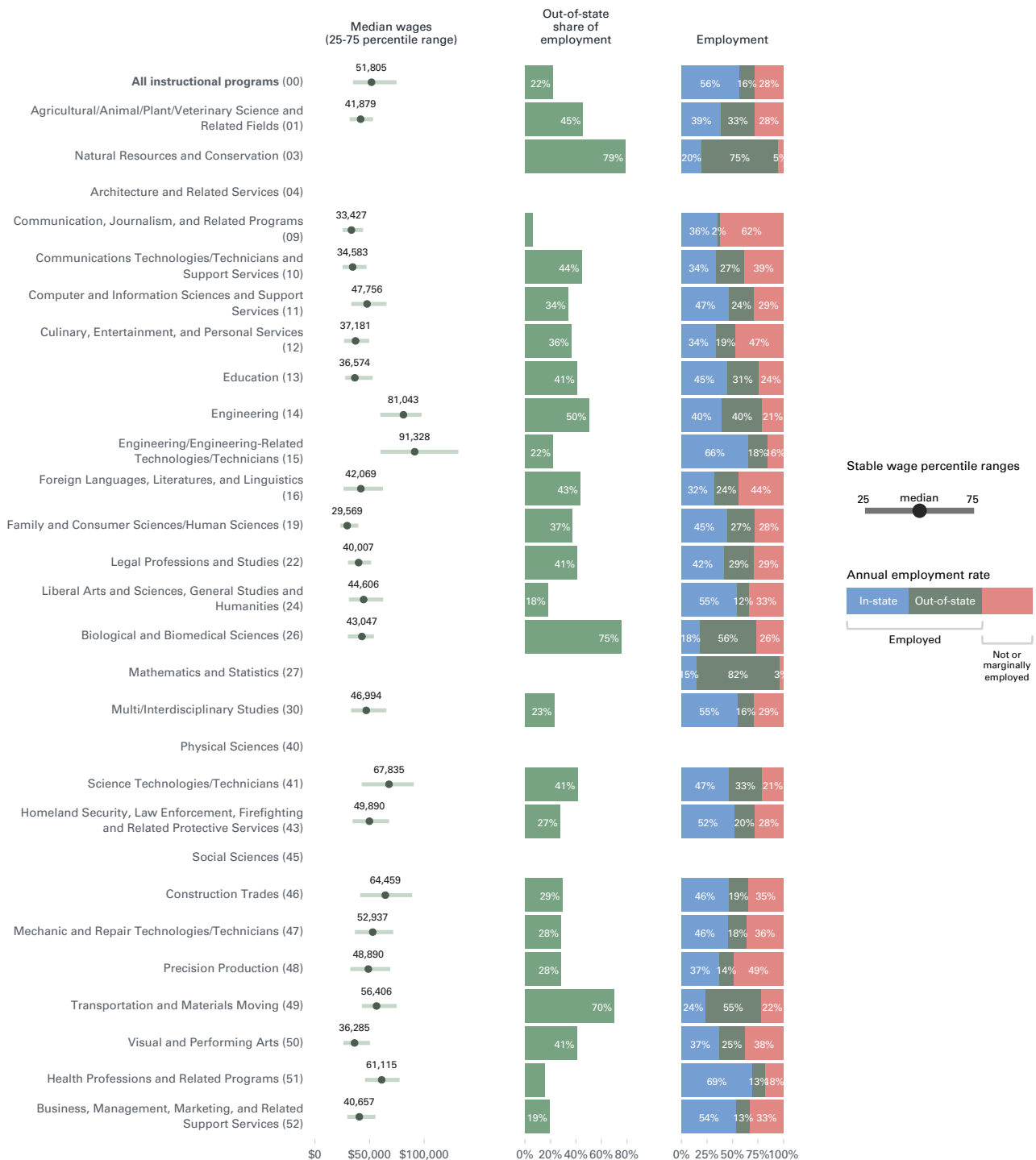
Figure 4.13 Louisiana bachelor's employment and wage outcomes five years after completion by instructional program, including employment outside Louisiana



Source: Blanco Center analysis of PSEO (U.S. Census Bureau)

Note: Wages reported by PSEO are comparable to wages for stable annual employment based on LA FIRST data.

Figure 4.14 Louisiana associate and short-term credential employment and wage outcomes five years after completion by instructional program, including employment outside Louisiana



Source: Blanco Center analysis of PSEO (U.S. Census Bureau)

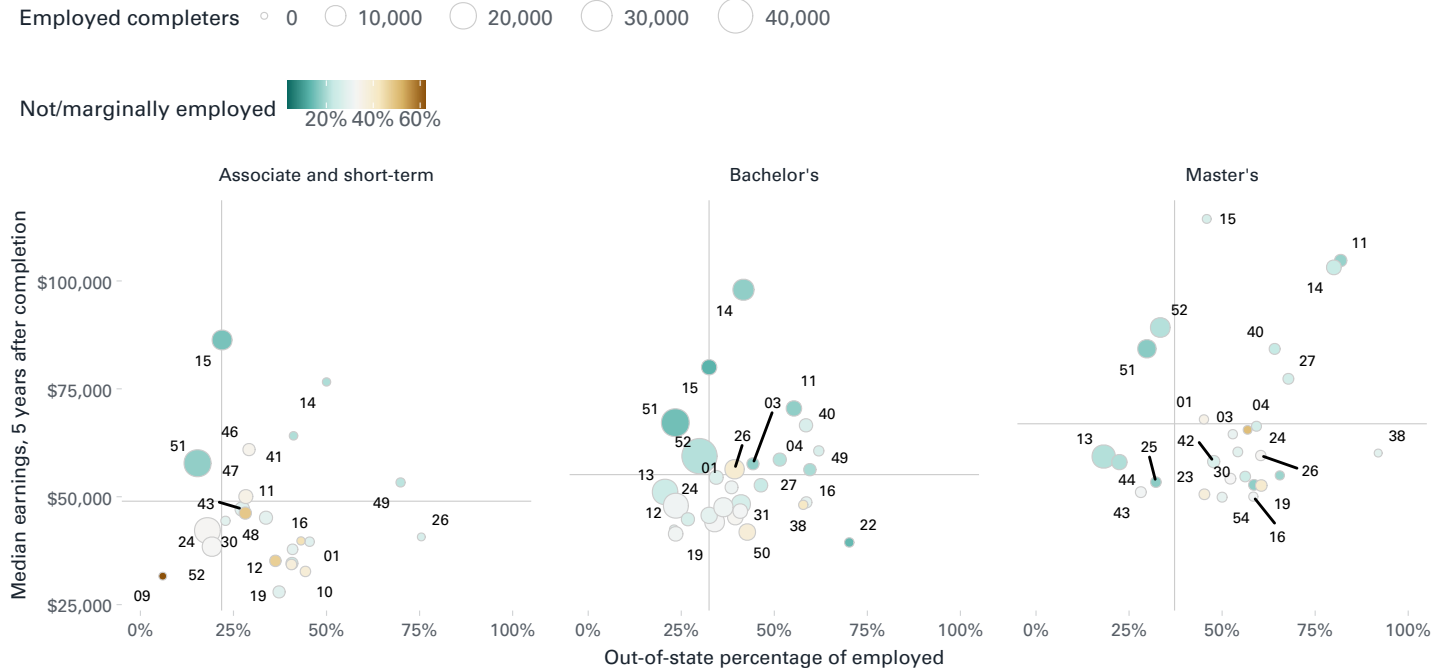
Note: Wages reported by PSEO are comparable to wages for stable annual employment based on LA FIRST data.

Rates of stable employment ranged from roughly 60 percent to over 85 percent. There is also considerable variation in the mix of in- and out-of-state employment among employed completers. Depending on the instructional program, bachelor's completers worked out-of-state at rates ranging from just over 20 percent to 70 percent. Similarly, while 25 percent of all bachelor's completers were not or marginally employed, individual instructional programs range from under 15 percent to over 40 percent on this outcome.

For associate and short-term credentials, year 5 earnings for stable annual employment range from just above \$30,000 to around \$50,000 for most instructional programs, though several programs exceed these levels. Higher-earning programs include Health Professions and Related Programs (CIP 51), Construction Trades (46), Engineering (14), and Science Technologies/Technicians (41). The standout is Engineering-Related Technologies/Technicians (15), where completers earn very high wages, competitive with the highest-paid bachelor's degrees. These completers are also very likely to remain employed in Louisiana. Later in the case studies section, we revisit in-state outcomes for these credentials, along with construction trades and healthcare.

Figure 4.15 shows a selection of information from the previous charts arranged on scatterplots for better comparison (master's programs are also included). The reference lines show the rates of out-of-state work and median wages for all completers at each degree level, and the bubbles are each two-digit CIP code, sized according to the total number of completers (refer to Figures 4.13 and 4.14 for the full program title). Instructional programs to the right of the reference line work out-of-state at higher rates than the degree-level average; programs above the line have higher median wages than the degree-level median.

Figure 4.15 Louisiana out-of-state employment, wages, and non- or marginal employment by degree group and instructional program 5 years after completion



Source: Blanco Center analysis of PSEO (U.S. Census Bureau)

Note: Reference lines represent median earnings and out-of-state percentage of the employed across all programs at the same degree level. Labels are two-digit CIP codes: See Figures 4.13 and 4.14 for each code's full program title. Wages reported by PSEO are comparable to wages for stable annual employment based on LA FIRST data.

Overall, 33 percent of employed bachelor's completers were employed out-of-state five years after completion. High-paid bachelor's completers with high rates of working out-of-state include: Engineering (14), Computer and Information Sciences and Support Services (11), Physical Sciences (40), Transportation and Materials Moving (49), Architecture and Related Services (04), Natural Resources and Conservation (03), Biological and Biomedical Sciences (26), and Mathematics and Statistics (27). Note that many of these are technical, STEM-related majors with portable skill sets and few barriers (for example, licensure). Completers who are more likely to remain in-state include larger programs, like Health Professions and Related Programs (51); Business, Management, Marketing, and Related Support Services (52); Education (13); and Liberal Arts and Sciences, General Studies and Humanities (24). Some lower-paid bachelor's completers were also more likely to work out-of-state, including Visual and Performing Arts (50), Philosophy and Religious Studies (38), Foreign Languages, Literatures, and Linguistics (16), Architecture and Related Services (04), and Legal Professions and Studies (22), and History (54). Of these, only Visual and Performing Arts (50) and Philosophy and Religious Studies (38) also had relatively high rates of non- or marginal employment, as measured by PSEO.

Switching to associate and short-term credential completers, only 22 percent of those employed five years after completion are employed out-of-state. While the rate at which employed completers work out-of-state is lower than for bachelor's, several STEM fields also show up in the instructional programs as more likely to migrate: Engineering (14), Science Technologies/Technicians (41), Mechanic and Repair Technologies/Technicians (47), and Biological and Biomedical Sciences (26). The largest programs in terms of employed completers, including Engineering Technology (15), Liberal Arts and Sciences, General Studies and Humanities (24), Health Professions and Related Programs (51), and Business, Management, Marketing, and Related Support Services (52) had high percentages of completers remaining in-state for work.

Thirty-seven percent of employed master's completers are employed out-of-state five years after completion. Education (13), Health Professions and Related Programs (51), and Business, Management, Marketing, and Related Support Services (52, including MBAs) completers – the three most common master's degrees – were more likely to remain in-state. In many other fields, master's completers were more likely to work out-of-state than in-state, many paralleling relatively high rates for bachelor's completers in the same fields (STEM-related fields, for example).

Postsecondary completers and Louisiana's regional labor markets

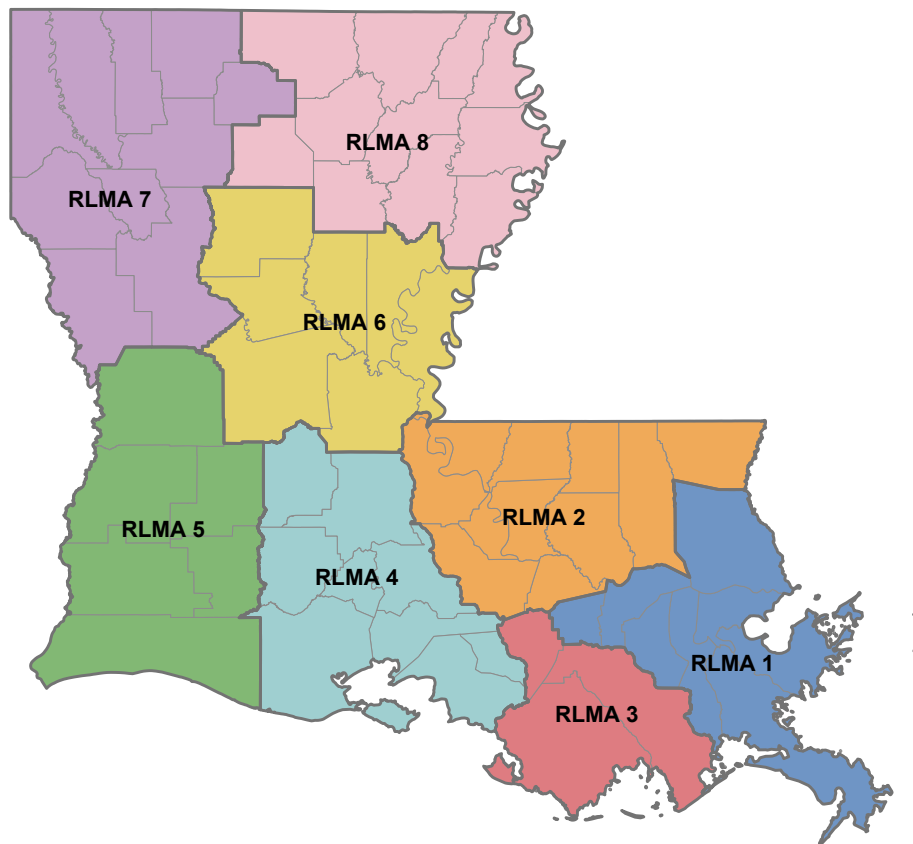
Consistent with patterns of interstate mobility, postsecondary attendance and completion are catalysts for movement within the state. Many Louisiana residents relocate across regional labor markets to attend college or pursue job opportunities after completion. Some remain in their home region to attend postsecondary education and, after completion, either stay or leave for employment. Others who leave after high school might return home after completion, might stay to live and work in the region where they attended higher education, or might move to an entirely different region. Below, we explore intra-state flows of completers across different labor markets.

To do so, we focus on Louisiana's eight regional labor market areas (RLMAs). Together, these regions cover every parish in Louisiana, and they are defined by LA Works as follows (see Figure 4.16):

New Orleans Region (RLMA 1), Baton Rouge Region (RLMA 2), Houma Region (RLMA 3), Lafayette Region (RLMA 4), Lake Charles Region (RLMA 5), Alexandria Region (RLMA 6), Shreveport Region (RLMA 7), and Monroe Region (RLMA 8).

Because LSU's flagship campus in Baton Rouge (LSU A&M) is larger than all other schools and attracts many students from across the state and beyond the state, these completers are removed from reporting in RLMA 2 (Baton Rouge) and included on their own chart as LSU A&M (BR) completers.

Figure 4.16 Louisiana Works Regional Labor Market Areas (RLMAs)



Source: Louisiana Works

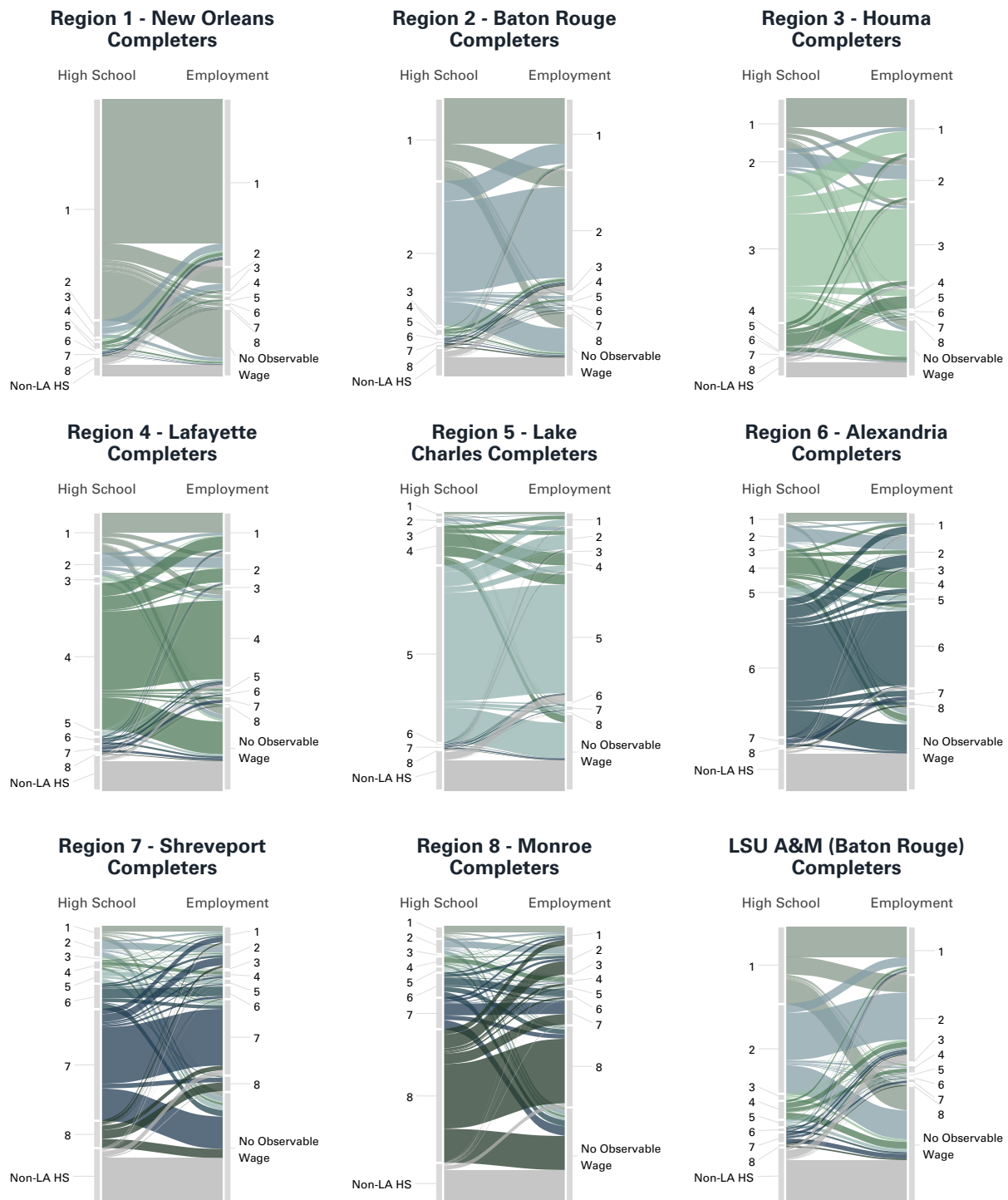
For this analysis, we focus on the highest and most recent degree of an individual completer (who graduated between AY 2014-15 and 2022-23) and link these completers to wage records two years later.¹⁴ We identify the region where the institution of the student's postsecondary completion is located, the student's home region (where they graduated high school), and their location of employment after completion. Focusing first on bachelor's completers and then on associate and short-term completers, we summarize geographic flows across Louisiana regions that correspond with two transitions: high school to postsecondary and postsecondary to employment.

Of the students included in the analysis, 35 percent completed associate degrees or short-term credentials, and 65 percent completed a bachelor's degree. Eleven percent came from outside Louisiana. Two years after graduation, 30 percent of completers had no observable wage in Louisiana. Non-observable wages can be attributed to a lack of UI-covered employment, self-employment, or employment out-of-state.¹⁵

¹⁴ Identifies the employment region of all public university completers with W-2 wages two years after graduation, which may include graduates who are currently enrolled in a new program while working.

¹⁵ While we focus on stable employment in the remaining portions of the findings, for this analysis, we include any completers with an observed wage.

Figure 4.17. Flows of bachelor's completers by region (RLMA): high school to postsecondary institution of completion to employment



Source: Blanco Center analysis of LA FIRST data

Note: Employment is based on primary region of wage earning two years after completion. LSU A&M (Baton Rouge) is removed from Region 2 and shown separately.

Overall, the charts illustrate the regional “stickiness” of transitions between high school, higher education, and employment. In every region, the most common single category (the widest flow) includes completers who graduated high school and were subsequently employed in the same region as their postsecondary institution. However, the proportion of these within-region flows varies. Movement across regions is also common, as demonstrated by flows between the two largest regions, New Orleans and Baton Rouge (RLMAs 1 and 2), along with LSU A&M in Baton Rouge. RLMA 1 high school students are a significant share of LSU A&M (27 percent) and other RLMA 2 completers (29 percent). However, most of these completers who were employed in Louisiana two years later were employed in RLMA 1, their home region. In contrast, few of RLMA 1’s completers originated from RLMA 2 high schools. Both regions’ completers also have some representation of recent completers who worked in the other region without a previous high school relationship.

While there is a notable pattern of students migrating away from their high school regions to complete at a postsecondary institution in another region of the state, the largest portion of completers in every region originated from the same home region, in some cases with significant flows from high schools in neighboring regions. The New Orleans region (RLMA 1) has the highest percentage of completers coming from the same high school region (most of whom later work in the same region). Most universities awarding bachelor’s degrees in Louisiana attract approximately 35 percent to 40 percent of their graduates from outside their local region, aside from LSU A&M (BR), which attracts a statewide high of 47 percent of completers from other Louisiana regions and out-of-state. The Shreveport region (RLMA 7) also attracts a large percentage of high school students from across the state, as the concentration of universities in Northwest Louisiana (LSU Shreveport, Louisiana Tech, Grambling State) draw from a pool of students wider than the surrounding region. Louisiana Tech and Grambling State are in Lincoln Parish, which borders the Monroe region (RLMA 8) and is a similar distance from the population centers of the Shreveport and Monroe regions, which helps explain some of the higher migration. LSU A&M (BR) and the Shreveport region (RLMA 7) both attract the highest percentage of students from out-of-state, at 20 percent, as shown in Figure 4.17.

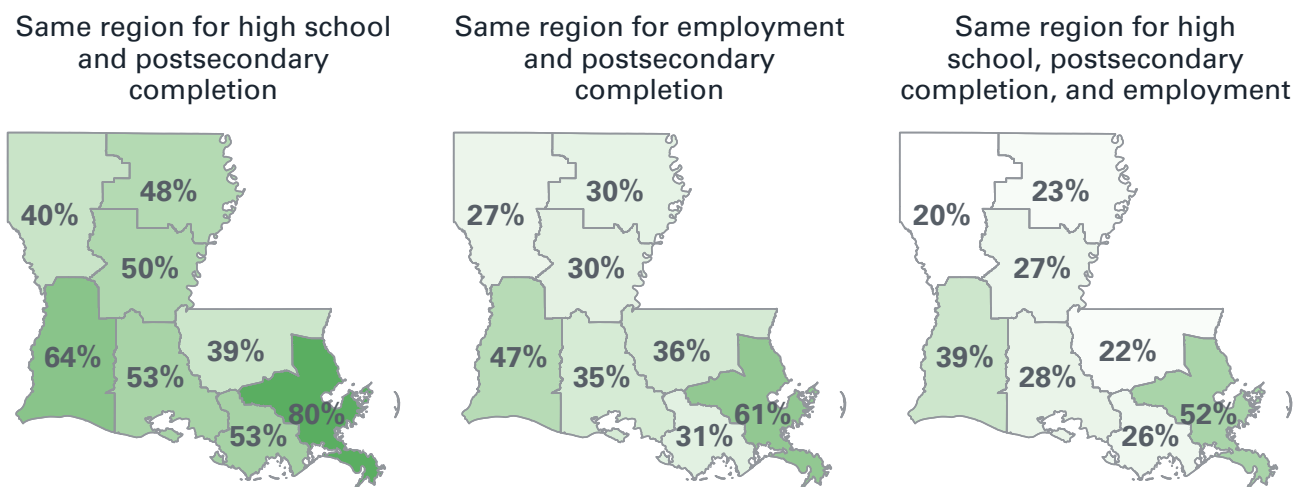
As the largest regions in both population and employment, the New Orleans (RLMA 1) and Baton Rouge (RLMA 2) regions are prominent employment destinations for completers. RLMA 1 accounts for 9 percent of total Louisiana bachelor’s completers, and RLMA 2 accounts for 39 percent of bachelor’s completers when including LSU’s main campus. These regions combine to account for over half of all bachelor’s degree employment in the state, with 28 percent in RLMA 1 and 31 percent in RLMA 2.¹⁶ This is consistent with the general notion that

¹⁶ Based on observable wages two years after completion. Approximately 35 percent of bachelor’s completers do not have an observable wage (i.e. unemployment or employment out-of-state).

larger regions offer more diverse, higher-paying opportunities to mobile graduates. Though a smaller labor market, the Lake Charles region also retains a relatively large proportion of completers, which could partly reflect hiring conditions. At the metro level, Lake Charles employment grew over the period covered by this analysis, while the other smaller metros (Alexandria, Monroe, and Houma) had flat or declining employment.¹⁷

Figure 4.18 summarizes the rate at which high school and post-completion employment occurred in the same region as completion. New Orleans (RLMA Region 1) maintains the highest rate of bachelor's degree completers who come from local high schools (80 percent). This region also boasts the highest rate of bachelor's graduates who remain working locally 2 years after graduation (61 percent). The next closest region in both metrics is Lake Charles (RLMA 5) with 64 percent of bachelor's graduates coming from local high schools and 47 percent working in the same region after graduation. Only 39 percent of the Baton Rouge region's (RLMA 2) bachelor's graduates come from local high schools, largely driven by LSU's ability to attract enrollment from across the state and from out-of-state.

Figure 4.18 Retention of bachelor's degree completers by region



Source: Blanco Center analysis of LA FIRST data

Note: Employment is based on primary region of wage earning two years after completion.

¹⁷ This is based on metropolitan statistical area totals from the Bureau of Labor Statistics. All metros had a major dip during the 2020 pandemic. In the preceding years, Lake Charles had a rapid growth rate far exceeding any other region of the state. While it has not recovered to its 2018 peak, its level remains higher than before 2014, unlike the other metros identified here. Note that metropolitan statistical areas and RLMA's do not line up perfectly in most cases, but their employment trends overlap significantly, since most of the differences are small rural or outlying parishes.

Table 4.1 analyzes regional retention for bachelor’s completers by RLMA, as well as bachelor’s completers at LSU A&M (BR) and Louisiana’s Historically Black Colleges and Universities (HBCU’s), which include Southern University and Grambling State University. While LSU A&M (BR) bachelor’s completers come primarily from outside the Baton Rouge region, the HBCU’s in Louisiana recruit 47 percent of their completers from local high schools, and 53 percent of UL Lafayette completers come from local high schools. The post-college employment data are relatively similar – 38 percent of Louisiana HBCU graduates work in their region, while 35 percent of UL Lafayette (RLMA 4) and 32 percent of LSU graduates are working in their university region two years after graduating.

Table 4.1 Bachelor’s completers two years after graduation by institution region

Postsecondary completion RLMA	High school	Same RLMA for	
		Employment	High school and employment
Region 1 - New Orleans	78%	61%	52%
Region 2 - Baton Rouge	53%	44%	34%
Region 3 - Houma	53%	31%	26%
Region 4 - Lafayette	53%	35%	28%
Region 5 - Lake Charles	64%	47%	39%
Region 6 - Alexandria	50%	30%	27%
Region 7 - Shreveport	43%	29%	22%
Region 8 - Monroe	48%	30%	23%
HBCU Bachelors	47%	38%	28%
LSU Bachelors	32%	32%	17%

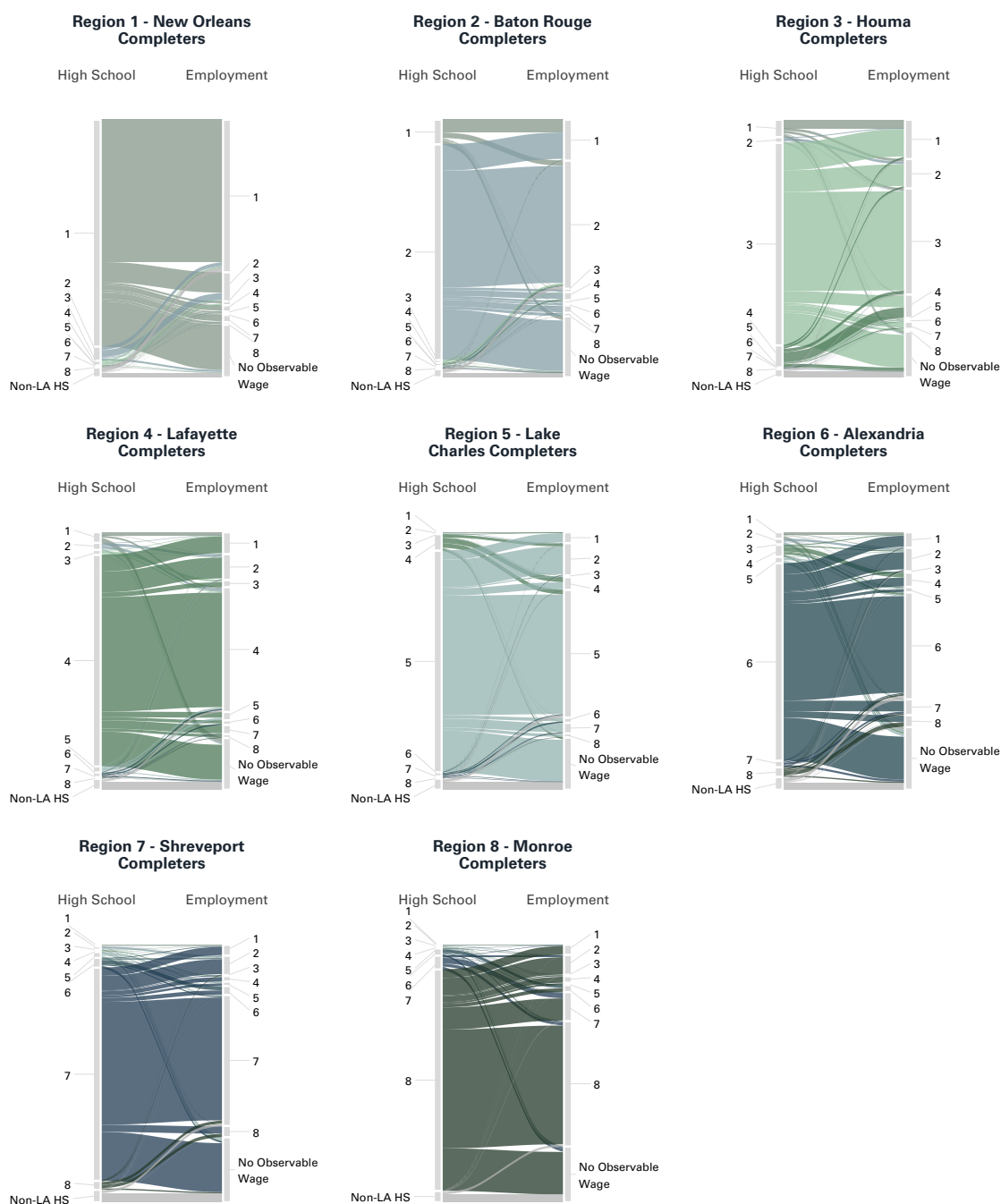
Source: Blanco Center analysis of LA FIRST data

Table 4.1 also tracks the rate of post-secondary bachelor’s completers who attended high school within the region and found work in the same region two years later. New Orleans (RLMA 1) has the highest rate, with more than half of college graduates linked to the local region for these major milestones. New Orleans is certainly an outlier, with other regions ranging from 22 – 34 percent of completers both coming from high schools in the region and then working in the region two years after graduating. These regions exclude the LSUA&M (BR) and the HBCUs, which had 28 percent and 17 percent of completers attending high school and working in the same region as the institution, respectively.

Associate degree and short-term credential completers. Figure 4.19 summarizes high school and employment flows in relation to the region of the postsecondary institution for associate and short-term completers. In general, completers of associate degrees and short-term credentials are more likely to come from local high schools. Relative to bachelor’s completers, this makes intuitive sense – a graduating high school senior looking at community college options may prioritize proximity, cost, and accessibility when seeking a shorter-term, often directly career-aligned credential. Research has found that student attendance is more sensitive to distance for community colleges than for four-year institutions

(Acton et al. 2024). While there exists some variation, across all eight of Louisiana's regions, at least 77 percent of associate and short-term credential completers originate from local high schools, with a maximum of 88 percent in the New Orleans region.

Figure 4.19 Flows of associate and short-term credential completers by region (RLMA): high school to postsecondary institution of completion to employment

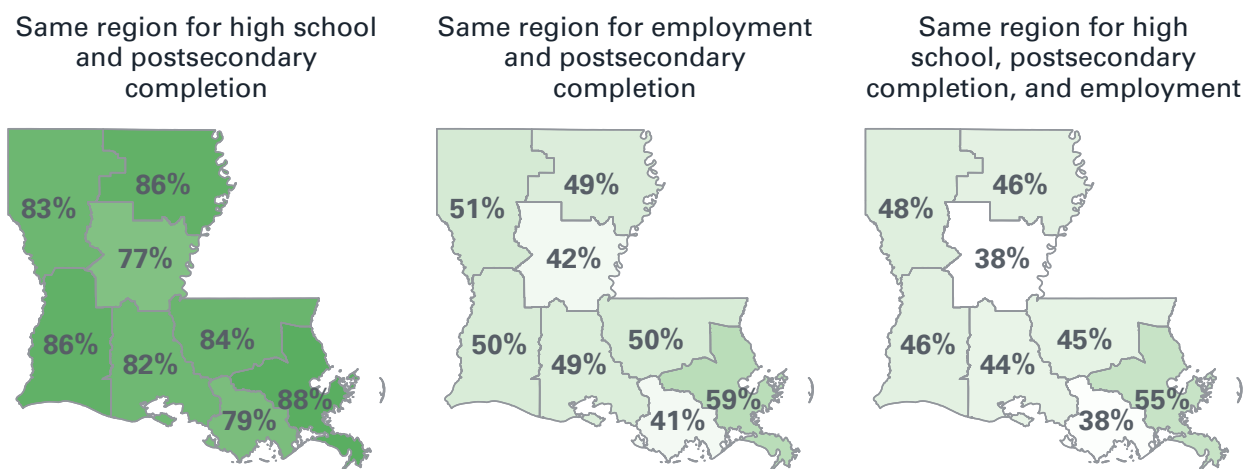


Source: Blanco Center analysis of LA FIRST data

Note: Employment is based on primary region of wage earning two years after completion.

After graduating, the share of associate and short-term credential completers who remain working in their local institution's RLMA is about 51 percent. This is higher than the local employment rate for bachelor's completers, 36 percent, implying that associate and short-term credential graduates are more likely to attend programs near their local high school and stay working locally after graduating (see Figure 4.20). There are a few regions that diverge when comparing short-term vs. bachelor's degrees' employment regions. In RLMA 7 and 8 (Shreveport and Monroe), the percentages of associate and short-term completers who work locally are at least 19 percentage points higher than the same percentages for bachelor's completers.

Figure 4.20 Retention of associate degree and short-term credential completers by region



Source: Blanco Center analysis of LA FIRST data

Note: Employment is based on primary region of wage earning two years after completion.

Table 4.2 summarizes regional retention for associate’s and short-term credential completers. New Orleans (RLMA 1) has the strongest rates of regional labor market attachment for short-term graduates, while Houma (RLMA 3) and Alexandria (RLMA 6) have the lowest percentage of completers remaining in their respective regions for employment. Overall, local labor market attachment is elevated for completers of associate’s and short-term credentials when compared to bachelor’s degree holders. Among short-term degree completers in the New Orleans (RLMA 1), 55 percent attended high schools locally and found employment locally after graduation – this is the highest rate in the state. The next-highest rate of same high school and employment is the Shreveport region (RLMA 7), at 48 percent of completers.

Table 4.2 Associate’s and short-term completers two years after graduation by institution region

Postsecondary completion RLMA	High school	Same RLMA for	
		Employment	High school and employment
Region 1 - New Orleans	88%	59%	55%
Region 2 - Baton Rouge	84%	50%	45%
Region 3 - Houma	79%	41%	38%
Region 4 - Lafayette	82%	49%	44%
Region 5 - Lake Charles	86%	50%	46%
Region 6 - Alexandria	77%	42%	38%
Region 7 - Shreveport	83%	51%	48%
Region 8 - Monroe	86%	49%	46%

Source: Blanco Center analysis of LA FIRST data

Understanding migration patterns of Louisiana’s college graduates. Louisiana’s regional workforce patterns differ significantly by credential level. Associate degree and short-term credential pathways are deeply rooted in their regions, with most completers coming from local high schools (84 percent). While also fed by a significant stream of local high school students, bachelor’s degree pathways are characterized by larger flows across regional labor markets, though patterns vary based on the characteristics of the institution and the region. Associate and short-term credentials are more likely to draw from local high schools than bachelor’s degree programs, and degree attainment impacts a worker’s proximity to their institution after entering post-completion employment. In other words, short-term degree completers are more likely to stay close to home when choosing a school, and after graduation, are more likely to find employment locally than bachelor’s graduates. In fact, 48 percent of short-term degree completers attended high school and found employment after college within the same region. This proportion falls to 27 percent for bachelor’s completers.

The gravity of New Orleans and Baton Rouge as the regions with the largest population and labor markets shapes intra-state flows and rates of retention. New Orleans is also an outlier for its high-school-college-career pipeline – 52 percent of bachelor’s and 59 percent of associate and short-term completers stayed in the New Orleans region throughout these milestones. Lake Charles has the second highest rate of college graduates who attended local high schools, with a substantial portion remaining in the region for work after completion (47 percent of bachelor’s and 50 percent of associate and short-term credential completers).

Baton Rouge generates the highest number of completers from postsecondary institutions in the state, accounting for 32 percent of all completers. While LSU A&M (BR) has the most completers, only 31 percent remain in the region for employment 2 years after graduating – a lower retention rate than UL Lafayette or the HBCUs. Despite the gravity of the New Orleans and Baton Rouge labor markets, completers who attended local high schools in any region are most likely to find employment in the same region – this pattern holds true across every region in Louisiana.

Detailed outcomes for completers employed in Louisiana

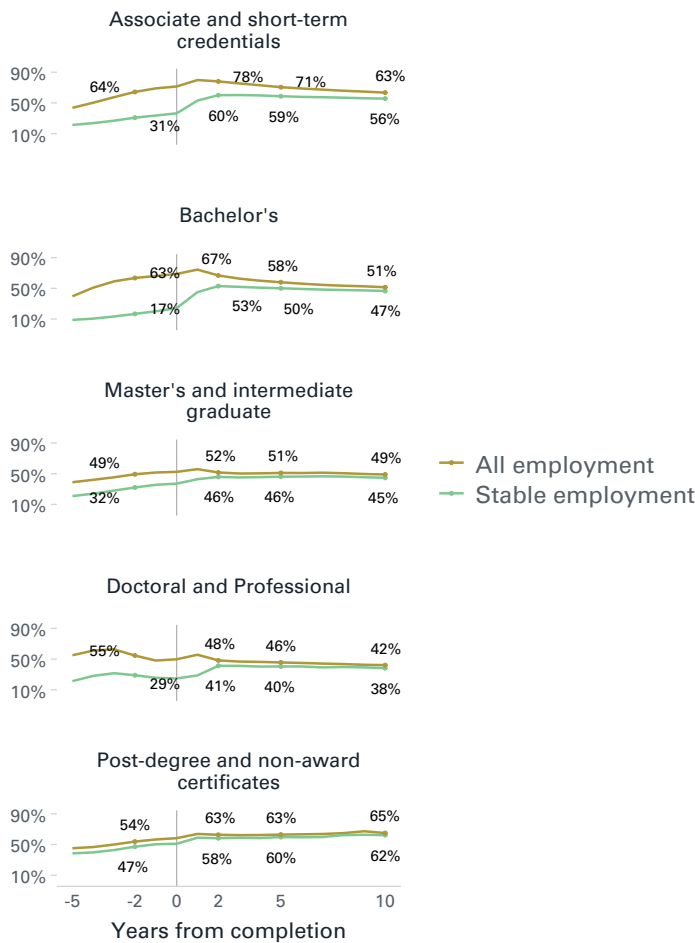
This section breaks down major employment outcomes for completers’ employment in Louisiana. The first set of outcomes focuses on wages and employment status in Louisiana by degree level, followed by more detailed breakdowns by degree level and instructional program area (CIP code). We then explore differences by age, race, and gender.

As a reminder, all outcomes are described annually. We define employment as having any reported wages during a calendar year, but we emphasize *stable* annual employment and wages. Stable annual employment requires that wages are reported for at least three quarters of a given year and exceed the federal minimum wage for a full-time, year-round worker. This is similar to the strategy used in the PSEO data reported in the previous section.

Employment and wages by degree level

Employment. Giving a broad overview, Figure 4.21 shows the percentage of completers employed (earning a covered wage in Louisiana) by general degree group for the period before and after completion. The chart quantifies employment in Louisiana in two ways: earning any wage during the year and earning a stable annual wage (see Appendix for the cumulative percentage of potential post-completion quarters with a positive wage). For all degrees and credential groups, Louisiana employment increases immediately after completion and remains relatively stable afterward.

Figure 4.21 Louisiana covered employment before and after completion by degree group

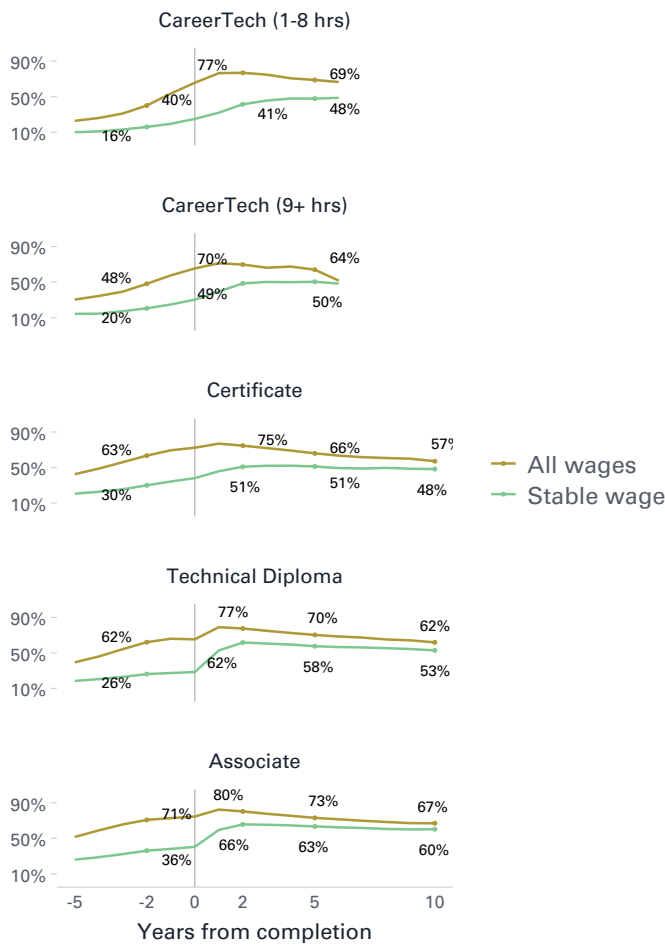


Source: Blanco Center analysis of LA FIRST data

Still, several differences stand out. Bachelor's and associate and short-term completers experience a strong initial post-completion boost in Louisiana employment. The gap between the share of completers with any wage and the share with stable wages indicates that periodic and part-time employment is common prior to completion. Other than post-degree and non-award certificates, associate and short-term completers have relatively high rates of Louisiana employment after completion, with 60 percent earning a stable annual wage after 2 years and 59 percent after 5 years (as Figure 4.22 shows, these rates are relatively consistent across associate and short-term credentials). As a reminder, these averages do not include employment outside of Louisiana, which occurs at higher rates for bachelor's and graduate completers. Consequently, the proportion of completers with Louisiana wage records is slightly lower for bachelor's and graduate degrees. Roughly half of post-degree and non-award certificate completers have stable employment prior to completion. While we do

not emphasize these credentials in the remainder of the analysis as they are less common than other short-term credentials and multi-year degrees, they illustrate the role of higher education in continuing mid-career training.¹⁸

Figure 4.22 Louisiana covered employment for associate and short-term completers



Source: Blanco Center analysis of LA FIRST data

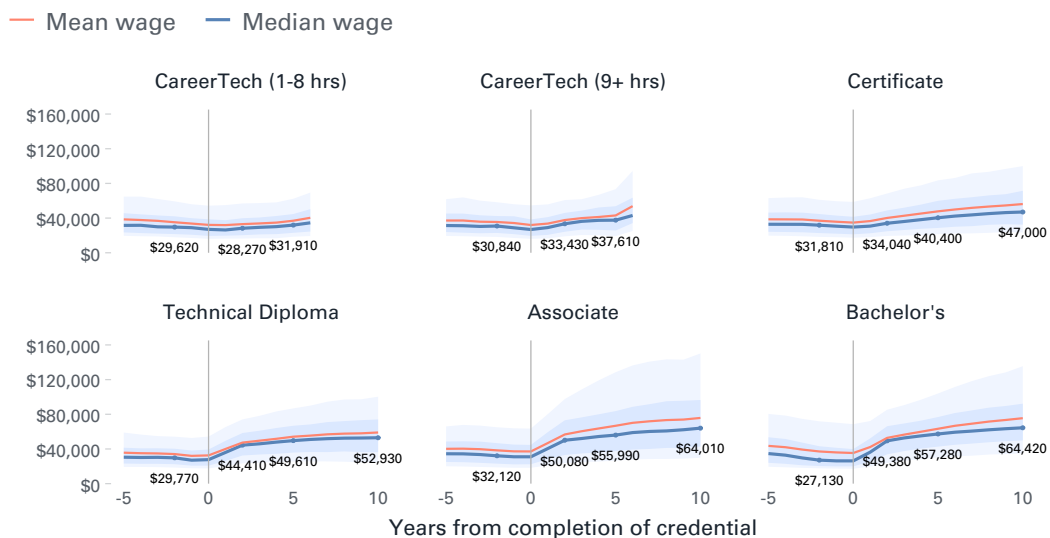
These outcome measures rely on a positive signal of wage-earning employment, which excludes some forms of employment, including self-employment, as well as employment out-of-state. Absence of a wage record does not necessarily imply non-employment (unemployment or non-participation in the labor force), and joblessness cannot be inferred from the absence of a UI-covered wage alone. However, an analysis of UI claims records in Louisiana also suggests that workers with higher levels of education attainment have a lower risk of making a UI claim. In the period covered by data available to LA FIRST, 2014 to 2024, 55 percent of UI claimants for whom self-reported educational attainment was available reported

¹⁸ Though uncommon when compared across all degree levels, these credentials may serve specific functions for narrow subsets of the workforce or in specific processes of career advancement and upskilling. As such, we may engage with them more centrally in future research.

a high school diploma or less than high school attainment, compared with 46 percent of the employed workforce over age 25. Only 14 percent of claimants reported having a bachelor's degree or higher, compared with around 21 percent of the employed workforce.¹⁹

Wages. Focusing on bachelor's and associate degrees and short-term credentials, Figure 4.23 offers a long-term view of the distribution of annual wage earnings for completers of their highest observed degree who are working in Louisiana (here, the figure shows wages for stable employment; see Appendix, Figure A.3, for a similar figure showing all wages). Figure 4.24 shows the same wage trajectories but emphasizing the median wage and adding more advanced degree levels. By showing the median (or typical) wage, the average wage, and the difference between the top and bottom tenth percentile of wage earnings, Figure 4.23 illustrates the range of typical outcomes for completers. For comparison, the charts include earnings up to five years prior to completion and up to ten years after completion, though as discussed above, a smaller proportion of completers were earning in-state wages prior to completion. Though wage levels vary by the level of degree or credential, wages tend to experience a notable increase within the first two years post-completion and then to level off into more gradual increases in subsequent years.

Figure 4.23 Wages before and after completion by degree level for associate degrees and short-term credentials, stable wages

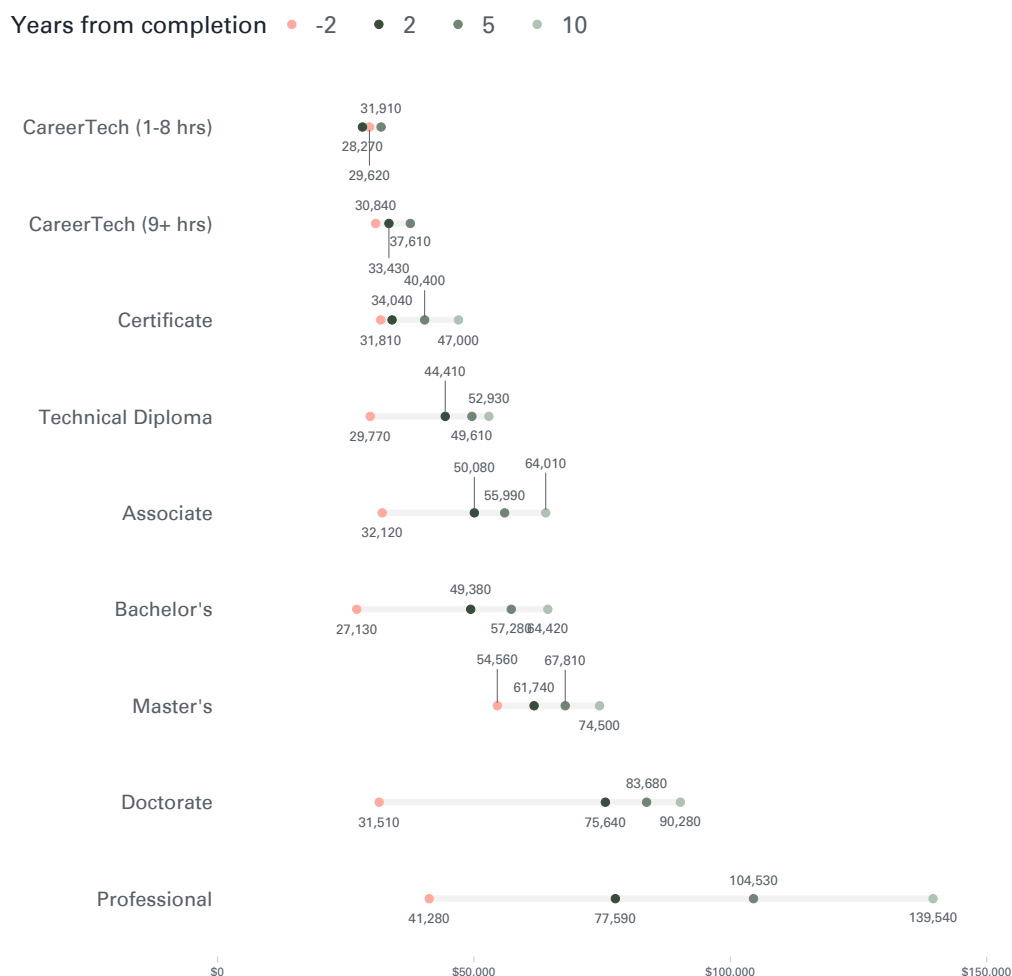


Source: Blanco Center analysis of LA FIRST data

Note: Labels indicate median wages two years before and two, five, and ten years after completion. Inner range is 25-75th percentile, and outer range is 10-90th percentile.

¹⁹ This comes from an LA FIRST analysis of data on UI claims from Louisiana Works. The workforce reference from Quarterly Workforce Indicators was almost 22 percent in Q4 2024 and over 20 percent in Q4 2014.

Figure 4.24 Median wages before and after completion by degree level



Source: Blanco Center analysis of LA FIRST data

Note: Wages are stable wages.

As the exception to this pattern, median wages for completers whose highest credential was CareerTech (1-8hrs) did not experience a clear post-completion increase. Completers at the CareerTech (9+ hrs) and certificate levels experienced slightly higher growth, with year-five median earnings reaching \$37,610 and \$40,400, respectively. Technical diploma completers experienced a more pronounced initial post-completion bump, with median wages rising from \$29,770 two years prior to \$44,410 by year two and \$48,610 by year five.

Steeper increases occur at the associate and bachelor's levels, which also exhibit the widest variation in long-term earnings growth. Associate degree completers saw median earnings jump from \$32,120 two years before completion to \$50,080 two years after, climbing to \$55,990 by year five. While bachelor's degree

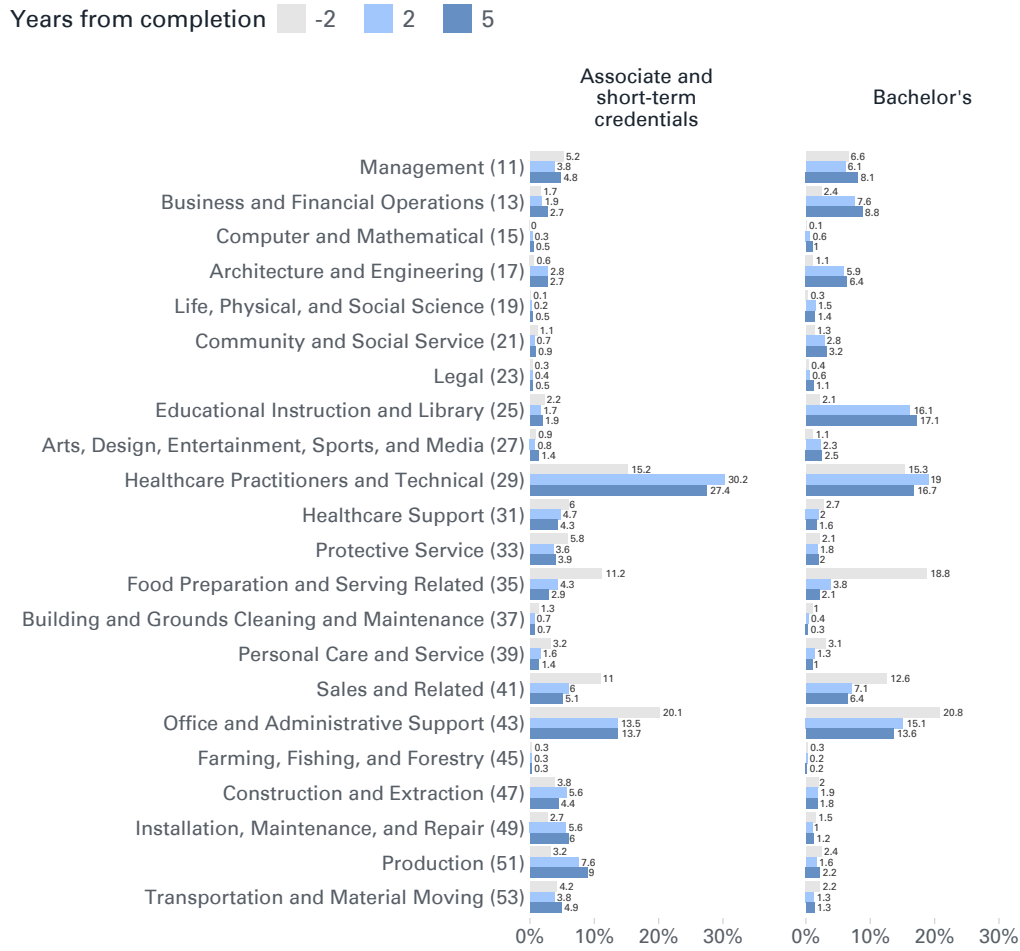
completers recorded lower median earnings prior to completion (\$27,130) and a slightly lower year-two median (\$49,380) than associate completers, they achieved higher median wages by year five (\$57,280); and both bachelor's and associate completers continued to experience gains through year ten for in-state employment.

Figure 4.23 also illustrates the wide variation in wage outcomes. For associate and short-term completers, the range between the 10th and 90th percentile at five years was large, from \$24,470 to \$107,330. At the bachelor's level, this range was only slightly smaller, from \$30,260 to \$103,950. The 10th percentile for bachelor's completers also showed more consistent growth than shorter-term credentials.

At the graduate level (Figure 4.24), earnings profiles start higher and scale significantly with credential specificity. Master's degree completers earned the highest median wage two years prior to completion (\$54,560), rising to \$61,780 at year two and \$67,810 at year five. Doctoral completers reached a median wage of \$75,640 at year two after completion and \$83,680 at year five, and professional degree holders reached \$77,590 at year two and \$104,530 at year five.

Occupations and industries. These shifts in employment rates and wage earnings as students complete their credentials are accompanied by shifts in the types of jobs that employed completers have. Figure 4.25 shows the distribution of stable employment by broad occupation groups for completers of associate degrees and short-term credentials and bachelor's degrees, and Figure 4.26 shows a similar breakdown for industry sectors. These figures compare the mix of jobs for those within the cohort of completers who were working two years before completion with outcomes at two years and five years after completion. Relative to pre-completion occupations, post-completion occupations were far less likely to include Sales and Related Occupations, Office and Administrative Support, and Food Preparation and Related Occupations, among others. This shift is consistent with both skills-based occupational sorting and sorting based on practical considerations for working students. By design, completers have a different, more specialized skillset after completion. They are thus less likely to work in lower-paid services industries and more likely to work where their newly acquired skills are relevant (for example, health care). At the same time, retail and food service often involve part-time, entry-level-skill jobs that, at least for some students, can accommodate working while pursuing education, but often don't represent the best option after completion in terms of pay, stability, or skills alignment.

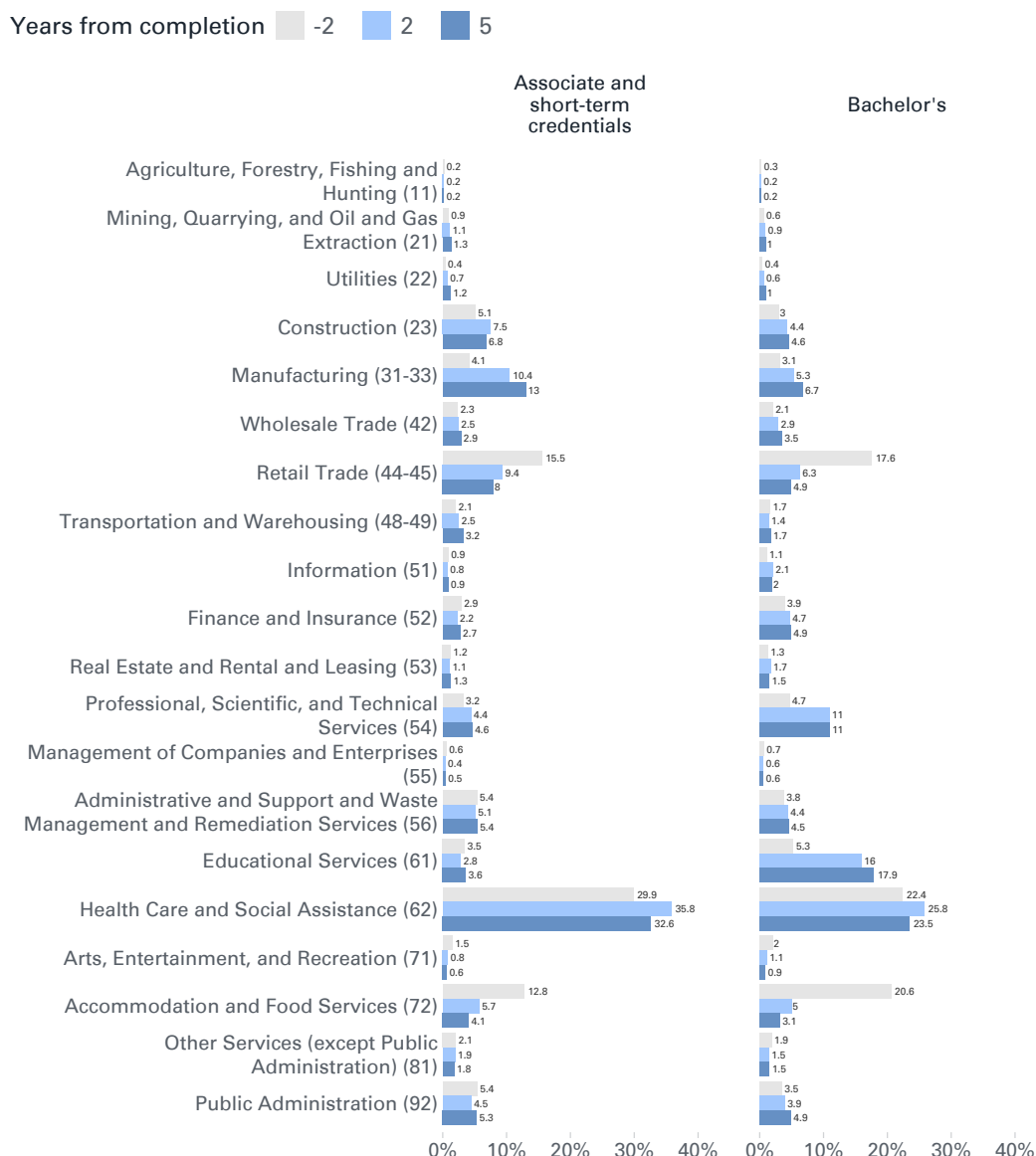
Figure 4.25 Occupation groups for employed completers by degree group



Source: Blanco Center analysis of LA FIRST data

Note: Employment is stable annual employment.

Figure 4.26 Industry sectors for employed completers by degree group



Source: Blanco Center analysis of LA FIRST data

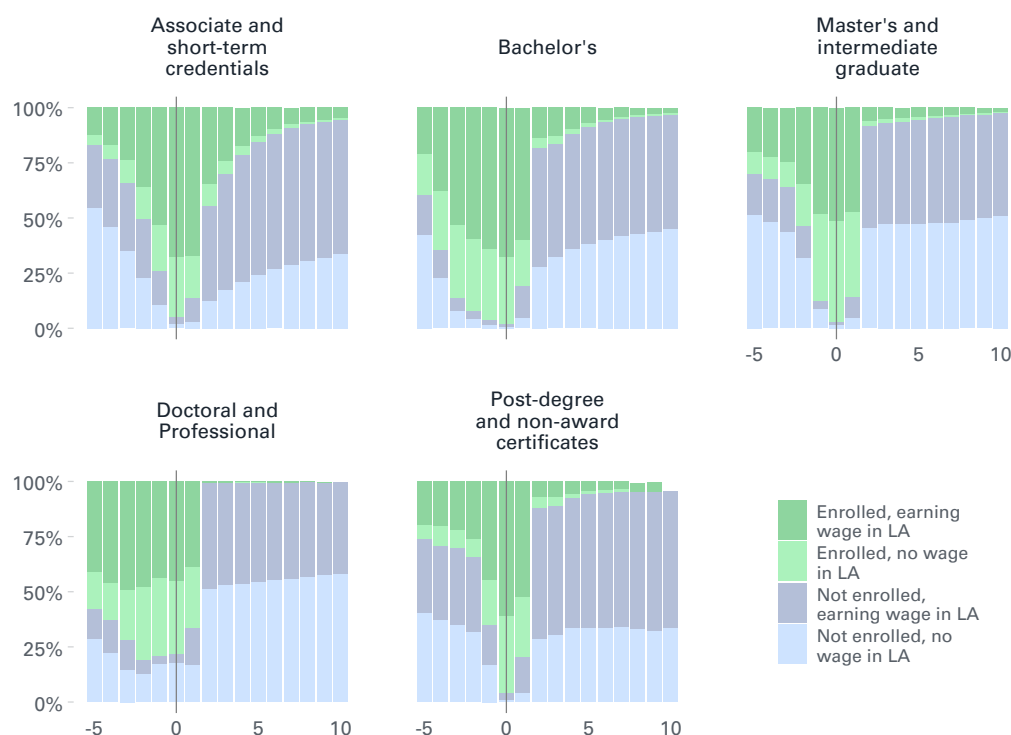
Note: Employment is stable annual employment.

Associate and short-term completers are strongly represented in Health Care Practitioners and Technical Occupations and blue-collar occupations (Construction and Extraction; Installation, Maintenance, and Repair; and Production). Bachelor's completers are also strongly represented in Health Care Practitioners and Technical Occupations, as well as Educational Instruction and Library Occupations, Business and Financial, Community and Social Services, and Architecture and Engineering Occupations. The charts reflect the critical role that postsecondary completions play

in populating critical segments of the workforce like health and education, as well as other roles in public services and business operations. Meanwhile, the share of completers working in large but frequently lower-paying occupation groups like sales, office and administrative support, and especially food service falls sharply after completion. Generally, completers are not earning their main employment income from lower-paid occupations and industries, like sales and food services, at least not at high rates.

Enrollment. Enrollment and employment are not mutually exclusive statuses, and they overlap at different rates for completers at different degree levels. Figure 4.27 illustrates this by showing how enrollment status at BOR institutions overlaps with employment status. Among associate and short-term credential completers as well as bachelor's completers, a significant portion are enrolled and working around the time of completion. Associate and short-term credential completers are more likely than bachelor's (and higher) completers to be working while enrolled after completion, especially for those completing shorter-term degrees. Echoing the earlier exploration of educational pathways, these outcomes illustrate how, especially for many completers of one- and two-year credentials, completions mark more of a punctuation in educational pathways than a hard demarcation between pre- and post-enrollment statuses. Many certificate and associate completers go on to additional education. Bachelor's and, especially, graduate completers are more likely to be at the terminal point in their educational pathways. As shown earlier, more advanced degree completers are also more likely to find employment out-of-state.

Figure 4.27 Louisiana enrollment and employment status relative to completion year by degree group



Source: Blanco Center analysis of LA FIRST data

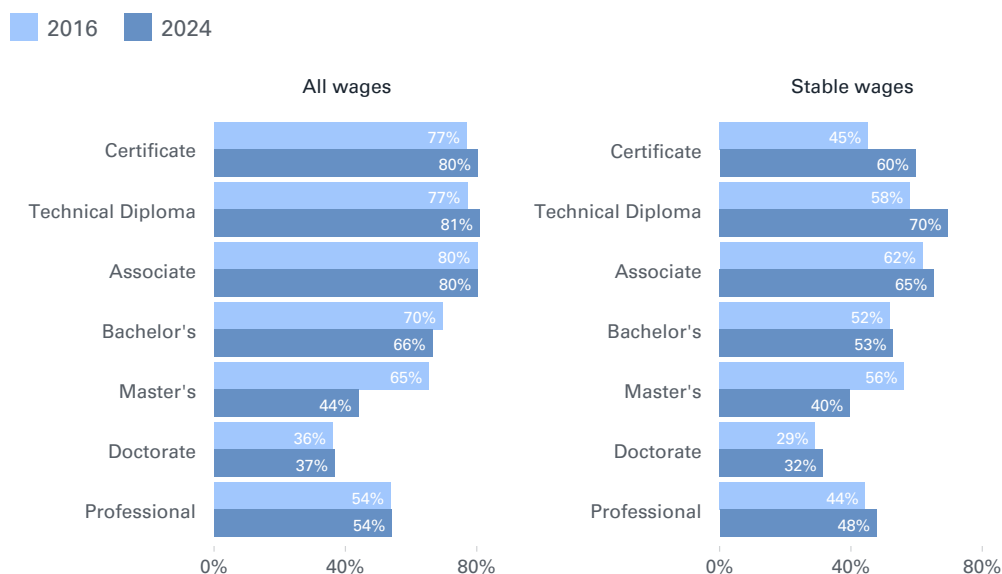
Note: Bars may not total to 100% due to data suppression. Each chart shows completers' first completion by degree level.

Trends over time. To this point, we have focused on outcomes over time relative to the completion year. These outcomes have been consistent over time, with some exceptions, as shown here by comparing outcomes observed in 2016 and 2024 for the cohorts that completed two years earlier.²⁰ Figure 4.28 shows rates of employment in Louisiana by degree level for each cohort. Stable employment was higher for the 2024 cohort than it was for the 2016 cohort for completers of technical diplomas and certificates. In tandem with a modest increase in the percentage with any wage, this suggests that more completers of these short-term credentials were able to hold full-time work over most of the year in 2024 than in 2016. The percentages fell sharply for master's completers, but this is likely significantly influenced by LSU-Shreveport's online MBA program, which enrolls a large number of students who live out-of-state.²¹

²⁰ The time period between 2016 and 2024 includes the height and aftermath of the COVID pandemic 2020, which disrupted many trends in employment and education – and accelerated some. Here, we focus instead on the first and last year of data, highlighting broad changes outside beyond those more acutely tied to the pandemic period.

²¹ As described in last year's report, the founding and growth of LSU Shreveport's online MBA program makes master's degree-level completion trends difficult to interpret. According to information on program websites, LSU Shreveport awarded 2,146 MBAs in AY2023-24, while LSU in Baton Rouge awarded 366 (Habans et al. 2025).

Figure 4.28 Employment status two years after completion, 2016 and 2024

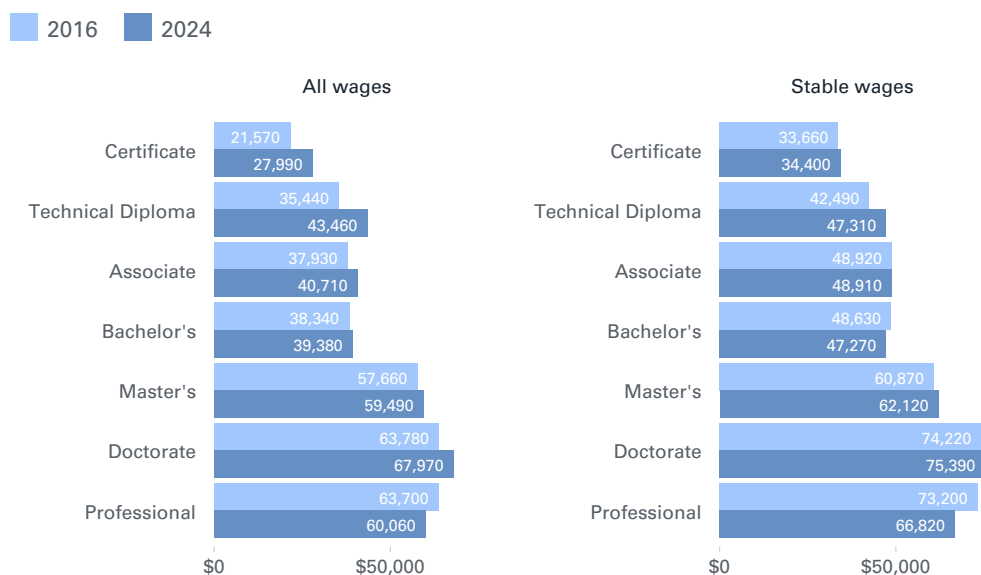


Source: Blanco Center analysis of LA FIRST data

Note: Chart includes completers in AY2014-15 and 2022-23.

Figure 4.29 shows median wage earnings by degree level for completers employed in Louisiana two years after completion in 2016 and 2024. For most degree levels, early-career wages were relatively stable over time, but stable annual wages increased notably for technical diploma completers.

Figure 4.29 Median wages two years after completion, 2016 and 2024

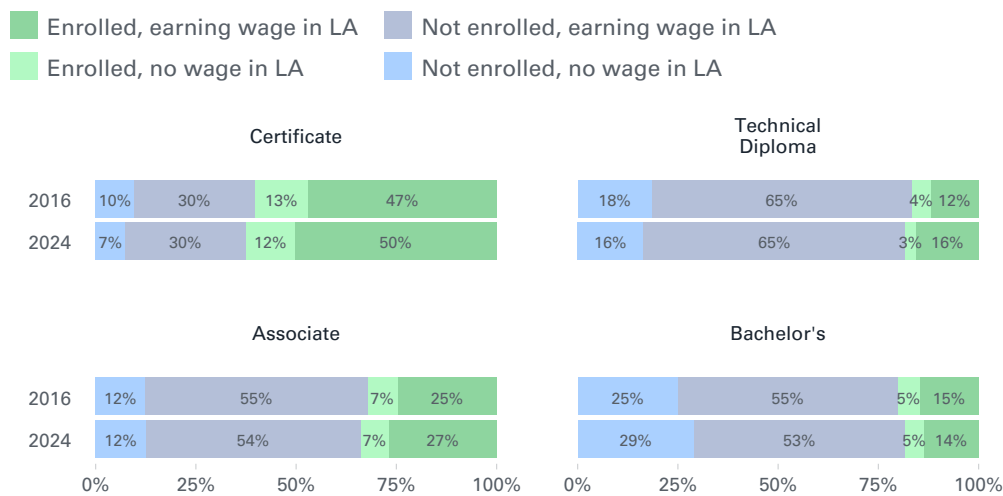


Source: Blanco Center analysis of LA FIRST data

Note: Chart includes completers in AY2014-15 and 2022-23. Wages are stable wages.

Figure 4.30 shows enrollment and employment status two years after completion for selected degree levels. While the share of students in different enrollment and observed work statuses have been generally stable across cohorts, certificate, technical diploma, and associate completers are slightly more likely to be enrolled while working two years after their completion for the more recent cohort (2024), suggesting more students carrying on in a learning pathway in Louisiana public higher education after these completions than in the past. A larger share of Bachelor's completers are neither observed as enrolled nor employed in-state two years after completion.

Figure 4.30 Louisiana enrollment and employment status two years after completion, 2016 and 2024



Source: Blanco Center analysis of LA FIRST data

Note: Chart includes completers in AY2014-15 and 2022-23.

Employment and wages by instructional program

The next set of figures shows employment and wage outcomes of completers by instructional program. Based on the figures above, we focus on outcomes two years after completion. Figure 4.31 shows how outcomes vary across instructional programs or fields of study (at the two-digit CIP level) for associate and short-term credential completers, and Figure 4.32 shows the same for bachelor's completers. The Appendix includes identical figures but with five-year outcomes. It also includes two-year outcomes with enhanced detail: unbundling associate degrees and other shorter-term credentials and using more specific instructional program categories (four-digit CIP level).

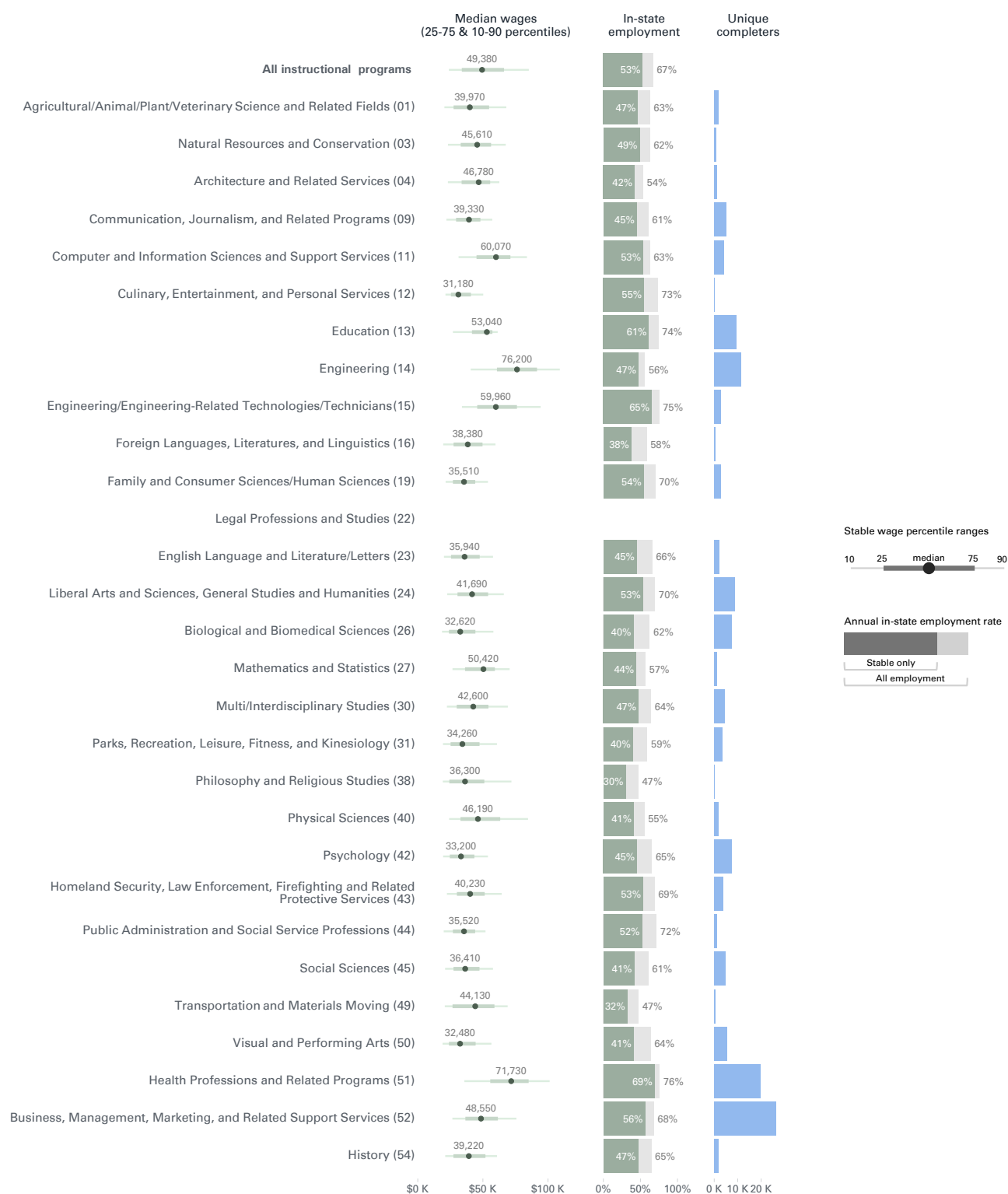
Figure 4.31 In-state wages and employment for associate and short-term credential completers by instructional program, two years after completion



Source: Blanco Center analysis of LA FIRST data

Note: Wages are stable annual wages.

Figure 4.32 In-state wages and employment for bachelor's completers by instructional program, two years after completion



Source: Blanco Center analysis of LA FIRST data

Note: Wages are stable annual wages.

Several general patterns for associate and short-term credentials emerge from Figure 4.31. Completers are concentrated in Liberal Arts and Sciences, General Studies and Humanities; Health Professions and Related Programs; Business, Management, Marketing, and Related Support Services; and Engineering/Engineering-Related Technologies/Technicians. Notable numbers of completers also exist in Construction Trades, Mechanic and Repair Technologies/Technicians, and Precision Production. Wages vary widely by instructional program, with median wages ranging from under \$30,000 to over \$60,000. The programs with the highest-earnings tend to have more completers, and programs with lower-earnings tend to have fewer completers. A notable exception is Liberal Arts and Sciences, General Studies and Humanities, which has by far the largest number of completers, but wages that are on the lower end of the spectrum.

On the other end of the spectrum, Engineering/Engineering-Related Technologies/Technicians have especially high wages, with the highest-earning workers earning well over \$100,000 in reported wages. The employment rate is also relatively high among completers of these programs. These degrees have strong wage and employment outcomes across associate degrees, certificates, and technical diplomas. A similar pattern exists for Health Professions and Related Programs, as well as for other technical degrees and credentials in the more detailed appendix breakdowns. We return to these specific programs in the case studies section below.

As shown in Figure 4.32 for two-year outcomes, bachelor's completers show similar patterns in-state as reported above in the PSEO data. For most programs, median wages for completers by year 2 ranged from around \$35,000 to around \$50,000 for stable employment wages in Louisiana, increasing to a range of around \$45,000 to around \$60,000 by year 5 after completion (see appendix). However, earnings are skewed for most programs, such that the highest-earning completers earned considerably more. An exception to this is education, where the median completer is paid relatively well initially (\$53,040), but there is little difference between this typical salary and the highest-paid completers (and only modest gains from year 2 to year 5; see appendix). Engineering, other STEM-related fields, healthcare, and business majors tend to earn the highest wages. Among the more common programs, healthcare, education, liberal arts and sciences, and business majors tend to be observed with in-state employment at above average rates.

More time-intensive degree milestones are generally linked with higher levels of pay, albeit with some variation in the size of credential-specific wage premiums across different fields of study. Figure 4.33 illustrates those wage premiums by comparing median wages for stable annual employment for completers of associate degrees and short-term credentials, bachelor's degrees, master's degrees and intermediate graduate credentials, and post-degree and non-award certificates. Note that this figure includes only the highest-last degree in each completer's observed sequence, ensuring that the wages of students on multi-degree pathways are counted only once. The gap is large between completers of associate degree and short-term

credentials and bachelor's completers for Computer and Information Sciences and Support Services, but the same gap is far smaller for Health Professions and Related Programs and several other fields. The premium for a doctorate is especially large in fields with professional doctorate degrees like Health Professions and Related Programs (MD) and Legal Professions and Studies (JD), which are among the most common professional doctorate degrees.

Figure 4.33 Median wages by degree level and instructional program, five years after completion

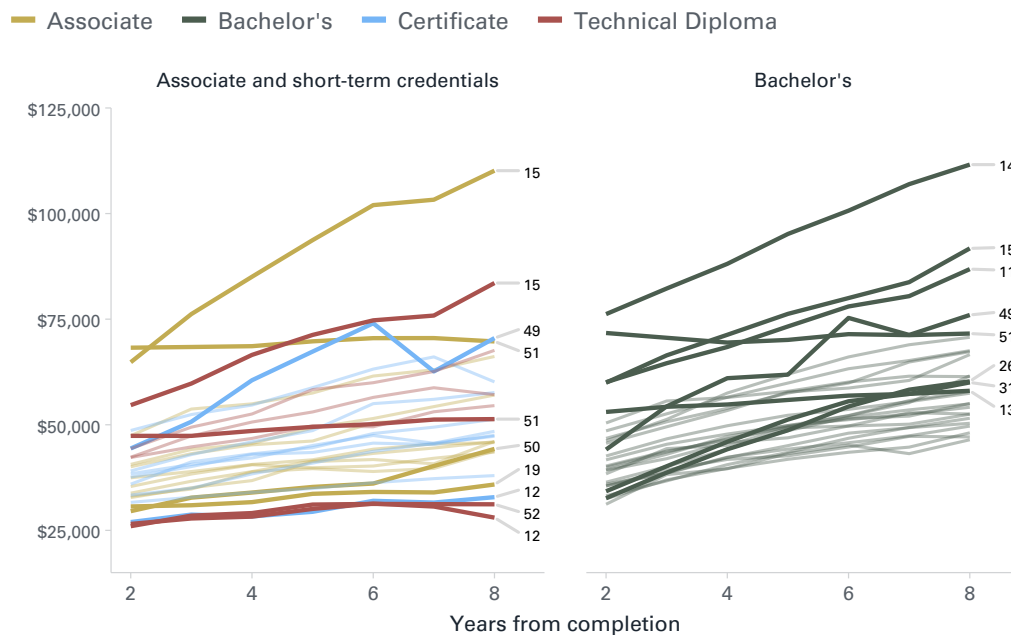


Source: Blanco Center analysis of LA FIRST data

Note: Wages are stable annual wages.

Longer-term wage growth. While we have focused on shorter-term outcomes by program, we conclude with a glimpse at longer-term outcomes. Figure 4.34 shows the progression of median wages from years two through eight after completion, broken down by degree level and two-digit CIP code (for programs where at least 100 completers of their highest and last BOR credential may have observable employment outcomes in every year shown). Taken as a whole, the progression of wage outcomes is consistent with a period of steep returns to additional experience for roughly the first five to six years after completion. These returns then gradually level off. Also, for the bulk of programs, wage levels relative to other programs remain roughly consistent over time. For example, most programs in the middle range of median wage outcomes in year two show a degree of wage growth but remain in the middle range relative to other programs by year eight. The figure highlights a few exceptions that diverge from this general pattern, as well as the highest-earning programs.

Figure 4.34 Median wages by program after completion, year two through year eight



Source: Blanco Center analysis of LA FIRST data

Note: Labels are two-digit CIP codes: See Figures 4.31 and 4.32 for each code's full program title. Wages are stable annual wages. Only programs with at least 100 completers in all years are shown.

Programs that train critical nursing and teaching professions had strong initial wages but very limited gains by year eight. Health Professions and Related Programs (51), which are largely made up of nursing completers, rank very high in initial wages relative to other programs at the equivalent degree or credential level. However, wages were essentially flat in subsequent years for these completers. A similar pattern exists for Education (13) bachelor's degrees, where completers initially rank in the top five of these more common programs when looking at median wages at year two. With only modest subsequent gains, these completers gradually fall behind their peers in other programs with slightly lower initial wages.

As noted above, Engineering (14) bachelor's and all Engineering Technology (15) credentials have the highest initial wages at their respective levels, and these completers continue to experience consistent wage gains throughout the post-completion period. Bachelor's completers in Biological and Biomedical Sciences (26) and Parks, Recreation, Leisure, Fitness, and Kinesiology (31) have among the lowest initial wages at their degree level. However, they experience wage gains that exceed the rate of other programs through about year six. At that point, their median wages rank above the bulk of programs and substantially surpass other initially low-earning programs. Programs in Transportation and Material Moving (49) also experience strong gains relative to other programs.

Shorter-term credential programs where completers initially had low median wages – including technical diplomas and certificates in Culinary, Entertainment, and Personal Services (12), technical diplomas in business (52), and certificates in Family and Consumer Sciences/Human Sciences (19) – had only modest wage growth and did not catch-up with wages for the bulk of associate and short-term credential programs.

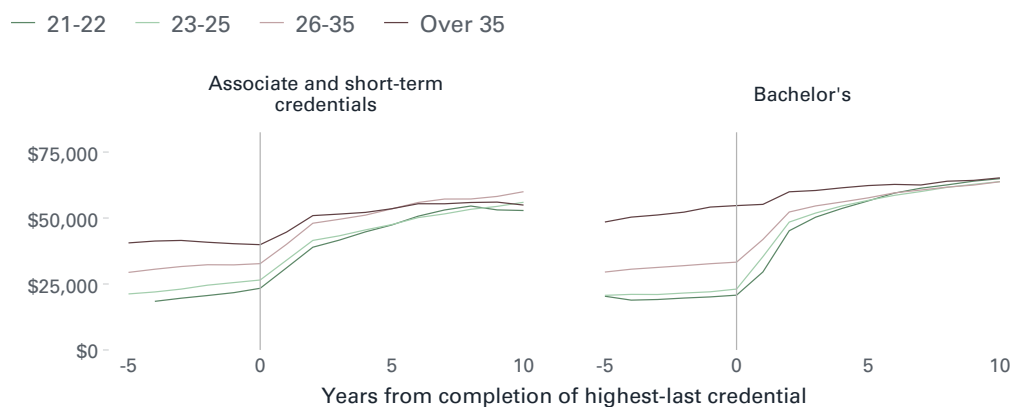
Demographic breakdowns

Age at completion. Both education and experience contribute to a worker's skills. Additional experience tends to increase wages quickly earlier in workers' careers as they develop general and occupation-specific skills, but this effect levels off as workers age and the accumulation of new skills slows. These dynamics underly the pattern illustrated above in Figure 4.34. For younger completers, earnings gains tend to be especially steep, as additional educational attainment, high early-career mobility, and marginal gains in experience all exert strong influences on wages, on average. Additionally, older completers with established work histories might have sought additional education to enhance competitiveness for promotion or to open new options for career growth, whereas younger completers are more likely to position themselves on widely branching career trajectories where an education pathway and a job placement after completion act as the critical first steps.

Figure 4.35 compares median wage earnings before completion with earnings after completion, broken down by age at the time of completion. In all cases, older workers tend to earn more after completion. However, they were also earning

more before completion, and the differences between pre- and post-completion earnings are smaller than for younger completers. For example, when comparing bachelor's completers ages 21-22 earning stable annual wages two years before and two years after completion, median earnings more than double from \$19,670 to \$45,180. The jump for the same age cohort of associate degree and short-term credential completers was slightly smaller but still large, from \$20,630 to \$38,950. For completers older than 35, these shifts were much smaller: \$52,220 to \$59,940 for bachelor's and \$40,820 to \$50,920 for associate and short-term. Additionally, by year five after completion, the age-related gap closes significantly as the influence of experience levels off. This pattern illustrates how the pathways into education and their consequences for employment differ for older and younger completers.

Figure 4.35 Median wages before and after completion by age at completion and degree group

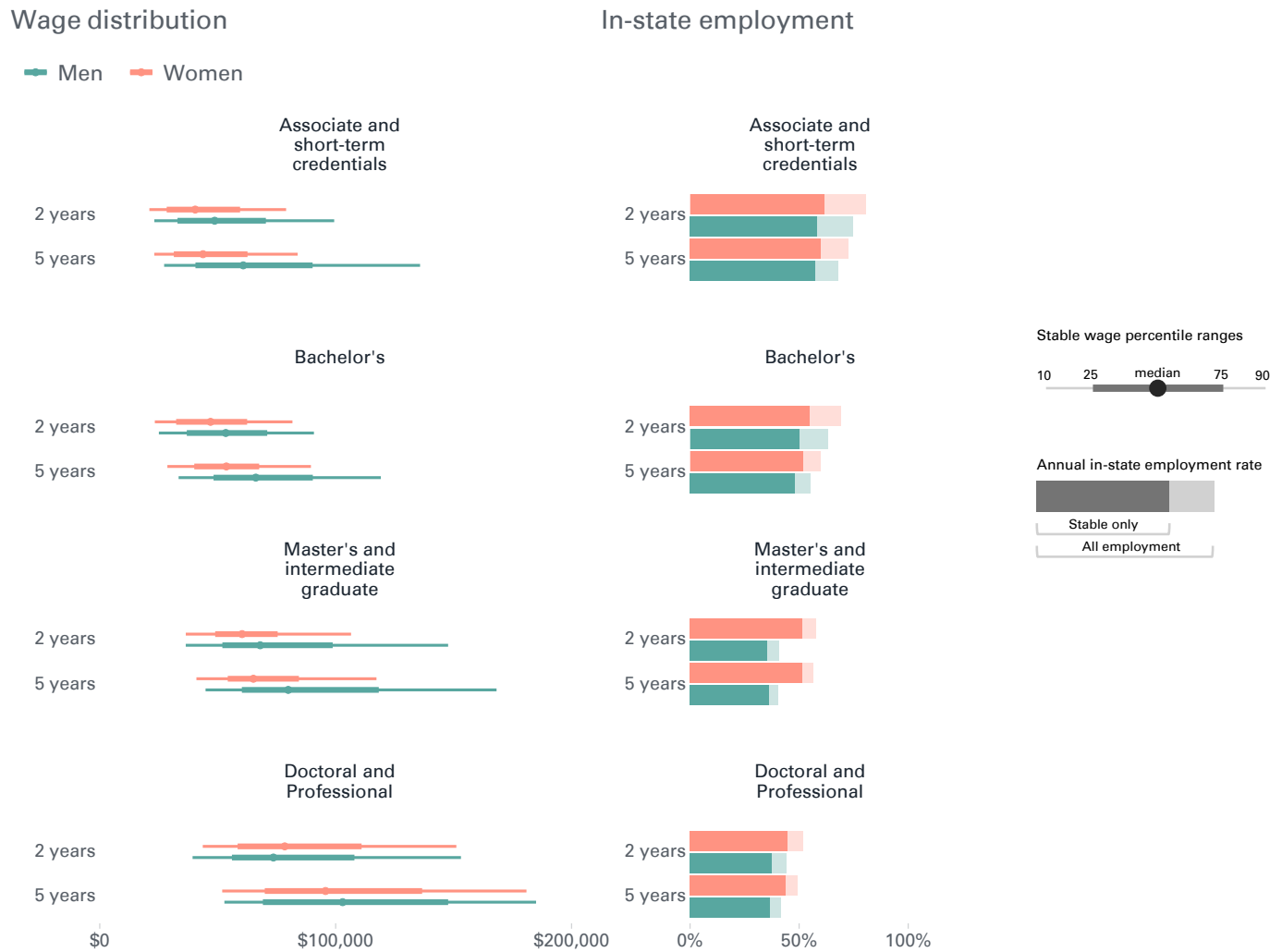


Source: Blanco Center analysis of LA FIRST data

Note: Wages are stable annual wages.

Gender and race. In addition to age, other demographic characteristics reveal consistent patterns for employment outcomes. Figures 4.36 and 4.37 show wage and employment outcomes broken down by gender and by race and ethnicity, respectively, at different degree levels. Men’s wages were higher at the median and every part of the distribution for short-term, bachelor’s, and graduate degrees, with early-career doctoral and professional completers as the most notable exception where median female wages are higher. Across the board, men exhibit faster wage growth from short-term (two-year) to medium-term (five-year) outcomes. Among completers, women were employed in Louisiana at higher rates than men at most degree levels – substantially higher at the master’s level. For race and ethnicity, White completers across all degree levels (and Asian graduate degree completers) generally had higher wage outcomes than Hispanic and Black completers. At two years, Black completers’ median stable earnings were \$41,780 with a bachelor’s degree and \$38,580 with an associate or short-term degree, compared with \$51,870 and \$47,110 for White completers. White and Black completers were also more likely to earn wages in Louisiana than other groups.

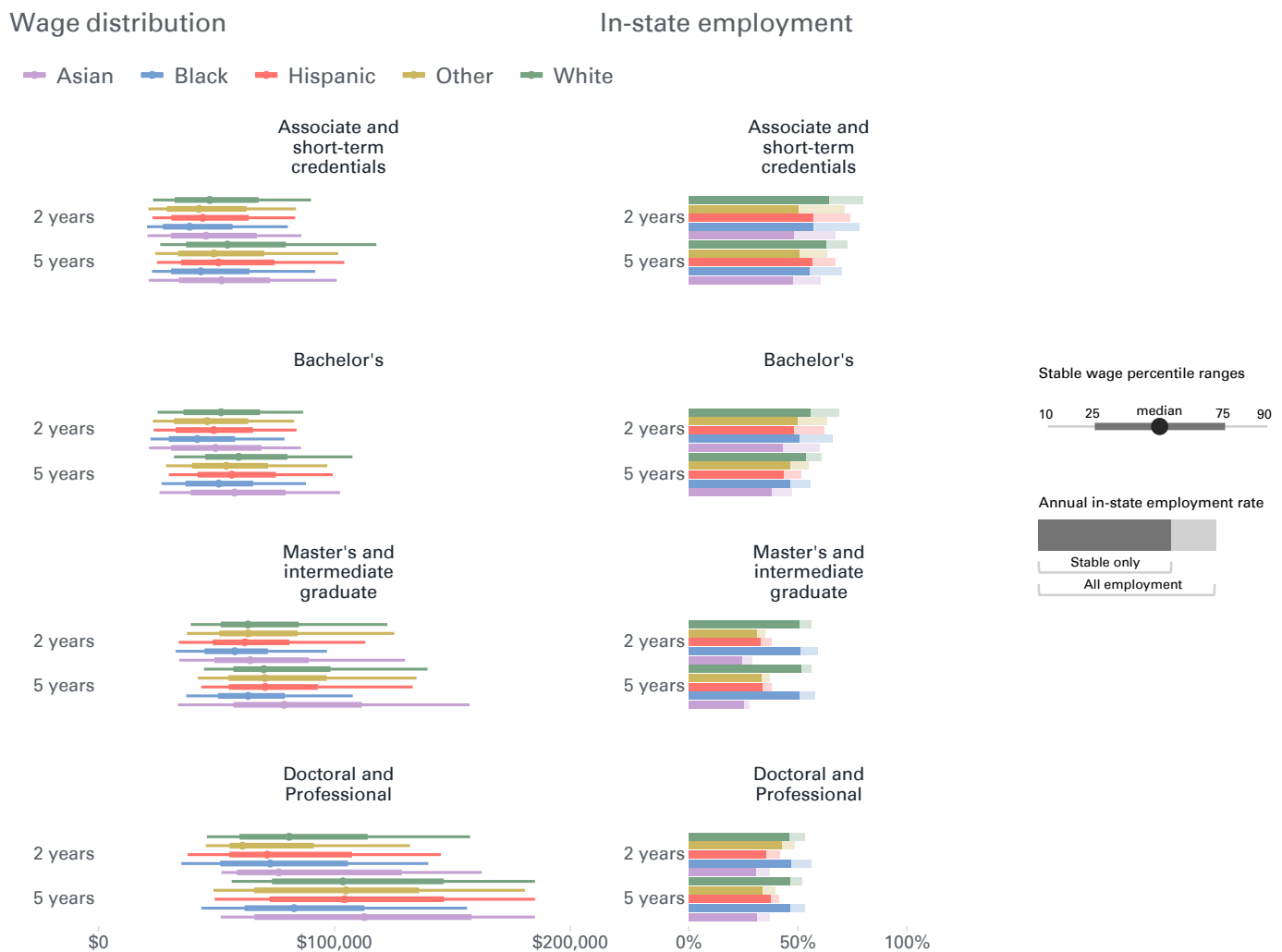
Figure 4.36 Wage distribution and in-state employment rates by gender



Source: Blanco Center analysis of LA FIRST data

Note: Wages are stable annual wages.

Figure 4.37 Wage distribution and in-state employment rates by race and ethnicity



Source: Blanco Center analysis of LA FIRST data

Note: Wages are stable annual wages.

Viewed through the lens of sorting mechanisms, differences in wage and employment outcomes by demographic group may arise at two primary stages, one during the educational pathway and the other within the labor market:

- Degree and instructional program sorting up to the point of completion:** Different groups attend institutions, complete specific degrees and credentials, and concentrate in specific instructional programs at different rates. To the extent that these differences then shape the ability of completers to enter different segments of the labor market, educational sorting affects employment outcomes. For example, if

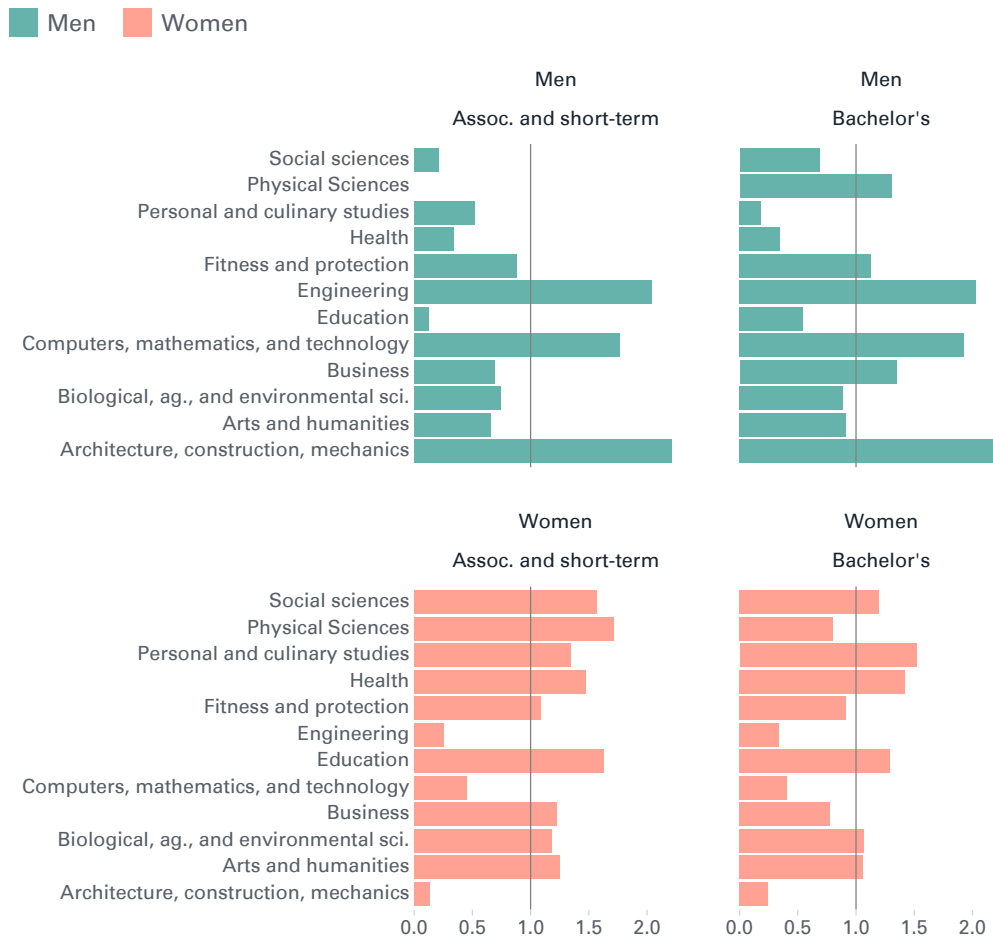
engineering is the most lucrative bachelor's degree major, and if relatively few women complete this major, women's overall earnings will be lower on average. These sorting dynamics were touched on in the earlier section on pathways through higher education, and their effect on outcomes is summarized here.

- **Divergent employment outcomes after completion:** Even when completing the same degree in the same field, different groups might experience different employment opportunities and outcomes. These differences may be due to a range of factors inside and outside of the labor market, including the social and information networks that influence hiring and promotion, varying mechanisms of geographic or job mobility, on-the-job skill development and experience, other career-shaping factors in the workplace, and family and care-giving responsibilities outside of paid employment. Additionally, outcomes may be shaped by how graduates weigh non-monetary job attributes — such as scheduling flexibility, interest, and workplace environment — against maximizing wage-and-salary earnings.

Focusing on gender, we investigate degree and instructional program sorting by calculating representation ratios for completers of different instructional programs (Figure 4.38). These ratios are simply the percentage of completers from a given demographic group (men and women) in each instructional program divided by the percentage of all completers from the same group. A ratio of 1.5 means that the demographic group appears 50 percent more frequently in that category of completers than they do in the overall population of completers. For associate degrees and short-term credentials, women had representation ratios greater than one for social sciences, health and education, and personal and culinary studies. Women had dramatically lower representation in engineering and computer, mathematics, and technology fields. In contrast, men had higher representation in engineering- and computer, mathematics, and technology-related credentials and construction and mechanical programs (architecture, construction, mechanics, and craftsmanship). Among bachelor's completers, women again were more highly represented in health and education but had lower representation in engineering; business; and computer, mathematics, and technology. Men were strongly concentrated in engineering; computer, mathematics, and technology; and business. These differences in educational pathways and occupational outcomes contribute to economy-wide differences in pay between men and women. And those differences are substantial. Across all programs, women with a bachelor's degree as their highest completion earned 81 percent as much as men at the same degree level, based on annual median wages for stable Louisiana employment in year five after completion. Among those with technical diplomas, women earned 83 percent as much as men, for certificates women earned 71 percent as much as men, and for associate degrees women earned 68 percent as much as men.²²

²² The difference for master's degrees is similar to bachelor's degrees: women earned 81 percent as much as men. The difference for doctoral and professional degrees is much smaller, with women earning at least 93 percent as much as men across all fields of study.

Figure 4.38 Representation ratios of completers by gender and program area



Source: Blanco Center analysis of LA FIRST data

Note: A ratio greater than 1 means the group is over-represented in the program area.

Figure 4.39 compares median wages for men and women who completed the same degrees in the same fields, showing the median at years two and five after completion. Men’s earnings exceed women’s earnings even when their specializations are similar. Men also tend to experience larger wage gains over their early post-completion career. There is, however, some variation in this pattern. Some bachelor’s degrees have a relatively small male/female wage difference, including engineering, one of the highest-paying programs and one where women have very low representation. By year five, the difference in earnings between men and women is larger for bachelor’s degree business programs as well as computer, mathematics, and technology programs. For associate and short-term completers, men experience higher initial wages and early-career gains across most program areas. Even in health, where women dominate overall completions, men have higher initial wages and early-career wage gains (below, the case studies section further unpacks this pattern for specific healthcare programs).

Figure 4.39 Wage growth after completion by gender and program area



Source: Blanco Center analysis of LA FIRST data

Note: Wages are stable annual wages.

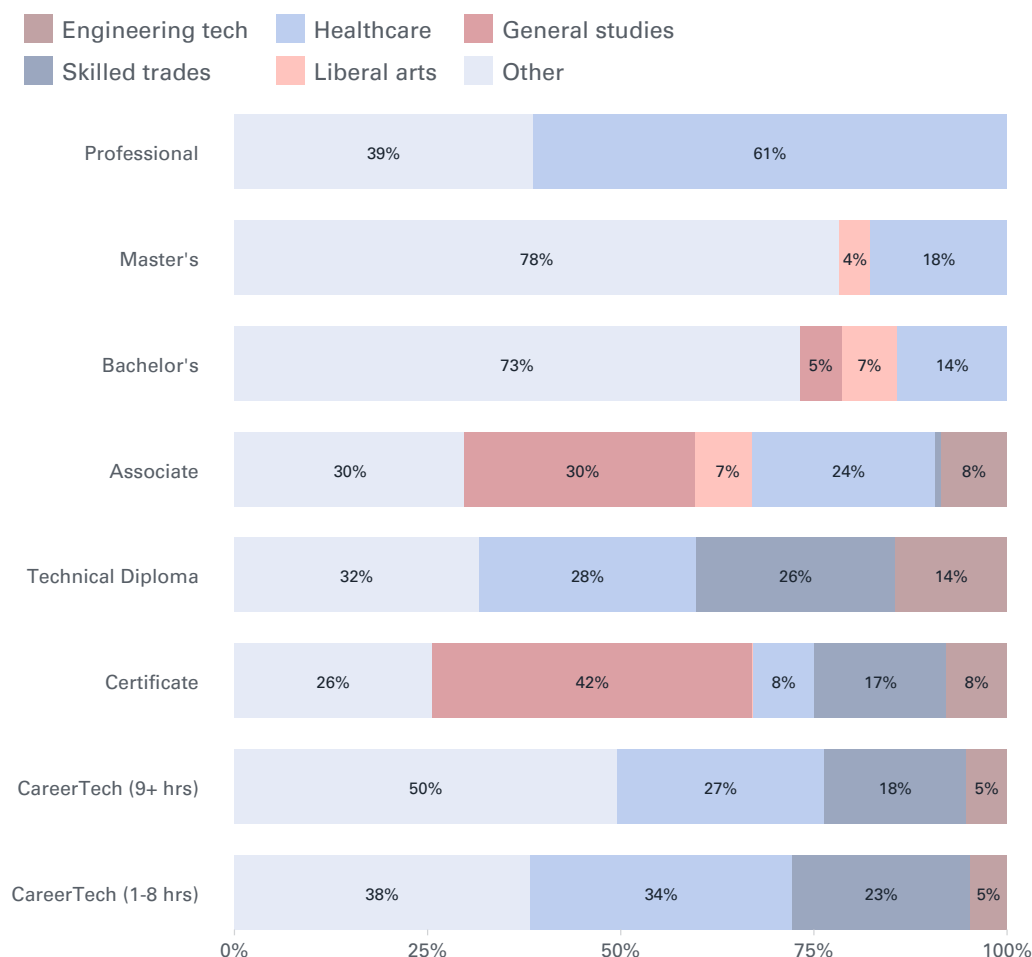
These differences give important context to efforts to understand key post-completion outcomes, like the association between programs and wage earnings. Demographic sorting occurs both during postsecondary education and in the labor market, and the extent to which men or women concentrate in each field can influence measures of economic opportunity and mobility, such as early-career wage levels and wage growth after completion. Moreover, as women continue to outpace men in degree attainment, they represent an increasing share of the overall population of completers. However, outside of their strong representation in higher-paying healthcare programs, women typically earn lower wages than their male counterparts. As shown here, women are also disproportionately likely to have stable post-completion employment in Louisiana. On average, these trends combine to influence metrics of overall wage outcomes at the program level in important ways. Long-term research should further explore experiences of students at younger ages that may influence demographic sorting at the postsecondary level and further explore the sorting processes both at the postsecondary level and in the labor market to better understand to what extent these differences are driven by individual factors or if these trends are driven by barriers or limitations facing certain demographic groups that can be addressed through policy or program design changes.

Differences in completion by program area and in wage outcomes also exist by race and ethnicity, although the patterns are less stark than the differences shown above by gender. Though we do not discuss these patterns at the same level of detail here, the Appendix includes representation ratios and wage breakdowns for selected race and ethnicity groups, like the figures above show for gender. Below, the case studies also touch on differences by race and ethnicity for specific program areas.

Five case studies: Pathways and outcomes by program area

The following case studies focus on completers in specific groups of related instructional programs: general studies, liberal arts and sciences, healthcare, skilled trades, and engineering technology. General studies, healthcare, and skilled trades are among the most popular fields of study and cover large numbers of completions at most degree levels, while liberal arts and sciences and engineering tech case studies allow us to dive into stories of particular topical or local interest. As shown in Figure 4.40, associate degrees and short-term credentials are especially well-represented in these case studies. When combined, the case studies represent 73 percent of associate completers, 83 percent of certificate completers, and 71 percent of technical diploma completers.

Figure 4.40 Completions in each case study by degree level, AY2014-15 to 2024-25



Source: Louisiana Board of Regents Statewide Completers System

In each case study, we discuss stable annual wages and occupational outcomes based on completers in AY2014-15 and 2024-25 five years after completion (unless noted otherwise). We focus on associate, short-term, and bachelor's completers, while touching on graduate completers when appropriate. We also discuss multiple-completion pathways. Overall, earnings within each case study are reported based on individuals' highest degree level achieved, given that the program of that degree or credential falls within the case study scope. With this approach, we include all workers who completed a credential in the given case study at any point in their education. So, for example, a graduate of an associate and bachelor's program in humanities would be excluded from the wage analysis of humanities associate completers but included in the wage analysis of humanities bachelor's completers, and a graduate of an associate in a humanities program and a bachelor's in business would be included in the wage analysis for humanities associates. Program-level wages include only wages of people whose highest degree level completed was in

that program, so for example, our completers of a humanities associate and business bachelor's would only be analyzed with other business bachelor's completers.

As a reference point for the case studies, 51 percent of all completers are found working a W-2 job with a stable wage in Louisiana five years after completion. Also, the following estimates describe wage and salary earnings for employees ages 23-27 with a high school diploma (civilian workers not currently in school, 2021-2024):

- Typical (median) employed: \$26,800
- Typical (median) full-time, year-round employed: \$33,447
- Higher-earning (75th percentile) full-time, year-round employed: \$48,240
- Typical (median) female full-time, year-round employed: \$26,800
- Typical (median) male full-time, year-round employed: \$38,092

Note that, as these estimates are derived from a household survey (American Community Survey), they differ from wages derived from LA FIRST administrative data (UI records) and are provided only for context.

General studies

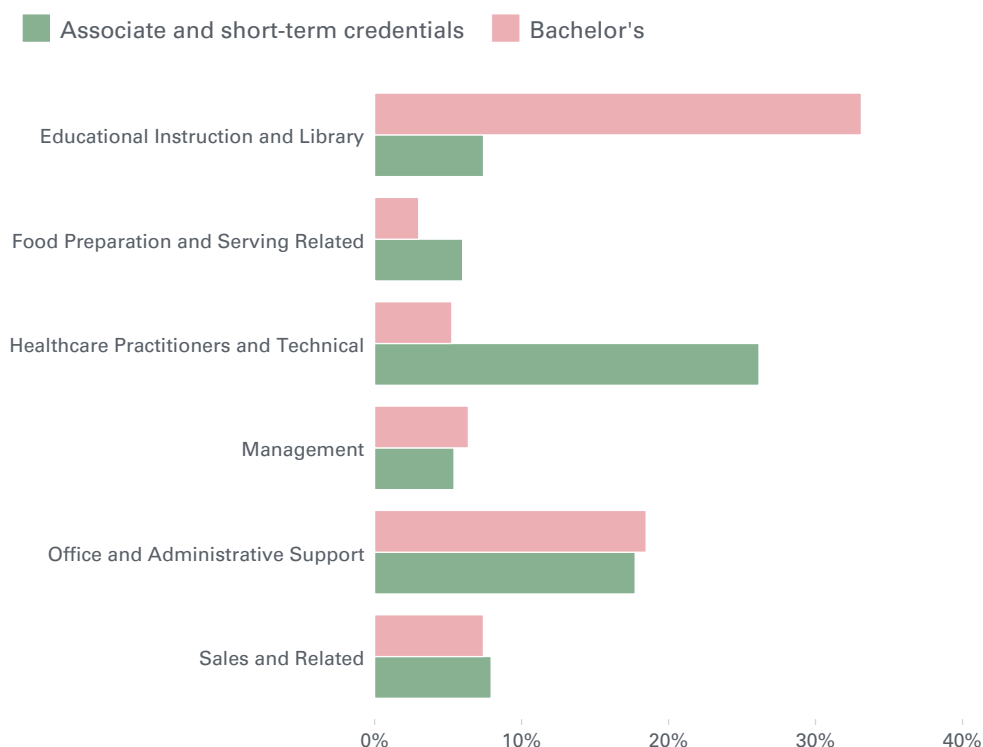
As laid out in the earlier discussion of pathways, general studies short-term credentials, associate degrees, and bachelor's degrees are among the most popular fields for completers. From academic year 2010 through 2024, 46 percent of certificate completers and 31 percent of associate completers earned at least one credential in general studies. This level of student uptake invites a closer look at these completers' experiences and outcomes, particularly as these programs do less to offer a prescribed career trajectory than many other common programs. As a field, general studies has even higher representation of women than higher education overall, with women making up over 71 percent of general studies completers in Louisiana since 2014. And while completers' earnings lag behind overall earnings for all instructional programs, there is relatively less disparity across race and gender.

General studies completers have a wide range of outcomes with respect to occupations and earnings.²³ Especially given the non-specific nature of the general studies credential, the top destination occupations for completers of short-term credentials and associate and bachelor's degrees are varied, as Figure 4.41 shows. For completers of associate and short-term credentials in general studies, the most common destination job five years after completion is in healthcare practitioner and technical occupations, at 26 percent of general studies completers who earned a wage in Louisiana. Another 18 percent enter office and administrative support jobs. Occupations in education and sales each attract about seven percent of these

²³ The occupation and wage outcomes reflect the post-graduate wages for 15,469 students who completed a general studies credential or degree from academic years 2014-2019.

completers, and food preparation and serving occupations account for six percent. General studies bachelor's completers, on the other hand, are more concentrated in educational instruction and library occupations, where 33 percent of these completers work. For both bachelor's and associate and short-term completers, about 19 percent work in office and administrative jobs.

Figure 4.41 Top destination occupations for general studies completers 5 years after completion



Source: Blanco Center analysis of LA FIRST data

Note: Occupation is based on main occupation for stable annual employment.

Across all degree and credential levels, general studies completers earned \$36,090 two years after completion and \$47,150 five years after completion, an \$11,070 increase. This 31 percent increase in salary outpaces all instructional programs, which show an overall increase of 14 percent from two to five years after completion. These earnings are only slightly higher than median annual wages for high school graduates ages 23-27 of \$33,450, referenced above. Five-year post-completion earnings varied by degree level – certificate holders have median earnings of \$47,860, associate's degree holders earn less at \$43,730, and bachelor's completers earn the most at \$50,700 (note that these include students who also completed an additional non-general studies degree, as described below).

Women complete about 71 percent of general studies credentials, and men's and women's earnings at five years after completion show a slightly smaller gap than what we see overall for completers in all instructional programs. Looking at wages by degree level among those with a general studies degree, women earn between 85 percent (associate) and 90 percent (certificate) of the earnings observed for men. For bachelor's completers, median earnings for women is 86 percent of median earnings for men. For comparison, when examining all instructional programs, the median earnings for women with associate's degrees is 67 percent of the median earnings for men; for those completing certificates, median earnings for women is 71 percent of median earnings for men; and for those completing bachelor's degrees median earnings for women is 81 percent of median earnings for men. The presence of completers with general studies credentials in higher-paying and women-dominated healthcare and education fields may explain some of the improved wage gap outcomes for the program.

The gap in median earnings for general studies degrees across race and ethnicity is also less pronounced than the overall gap for completers of all instructional programs. White graduates make the most in the bachelor's and certificate levels, with Asian graduates earning the most amongst associate's completers.

Postsecondary pathways often start or end with general studies credentials, leading to different outcomes. General studies credentials can serve multiple roles in a higher education pathway, with over a quarter of general studies completers earning more than one credential along their educational pathway. For example, students who earn a general studies associate degree may transfer into a bachelor's degree program, which about a tenth of these multiple-completions students did from academic year 2010 through 2024. More frequently, pathways with multiple degrees or credentials link general studies certificates to associate degrees.

Only five distinct multiple completion pathways account for a third of all multiple completion pathways that include a general studies credential. Among these, the leading pathways (making up 29 percent of all multiple completion pathways that include a general studies credential) are a general studies certificate followed by an associate degree. From academic year 2010 through 2024, these general studies certificates lead to a general studies associate for 6,583 completers, a healthcare associate for 2,550 completers, and a business associate for 1,266 completers. These branching pathways lead to different outcomes according to the student's field of study after their initial general studies certificate. Students who complete a general studies certificate and go on to complete a general studies associate make a median of \$39,210 five years after completing the associate while pathways leading to a healthcare associate help completers earn a median of \$71,420 five years after completing the associate. Pathways leading to a business associate help completers earn a median of \$46,160 at the same time horizon. The 2-4-year transfer pathway is also common, with 813 completers earning an associate in

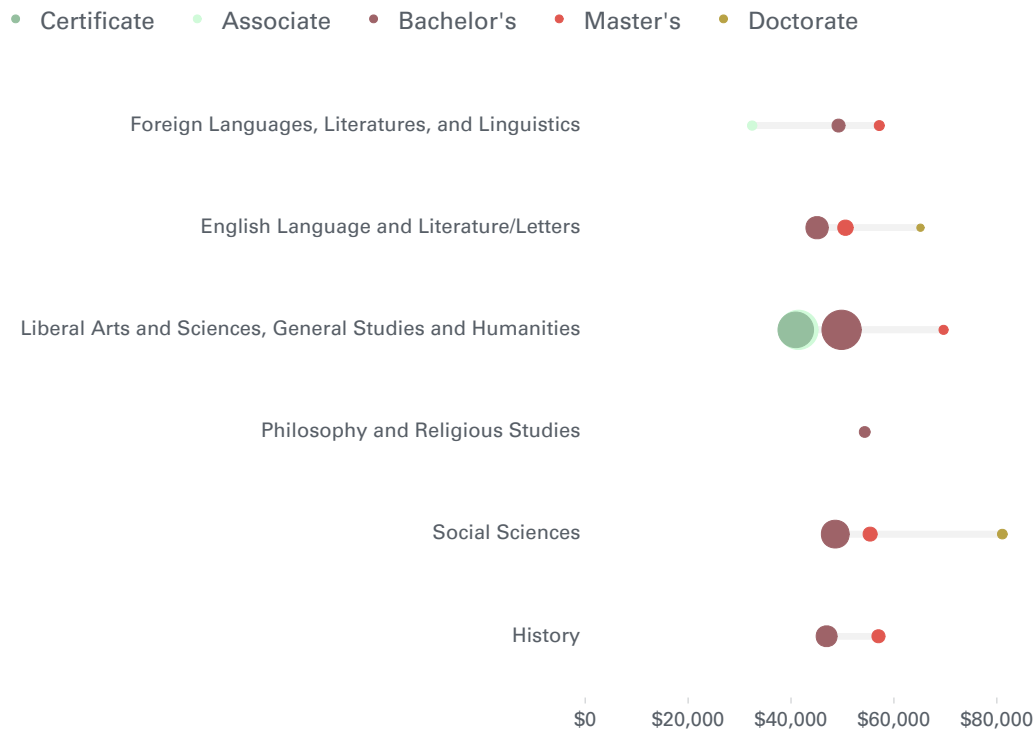
general studies followed by a bachelor's in general studies, though other general studies completers also complete bachelor's degrees in other fields. While general studies credentials can lead students to additional credentials in more specific fields, this is not always the case.

Humanities, liberal arts, and social sciences

Though we often categorize some humanities, liberal arts, and social sciences programs alongside general studies, these programs can be quite specific, from Ancient Near Eastern and Biblical Languages, Literatures, and Linguistics to Professional, Technical, Business, and Scientific Writing. For brevity, we'll refer to this group collectively as humanities in this case study, which also includes liberal arts degrees. Humanities completions are most likely to be bachelor's degrees, at 64 percent, with 20 percent of completions in associate degrees and 12 percent in master's degrees. Completers in these humanities disciplines in Louisiana number 22,048 since 2014, far less than general studies and healthcare. While earnings lag behind some fields of study, humanities programs have comparable outcomes for graduates across race and gender and drastically outpace median earnings from all high-school graduates. Unlike business or healthcare, whose graduates' earnings grow quickly to \$60,000 - \$70,000 five years after graduation, pursuing higher levels of education in the humanities shows muted gains in wage earnings.

Wage and occupation outcomes across the humanities. Despite the diversity of programs on offer in the humanities, median earnings for bachelor's degree holders are fairly similar across instructional programs, yet diverge for master's degrees, where earnings for degrees in Liberal Arts and Sciences, Humanities, and General Studies is \$69,650 (see Figure 4.42). The top destination occupations for advanced degrees in the humanities (master's, doctoral, and professional) concentrate in the education and library fields, while associate and short-term credentials more often end up in healthcare occupations or office and administrative support.

Figure 4.42 Wage by program and degree for humanities completers five years after completion



Source: Blanco Center analysis of LA FIRST data

Note: Wages are stable annual wages.

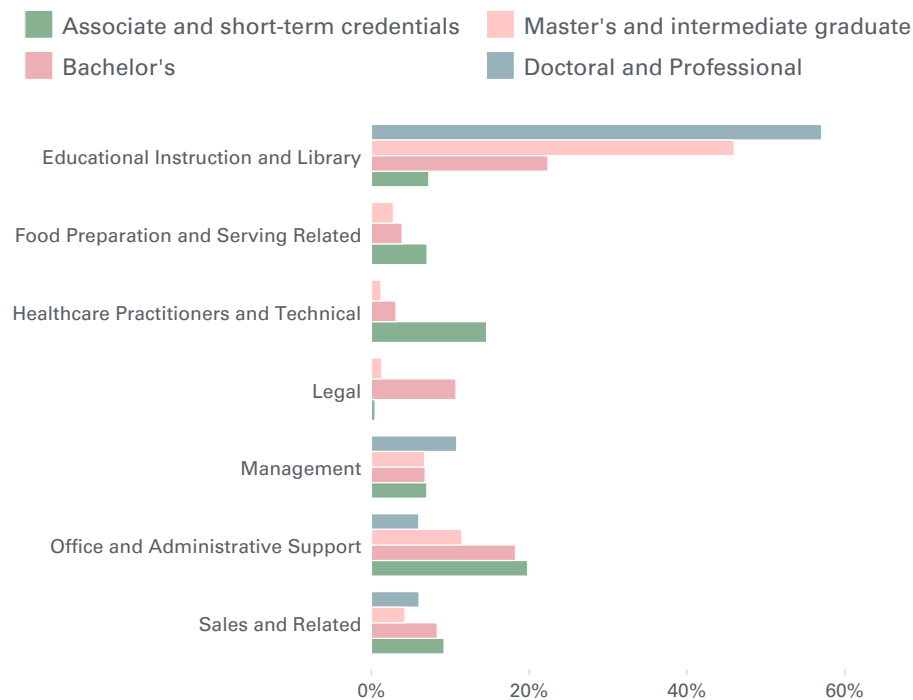
For bachelor's degree completers across the humanities, median earnings for more narrowly defined program groups range from \$45,060 to \$54,320 in annual earnings five years after graduation, with the highest earnings in philosophy. It is important to note that degree offerings vary considerably across specific programs of study with only some areas offering certificates or associate, master's, or doctorate degrees. For those individuals who do complete a master's degree in humanities (approximately three percent of all humanities completers), median earnings are \$54,570. Completers of doctoral degrees earn \$70,630. As humanities graduates progress through their careers, their median earnings show strong growth compared to other fields of study. Graduates earn \$11,750 more at five years compared to two years post-completion (\$36,730 to \$48,480). This 33 percent increase slightly outpaces the wage growth of general studies completers, though these salaries still lag behind the median earnings of all instructional program completers, who earn \$52,143 five years after completion. Compared to the median pay of all high school graduates, \$33,447, a degree in the humanities offers a substantial wage premium.

While there exists a pay gap by gender at lower degrees within the humanities, it is muted compared to many other programs, and women actually make slightly

more than men at the doctorate level. This is a departure from completers in all instructional programs, where median earnings for women range between 67 percent of the median earnings for men for associate completers to 93 percent of the median earnings for men for doctorate completers. The gender wage gap narrows at higher levels of degree attainment. Like general studies, these degrees see a larger number of women completers. Since 2014, there have been 13,966 women graduates, compared to 8,082 men. Racial disparities in earnings are relatively narrow for humanities completers, with Black completers making slightly more than White graduates at the master's and doctoral level. Like the gender wage gap, wage outcomes by race in the humanities are much more equitable than across all instructional programs. For example, we see a much larger gap of \$8,430 in earnings for all programs at the bachelor's level between Black graduates, \$50,880, and White graduates, \$59,310, compared to humanities, where the gap is only \$1,640.

As Figure 4.43 shows, a large proportion of humanities completers at the bachelor's level or above work in teaching and education related occupations: 22 percent of bachelor's, 46 percent of master's, and 57 percent of doctoral and professional completers hold educational instruction and library occupations five years after completion. Associate and short-term credential completers, on the other hand, have their strongest showing in office and administrative support jobs, with 20 percent of completers, and 16 percent have healthcare practitioner occupations. Humanities bachelor's completers also have a noticeable presence outside of the education field, with 18 percent of completers in office and administrative jobs and another 11 percent in legal occupations.

Figure 4.43. Top destination occupations for humanities completers five years after completion



Source: Blanco Center analysis of LA FIRST data

Note: Occupation is based on main occupation for stable annual employment.

Advanced degrees and double majors feature in humanities pathways. Of the students who earned a degree or credential in liberal arts and sciences, about a third completed more than one credential from a public postsecondary institution in Louisiana. For these sequential-completion pathway students, 21 percent (2,316) earned a bachelor's followed by a master's degree, and another 15 percent earned a certificate followed by an associate degree. Double majors with at least one major in the humanities group earn a median of \$54,670 five years after completion, just shy of the \$57,600 median wage completers of the bachelor's-master's pathway earn. This is also slightly higher than all masters completers in the humanities, who earn \$54,570. Humanities are an important part of the educational offerings of any institution that many choose, with strong wage outcomes for students whose pathways include humanities credentials, especially at the bachelor's and master's level.

Healthcare

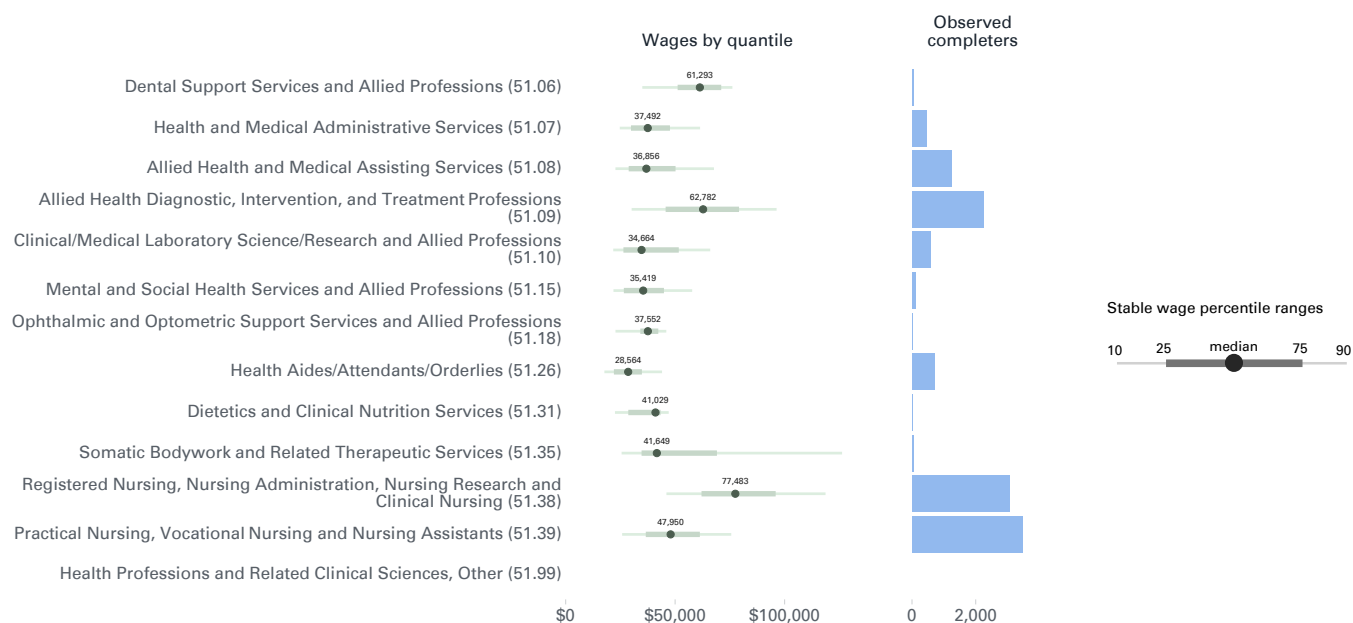
Among higher education and career pathways, healthcare has a reputation for abundant job opportunities due in part to strong industry demand and acute shortages of specific occupations like nurses. The realities of the field largely

confirm this reputation, though with some important qualifications. Wages vary widely for healthcare completers at different degree levels and in different fields, including for accessible credentials that are touted as providing access to high-demand opportunities.

Healthcare wage outcomes are generally high but heavily dependent on degree level, instructional program, and demographics. As a broad field of education and training, healthcare is one of the most popular in Louisiana, with 75,914 graduates since 2014 completing healthcare degrees. Across the entire field, healthcare completers had strong median earnings, with \$65,650 two years after completion and \$67,030 five years after completion. This limited wage growth compared to other fields may be due in part to the relatively high wages completers already enjoy by the time they are two years out from school, as well as potentially by strictly defined roles in a healthcare setting. This pattern contrasts with general studies and humanities, whose graduates start with lower post-completion wages but then achieve rapid wage growth from two to five years. According to human capital theory, as employees progress in their careers, they acquire job-specific skills through experience that lead to compensation gains, but this process unfolds at different rates for different pathways and careers. For example, vocationally oriented registered nursing programs prepare students for well-defined roles with advanced, relatively codified skills and technical qualifications – roles which a high proportion of completers obtain. In contrast, bachelor's completers in fields like liberal arts, social sciences, and business administration focus on generalist skills, like critical thinking, and graduates obtain jobs in a broader range of occupations. As employees, these completers proceed down more varied, less narrow career paths, where they may have lower initial productivity but experience greater returns to on-the-job training and real-world experience as they gain skills that are more specialized and more specific to the job and the employer.

One of the highest paying certificates is in the Allied Health Diagnostic, Intervention and Treatment program, which includes EMT/Paramedic training and has median earnings of \$68,120 five years after completion. Compared to other healthcare programs, men make up a large share of its completers. Figure 4.44 shows that for completers whose highest degree attainment is an associate, Registered Nursing has the most lucrative five-year earnings, at \$77,840, followed by Allied Health and Dental Support with \$59,840 and \$59,130 respectively. For bachelor's completers in the healthcare field, shown in Figure 4.45, registered nursing and dental support have the highest future earnings at \$77,280 and \$67,850, respectively. At the master's level, a few programs stand out: dentistry, allied health, and nursing. The degree level premium for both nursing and allied health is significant, with master's completers earning \$116,910 and allied health earning \$119,100. Professional degrees in medicine lead to some of the most lucrative careers in Louisiana, with median earnings in dentistry, medicine, and pharmaceutical sciences ranging between \$117,070 and \$175,390.

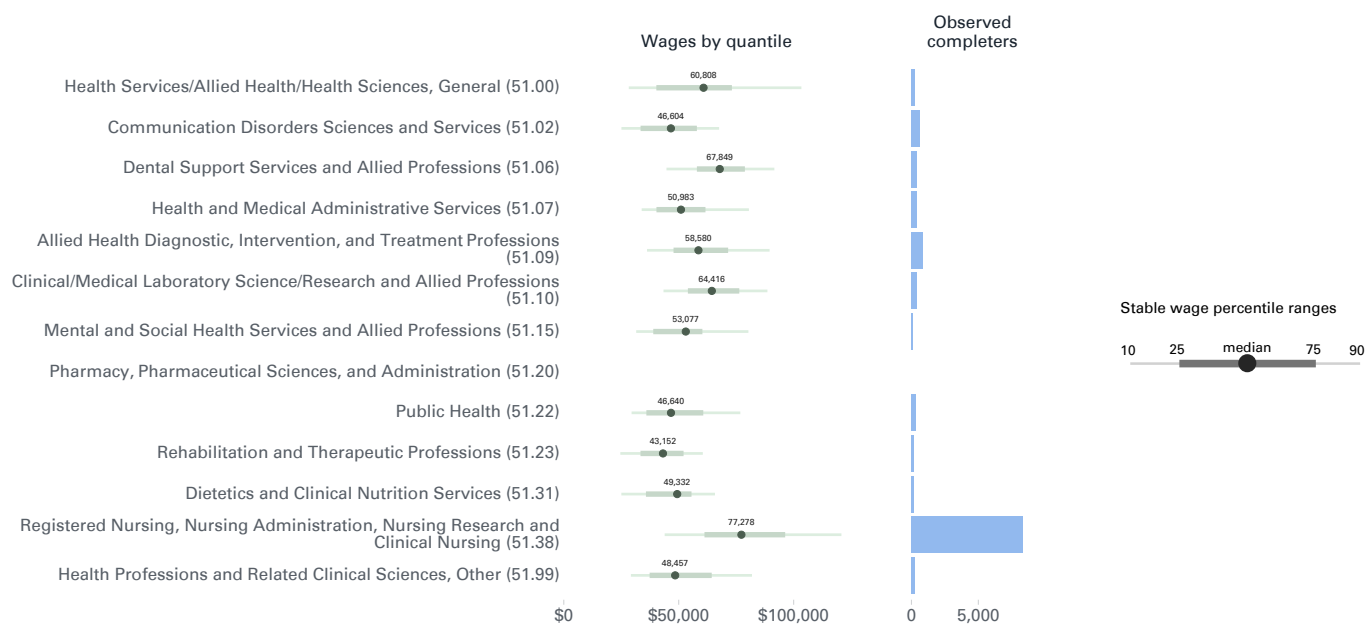
Figure 4.44 Wages and completers by healthcare program for associate and short-term credential completers 5 years after completion



Source: Blanco Center analysis of LA FIRST data

Note: Wages are stable annual wages.

Figure 4.45 Wages and completers by healthcare program for bachelor's completers five years after completion



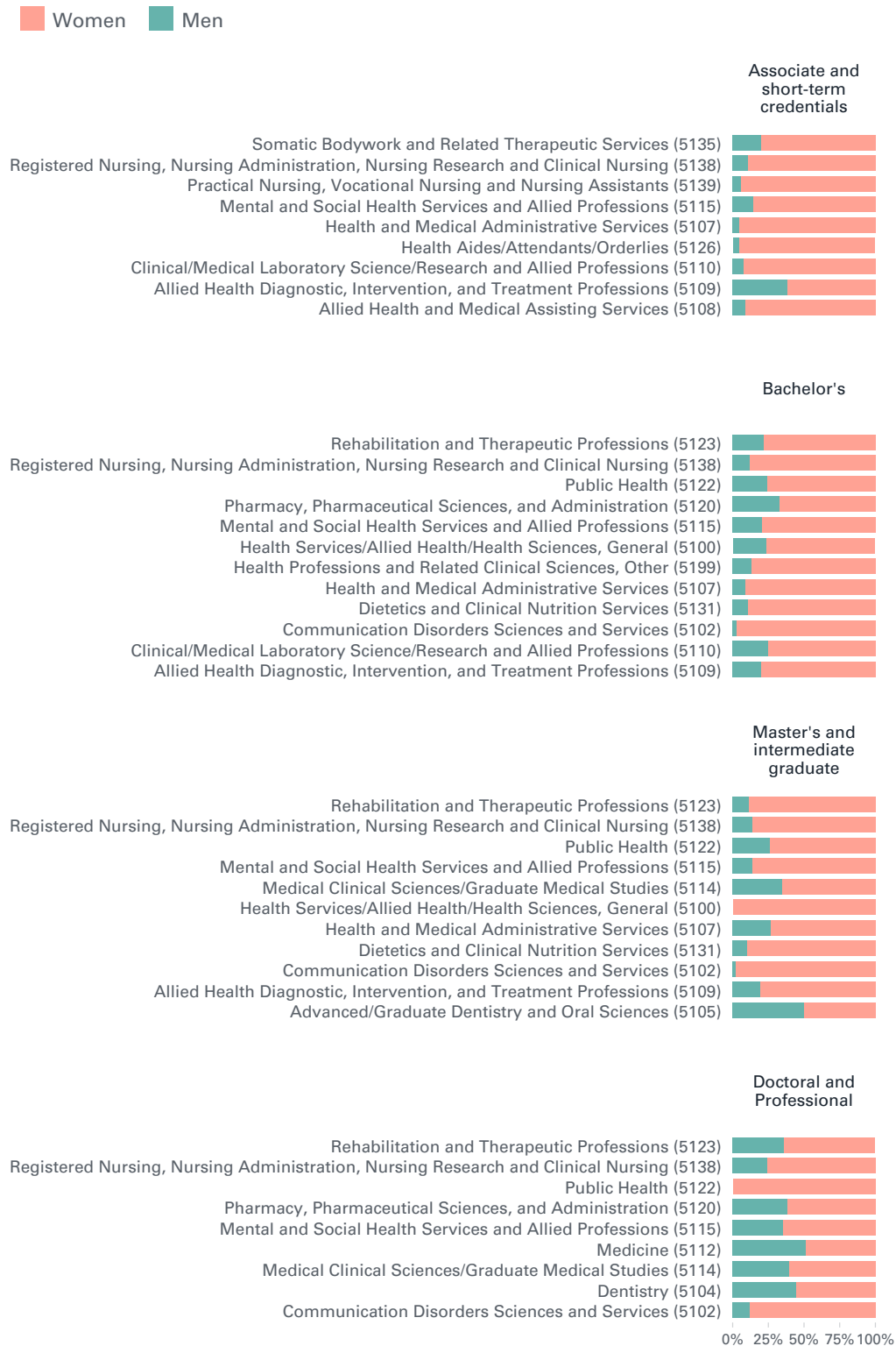
Source: Blanco Center analysis of LA FIRST data

Note: Wages are stable annual wages.

While nursing is among the highest-earning credential groups, most healthcare instructional programs lead completers to occupations with typical earnings well above most other programs offered by Louisiana public institutions at the same degree level. Notable exceptions are health aid programs, where CareerTech completers earn \$30,407 and certificate completers earn \$28,644 five years after completion. Healthcare degrees and credentials are often pursued as part of a multiple-completion pathways, where students complete increasingly advanced credentials. We talk about some of the common multiple-completion pathways further along in the case study.

Healthcare programs attract women (62,963 completers since 2014) at far higher rates than men (12,951), especially among the shorter-term credentials (Figure 4.46), and the pay gap between men and women remains high even within the same field of study and level of educational attainment. One program does stand out as particularly attractive to men among the short-term healthcare credentials: while they make up less than 20 percent of almost every other healthcare program, men make up 38 percent of completers in the Allied Health Diagnostic, Intervention and Treatment program, which includes the higher-paying Emergency Medical Technician (EMT Paramedic) credential.

Figure 4.46 Distribution of completers by gender for healthcare programs across degree levels



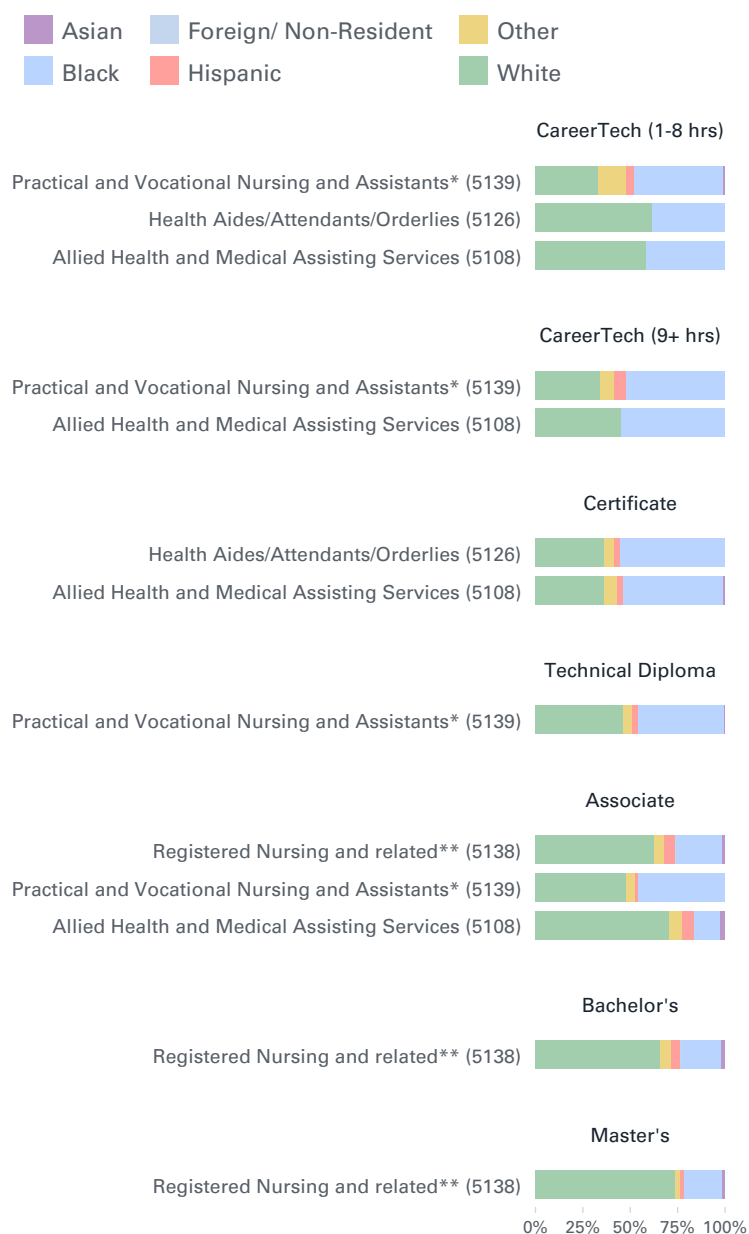
Source: Blanco Center analysis of LA FIRST data

While men and women see similar relative gains from higher levels of education in nursing, a strong wage gap persists at every level. These wage gaps widen at higher degree levels, with male completers of bachelor's and master's degrees in nursing earning higher salaries than women with similar degree attainment. Interestingly, while nursing is a women-dominated field, male nurses concentrate in the higher degrees, which lead to better earnings outcomes.

Among the most advanced healthcare degrees are medical doctors (MDs), which lead to some of the highest paying careers in Louisiana, including physician, surgeon, anesthesiologist, and many other specializations.²⁴ The number of women MD completers still outpaces men, though to a less drastic extent than most other healthcare programs (4,070 vs. 2,980 graduates since 2014). White completers make up 73 percent of MDs completers, while 9 percent are Asian, 8 percent are Black, and 3 percent are Hispanic. MD completions illustrate a more general pattern across healthcare programs and degree levels. Black completers earn slightly more in wages than White completers for some of the most common pathways like nursing. However, Black completers account for a disproportionate share of credentials and degrees that connect to lower-paying occupations, as shown in Figure 4.47, which skews aggregate earnings by race in healthcare.

²⁴ For doctors in particular, linked wage outcomes may have limitations. As captured by LA FIRST data, the relative gender pay gap among MDs is the smallest of any healthcare degree, with women earning \$119,240 and men earning \$127,110 five years after completion. As with all measures of earnings in this report, these estimates reflect only wages covered by the unemployment insurance program. Many physicians are self-employed, work as independent contractors, receive non-wage compensation, or may have a combination of earnings from multiple sources beyond UI-covered wages. For these reasons, total earnings for physicians may be considerably higher than figures reported here.

Figure 4.47 Distribution of completers by race/ethnicity for healthcare programs across degree levels



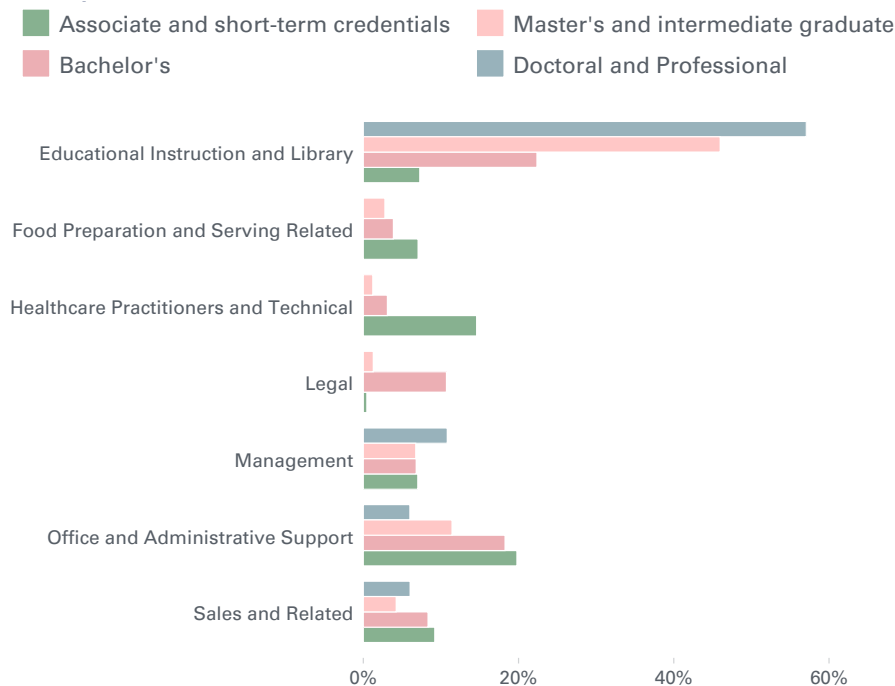
Source: Blanco Center analysis of LA FIRST data

Note: *The full program title Practical Nursing, Vocational Nursing and Nursing Assistants has been shortened to Practical and Vocational Nursing and Assistants. ** The full program title Registered Nursing, Nursing Administration, Nursing Research and Clinical Nursing has been shortened to Registered Nursing and related.

Occupational alignment is strong within healthcare. Overall, healthcare completers are more likely to land in an aligned occupation, including healthcare practitioner and related administrative and management roles, than completers in most other fields, as Figure 4.48 shows at a high level. Five years after completion, healthcare completers hold jobs in healthcare practitioner

occupations at high rates, with 67 percent of associate and short-term credential completers, 76 percent of bachelor's completers, and 73 percent of master's and intermediate graduate healthcare completers working in a healthcare occupation. Associate and short-term completers also work in healthcare support and office and administrative occupations, with nine percent landing in the former category and another seven percent in the latter. Eight percent of master's and five percent of bachelor's completers hold management jobs.

Figure 4.48 Top destination occupations for healthcare completers five years after completion



Source: Blanco Center analysis of LA FIRST data

Note: Wages are stable annual wages.

Multiple-completion pathways that include a credential in healthcare encompass every level of attainment. From short-term credentials to advanced graduate and professional degree sequences, over one-third of all students with a healthcare credential obtained multiple credentials from BOR institutions. Based on data from academic years 2010 through 2024, the most common of these multiple-completion pathways is a bachelor's to a master's in healthcare, with 3,638 completers. Many of these pathway completions are attributable to progression through registered nursing programs. The second most-common, with 2,550 completers, is a certificate in general studies to an associate in health. The next most common are bachelor's in Biological and Biomedical Sciences continuing into a professional degree in health (MD) (1,853 completers), and an associate followed by a bachelor's in health (1,791, also mostly completers following a

nursing pathway). Nearly a thousand completers have gone from a bachelor's in health to an MD (the health bachelor's includes pre-med majors). These five most-common health-related pathways cover about one-third of all multiple-completion pathways that include a credential in the health field.

Splitting the health credentials into specific instructional programs further illustrates common multiple-credential pathways. In the bachelor's to master's path, completers are close to evenly divided between registered nurse (RN) bachelor's and master's and speech-language pathologist bachelor's and master's degrees for academic years 2010 - 2024, with 1,337 and 1,101 completers respectively. The wage outcomes (based on completers in AY2014-24) for this split are stark, with those completing in the communications disorder field earning a median of \$60,880 five years after completing compared to bachelor's-master's registered nurses' \$113,870. The highest concentration of sequential completers when field of study is considered is the pathway from a certificate in general studies to an RN associate, with a median wage of \$75,160 five years after completing. Another 1,529 go from associate RN to bachelor's RN. Separately, 1,337 go from bachelor's RN to master's RN, but only about 180 follow the full sequence from associate to bachelor's to master's RN. Bachelor's in biological sciences to MD is another pathway with a high concentration of completers (1,180). Five hundred and twenty completers go from a pharmacy bachelor's to a PharmD. The LPN technical diploma also shows up in many of the common multiple-degree sequences, suggesting that it functions both as direct occupational training and as a steppingstone to additional educational pathways.

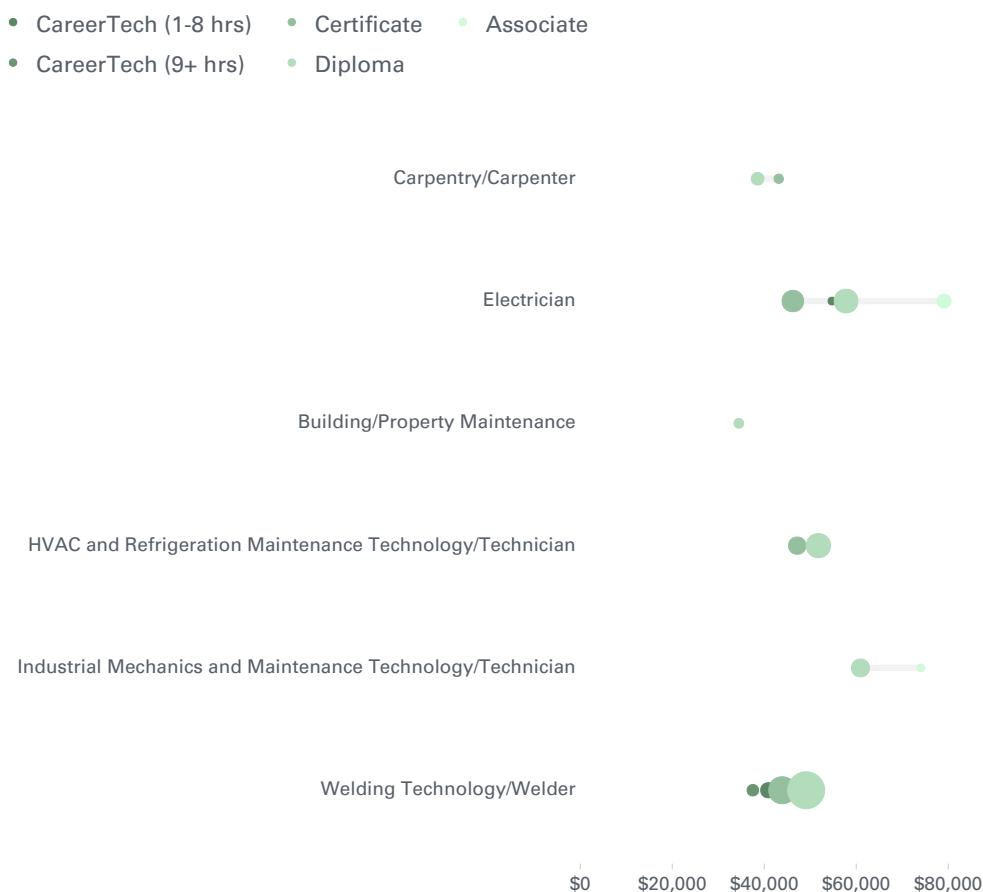
Skilled trades

We define skilled trades using the Advance CTE career clusters methodology. The subcluster "Skilled Trades" of the career cluster "Construction" includes programs such as HVAC technician, carpentry, welding, and electrician. It does not include the two most common engineering tech credentials earned in Louisiana: Instrumentation Technology/Technician and Industrial Production Technology/Technicians, Other. These programs are examined separately in the next section.

Strong and predictable wages and occupation outcomes within skilled trades.

The median earnings of graduates of all skilled trades degrees and credentials was \$41,830 two years after graduation and \$51,280 five years after graduation. These professions have comparable wages to completers of all short-term and associate instructional programs after two and five years (\$43,740 and \$50,190). The skilled trades sector also provides a great premium relative to baseline wages for workers with no post-secondary education (\$33,450). There have been 13,961 graduates within the skilled trades since 2014, representing CareerTech credentials, technical diplomas, certificates, and associate degrees. Most skilled trades, including carpentry, plumbing, electrical maintenance and HVAC, have very similar wages across credential level, as Figure 4.49 shows.

Figure 4.49 Wage by program and degree for skilled trades completers five years after completion



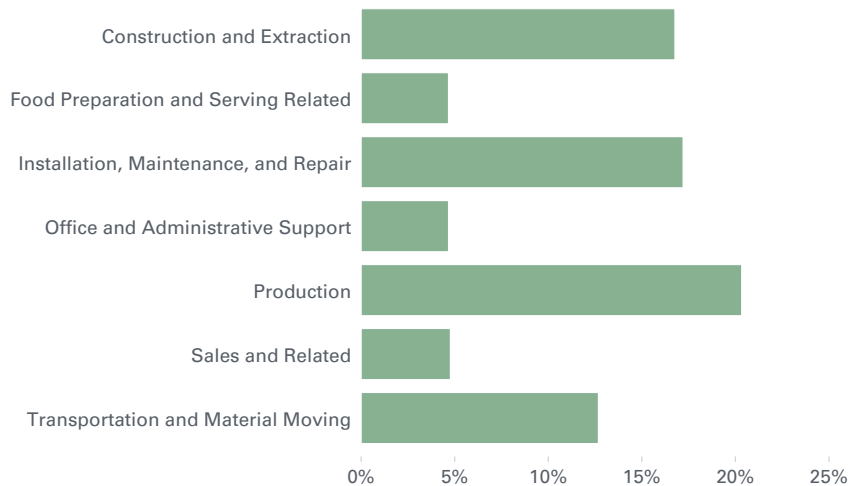
Source: Blanco Center analysis of LA FIRST data

Note: Wages are stable annual wages.

Electricians offer some of the highest paying careers within the skilled trades – associate’s graduates earn a median of \$79,070, while technical diploma and CareerTech completers make \$57,770 and \$54,710, respectively. On the lower end are careers in welding and carpentry, where certificate, CareerTech, and diploma holders earn between \$37,500 and \$43,890. Skilled trades programs attract many more men than women, and while the overall difference in earnings between men and women is large, we see wage differences favor the few hundred women with HVAC credentials, where women earn \$63,550 to men’s \$53,090. Generally, however, women complete skilled trades programs in too small of numbers to report their wage outcomes at that level of detail. Wage outcomes can diverge by race within the skilled trades. In woodwork, one of the lowest paying careers in the trades, there is a relatively small difference with Black and White workers making \$42,200 and \$40,700 respectively.

Skilled trades completers are spread among a few top occupation categories as shown in Figure 4.50, production (20 percent), installation, maintenance and repair (17 percent) and construction and extraction (17 percent).

Figure 4.50 Top destination occupations for skilled trades completers five years after completion



Source: Blanco Center analysis of LA FIRST data

Note: Occupation is based on main occupation for stable annual employment.

Multiple-credential pathways are especially common in the skilled trades. Over half of completers in the skilled trades earn multiple credentials from the BOR during their education. The top credential sequence for skilled trades is a precision metalwork certificate followed by a technical diploma in precision metalwork, which includes welding. Eighteen percent of skilled trades pathways are of this type. This pathway leads to median wages of \$49,550 five years after completion, compared to the median wage of people whose highest credential is a precision metalwork certificate, \$45,220. The next most common sequence is an HVAC certificate followed by HVAC diploma, with eight percent of students on a skilled trades pathway following this trajectory. HVAC credentials also show gains for completing higher levels of study, with the certificate-diploma pathway earning a median of \$51,870 compared to \$47,150 for completers whose highest attainment is a certificate in HVAC. Another eight percent earn an electrician certificate and then electrician diploma. These three paths account for one-third of all skilled trades multiple-completion pathways.

Engineering technology

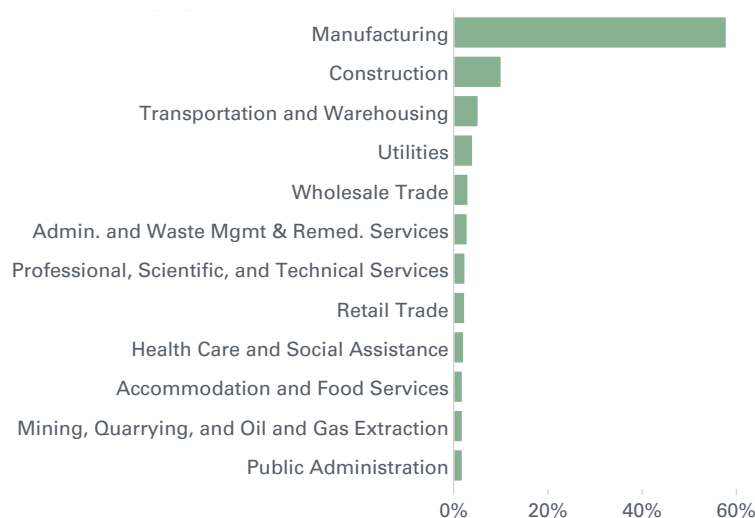
The two programs in engineering technology mentioned above -- Instrumentation Technology/Technician and Industrial Production Technology/Technician, Other -- stand out due to the high wages these completers go on to earn. Approximately 8,000 students completed credentials in these programs from 2014 through 2024, including 5,543 associates.

Exceptional wage outcomes for engineering technology completers and strong ties to Louisiana’s manufacturing sector. Whatever credentials a student completes in this field, they are entering jobs with markedly high wages. Median earnings for these completers are \$107,830 five years after degree completion for completers of any credential types offered for these programs (certificates, diplomas, and associate degrees). For associate completers, the median pay is \$116,650 at the five-year mark, though this number obscures some disparities. Black associate completers in these two specialized engineering technologies fields earn \$91,580 compared to White completers’ \$119,430 – similar differences exist at the technical diploma level and are even larger amongst certificate completers. Engineering technology completers also have drastically different wages by gender across all degree levels – specifically, women associate degree holders make \$65,020 compared to men’s \$114,120. These numbers reflect a far more dramatic difference than the overall differences by gender for all instructional programs in Louisiana.

These high earnings for short-term degrees and credentials have close links to Louisiana’s energy-related manufacturing economy. Completers of engineering tech credentials are highly concentrated by industry, with over half working in the manufacturing sector (Figure 4.51). These destination industries include Louisiana’s petroleum refineries and chemical manufacturing, where employment makes up a larger percentage of total private employment in Louisiana than in any other state.²⁵ Ten percent of the engineering tech completers work in the construction industries, and many construction jobs in Louisiana are also tied to energy-related manufacturing facilities. Finally, follow-up analysis of the completion data indicates that completers in these programs are concentrated at LCTC campuses in Louisiana’s two major energy manufacturing corridors: the Mississippi River parishes spanning New Orleans and Baton Rouge and the Lake Charles area.

²⁵ This is based on state-level data from the Quarterly Census of Employment and Wages on NAICS 324 and 325.

Figure 4.51 Top destination industries for engineering technologies completers five years after completion



Source: Blanco Center analysis of LA FIRST data

Note: Industry is based on main industry for stable annual employment.

Well-established sequential completion pathways for engineering technology programs. Over three-quarters of engineering tech credentials were earned in sequential completion pathways. Twenty-two percent of these engineering tech completers earned a certificate, then a diploma, then an associate in industrial production technology, and another 12 percent earned the same credentials in instrumentation technology. The technical diploma gives an appreciable bump in pay in both fields. The certificate-diploma-associate pathway for industrial production technology shows median wages of \$132,680 five years after completion, while the certificate-associate pathway in the same field earns a completer a median wage of \$122,250. For instrumentation technology, the certificate-diploma-associate pathway shows a median wage of \$92,160, while the certificate-diploma completers earn \$91,130.

Exploring questions of alignment

Though a prominent fixture in discussions of postsecondary education and training, alignment is a wide-ranging concept. It can refer to coherence across course and program offerings within an educational institution or, more relevant to this report, the link between specific instructional program offerings and employment outcomes. Associate degrees and shorter-term credentials often have a direct focus on career and technical training. Bachelor's degrees span a broad spectrum of career preparation, ranging from specialized professional training to generalist academic pursuits rooted in the liberal arts tradition. Either could include exposure to a mix of advanced technical skills and other job-

relevant practices like writing, communicating, and critical thinking. Alignment questions tend to revolve around whether completers are getting jobs related to their program of study and in line with where opportunities are growing. While these questions have been a focus of strategic planning and policy in education and workforce development, how to *measure* alignment is a separate challenge.

Below, we explore how empirical employment outcomes correspond with commonly used benchmark references for alignment. We examine the percentage of completers observed working in occupations coded as “aligned” by these resources. Then, we look at recent program-level trends in completers and how their occupational outcomes align with Louisiana employment projections through 2032. Beyond details on program-level outcomes and patterns, the pilot analysis broadly underscores the importance of a holistic approach to the alignment question. Though we demonstrate several candidate metrics for alignment below, our main takeaway from the exercise is that any singular metric will be strictly limited in its ability to reliably distinguish “good alignment” from “poor alignment.” Both postsecondary education and the labor market reflect the interplay of complex systems. The *ability* to link outcomes also implies a *responsibility* to account for the specificity, nuance, and diversity of outcomes across programs and the critical role of non-educational factors (in workplaces and across local labor markets) in shaping those outcomes.

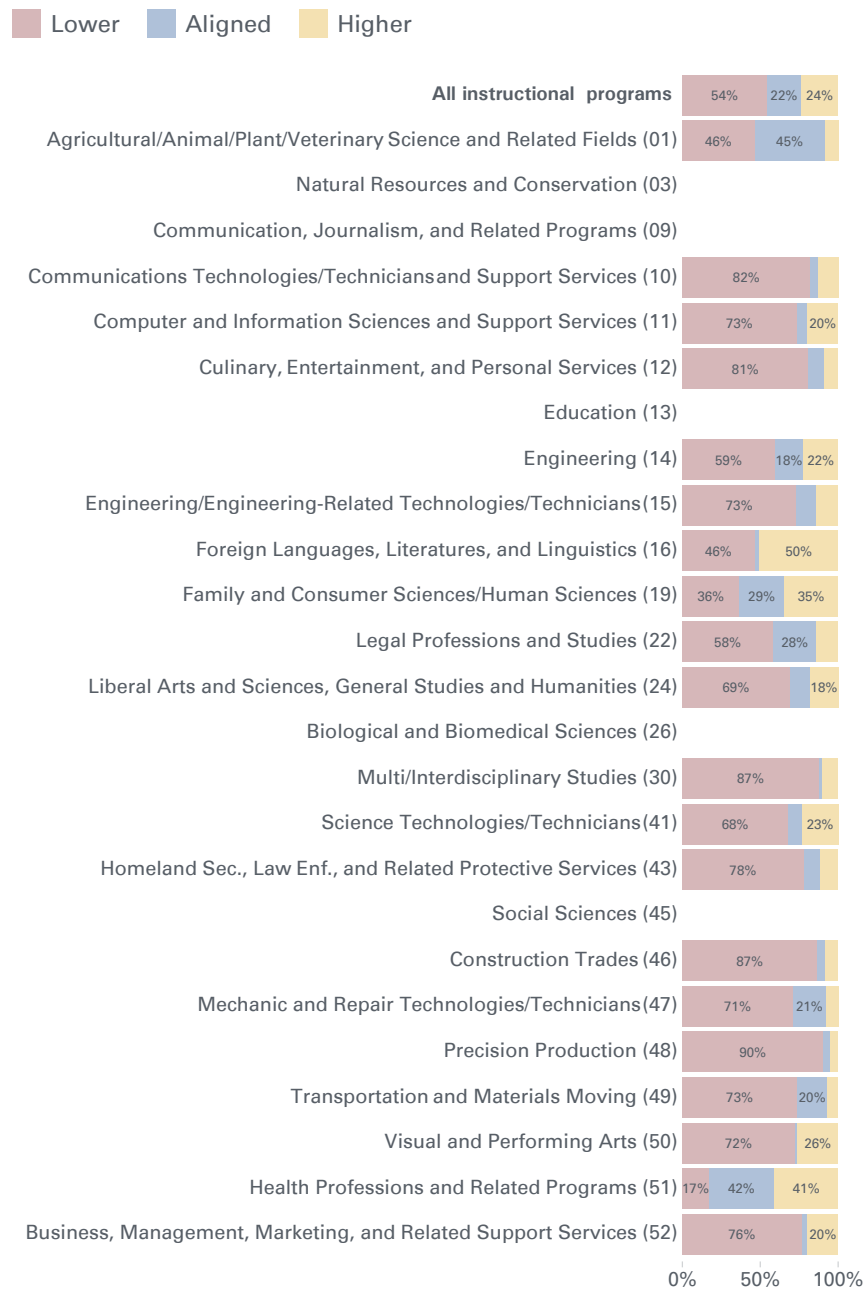
Comparisons with benchmark references for alignment

Alignment between the completed degree and typical degree requirements for the occupation. As a benchmark reference, the BLS identifies typical entry-level education requirements for occupations, and completers are considered “aligned” if their degree level matches that typical level. For example, if a bachelor’s degree completer in engineering is employed as a construction laborer, which does not require a four-year degree, their employment is not aligned but *lower* than the level of their degree (i.e. working in an occupation that typically requires fewer years of education than the person completed). That same completer would be *aligned* if they were employed as an engineer or any other occupation that typically requires a bachelor’s degree for entry.

Figure 4.52 shows degree level alignment three years after completion for associate and short-term credential completers; Figure 4.53 shows the same for bachelor’s completers. The bars show the percentage of total completers observed in stable annual employment in Louisiana according to whether the degree level requirement of the occupation was higher, lower, or aligned at the level of their completion degree. For associate and short-term credential completers, degree-level alignment was low for many program areas, indicating that completers were working in occupations three years after completion that required less than what they had attained. On average across all programs, about half of completers were working in occupations at an equivalent or higher

level than observed for completion. However, this rate was lower for many programs. Health Professions and Related Programs, where 84 percent were observed working in occupations that typically require degrees at or higher than the observed level of completion, brings up the average. For bachelor's completers, Education (13), Engineering (14), Mathematics and Statistics (27), and Health Professions and Related Programs (51) had among the highest rates of degree-level alignment, and a relatively strong proportion of Public Service and Social Service Professionals (44) were working in occupations above their observed level of completion.

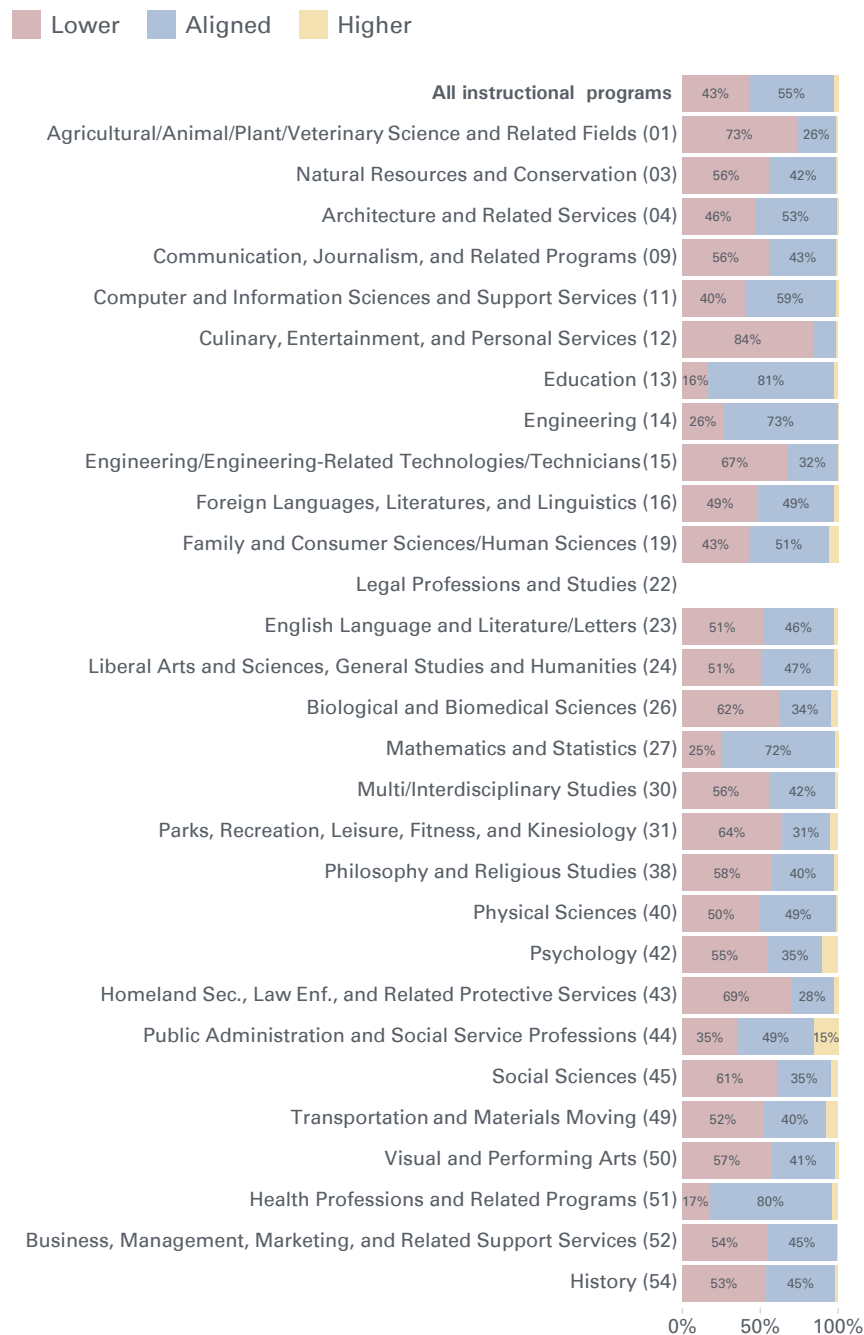
Figure 4.52 Degree level and occupation alignment for completers of associate degrees and short-term credentials



Source: Blanco Center analysis of LA FIRST data

Note: The denominator is stable employed completers. Alignment is based on typical education needed for entry reported by the U.S. Bureau of Labor Statistics.

Figure 4.53 Degree level and occupation alignment for completers of bachelor's degrees



Source: Blanco Center analysis of LA FIRST data

Note: The denominator is stable employed completers. Alignment is based on typical education needed for entry reported by the U.S. Bureau of Labor Statistics.

It is also important to consider that occupations are defined to capture similar tasks or duties, but some occupations still encompass a range of responsibilities including roles that can be filled by individuals with less education and roles that require or benefit from additional education even if referred to by the same general occupational title. A leading example of this is Registered Nurse, which includes a range of responsibilities related to patient care and administration, but may require different levels of education depending on the setting or complexity of care provided. In other words, some occupations are broad enough that a comparison based on typical entry-level education fails to capture important aspects of alignment in the real world. Additionally, the “typical education needed for entry” identified by the BLS may not accurately reflect the minimum level: registered nurse is listed as a bachelor’s degree occupation even though associate degree pathways for registered nursing not only exist but have large numbers of completers.

Aside from the exceptions with somewhat higher or lower rates of alignment, the analysis suggests that, for most fields, roughly half of bachelor’s completers are working in an occupation that typically aligns with their degree level based on the typical entry-level education identified by the BLS.

Alignment between the instructional program and the occupation. As benchmark references, both the NCES CIP-SOC crosswalk and the Advance CTE Career Clusters tool are essentially “crosswalks”: they relate specific instructional or training programs (CIP codes) to specific occupations (SOC codes), based on expert judgement about the relevance of skills and credentials associated with a field of study to one or more jobs. Typically, these crosswalks link one CIP code with a handful of SOC codes. While the groups that develop these resources may rely on multiple sources of data at the national level, a fair amount of judgement is involved to determine what should be included in a multi-purpose list of program-occupation links and what should be omitted, even if some links are consistently found in the broader economy, albeit in smaller numbers.

To support workforce and academic planning, these resources are widely used as a bridge between education and employment data, for example, to match an institution’s program offerings with occupations experiencing growth in the labor market and identify relevant gaps. However, both crosswalks are largely oriented to career and technical fields with straightforward links between academic programs and career preparation and thus permit more matches for some instructional programs than others. For example, health care and construction programs tend to have direct occupational targets that account for a significant proportion of employment in the broader labor market. Crosswalks tend to match social sciences, humanities degrees, or other academic programs more narrowly to teaching professions in the relevant subject or to more niche jobs, though these completers actually are found in many different occupations, often in high-wage, high-quality jobs where the skills and knowledge gained

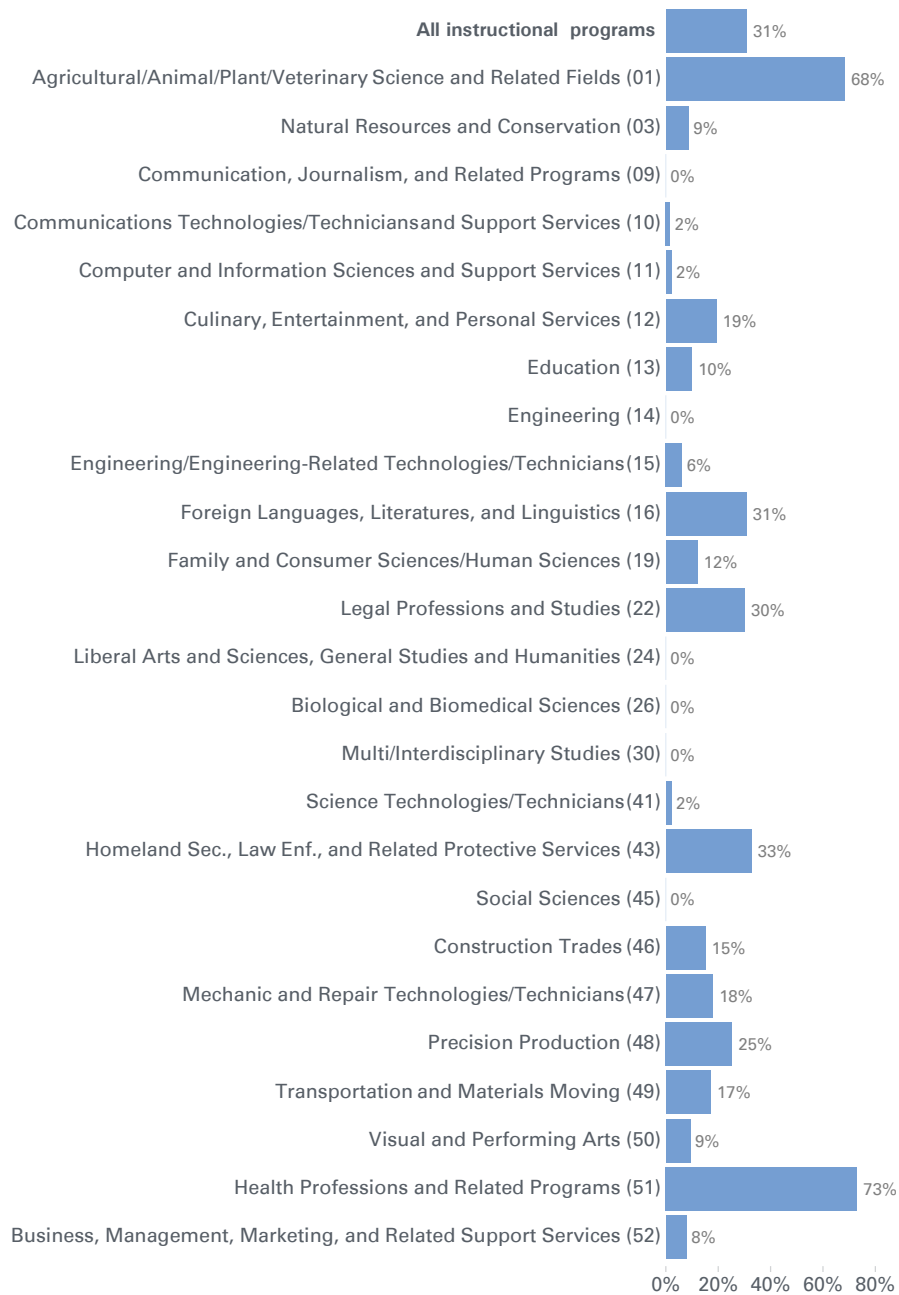
in the degree program may be clearly linked to the worker's success. Engineering majors have a higher potential to align than economics majors because there are more engineers than economists; and although economics education is potentially applicable to a range of high-quality professions, these links typically have limited representation on a CIP-SOC crosswalk. A successful outcome could also occur if a completer advances beyond their initial "aligned" occupation. In short, we should expect some instructional programs to exhibit higher levels of alignment than others (in a later section, we discuss and measure a related concept of occupational concentration), and a lack of observed alignment based on national CIP-SOC crosswalks alone is not necessarily a poor outcome for all programs.

Figures 4.54 and 4.55 show the percentage of each instructional program's completers in an aligned occupation three years after completion. Here, employment is considered "aligned" when the observed occupation matches a relationship in either the NCES or Advance CTE crosswalk.²⁶ For associate and short-term completers in Figure 4.54, the highest rates of alignment were in health professions and related programs (51) and agricultural and veterinary fields and health professions and related programs (11). Alignment was also high in construction, transportation, production, and mechanic and repair fields as well as a handful of other areas like foreign languages and literature, legal professions and studies, and culinary. Rates were otherwise low, including for completers in the engineering-related technologies and technicians' fields (15) – a curious result given their exceptionally high levels of pay. As shown previously in the case studies, these completers' association with employment in Louisiana's manufacturing industries strongly suggests tight alignment with a specialized labor market, though this manner and degree of alignment is not reflected in the metric presented here, based only on observed occupations and national CIP-SOC crosswalks.²⁷

²⁶ We compared matches in both crosswalks, and they were generally similar to within a few percentage points or identical. To simplify, we only show the percentage of CIP-SOC outcomes with a match in either of the two crosswalks.

²⁷ A closer look at our public degree-CIP-SOC matrix and the NCES CIP-SOC crosswalk validates this finding. Most observed and reportable occupations for Industrial Production Technologies/Technicians (15.06) completers are in occupations plausibly tied to Louisiana's main manufacturing industries (Architecture and Engineering; Production; Installation, Maintenance, and Repair; Construction and Extraction, as well as General and Operations Managers). However, these observed occupations in Louisiana are not closely reflected on the national NCES CIP-SOC crosswalk, which favors only Architecture and Engineering and certain Production occupations. As a result, we observe partial CIP-SOC alignment as defined, but not to the extent suggested by industry and wage outcomes.

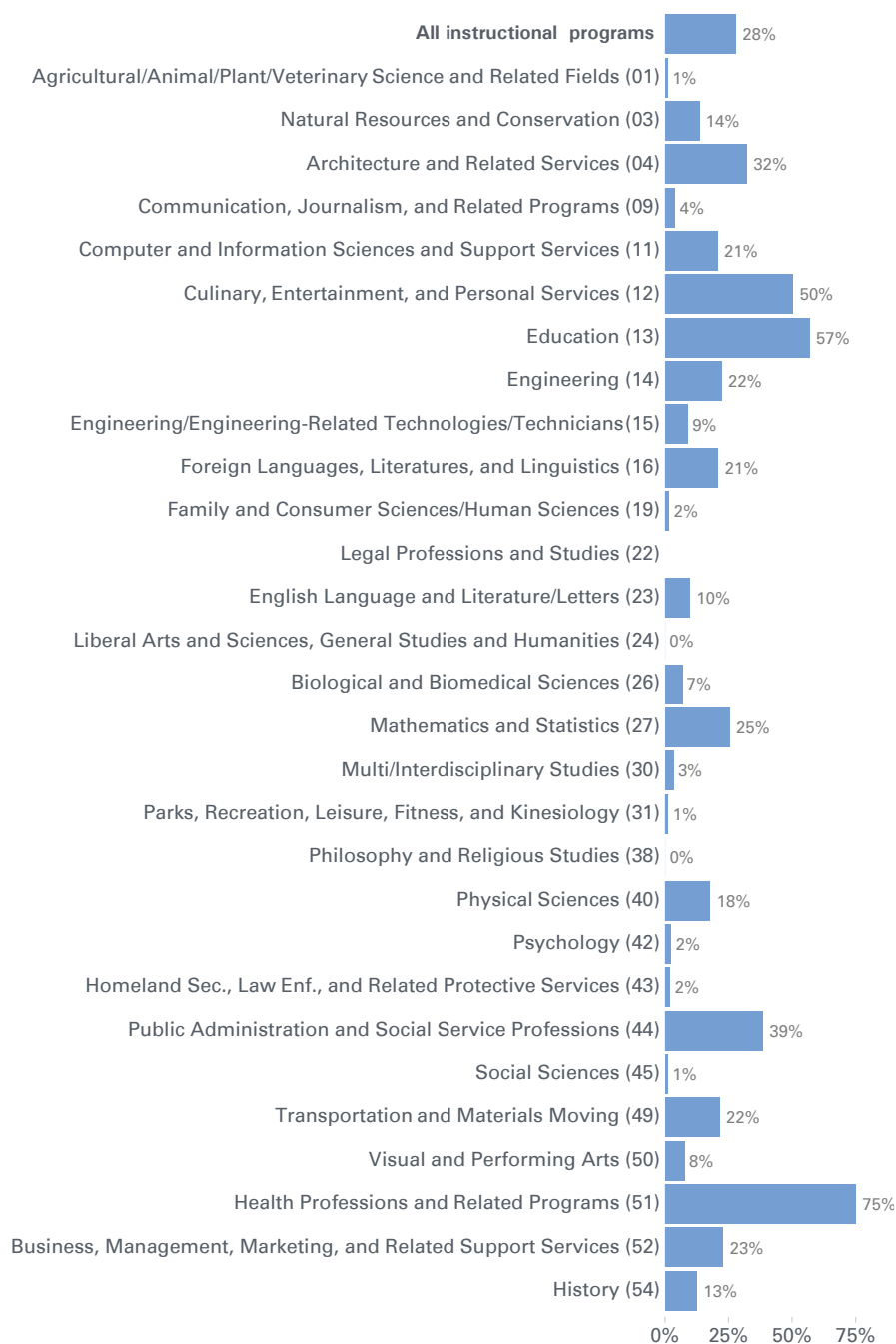
Figure 4.54 Instructional program and occupation alignment for completers of associate degrees and short-term credentials



Source: Blanco Center analysis of LA FIRST data, NCES CIP-SOC Crosswalk, and Advance CTE Career Clusters

Note: The denominator is stable employed completers. Alignment is based on observed matches in either the NCES or Advance CTE crosswalk.

Figure 4.55 Instructional program and occupation alignment for completers of bachelor's degrees



Source: Blanco Center analysis of LA FIRST data, NCES CIP-SOC Crosswalk, and Advance CTE Career Clusters

Note: The denominator is stable employed completers. Alignment is based on observed matches in either the NCES or Advance CTE crosswalk.

For bachelor's completers in Figure 4.55, the highest rates of alignment between the instructional program and occupation were health professions and related programs (11), culinary, entertainment, and personal services (12), education (13), and public administration and social services professions (44). Several other bachelor's majors that involve somewhat specialized skills had moderate levels of alignment, including STEM-related fields, business, and architecture. In contrast, popular majors like psychology and social sciences had low levels of alignment, as expected due to the nature of the CIP-SOC crosswalks used.

To be clear, while these summaries provide a rare data-driven glimpse into the notion of program-occupation alignment, they also illustrate conceptual and measurement challenges. Crosswalks like the ones used here are among the most readily available resources for designing education-career pathways and assessing instructional programs based on skills and qualifications for job opportunities. Outside of a few fields like education and healthcare, such alignment can only be validated for a minority of completers of most programs. Data limitations also likely play a role, as LA FIRST SOC-code coverage is currently limited,²⁸ and the crosswalks represent, at best, national relationships rather than Louisiana-specific labor markets (as the case appears to be for engineering technology). Even without these data limitations, a low alignment rate alone does not necessarily imply that completers' outcomes are "good" or "bad." Rather, such summary measures are, at best, only one relevant data point for determining student success.

Given the limitations, we situate these charts primarily as an exercise in exploring degree-occupation relationships and illustrating what patterns these benchmarks produce using a broad set of statewide data. They may not be reliable or precise measures of outcomes, either alone or in comparison with other programs (see box for an example from construction programs). One general takeaway is the need for a nuanced, multi-faceted concept of alignment that holistically considers quantifiable outcomes like wages alongside less easily quantified nuances of educational pathways, skills and qualifications, occupational opportunities, and career trajectories. Though valuable as a starting point, CIP-SOC crosswalks only shed light on a small part of this picture.

²⁸ Our weighting adjustment only partially corrects for limited coverage. For example, as documented in last year's report, management occupations are over-represented in LA FIRST data, which hints at issues with SOC code assignment that are difficult to fully correct with the weighting adjustment applied in this year's report. Weighting aims to adjust proportions among observed occupations but cannot correct for unobserved occupations that are unobserved due to non-reporting rather than actual employment. Management occupations also have limited representation in the NCES CIP-SOC crosswalk, especially for career and technical programs, so completers in a management position may often be coded as "not aligned" in our summary measures.

Is program-occupation alignment really that low?

Associates and short-term credentials in construction, which have a surprisingly low alignment score using these benchmarks, provide an example of how real-world data linking can deviate from an ideal crosswalk. First, many “unaligned” occupations are assigned the SOC code of “helper” occupations – Helpers—Electricians (SOC 47-3013), Helpers—Carpenters (SOC 47-3012), etc. – and not an aligned destination on the NCES crosswalk. While a benchmark crosswalk may not consider those strongly aligned, these occupations may well provide an entry-level position that connects directly with the program’s intended career path. Closely related occupations like these may also reflect variability across employers in the job titles assigned to similar and potentially aligned work. Second, related programs may have similar occupation outcomes that are not “aligned” on the CIP-SOC crosswalks. For example, the NCES crosswalk lists Electricians (SOC 47-2111) as an aligned occupation only for Electrician (CIP 46.0302) programs but not for Electrical and Power Transmission Installation/Installer, General (CIP 46.0301) programs, yet electrician employment is also observed for the latter. These issues, along with the reality of credential stacking and additional licensure requirements in construction, further illustrate the shortcomings of existing national benchmark crosswalks and how they can diverge from empirically observed outcomes.

Completion trends and alignment with employment projections

Recent trends in completers. The summaries above illustrate the range of employment outcomes for completers based on their degree and field of study. Here, we examine recent trends in the number of annual completers. Further below, we relate these trends to expectations for job growth encountered by recent completers, based on occupational projections published by Louisiana Works.

Focusing on the 2014-15 through 2023-24 academic years, Figure 4.56 shows trends for completers of short-term credentials and associate degrees by instructional program (grouped by four-digit CIP codes with only those groups having over 100 annual completers in all years shown). Among the program areas experiencing gains were a mix of general studies credentials and career focused credentials:

- Associate: Liberal Arts and Sciences, General Studies and Humanities (27 percent); Business/Commerce, General (32 percent); Allied Health Diagnostic, Intervention, and Treatment Professions (67 percent); and Registered Nursing, Nursing Administration, Nursing Research, and Clinical Nursing (43 percent).
- CareerTech: Several programs are growing, as this is a newer credential.
- Certificate: Liberal Arts and Sciences, General Studies and Humanities (88 percent); Electrical and Power Transmission Installers (tripled); Industrial Production Technologies/Technicians (88 percent); Electromechanical Technologies/Technicians (90 percent); Allied Health and Medical Assisting Services (40 percent).
- Technical diploma: Electrical and Power Transmission Installers (doubled); Precision Metal Working (26 percent).

Figure 4.56 Annual short-term credential and associate completers by instructional program, AY2014-15 to 2024-25

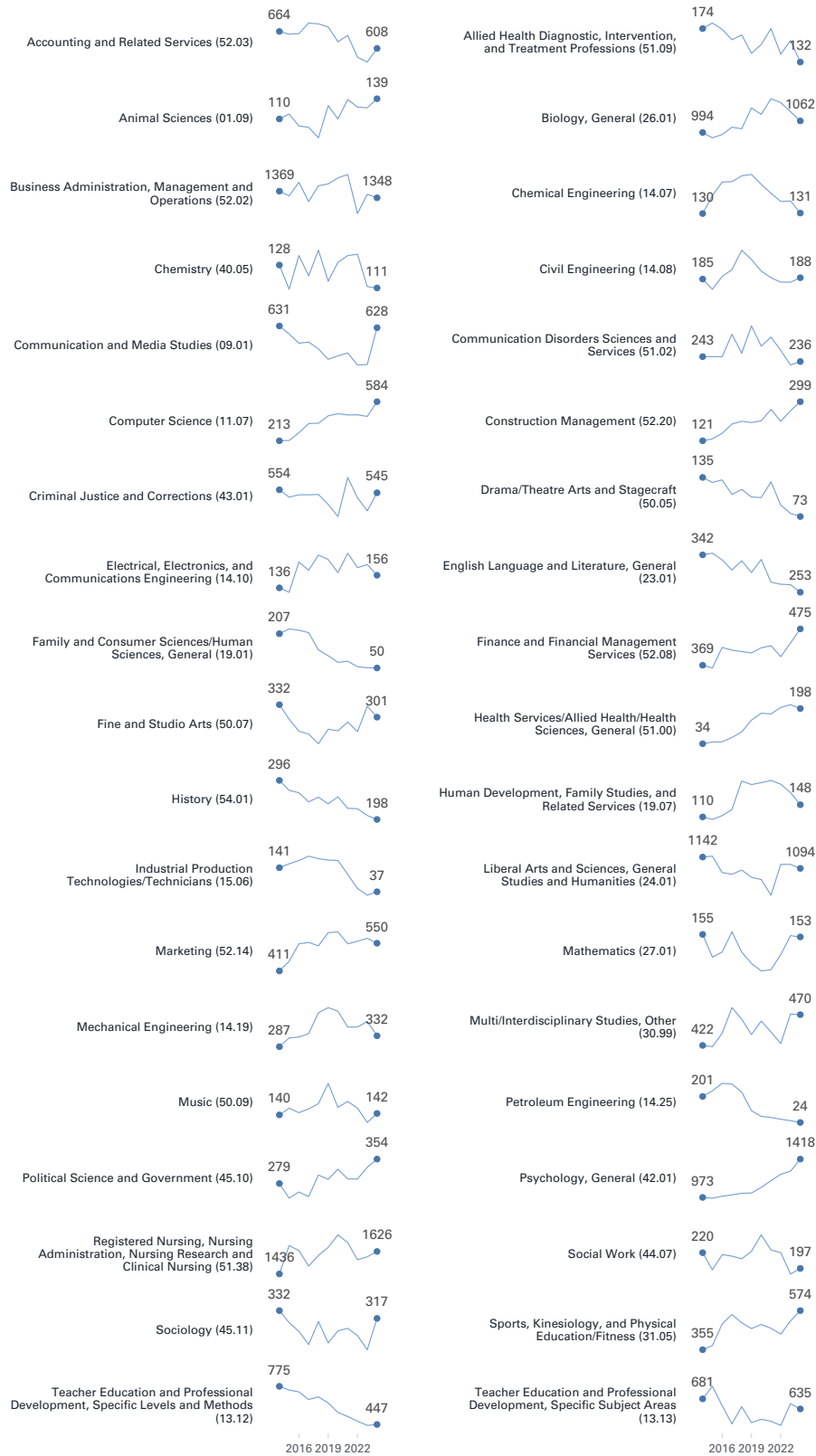


Source: Blanco Center analysis of LA FIRST data

Notable programs where the number of completers declined included the lucrative associate in Industrial Production Technologies/Technicians (45 percent), associate in Criminal Justice and Corrections (26 percent); and the technical diploma in Practical Nursing, Vocational nursing and Nursing Assistants (41 percent).

Figure 4.57 shows trends in completers by instructional program at the bachelor's level. Most show variation from year to year, but there are few over-arching trends. Noteworthy increases occurred in Computer Science (nearly tripled); Construction Management (doubled); Psychology (46 percent); Sports, Kinesiology, and Physical Education/Fitness (62 percent); and some social sciences and business-related majors. Bachelor of Nursing programs (Registered Nursing, Nursing Administration, Nursing Research, and Clinical Nursing) have seen modest increases as well (13 percent). Declining programs include English Language and Literature, General (26 percent); History (33 percent); Petroleum Engineering (89 percent); Family and Consumer Sciences/Human Sciences, General (76 percent); Drama/Theatre Arts and Stagecraft (46 percent); and Industrial Production Technologies/Technicians (74 percent). Completers in teaching-focused bachelor's degrees (Teacher Education and Professional Development, Specific Levels and Methods and Specific Subject Areas) declined (42 percent and 7 percent).

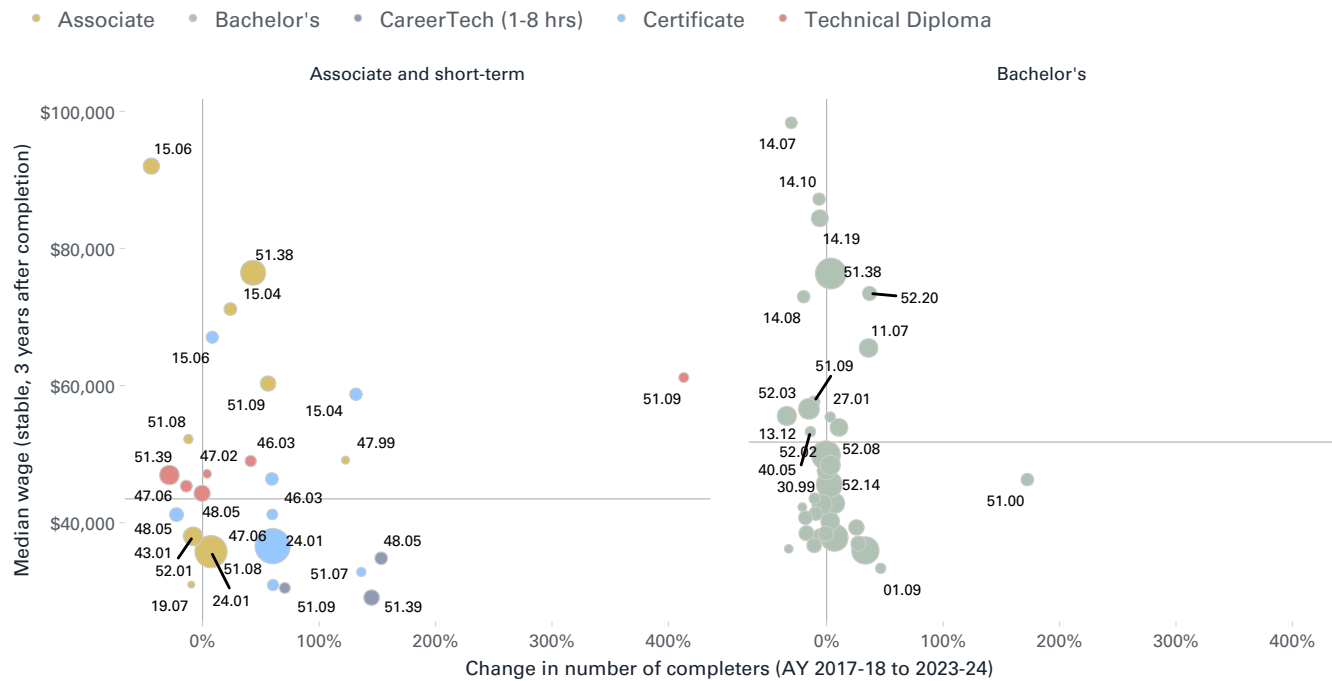
Figure 4.57 Annual bachelor's completers by instructional program, AY2014-15 to 2024-25



Source: Blanco Center analysis of LA FIRST data

To put these trends in the context of wage outcomes, Figure 4.58 compares trends in the number of completers by instructional program with median wage levels three years after completion. Growth and decline in unique completions are reflected as the percentage change in average annual completers between two two-year periods – roughly before the pandemic (academic years 2017-18 and 2018-19) and the most recent two years of data (academic years 2023-24 and 2024-25) – and only larger programs with over 100 annual average completers are shown. There is not a strong pattern to suggest that recent completion trends have shifted toward or away from programs with higher wage outcomes. For example, among high-paying associate degrees, Registered Nursing (51.38) and Electromechanical Technologies Instrumentation and Maintenance (15.04) programs have increased in the number of completers, while completions of the associate in Industrial Production Technologies (15.06) have decreased. We further explore completion trends and wages below, with the additional layer of projections of future employment.

Figure 4.58 Recent trends in completions and median wages by instructional program



Source: Blanco Center analysis of LA FIRST data

Note: Indicators are based on stable annual employment. Horizontal lines are the reference median for the whole degree group/level. Labels are four-digit CIP codes: See Figures 4.56 and 4.57 for each code's full program title.

Alignment between recent completion trends and future employment

projections. As a final step in this year’s exploration of alignment, we look at how occupational outcomes for recent completers align with future projections for occupational employment. Specifically, we link occupations – as observed in 2024 employment for completers in academic years 2021-22 and 2022-23 – and apply the percentages observed for each degree-CIP completer cohort to 10-year projections (2022-2032) for changes in total employment and openings, as published by LA Works. We focus on two key indicators: size of the effective labor market and annual openings (see Appendix for technical definitions).

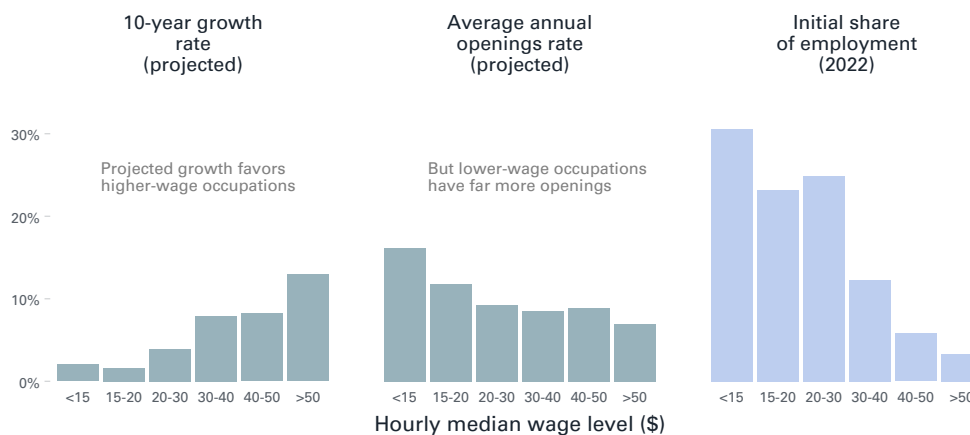
- *Change in the size of the effective labor market (ELM change %)* indicates how a specific degree and instructional program cohort aligns with future growth or decline of occupational employment in the Louisiana economy through 2032. The change in the size of the effective labor market is interpretable as how much Louisiana employment is projected to grow for completers based on the occupational distribution for recent completers. A positive percentage indicates that completers, on average, are aligned with growing jobs.
- *Annual openings* indicate the average number of total annual openings available to a completer of each cohort, based on the occupations observed for that cohort. Note that this indicator incorporates both net employment growth and occupational churn: replacement demand driven by incumbent workers changing roles or exiting the labor force (including retirements). Arguably, while openings are more directly relevant to the volume of opportunities each cohort of completers encounters, this figure can also be higher when linked to jobs with higher rates of turnover even if there is no projected long-term growth in that occupation. Note that annual openings are reported as an annual average over ten years, but effective labor market change is a ten-year change.

While annual openings reflect the number of aligned job opportunities available to an average completer, a growing effective labor market indicates alignment with where the labor market is heading and may highlight education and training programs important to support future economic growth.

Before diving into specific instructional programs, we offer two more general points of context. First, projected growth in employment and projected openings are not necessarily highly correlated. To illustrate, Figure 4.59 is derived solely from the LA Works occupational projections, not from linked LA FIRST data. Alongside the initial (2022) distribution of employment by occupational median wage, the charts show the projected 10-year growth in employment and the projected annual openings as a percentage of initial

employment. On average, higher-wage occupations have higher projected rates of growth. This pattern flips for the rate of projected annual openings, which are higher for lower-wage jobs. Growth contributes to openings but so does employee turnover, and turnover tends to be higher for lower-wage jobs. As we show below, these general patterns are also reflected in how the two key indicators – growth in the size of the effective labor market and annual openings – vary at the program level.

Figure 4.59 Summary of 2022-2032 occupational projections by wage level



Source: Blanco Center analysis of Louisiana Works occupational projections

Note: Growth indicators are based on current employment estimates for 2022 and projections for 2032.

Second, the selection of baseline measures in table 4.3 reveals a few broad patterns at the degree and credential level with respect to completion trends and projected growth in the effective labor market (*ELM change %*). Here, completion trends are measured as:

- *Annual completers* is the annual average for the cohort whose employment outcomes determine the effective labor market (AY 2021-22 and 2022-23).
- The percentage change in average annual completers (*completers change %*) between two periods: before the pandemic (academic years 2017-18 and 2018-19) and the most recent data (academic years 2023-24 and 2024-25).

Recent years have seen growth in the annual number of completers of certificates (including CareerTech certificates) and master's degrees (note that, unlike all other degree levels, CareerTech certificates are new and began during the initial period examined, so the high rates of growth reflect a start-up period), while technical diploma completers have decreased. The number of bachelor's degree completers (by far the largest group of completers) decreased slightly. Based on recent employment outcomes, 10-year growth of the effective labor market for

completers is expected to be 2.5-5.9 percent depending on the degree level, with the fastest growth for professional degrees, technical diplomas, master's degrees, and associate degrees. For a baseline reference point, across all employment in the Louisiana economy, the projected 10-year growth rate is 3.8 percent, and average annual openings across all occupations is 2,258. When compared with the entire occupational distribution, BOR completers have higher representation in specialized, often smaller occupations that require specific education and/or training. Completers also have lower representation among many of the largest occupations, like retail and food service jobs, which tend to have less required education and training, lower wages, and higher turnover rates.

Table 4.3 Summary of projected 10-year growth of the effective labor market by degree or credential level

Degree level	Annual completers	Completers change %	ELM change %	Annual openings
CareerTech (1-8 hrs)	1,240	633.2%	2.5%	863
CareerTech (9+ hrs)	862	1542.0%	3.5%	716
Certificate	4,366	41.7%	3.3%	958
Technical Diploma	1,942	-8.1%	5.6%	866
Associate	5,780	8.9%	4.8%	1,035
Bachelor's	18,594	-0.4%	3.8%	684
Master's	8,540	50.9%	5.1%	279
Doctorate	605	12.4%	2.6%	114
Professional	1,160	19.9%	5.9%	382

Source: Blanco Center analysis of LA FIRST data and Louisiana Works occupational projections (2022-2032)

Note: Indicators are based on stable annual employment.

Detailed indicators at the four-digit CIP level are shown in Figure 4.60 for associate and short-term credential completers and Figure 4.61 for bachelor's completers (only programs with more than 100 annual completers are included in these detailed breakdowns by instructional program). In addition to providing program-level detail on change in the size of the effective labor market (ELM change %), annual openings, annual completers, and the percentage change in average annual completers (completers change %), the figures also include the following:

- The occupational concentration index (Concentration) indicates how strongly aligned the degree and instructional program is with a specific set of occupations: high values indicate that completers are tightly concentrated in a narrow set of occupations and not distributed more widely and in-line with the occupational diversity of the entire labor market.
- Median wages are calculated by program for stable Louisiana employment three years after the highest, last completion and pooled across completers in all available academic years, as shown earlier in the findings.

Figures 4.60 and 4.61 include the following indicators:

- **Annual completers** in AY 2021-22 and 2022-23, whose observed occupational outcomes form the basis of the analysis.
- **Completers change %** shows the trend between AY 2017-18/2018-19 and AY 2023-24/2024-25 (difference between two-year annual averages).
- **ELM change %** is the effective labor market growth, based on 2022-2032 projections and observed outcomes.
- **Annual openings** are the annual openings for the average completer, based on 2022-2032 projections and observed outcomes.
- **Concentration** is the occupational concentration index, by quintile.
- **Median wage (stable)** reflects outcomes based on the highest degree for the entire pooled cohort as shown earlier in the report.

Figure 4.60 Summary of projected ten-year growth of the effective labor market and annual openings by instructional program for associate and short-term credential completers

Associate							
	Annual completers	Completers change %	ELM change	ELM change %	Annual openings	Concentration	Median wage (stable)
Electromechanical Technologies/Technicians (15.04)	190	23.9%	297	5.9%	577	mid	\$71,980
Industrial Production Technologies/Technicians (15.06)	334	-44.0%	353	4.7%	801	low	\$94,580
Human Development, Family Studies, and Related Services (19.07)	102	-9.7%	89	1.4%	752	high	\$30,950
Liberal Arts and Sciences, General Studies and Humanities (24.01)	1,806	7.2%	68	1.0%	851	very low	\$36,630
Criminal Justice and Corrections (43.01)	218	-10.9%	15	0.2%	891	very low	\$39,850
Mechanic and Repair Technologies/Technicians, Other (47.99)	104	122.7%	515	6.2%	774	low	\$50,100
Allied Health and Medical Assisting Services (51.08)	116	-12.2%	267	17.4%	214	very high	\$52,650
Allied Health Diagnostic, Intervention, and Treatment Professions (51.09)	292	56.2%	213	7.0%	245	very high	\$59,820
Registered Nursing, Nursing Administration, Nursing Research and Clinical Nursing (51.38)	962	43.4%	2,676	7.5%	2,264	high	\$75,580
Practical Nursing, Vocational Nursing and Nursing Assistants (51.39)	118		1,237	7.5%	1,391	very high	\$47,830
Business/Commerce, General (52.01)	478	-8.2%	-69	-0.8%	1,101	very low	\$38,790
CareerTech (1-8 hrs)							
Precision Metal Working (48.05)	192	153.4%	268	5.8%	576	low	\$36,020
Allied Health Diagnostic, Intervention, and Treatment Professions (51.09)	144	70.6%	197	3.8%	661	high	\$29,100
Practical Nursing, Vocational Nursing and Nursing Assistants (51.39)	302	145.1%	444	5.2%	931	mid	\$22,850
Business Operations Support and Assistant Services (52.04)	197		-69	-0.9%	1,058	very low	\$30,580
Certificate							
Electromechanical Technologies/Technicians (15.04)	180	131.7%	313	4.8%	748	mid	\$59,700
Industrial Production Technologies/Technicians (15.06)	174	8.3%	376	4.6%	915	low	\$58,320
Liberal Arts and Sciences, General Studies and Humanities (24.01)	2,238	60.2%	352	3.6%	1,081	very low	\$34,990
Electrical and Power Transmission Installers (46.03)	192	59.5%	269	5.1%	655	low	\$42,570
Vehicle Maintenance and Repair Technologies/Technicians (47.06)	140	59.8%	315	5.3%	671	mid	\$39,170
Precision Metal Working (48.05)	228	-22.4%	446	7.3%	731	mid	\$40,850
Health and Medical Administrative Services (51.07)	116	136.3%	-77	-0.8%	1,277	low	\$33,550
Allied Health and Medical Assisting Services (51.08)	152	60.5%	349	4.2%	1,152	mid	\$30,660
Technical Diploma							
Electrical and Power Transmission Installers (46.03)	152	41.3%	376	6.4%	663	mid	\$48,700
Heating, Air Conditioning, Ventilation and Refrigeration Maintenance Technology/Technician (HAC, HACR, HVAC, HVACR) (47.02)	112	3.8%	260	3.9%	815	mid	\$47,320
Vehicle Maintenance and Repair Technologies/Technicians (47.06)	168	-14.0%	216	3.5%	707	mid	\$46,250
Precision Metal Working (48.05)	331	-0.4%	427	7.1%	703	mid	\$44,800
Allied Health Diagnostic, Intervention, and Treatment Professions (51.09)	128	413.2%	65	4.1%	122	very high	\$62,770
Practical Nursing, Vocational Nursing and Nursing Assistants (51.39)	522	-28.5%	1,171	7.3%	1,384	very high	\$46,930

Source: Blanco Center analysis of LAFIRST data and Louisiana Works occupational projections

Note: Indicators are based on stable annual employment.

Figure 4.61 Summary of projected ten-year growth of the effective labor market and annual openings by instructional program for bachelor's completers

	Annual completers	Completers change %	ELM change	ELM change %	Annual openings	Concentration	Median wage (stable)
Animal Sciences (01.09)	132	46.4%	12	0.50%	266	high	\$33,550
Communication and Media Studies (09.01)	574	-0.2%	-33	-0.80%	465	low	\$43,340
Computer Science (11.07)	458	36.0%	97	4.00%	291	high	\$65,500
Teacher Education and Professional Development, Specific Levels and Methods (13.12)	496	-34.2%	377	3.00%	940	high	\$55,310
Teacher Education and Professional Development, Specific Subject Areas (13.13)	570	6.8%	118	2.70%	467	very low	\$44,250
Chemical Engineering (14.07)	166	-30.4%	187	8.90%	215	very high	\$99,200
Civil Engineering (14.08)	183	-19.7%	158	5.20%	268	very high	\$72,880
Electrical, Electronics, and Communications Engineering (14.10)	180	-6.5%	113	13.10%	78	very high	\$88,090
Mechanical Engineering (14.19)	368	-5.9%	153	7.40%	202	high	\$84,460
Human Development, Family Studies, and Related Services (19.07)	218	-5.9%	70	1.20%	579	low	\$37,980
English Language and Literature, General (23.01)	274	-17.4%	-23	-0.40%	605	low	\$38,520
Liberal Arts and Sciences, General Studies and Humanities (24.01)	1,046	2.3%	121	1.80%	679	very low	\$45,380
Biology, General (26.01)	1,180	6.7%	76	2.10%	473	very low	\$38,590
Mathematics (27.01)	133	3.0%	37	0.70%	589	low	\$55,630
Multi/Interdisciplinary Studies, Other (30.99)	434	-0.3%	95	1.40%	708	very low	\$47,300
Sports, Kinesiology, and Physical Education/Fitness (31.05)	458	3.0%	56	1.60%	458	very low	\$40,530
Chemistry (40.05)	136	-13.9%	20	0.60%	441	high	\$54,500
Psychology, General (42.01)	1,204	33.2%	52	1.10%	540	very low	\$36,710
Criminal Justice and Corrections (43.01)	560	-4.0%	77	1.40%	605	very low	\$43,600
Social Work (44.07)	222	-9.4%	113	3.70%	370	high	\$38,840
Political Science and Government (45.10)	293	25.6%	-12	-0.40%	395	low	\$41,190
Sociology (45.11)	291	-0.7%	-56	-1.00%	738	very low	\$39,400
Drama/Theatre Arts and Stagecraft (50.05)	110	-32.6%	75	1.50%	654	mid	\$36,110
Fine and Studio Arts (50.07)	277	27.3%	-21	-0.40%	806	low	\$36,900
Music (50.09)	154	-10.2%	130	2.40%	530	mid	\$42,980
Health Services/Allied Health/Health Sciences, General (51.00)	188	172.4%	119	2.30%	605	low	\$46,410
Communication Disorders Sciences and Services (51.02)	262	-10.7%	67	3.10%	235	high	\$34,630
Allied Health Diagnostic, Intervention, and Treatment Professions (51.09)	158	-10.7%	142	6.90%	147	very high	\$57,650
Public Health (51.22)	111	-20.9%	60	0.80%	843	very low	\$41,240
Registered Nursing, Nursing Administration, Nursing Research and Clinical Nursing (51.38)	1,628	3.6%	2,369	7.50%	2,006	high	\$76,620
Business Administration, Management and Operations (52.02)	1,360	-0.6%	-7	-0.10%	874	very low	\$49,890
Accounting and Related Services (52.03)	615	-15.2%	218	2.40%	845	high	\$55,770
Finance and Financial Management Services (52.08)	410	10.6%	39	0.70%	574	low	\$54,450
Marketing (52.14)	554	3.1%	-1	0.00%	837	very low	\$48,940
Construction Management (52.20)	237	36.9%	235	5.20%	436	mid	\$73,490
History (54.01)	226	-18.1%	127	2.30%	546	low	\$41,980

Source: Blanco Center analysis of LAFIRST data and Louisiana Works occupational projections

Note: Indicators are based on stable annual employment.

We summarize a few takeaways here and graphically illustrate general patterns below.

Associate and short-term credentials:

- Strong growth in the size of the effective labor market and high rates of annual openings relative to completers are expected especially for programs in health care but also for several programs in construction and repair fields and industrial technologies. For example, the RN associate degree is expected to see 7.5 percent growth in the size of the effective labor market, with a high capacity for annual openings to absorb annual completers. These completers are highly concentrated by occupation, especially in nursing occupations, which are projected to grow.
- In some cases, the number of completers is trending down where growth in the effective labor market for completers is expected to be small or negative, such as Business/Commerce associate (52.01) and Criminal Justice and Corrections associate (43.01). However, there are other cases where the number of completers is trending downward for programs projected for strong growth. Examples include the LPN technical diploma (51.39), Allied Health and Medical Assisting Services associate (51.08), Precision Metalworking certificate (48.05), and Industrial Production Technologies/Technicians associate (15.06). In most cases, programs with a downward trend for one type of certificate also exhibit an increasing trend in completions for a different type of certificate, or a related program. For example, the decrease in LPN technical diplomas coincided with the introduction and subsequent growth of practical nursing associate degree programs. These dynamics illustrate the importance of a holistic approach to evaluating alignment and consideration of some of the subtler underlying dynamics related to particular fields of study.
- General studies associate and certificate programs (24.01) have the largest number of annual completers. These are the only programs where the number of annual completers outpaces annual openings to absorb those completers, based on this novel methodology and the current state employment projection.

Bachelor's:

- Most undergraduate majors are projected to see modest 10-year growth in the size of the effective labor market, ranging from 1-3 percent. Stronger growth is projected for registered nursing, allied health, and engineering majors.
- A majority of undergraduate majors show more annual openings than the number of completers. For some high-paying majors like

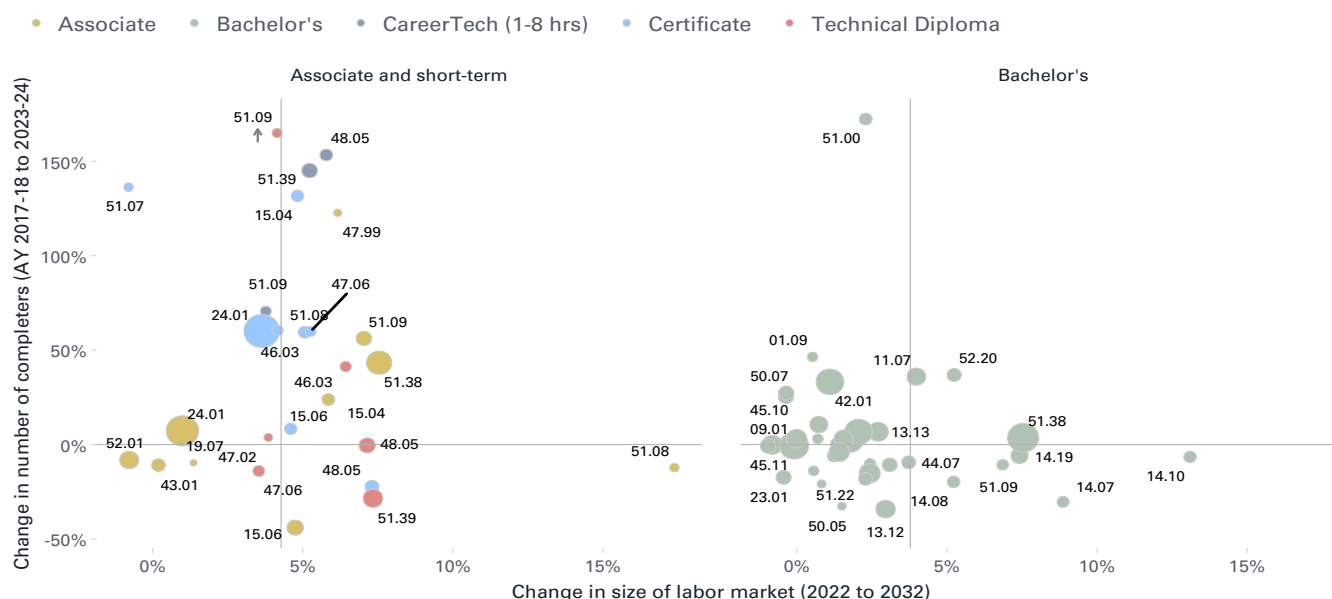
Computer Science (11.07); Electrical, Electronics, and Communication Engineering (14.10); and Mechanical Engineering (14.19), the number of annual completers exceeds the number of annual openings, based on Louisiana's current employment projections. The same is true for some of the largest majors, like Business Administration, Management and Operations (52.02); Liberal Arts and Sciences, General Studies (24.01); Biology, General (26.01); and Psychology, General (42.01).

Note that projected growth in the effective size of the labor market is not necessarily correlated with annual openings. For example, associate degrees in Business/Commerce, General (52.01) and certificates in Health and Medical Administrative Services (51.07) show a slight decline in the projected size of the labor market but high numbers of annual openings. Completers for both programs also have relatively low occupational concentration. In contrast, allied health associate programs (51.08 and 51.09) and Engineering bachelor's degrees (14) have high projected effective labor market growth but few annual openings, with high occupational concentration. Meanwhile, nursing programs at all degree levels rank highly on growth of the labor market, job openings, and occupational concentration.

As expected, technical and career-focused programs tend to have a higher degree of occupational concentration than academically focused programs, though not uniformly. For example, healthcare-related programs and engineering bachelor's programs have high occupational concentration, whereas general studies associate and certificate programs and liberal arts and social sciences bachelor's programs have low concentration. Business programs also tend to have low occupational concentration. Perhaps surprisingly given their focus on occupational training, associates and short-term credentials in construction, repair, and engineering technology programs tend to have only moderate levels of concentration (we discuss several of these programs at greater detail in the case studies). Occupational concentration also has a mixed relationship with wage levels. Higher-paying fields tend to have medium-to-high levels of concentration, but not all lower-paying fields have low concentration.

To further draw out broad patterns, the next set of figures illustrates how the key projection-based indicators of alignment correspond with completion trends and wage outcomes. Figure 4.62 compares trends in completers with projected growth in the effective labor market and projected openings. Programs above the horizontal line have seen more completers in recent years, and programs to the right of the vertical line are expected to see higher-than-average growth in the size of the effective labor market for completers. While this analysis considers the effective labor market for each credential level separately, it is important to remember that for some occupations employers hire workers with a range of credentials, and trends over time in employer demands can influence the popularity of programs at a particular credential level.

Figure 4.62 Recent trends in completions and projected ten-year growth of the effective labor market by instructional program



Source: Blanco Center analysis of LAFIRST data and Louisiana Works occupational projections

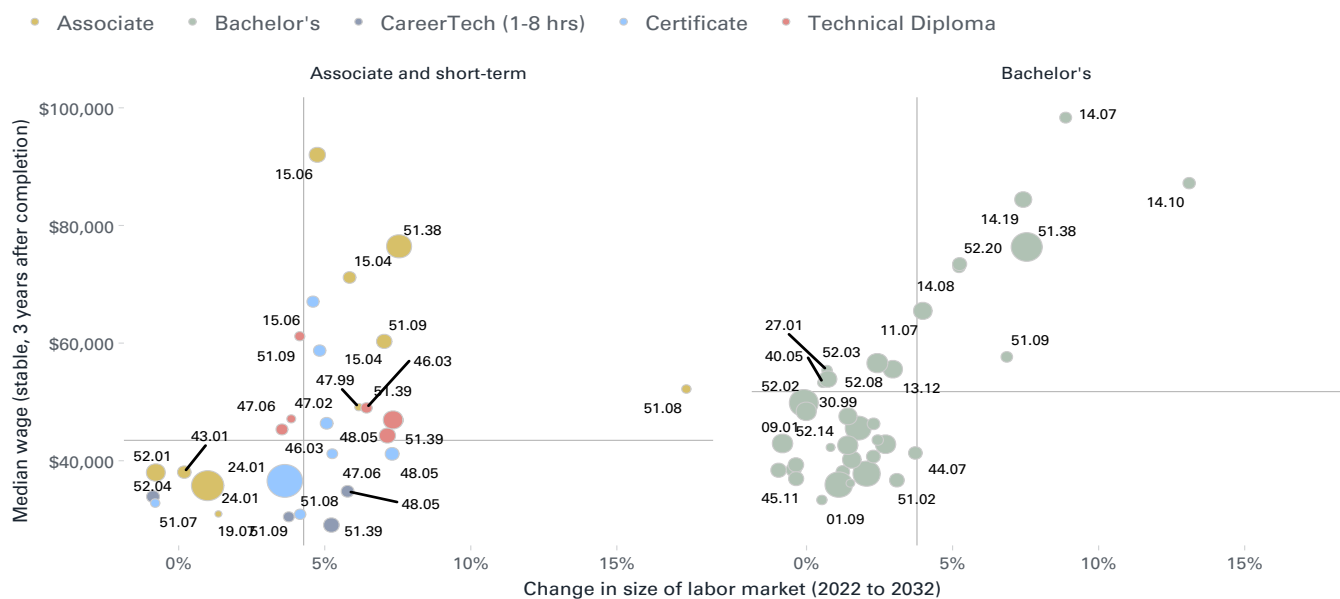
Note: Indicators are based on stable annual employment. 51.09's increase in completers has been adjusted to fit on the plot area. Lines are reference averages for the whole degree group/level. Labels are four-digit CIP codes: See Figures 4.60 and 4.61 for each code's full program title.

Generally, falling in the top-right or bottom-left quadrants implies that the number of completers and the size of the labor markets for those completers are growing or shrinking in tandem. In other words, trends in the number of completers over the past few years are at least directionally aligned with projected job trends over the next decade. The bottom-right quadrant suggests Louisiana's volume of completers has decreased for programs where projected occupational employment growth is above average. These include certificates in Precision Metalworking (48.05), associate degrees in Industrial Production Technologies (15.06), and four engineering bachelor's degree programs. While decreases in credential completion for popular fields of study may be surprising, Precision Metalworking (48.05) has also exhibited a notable increase in completers at the associate degree level while Industrial Production Technologies (15.06) has demonstrated a modest increase at the certificate level as well as increases in certificates and associate degrees in the closely related field of Electromechanical Instrumentation and Maintenance Technologies/Technicians (15.04). Among programs in Allied Health, associate (51.08), and bachelor's (51.09) degrees also have strong projected growth but slightly declining rates of completers. Meanwhile, the number of annual completers has increased in related programs with more modest projected growth: technical diploma in Allied Health (51.09) and bachelor's in Health Services/Allied Health/

Health Sciences, General (51.00). The top-left quadrant identifies programs like bachelor's in Psychology (42.01), where the number of completers has increased relatively quickly despite below-average projected growth in the labor market for these completers.

Programs linked to faster growth in the labor market for completers also lead to higher early-career earnings, on average. Figure 4.63 examines the relationship between median wages at year three and projected growth in the size of the labor market. Generally, programs expected to see more growth in the labor market for completers also tend to pay higher median wages. This association is clear for bachelor's degrees, where higher-paying majors are projected to see strong growth and lower-paying majors projected to see below-average growth or even slight decline. Associate degrees and short-term credentials have a similar pattern, except that a few certificate programs with lower levels of pay are projected to see above-average growth in the size of the labor market (bottom-right), such as Vehicle Maintenance and Repair Technology (47.06) and Precision Metalworking (48.05).

Figure 4.63 Projected ten-year growth of the effective labor market and median wages by instructional program

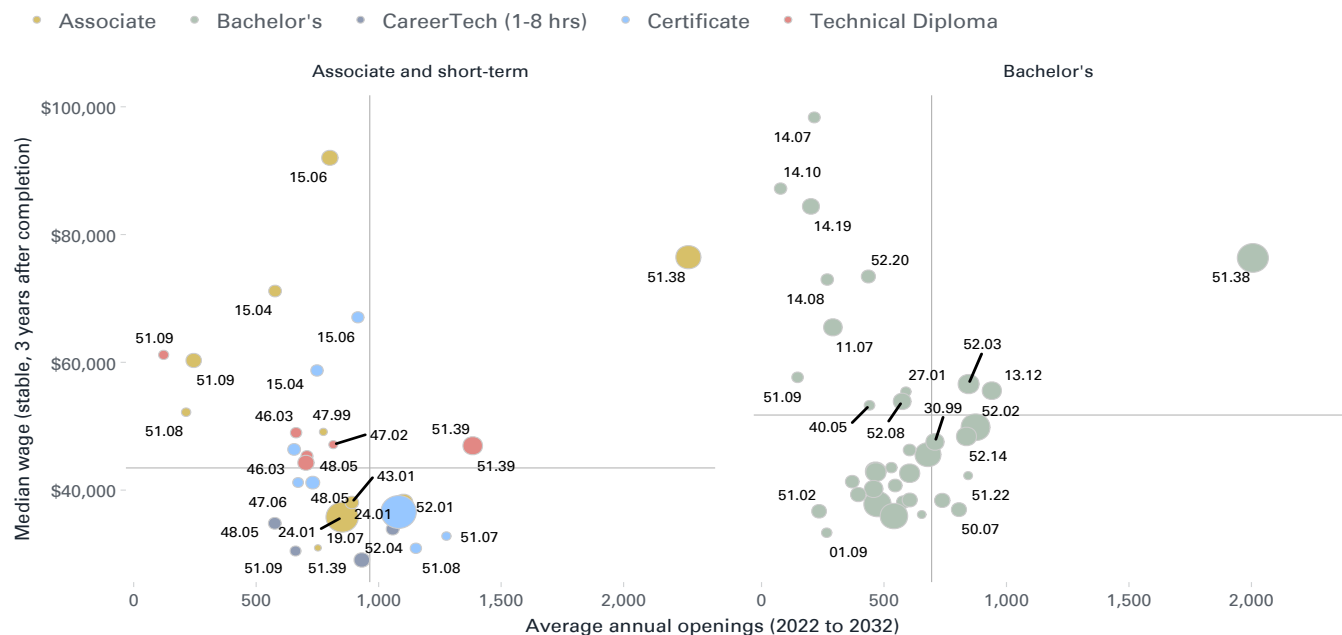


Source: Blanco Center analysis of LAFIRST data and Louisiana Works occupational projections

Note: Indicators are based on stable annual employment. Horizontal and vertical lines are the reference median/average for the whole degree group/level. Labels are four-digit CIP codes: See Figures 4.60 and 4.61 for each code's full program title.

Figure 4.64 also shows median wages but shifts the comparison to projected annual openings, revealing a different pattern. Programs with the highest-paid completers are associated with below average projected annual openings. The critical exceptions to this pattern are nursing programs (top-right, RN 51.38 and LPN 51.39), which pair relatively high median wages with very high projections of annual openings. This finding reflects a critical nuance in labor market data, where lower-paying jobs often exhibit higher rates of turnover. Consequently, programs tied to these occupations may appear to have more openings due to frequent vacancies rather than expanding opportunities. The finding highlights how openings alone can be a misleading proxy for opportunity or target for gap analysis. When quantified as the size of the effective labor market for completers, high rates of growth are not necessarily highly correlated with abundant job openings. Programs with high-earning completers tend to have growing labor markets rates but relatively few projected openings.

Figure 4.64 Projected ten-year average annual openings and median wages by instructional program



Source: Blanco Center analysis of LAFIRST data and Louisiana Works occupational projections

Note: Indicators are based on stable annual employment. Horizontal and vertical lines are the reference median/average for the whole degree group/level. Labels are four-digit CIP codes: See Figures 4.60 and 4.61 for each code's full program title.

Ultimately, defining how educational programs align with employment outcomes or in-demand opportunities cannot boil down to a singular calculation, like matching the number of completers to available seats or extrapolating from rigid tools like theoretical CIP-SOC crosswalks. Rather, alignment reflects nuances that exist at the level of programs and occupations, as well as the labor market dynamics that shape job opportunities and careers over time. While our preliminary analysis anchors findings to the empirically observed employment outcomes for completers, it also highlights the complexity of occupational outcomes and the challenges of boiling down alignment to a single measure. Thus, we also invite readers to examine a publicly available version of the full matrix of outcomes linking completers by program (degree and four-digit CIP) to occupational employment in Louisiana (SOC), which was used to calculate the summary indicators of alignment presented above (see appendix for a description of this data set).

Conclusion

Summary and discussion of findings

The complexity of postsecondary pathways. Louisiana's postsecondary system is characterized by a shifting mix of credentials. While bachelor's degrees remain the largest single category of completers from BOR institutions, their annual volume has remained flat. Certificates and graduate and professional degrees account for most of the growth, along with more modest increases in associates and decreases in technical diplomas. Even across different segments of the postsecondary system, specialized certifications and advanced degrees are becoming the keys for entry into higher-paying jobs.

Over a quarter of all completers since 2010 earned multiple credentials. This complicates the effort to draw a straight arrow from completion to employment outcomes, either as a reflection of student experience or as an exercise in data linking. Certificates frequently feature in these multiple-credential pathways, illustrating their dual role as immediate workforce entry points and as steppingstones to higher-level degrees. For instance, 41 percent of certificate completers also earn an associate degree. This credential sequencing suggests that measuring the value of a single program in isolation may miss the cumulative impact of a broader educational pathway. Furthermore, most students work while enrolled, and in many technical fields, higher-paying work afforded by incremental upskilling may lead students to exit their programs early – taking a certificate rather than a full degree because the market recognizes the value of skills and knowledge students have already accumulated.

Whether and to what extent these sequences reflect clear milestones or diversions on the road to broader career opportunities remains an open question and a fruitful area for future research, especially for specific program areas and for subsets of the workforce. With its broad focus, this report only briefly examines such pathways in detail for fields like nursing and skilled trades. Future research could more directly examine the impact of incremental credentials on entry to specific employment opportunities, or their role in occupational shifts or step-changes in wage earnings. Further research into upskilling ladders in healthcare, for example, has implications both for promoting career mobility and for addressing acute occupational shortages in healthcare.

Outcomes for certificates, technical diplomas, and associate degrees. Short-term credentials and associate degrees are positioned as a primary engine of attainable workforce-oriented skills beyond high school education. This is particularly true for technical fields like the skilled trades and healthcare, which along with general studies credentials make up the bulk of completions. Our analysis finds that outcomes remain sensitive to specific fields of study. In the traditional skilled

trades, median wages often hover near the average for all short-term credentials. However, engineering technology programs – feeders for jobs in Louisiana’s manufacturing industries – yield exceptionally high earnings, with median wages exceeding \$100,000 five years after completion.

Healthcare programs lead to a wide range of earnings. While large cohorts of nursing completers experience consistently high initial wage outcomes, high in-state retention rates, and high rates of placement in nursing or other closely related occupations, other healthcare support programs lead to much lower earnings. Outcomes for associate and short-term credentials must also be considered in the context of gender-based sorting. Men overwhelmingly make up most skilled trades and engineering tech completers, while women similarly account for most healthcare program completers. With the critical exception of nursing, most majority-female fields tend to pay less than majority-male fields. Even nursing programs, despite very high initial wages, experience less wage growth in subsequent years than most other programs; and even among completers of the same nursing programs, a significant gender earnings imbalance prevails. Across all programs combined, we find that women’s median earnings five years after completion are only 71 percent of men’s median earnings for certificates and 68 percent of men’s median earnings for associate degrees. This is larger than the difference for bachelor’s degrees, where women’s median earnings are 81 percent of men’s median earnings five years after completion.

General studies certificates and associate degrees represent a unique component of this landscape. Particularly for students who go on to earn multiple credentials, general studies is the most common starting program among the 37 percent of multiple-completion pathways that begin with certificates. For many, these credentials function as a low-stakes entry point into more specialized programs or more advanced degrees and credentials. However, because these programs alone do not lead to a specific occupation, the wage outcomes often track closely with the broad average across programs.

Finally, we document a strong degree of regional retention for associate and short-term credentials. Across all regions of the state, the vast majority of completers originate from local high schools, and regional and in-state employment retention rates are higher than for bachelor’s completers. PSEO data suggests that, especially for certificates, initial rates of employment (in- and out-of-state combined) are lower than for bachelor’s and especially for more advanced degrees. However, very little separation in employment rate by degree level remains 10 years after completion.

Outcomes for bachelor’s degrees. Bachelor’s degree outcomes illustrate the tension between high individual earnings and regional retention. The geography of migration flows after high school and after completion is complex, as

bachelor's completers are more likely than associate and short-term completers to move across different parts of the state and to move out of state. Four-year institutions also draw high school students from across the state, although to widely varying extents. Engineering, computer science, and other STEM degrees continue to produce the state's highest-earning graduates. However, these degrees also show some of the highest rates of out-of-state migration. In-state retention rates are higher for other programs, like healthcare, business, and education.

These programs, along with psychology, biology, and a range of humanities and liberal arts programs, represent the bulk of bachelor's completers. While these fields often show lower starting salaries, they demonstrate robust wage growth through the first few years after graduation. Liberal arts completers often complete double majors or feed into the state's graduate and professional programs. In many cases, these graduates also exhibit higher-than-average rates of in-state employment retention.

Furthermore, these completers find employment in a diverse range of occupations, which are critical to Louisiana private businesses and public services like education. As measured by their occupational concentration, the postsecondary-career link may be less straightforward than shorter-term technical degrees in jobs with acute shortages (skilled trades and healthcare) or than their four-year peers in engineering, rendering outcomes more nuanced. Bachelor's outcomes are also worth watching as employment growth and hiring slows nationally and, of course, as the uncertainty clouding AI's influence on the labor market for entry-level knowledge workers becomes clearer.²⁹

Positive employment outcomes cannot be boiled down to high employment rates or high wages alone. Nationally and in Louisiana, postsecondary education has seen pushes toward increasing accountability for student outcomes and deepening the integration of workforce demand as a primary consideration for funding and academic planning. These pushes frequently center on the notion of career "alignment." In practice, while alignment can be conceptualized in various ways, it also raises questions of how it should be measured as a key employment outcome of specific programs. One set of metrics includes rates of employment and wage earnings, which occupy a large portion of this report, or related concepts like return-on-investment. Another set of metrics considers the correspondence between academic programs and the jobs their completers hold.

²⁹ According to the U.S. Bureau of Labor Statistics (Job Openings and Labor Turnover Survey), hiring has hovered below 3.5 percent since mid-2024. Except for a brief disruption during the pandemic, this is lower than any rate since 2014, roughly the entire period analyzed in this report.

We discuss and demonstrate a range of ways that these outcome measures are complicated. These include out-of-state migration or self-employment, the broad range of wage outcomes even for narrowly defined program areas, and the diversity and complexity of postsecondary pathways (especially for multiple-credential completers). As we touch on below, detailing the impact of academic programs is even more elusive than descriptive outcomes. Measuring program-occupation alignment can depend on strong assumptions or reliance on limited benchmark resources, as we demonstrate in the final portion of the findings. Even comparing observed occupational outcomes with employment projections can yield conflicting conclusions depending on the target: future growth or future openings. And yet, measuring alignment remains important despite these challenges. On one level, it is critical to understanding how labor market dynamics shape employment outcomes of higher education. On a more direct level, measurement has a critical function in program planning, accountability, and, potentially, funding.

Tying financial aid and program funding to student employment outcomes has gained steam at the federal level, with new requirements built into the “gainful employment” rule for federal financial aid and the Workforce Pell Act. As states work to implement Workforce Pell, for example, which expands eligibility for federal financial assistance to programs as short as eight weeks, the technical problem of measurement is becoming central to policy (Goetz (2026), see also “The data implications of Workforce Pell”). This trend is equally rooted in the increasing availability of linked workforce data – including the LA FIRST data system and PSEO – to make comprehensive outcomes measurement possible. Perhaps more than any single finding or implication, the primary takeaway of this LEO report, which may be the most thorough survey of outcomes for completers in Louisiana produced to date, is as a demonstration of comprehensive outcomes measurement.

On earnings, we document extensive differences by demographics, chiefly by gender. While women tend to make less than men when completing the same degree programs, gender-based sorting into degrees and occupations is also a primary driver of the observed differences. Especially for associate degree and short-term credential programs, most strongly skew toward women or toward men. While this finding reflects the close occupational ties of many programs, even general studies completers are mostly women. These differences mean that historical patterns of employment and earnings for completers may leave some programs ineligible for some types of financial assistance even if they served as part of an educational pathway that improved opportunities for students. Especially against the backdrop of significant gender-based sorting by field of study, women could be left with less access to financial assistance under standardized earnings-based metrics (Blagg 2022; Baum and Blagg 2026). These issues do not have a simple fix. Hypothetically, a demographic adjustment could equalize the “composition effect” on earnings, but such an allowance would

create a multi-tiered standard, potentially reinforcing disparities in pay. Similar compositional issues exist by age, as older completers typically experience higher initial wages but smaller relative wage gains than younger completers.

The data implications of Workforce Pell

Among the eligibility requirements for Workforce Pell, the law creates accountability measures that include thresholds for median wages and job placement rates for short-term and traditionally noncredit programs, including Louisiana’s VSL programs. While the “value added” earnings test is relatively straightforward (median post-completion earnings minus 150 percent of the federal poverty level must exceed the cost of the program), the job placement test is not. Starting in 2026, the job placement threshold requires 70 percent employment, but this requirement grows more stringent in 2028 by requiring 70 percent placement in the specific occupation the program is designed for or in a comparable, in-demand occupation. While such programs are not the focus on this year’s report, we document the challenges: measuring out-of-state employment or employment not covered by the UI system and defining aligned occupations. This requirement creates pressure for states to implement occupational enhancements to their UI records (Whistle 2026). Though Louisiana is ahead of the curve in this respect, as we show in this year’s and last year’s report, occupational information is less standardized than other outcomes and best used carefully. Our preliminary analysis also suggests that 70 percent might be a high bar for Workforce Pell programs, especially without additional investment in occupational data assets or assumptions to mitigate their limitations.

Future directions

Full pathways, not just completions. Echoing the national salience of “stackable credentials” and themes reflected in the BOR master plan, this report illustrates the diversity and complexity of student experiences in postsecondary education. However, we only scratch the surface on how these pathway experiences influence outcomes, interact with students’ exposure to opportunities or dead ends in the labor market, or reflect previous employment experiences. For now, we stress that the prevalence of working students and multiple-degree completers complicates the connection between a postsecondary program and an employment outcome. Like PSEO, parallel projects in other states, and all efforts to implement rigorous accountability measures for postsecondary education and training, this

report simplifies the diversity of pathways to “completion” to make consistent measures of outcomes possible across programs. As such, we highlight a deeper engagement with pathways as both a cause and consequence of outcomes in the labor market as an area for further examination and refinement.

Enhancing occupational information. Leveraging occupational information remains a technical priority for supporting LA FIRST research. Indeed, recent state and federal legislation presupposes the availability and application of occupational information. As the most significant advancements on this front, this year’s report implements an adjustment for bias due to missingness in all reported occupational outcomes, develops several summary measures of alignment based on occupational outcomes, and produces a detailed table of occupational outcomes by degree and instructional program. We expect incremental improvement to remain a running theme in the future. Completing the occupational records of workers in Louisiana (for example, through imputation or other techniques) and better leveraging their longitudinal nature remain the key to unlock more in-depth analysis of occupational and career mobility. This is a route to more dynamic insights about the labor market and postsecondary employment outcomes in Louisiana. It also provides an opportunity to make original contributions to parallel efforts in other states and at the national level.

A richer engagement with career dynamics and employer-side factors. While this year’s report expands the examination of outcomes, the results remain primarily “snapshots” of median wages and employment rates at specific intervals. However, longitudinal UI records can also support a richer, more dynamic picture of the labor market’s functioning. Moving beyond group averages to individual career trajectories would allow for analysis of longer-term wage and promotion cycles, as well as employment and job stability measured across an individual’s post-completion career. Similarly, a focus on employment dynamics – the movement of workers across occupations, industries, or employers – would clarify fundamental processes surrounding job mobility. This is a natural way to incorporate demand-side factors, including local economic conditions and factors related to the employer, which are as central to outcomes as supply-side education and training.

From describing outcomes to measuring impacts. The findings in this report represent a critical step in extensively documenting the employment outcomes for Louisiana’s postsecondary completers. However, it is important to distinguish between descriptive outcomes (observed outcomes after a program) and causal impact (the specific effect of the program on outcomes). This report demonstrates that demographic sorting by program and occupation is a pervasive reality. Students are not randomly assigned to programs, and post-completion outcomes reflect a mix of prior experience, demographic and socioeconomic background, and geographic mobility. To measure a program’s impact net of these selection mechanisms, researchers must establish a counterfactual: what would this

specific student have earned had they not completed this program? Achieving this deeper level of causal inference remains a goal of future research, but one that requires innovation in the way that we leverage data and conduct research designs.

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Appendix

Supplemental documentation of data and outcome measures

Outcomes derived from PSEO data

In several essential ways, the outcomes reported in PSEO data parallel the outcomes reported for LA FIRST data. Both approaches also rely on a cohort concept and report outcomes for a specific year relative to the completion date. For LA FIRST outcomes, we also focus on “stable” employment and wages, which are purposefully defined to match the way that PSEO reports wages – annual wages earned in at least three quarters and exceeding the annualized full-time federal minimum wage. The main substantive difference is that PSEO outcomes for Louisiana completers include UI-covered employment in other states. However, other differences result in additional discrepancies between the data sets. Most importantly, PSEO constructs cohorts in a different way.

- **Completion year.** PSEO uses the calendar year of completion to define the outcome year relative to the completion year (for LA FIRST data, we use the academic year of completion).
- **Degree levels.** PSEO uses degree levels that are standardized for all participating states. These do not align clearly or exactly with every degree level in the BOR records shared with LA FIRST and documented on the BOR website. Most importantly, PSEO only reports “Certificate 1-2 years,” which align with technical diplomas, two certificate levels, and two career tech levels as reported in the BOR records.
- **Years.** PSEO includes completions from 2001-2021 for bachelor’s and 2001-2020 for all other degree levels. For LA FIRST, wage records are available from 2014-2024; we focus on 2016-2024, since occupations are only available for these years.
- **Cohort concept.** PSEO pools together cohorts that complete in multiple years, as we do with LA FIRST data. Smaller cohorts are also published by pooling 3-year intervals for bachelor’s and 5-year intervals for all other degree levels. After briefly examining changes over time and finding limited or ambiguous variability, we opted conservatively to focus on the entire pooled cohort.

Readers are welcome to consult the Longitudinal Employer-Household Dynamics website for extensive documentation on PSEO, as well as the PSEO Explorer tool, which provides direct access to the data.

Using PSEO data, we calculate rates of employment, in-state employment, and non-

or marginal employment by dividing by sum of employment and non- or marginal employment. To get out-of-state employment rates, we first subtract in-state employment from total employment and then use the same denominator as the others. In some cases, to emphasize variation across programs more apparent in the rate of in- and out-of-state employment rather than the overall rate of employment, we use the denominator of employment, as indicated in the figures themselves.

Note also that, for brevity, we report wage earnings by percentile for combined associate degrees and short-term credentials. PSEO only reports these percentiles at the individual degree level. As such, the PSEO-based wage percentiles in this report are approximate (or synthetic) percentiles, calculated by taking weighted averages of the percentile as reported by PSEO for certificate and associate completers.

Outcome weighting by SOC code

In LA FIRST UI records, industry (NAICS) and wages have near-complete coverage, but occupation (SOC) has extensive missingness. In a typical annual file of UI data, occupation is available for roughly half of records, although this rate increased in 2024, the most recent full year of data. SOC missingness is not completely at random, as it varies by other observables in the UI data, like NAICS code, firm size, and wage level. When outcome measures depend on SOC codes, this form of non-response bias could affect simple summaries using only observed SOC codes, with varying effects for different groups of completers. See last year's report for an assessment of SOC coverage in LA FIRST data (Habans et al. 2025).

To mitigate potential bias, we implement a reweighting procedure. These weights are used when reporting SOC-based outcomes but not for outcomes that do not rely on SOC codes (we use unweighted measures for industry, wages, and employment rates in Louisiana). Specifically, we implement raking, or iterative proportional fitting. This algorithmic procedure is commonly used in survey estimation to ensure that a sample reflects the known marginal distributions of a population. In this context, raking is used to adjust the observed subset of workers with SOC codes so that their aggregate characteristics match the known administrative population totals for the corresponding year.

The procedure iteratively adjusts weights across three observable characteristics of the UI records: Employer size, three-digit NAICS, and wage decile. For example, if 50 percent of the records have a missing SOC code, the procedure generates weights with a cell population-weighted average value of 2. By iteratively adjusting across multiple dimensions, raking generally avoids the volatility of extreme weights often found in simple cell-based weights. Intuitively, weighting nudges up observations with characteristics where missingness is high and nudges down observations with characteristics where missingness is low. The result is more representative of the Louisiana workforce covered by unemployment insurance.

We calculate weights separately for all employment and stable employment linked to annualized completer records. The calculation of the occupational

concentration measure also relies on performing the same procedure for all records. Each set of weights is calculated in a manner unique to the calendar year of UI data. The weights are applied to the degree-CIP-SOC matrix data set (both weighted and unweighted proportions are provided in separate tables) as well as the related summary measures of alignment and effective demand that depend on the SOC code.

Advanced measures of alignment and effective demand

The methods section gives an intuitive description of advanced measures of alignment, including what we term “effective demand,” summarizing the alignment between occupational outcomes for recent completers and 10-year occupational projections. Effective demand includes two program-level measures: growth in the size of the effective labor market (based on projected employment growth) and average annual openings (based on projected openings). These demand measures are “effective” because they summarize employment projections based on a recently observed distribution of observed occupational outcomes for completers, rather than hypothetical or deductive relationships. We also calculate a measure of occupational concentration. These measures are based on a complex matrix of detailed SOC code outcomes by degree level and four-digit CIP code but summarized to a single measure. Here, we provide more formal definitions for how the measures are calculated.

In the following formulas, E is a measure of employment, and W is the share of employment. These are indexed by i , the cohort of completers in a specific academic program (degree-CIP), and j , the occupation. For example, E_j is a measure of employment (employment, employment change, or openings) for occupation j , and W_{ij} is the share of i completers in occupation j .

Effective size of the labor market and average annual openings. These are calculated using the same formula, which is the average of a benchmark measure of occupational employment (E_j) derived from a separate source: the LA Works occupational projections for 2022-2032. These averages are weighted by the share of completers in that occupation (W_{ij}) derived from linked records. W_{ij} is the percentage of completers in a given occupation, based on observed stable employment and annualized occupations. Those who work outside of the state or do not work in stable employment are counted as zero, so W_{ij} does not necessarily sum to one across j . This has the effect of penalizing cohorts with low rates of stable employment in Louisiana and high rates of non- or marginal employment.

$$D_i = \sum_j (W_{ij} \times E_j)$$

D_i is calculated in the same way for projected employment change and annual openings. Employment change is normalized as a percentage of initial employment 2022, and the change in the size of the effective labor market is interpretable as how much Louisiana employment is projected to grow for completers based on the occupational distribution for recent completers (this is algebraically equivalent to calculating D_i separately for employment levels in 2022 and 2032 and taking the percentage difference). The annual openings are not normalized but interpretable as projected annual openings for the average completer, based on recent outcomes for completers of the same degree level and program.

Occupational concentration. As an indicator of occupational concentration at the degree-program level, we use a measure of divergence between occupational outcomes for completers employed in Louisiana and the occupational composition of the Louisiana labor market as a whole, also referred to in the literature as a field-occupation (FO) index (Zheng and Weeden 2023).

$$FO_i = \sum_j W_{ij} \log \left(\frac{W_{ij}}{W_j} \right)$$

Intuitively, this measures the distance between the occupational distribution of completers and the reference distribution of occupations across the entire workforce. W_{ij} is taken from the completer cohort (as described above), and W_j is taken from the entire annualized wage file (weighted separately). When a cohort of completers is highly concentrated in specific occupations relative to the entire distribution of occupations in Louisiana, the cohort's FO_i will be high.

This measure conceptually overlaps with and often corresponds with measures of ideal program-occupational alignment, such as one based on a CIP-SOC crosswalk, but makes no qualitative judgement about “alignment.” If a cohort of completers is highly clustered into specific jobs, they will have a high FO_i score, even if there is no relationship between those jobs and the content of their educational program. While it is not necessarily the case, technical and career-oriented programs generally should tend to have higher alignment and higher concentration than more academically oriented programs. However, given the same level of alignment based on a CIP-SOC crosswalk, FO_i score could be lower for a program aligned to multiple potential destination occupations or where those occupations represent a larger proportion of (and thus diverge less from) the overall occupational distribution in the broader labor market.

In the figures where these scores are reported, we do not report the index score directly. Rather we report quintiles across all programs analyzed. We describe the quintiles verbally: very low, low, mid, high, very high.

Deduplication and time in the alignment and effective demand analysis. Linked data is deduplicated and small cohorts are excluded in various ways within the analysis. Moreover, a mix of years are used to derive measures of occupational outcomes, completion trends, and projections. We have prioritized meaningful indicators, but there may be minor discrepancies between similar information due to these differences. Here, we provide additional clarity:

- LA Works projections are based on 2022 baseline employment by occupation and 2032 projections.
- As shown on the sparkline charts, the completer trends are deduped within the academic year, such that only the highest degree level attained in the year is included. Ties are counted in both degree-CIP groups. Only programs with a mean of at least 100 across all available years are shown on the sparklines.
- The completer trends are also described in the tabular summary figures as a single number for percentage change. In these cases, we compare the two-year averages for AY 2017-18/2018-19 and AY 2023-24/2024-25.
- Occupational distributions for the degree-CIP-SOC matrix are based on completers in AY 2021-22 and 2022-23 and their UI records in 2024. These are also based on within-year deduplication, and occupations reflect stable employment in 2024. These distributions are applied to the projections for 2022-2032. In the tabular summary figures, we only show degree-CIP cohorts with at least 100 annual average completers in AY 2021-22 and 2022-23.
- The calculated measures described above (change in effective demand, annual openings, and occupational concentration) are derived from an unsuppressed degree-CIP-SOC matrix. The publicly available degree-CIP-SOC matrix described below reflects the same information but applies additional aggregation.
- Median wages (stable) are derived independently of the rest of the analysis of alignment. They correspond with the wages shown earlier in the report and thus describe the entire cohort of “highest-last” degree completers across all years, not just wage outcomes for completers whose occupations are observed in the alignment analysis.

Public degree-CIP-SOC matrix (downloadable appendix)

The degree-CIP-SOC matrix reports the percentage of completers in each completer cohort (degree-CIP) that are observed as employed in each identified occupation (SOC code). We present public versions of the degree-CIP-SOC matrix as tables in a downloadable Excel spreadsheet. To build these data sets, we link unique completers in academic years 2021-22 and 2022-23 with employment records in

calendar year 2024. To parallel the terminology in the report’s main findings, the tables reflect pooled two-year and three-year post-completion outcomes. Each table is essentially a matrix of occupational outcomes in long format, similar in structure to the NCES CIP-SOC Crosswalk. However, the point of the NCES CIP-SOC Crosswalk is to relate instructional program subject matter to occupational skills and qualifications. The objective of our tables is to report *empirically observed* occupational outcomes by degree and instructional program, broken down by percentages. The NCES Crosswalk identifies conceptual, deductive links between program and occupation, but our degree-CIP-SOC matrix quantifies empirically observed outcomes.

Separate tables present each of four versions of the degree-CIP-SOC matrix, differing in their use of weights to adjust for missing SOC codes and in their approach to including only stable annual employment or including all employment with any non-zero wages:

- Any employment, unweighted
- Any employment, weighted
- Stable employment, unweighted
- Stable employment, weighted

In general, our preferred version is “stable employment, weighted,” as this version reduces the influence of marginal attachment to UI-covered employment in Louisiana and potential bias due to nonrandomly missing SOC codes. However, different use cases may call for different choices on which version is most appropriate and certain use cases may warrant approaches beyond the four options produced this year.

Each row in the tables is a unique combination of degree level, CIP code, and an occupational outcome – typically, an SOC code. Additional rows report outcomes where the SOC code is either not observed or cannot be reported. This is indicated in the column “status,” which takes four possible values: observed occupation, unobserved occupation (but employed), not employed, and other occupation.

The tables report outcomes as percentages of each completer cohort, calculated as follows:

- **% all records.** The numerator is the unweighted number of records. The denominator also includes unobserved occupations and not employed. This column is only included in the unweighted tables.
- **% observed occupations.** The numerator is the number of records reported in UI wage records with a particular occupation reported. The denominator is total employment with observed occupations. In the weighted tables, these proportions are weighted, and the denominator

is the sum of the weights. Intuitively, this reflects the approximate percentage of *employed completers* in each occupation.

- **% records (adjusted).** The observed occupations have been rescaled such that the percentages in each observed occupation and the percentage not employed sum to 100 percent. We multiply the “% observed occupations” by the total observed employment, and the denominator is the same as “% all records.” Assuming that the unobserved occupations resemble the observed occupations, this reflects the approximate percentage of *all completers* in each occupation.

For the stable employment tables, “not employed” implies that Louisiana employment does not meet the criteria for stable employment (at least three observed wage-quarters with annual earnings exceeding the annualized federal minimum wage), though some employment could have been observed during the year. To be precise, this cell includes completers who were not employed at all, those who were employed out of state, and those who were in non-covered self- and federal employment in Louisiana.

Suppression and aggregation. Degree-CIP cohorts are suppressed entirely when average annual completers are fewer than 30. To further protect against disclosure, detailed occupations are rolled-up (aggregated) to less detailed SOC levels when six-digit cells have unweighted observed employment of 10 or fewer. These cells are iteratively rolled up to the five-, three-, and two-digit levels until they contain over 10 observations. When no SOC code allows for sufficient cell size, the employment is counted as employed but in unspecified occupations (labelled “Other/nonreportable occ.”).

Additionally, in a small proportion of records, SOC codes are reported with less detail than the full six-digit SOC (i.e., two-, three-, or five-digit). In these cases, they are combined with rolled-up observations, so observations initially reported with greater detail but recoded by the roll-up algorithm could be grouped with observations initially reported with less detail. Our procedure for rolling-up occupations affects individual observations at a far, far greater frequency than the situation where SOC codes are initially reported at a lower-level of detail. When a two-, three-, or five-digit SOC encompasses but is reported separately from a detailed six-digit SOC for the same completer cohort, these categories thus can be interpreted as largely exclusive. For example, if Registered Nurse (29-1140) and Healthcare Practitioners and Technical Occupations (29) are reported separately for a given degree-CIP cohort, we expect that very few “true” Registered Nurses are counted in the latter group, and most of that category reflects other healthcare practitioners and technical occupations with 10 or fewer observations observed at a more detailed SOC level.

Additional data processing

Invalid SSN formats

SSNs play an important role as they are the basis of linking across data sets but are removed from analytical files. Using a flag prepared by our Information Division team, we ignore records with missing or incorrectly formatted SSNs. We also exclude worker-quarters where more than four job-quarter wage records are reported for the same worker's unique identifier in the same quarter, as these likely indicate records with falsely linkable SSNs or unusual employment situations. This affects a very, very small proportion of records.

Degree levels

We report the degree levels as recorded in the original BOR data. In some cases, we report individual degree levels, but we also use the following simplified categories for degree groups:

- Associate and short-term credentials: CareerTech, certificate, technical diploma, associate degree (A1, A2, C1, C2, DP, 10)
- Bachelor's (20)
- Master's and intermediate graduate: master's degree, education specialist, graduate certificate (30, 60, 70)
- Doctoral and professional (40, 50)
- Post-degree and non-award certificates: post-associate, undergraduate certificate, post-baccalaureate, post-master's, post-doctoral, post-professional (11, 15, 21, 31, 41, 51)

CIP codes

We use two-, four-, and the full six-digit CIP codes. For a more general level than two-digit CIP codes, we also use groupings from a 2020 report from the Urban Institute, "Measuring Program-Level Completion Rates: A Demonstration of Metrics Using Virginia Higher Education Data," which uses a condensed set of 12 categories of similar two-digit CIP codes to analyze CIP-level data (Blagg and Rainer 2020). That categorization is described in Appendix 1 of [the report](#). We use additional CIP groupings identified for the case study section.

Deduplication of completion pathways

Aside from some summaries of the number of degrees and credentials awarded in the pathways section, we deduplicate all completer records using either of two methods. First, we assign the highest degree level within a given academic year. Note that ties in degree level with different CIP codes lead to completers being included in both cohorts. However, we further ensure that the lowest level of

disaggregation deduplicates the completers again, which has the effect. This is used for trends in annual counts of completers and counts of the total number of completers in each case study, as it only counts completers one time. Second, most outcomes are reported with a similar method, but which also dedupes by leaving only the completer's "highest-last" observed degree or credential. This strategy reflects the reasonable assumption that, for a general studies associate who goes on to a bachelor's or for a math major who goes on to an MBA, the higher degree best signals their labor market positioning and shapes their employment outcomes.

The "highest-last" deduplication method is derived from a simple algorithm based on degree hierarchy and timing of completion:

- Priority is given to associate, bachelor's, master's, doctorate, and professional – in rank order.
- Certificates and technical diplomas are not distinguished by rank and are given lower rank than associate degrees.
- The highest, most recent rank is then taken.
- If only a relatively uncommon post-degree award is observed, this will be the highest-last degree. However, if a bachelor's completer then earns a post-bachelor's certificate, the bachelor's degree is the highest-last degree.

The following examples, some of which are uncommon, are provided for illustration. In most cases, the degree sequence is clearer:

- A student who completes an associate degree and then a bachelor's degree: the bachelor's degree is the highest-last completion.
- A student who completes a bachelor's degree and then an associate degree: the bachelor's degree is the highest-last completion.
- A student who completes two master's degrees: the later degree is the highest-last completion.
- A student who completes an associate and then a technical diploma: the associate is the highest-last completion.

Age for successive completions

To calculate the age at completion for successive credentials, the data is deduplicated to the year. If a person earns two credentials at age 22 and one credential at age 24, their first is counted at age 22 and their second is counted at age 24. The third credential is uncounted.

Enrollment status

In the pathways analyses, we use enrollment data. To deduplicate the enrollment data, only one method is used. For each year, we deduplicate to the degree level, meaning a person can be counted as enrolled in multiple degree levels. To calculate the mean hours taken by degree level before an enrollee stops out, drops out, or transfers out of a program, we assign the degree level and CIP code as the mode degree level and mode CIP code reported in the SSPS data, then sum the total credit hours taken.

We are often interested in the “status” of a student or worker at a given point in time. Generally, this means identifying if a person is:

- Unseen: does not appear in any data set in our analysis
- Working: has a non-zero wage in the UI data
- Enrolled: appears in the SSPS data
- Completing: appears in the SCS data
- Some combination of working, enrolled, and/or completing

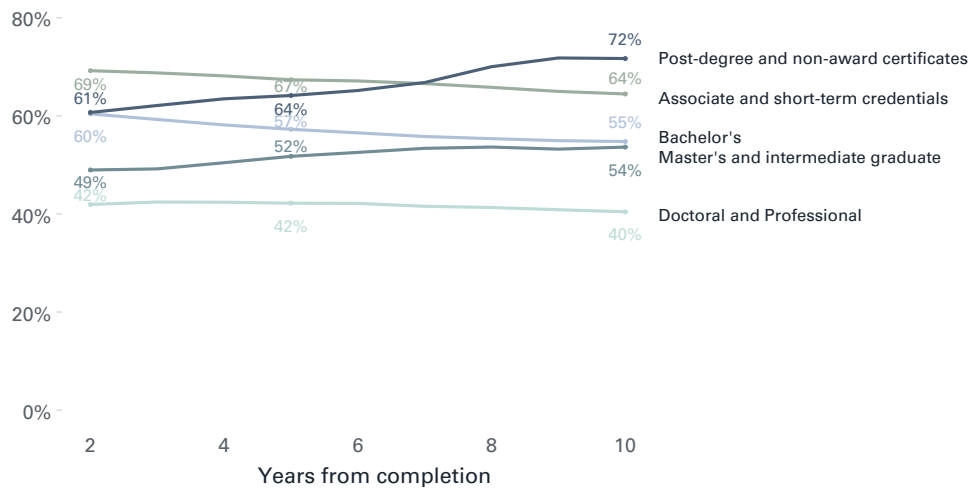
RLMA codes

The RLMA codes are identified in Table A.1.

Supplemental figures

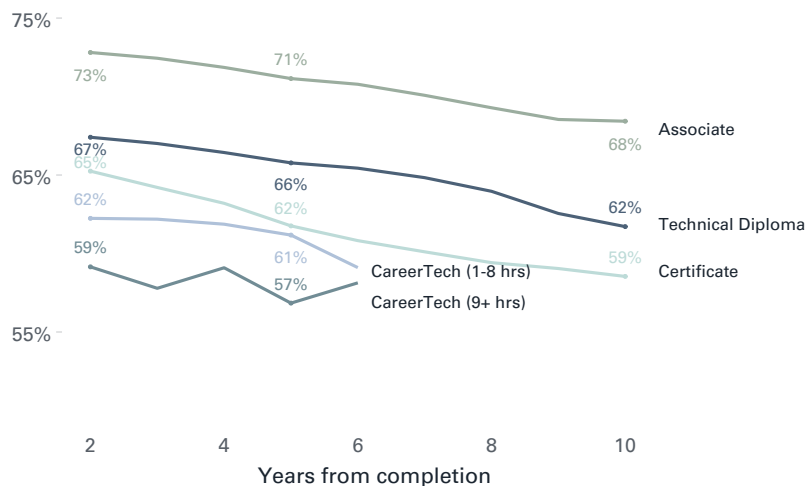
Figures A.1 and A.2 show a running percentage of the maximum cumulative quarters worked following completion.

Figure A.1 Cumulative quarters worked in Louisiana after completion by degree group



Source: Blanco Center analysis of LA FIRST data

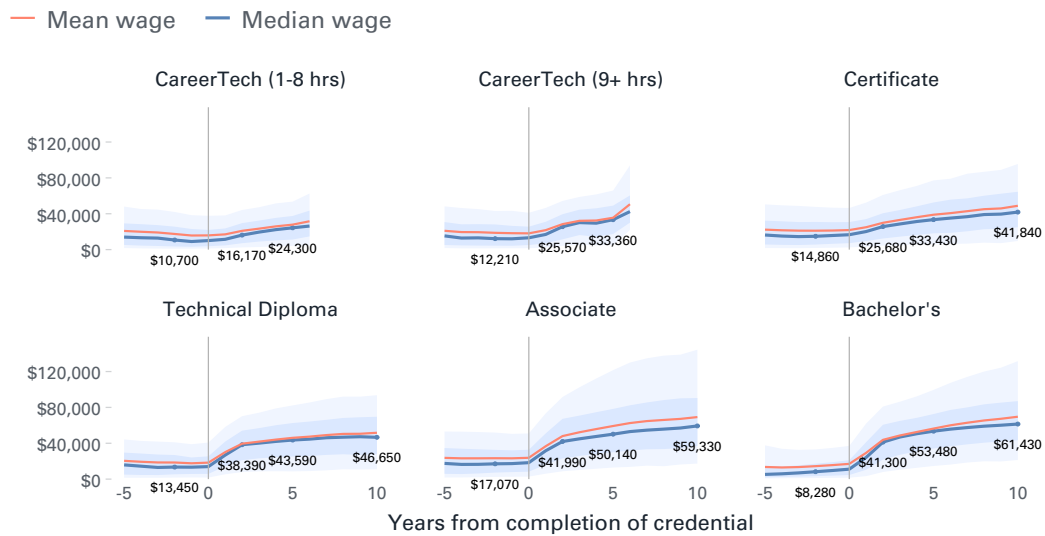
Figure A.2 Cumulative quarters worked in Louisiana after completion for associate and short-term completers



Source: Blanco Center analysis of LA FIRST data

Figure A.3, as a supplement to Figure 4.23, shows the distribution of wages by degree level, but it shows all wages rather than only stable wages.

Figure A.3 In-state wages before and after completion by degree level for associate degrees and short-term credentials, all wages

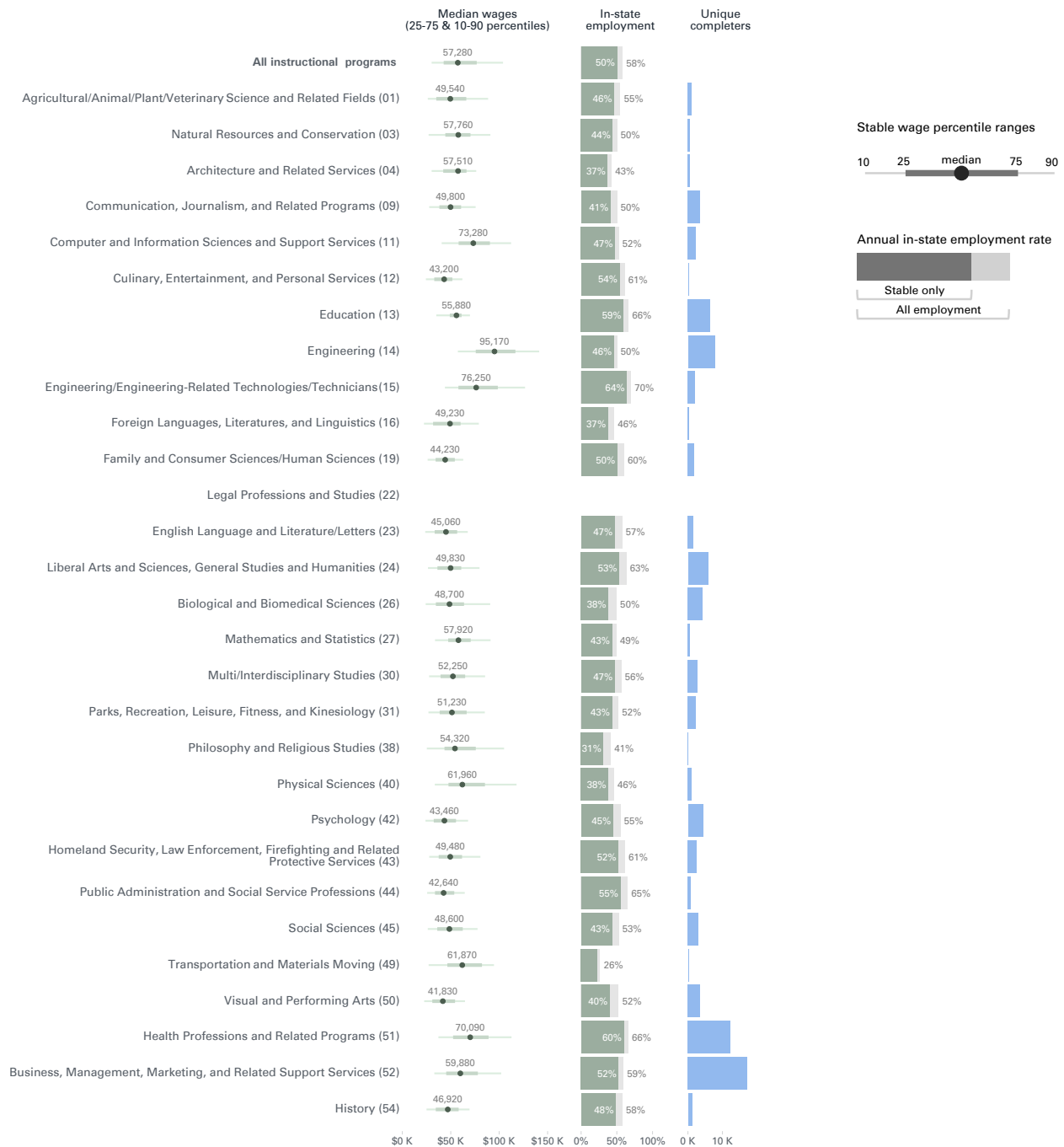


Source: Blanco Center analysis of LA FIRST data

Note: Wages are all wages.

Figures A.4 and A.5 show five-year outcomes as supplements to Figures 4.31 and 4.32 that appear in the text showing two-year outcomes by two-digit CIP.

Figure A.4 In-state wages and employment for associate and short-term credentials by instructional program, five years after completion



Source: Blanco Center analysis of LA FIRST data

Note: Wages are stable annual wages.

Figure A.5 In-state wages and employment for bachelor's by instructional program, five years after completion

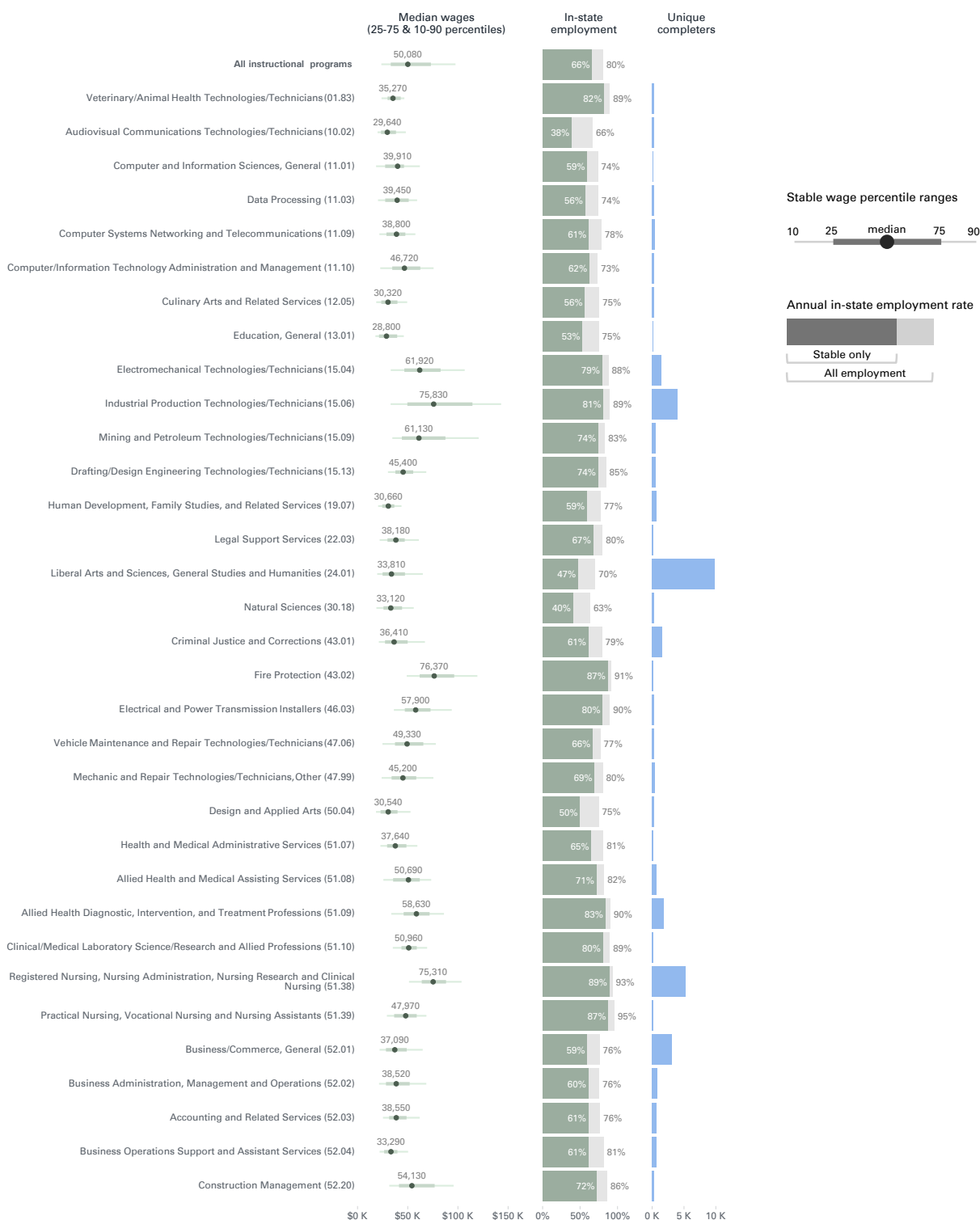


Source: Blanco Center analysis of LA FIRST data

Note: Wages are stable annual wages.

Figures A.6 through A.11 show similar two-year outcomes as shown in Figures 4.31 and 4.32 but at a greater level of detail: by specific degree or credential level and by four-digit CIP. To simplify these larger versions of the charts, we exclude CIP codes where the number of completers with observable two-year outcomes is below a certain cutoff. These cutoffs are identified in the notes for each figure.

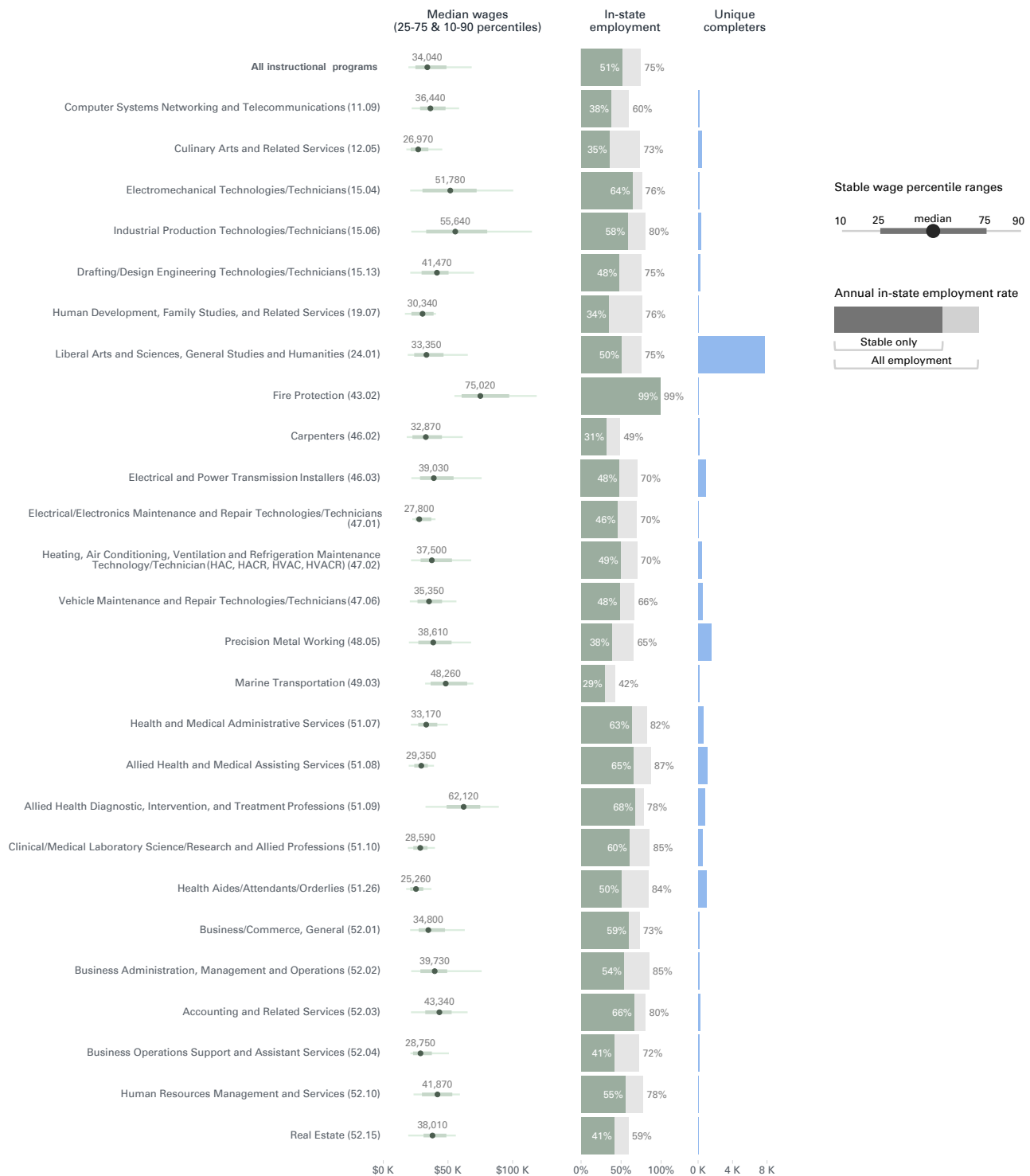
Figure A.6 In-state wages and employment for associate degrees by instructional program, two years after completion



Source: Blanco Center analysis of LA FIRST data

Note: Wages are stable annual wages. Only programs with at least 200 unique completers are shown.

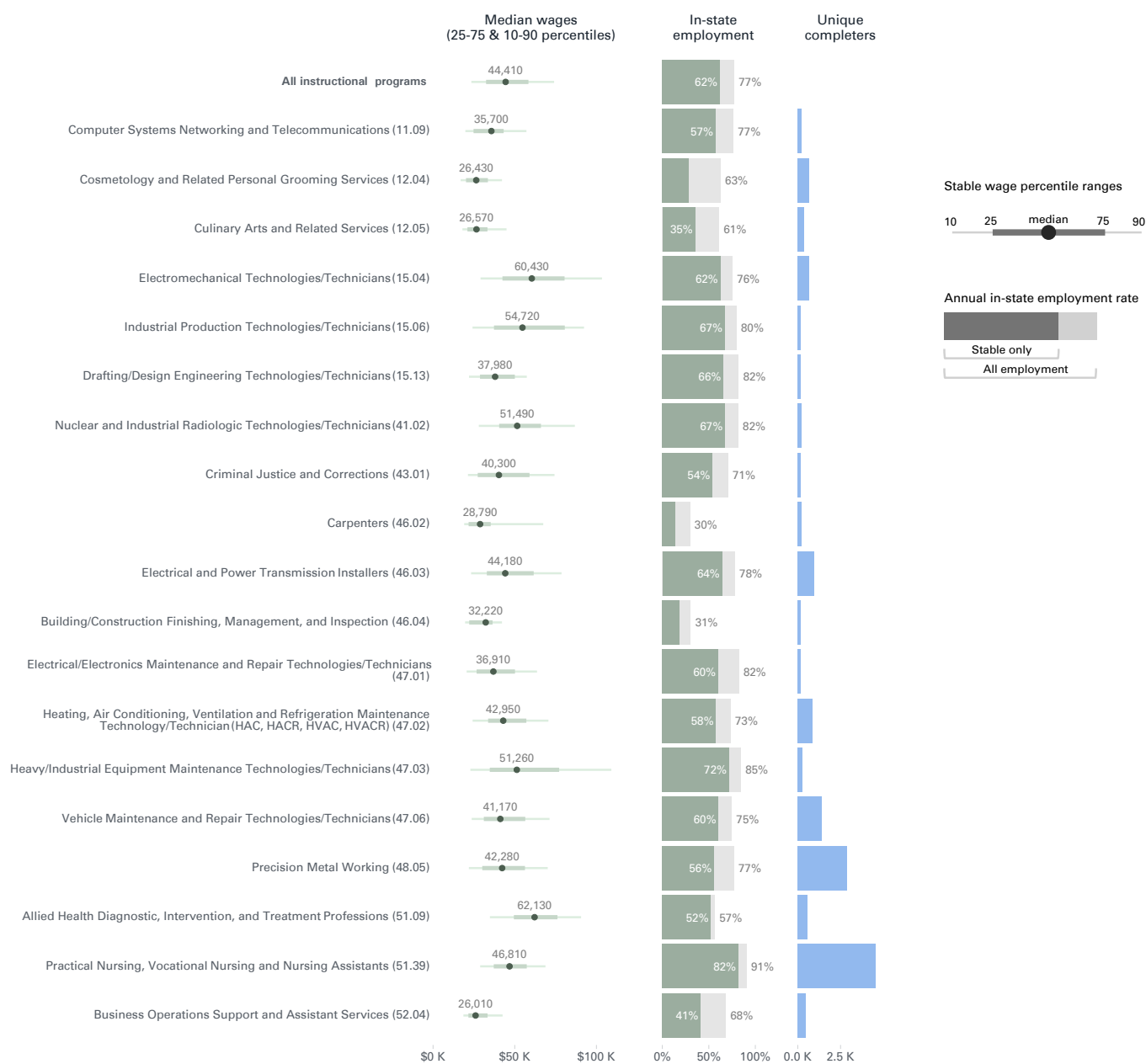
Figure A.7 In-state wages and employment for certificates by instructional program, two years after completion



Source: Blanco Center analysis of LA FIRST data

Note: Wages are stable annual wages. Only programs with at least 100 unique completers are shown.

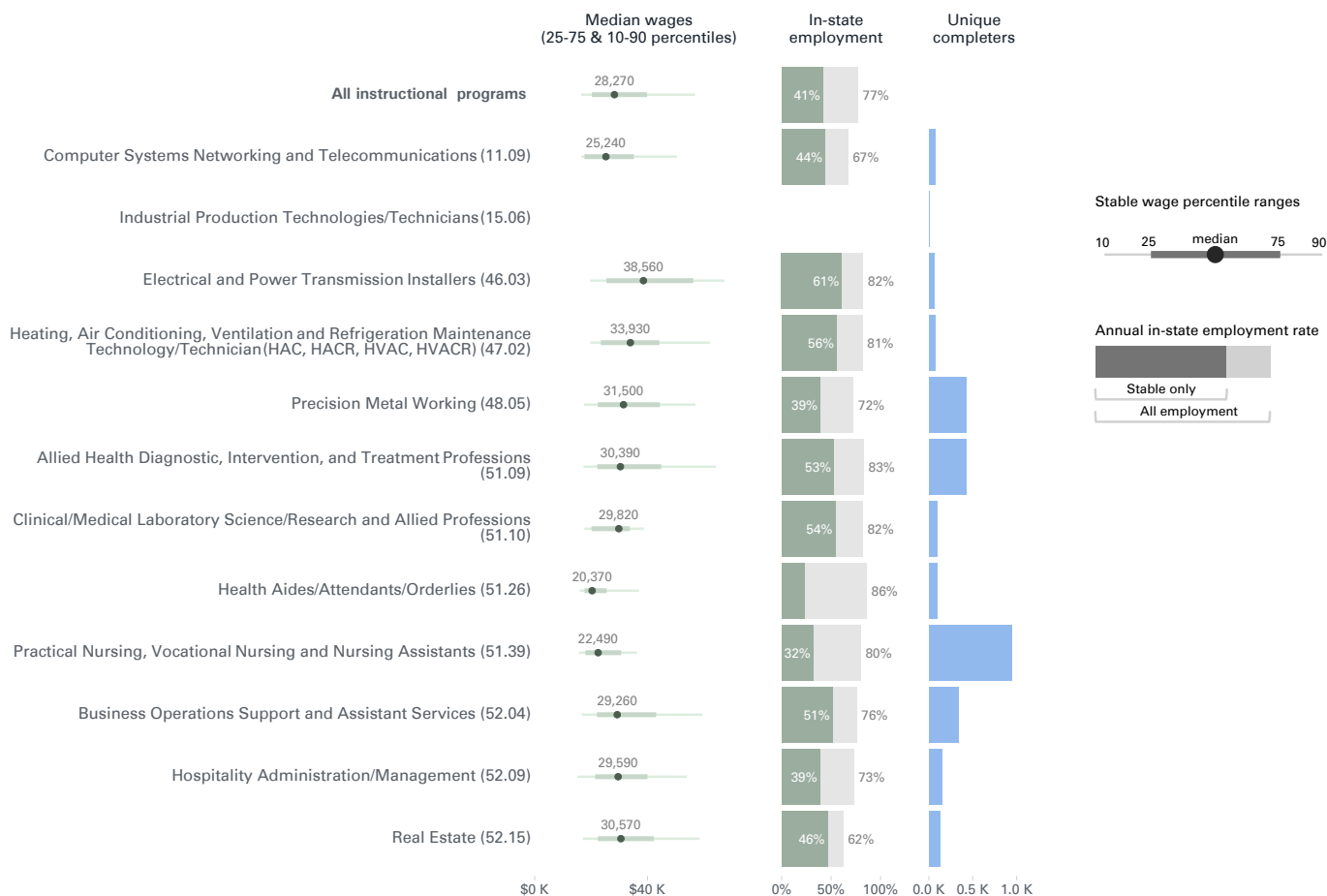
Figure A.8 In-state wages and employment for technical diplomas by instructional program, two years after completion



Source: Blanco Center analysis of LA FIRST data

Note: Wages are stable annual wages. Only programs with at least 100 unique completers are shown.

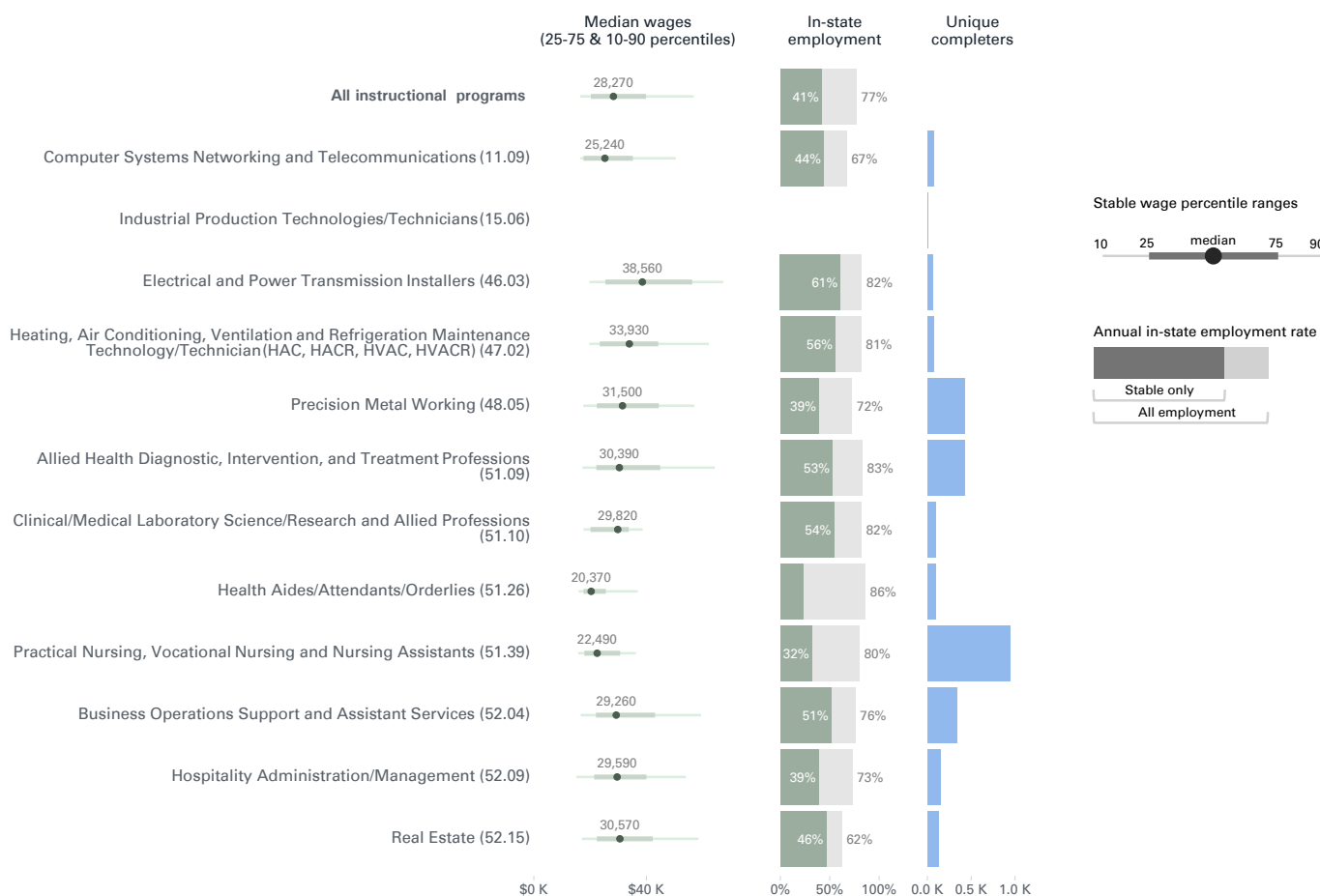
Figure A.9 In-state wages and employment for CareerTech (1-8 hours) by instructional program, two years after completion



Source: Blanco Center analysis of LA FIRST data

Note: Wages are stable annual wages. Only programs with at least 100 unique completers are shown.

Figure A.10 In-state wages and employment for CareerTech (9+ hours) by instructional program, two years after completion



Source: Blanco Center analysis of LA FIRST data

Note: Wages are stable annual wages. Only programs with at least 100 unique completers are shown.

Figure A.11 In-state wages and employment for bachelor's by instructional program, two years after completion



Source: Blanco Center analysis of LA FIRST data

Note: Wages are stable annual wages. Only programs with at least 600 unique completers are shown.

Figures A.12 and A.13 extend the demographic analysis presented in Figures 4.38 and 4.36 to race and ethnicity, showing subtler but noteworthy patterns in completions by program and wage growth from two to five years after completion across racial demographics.

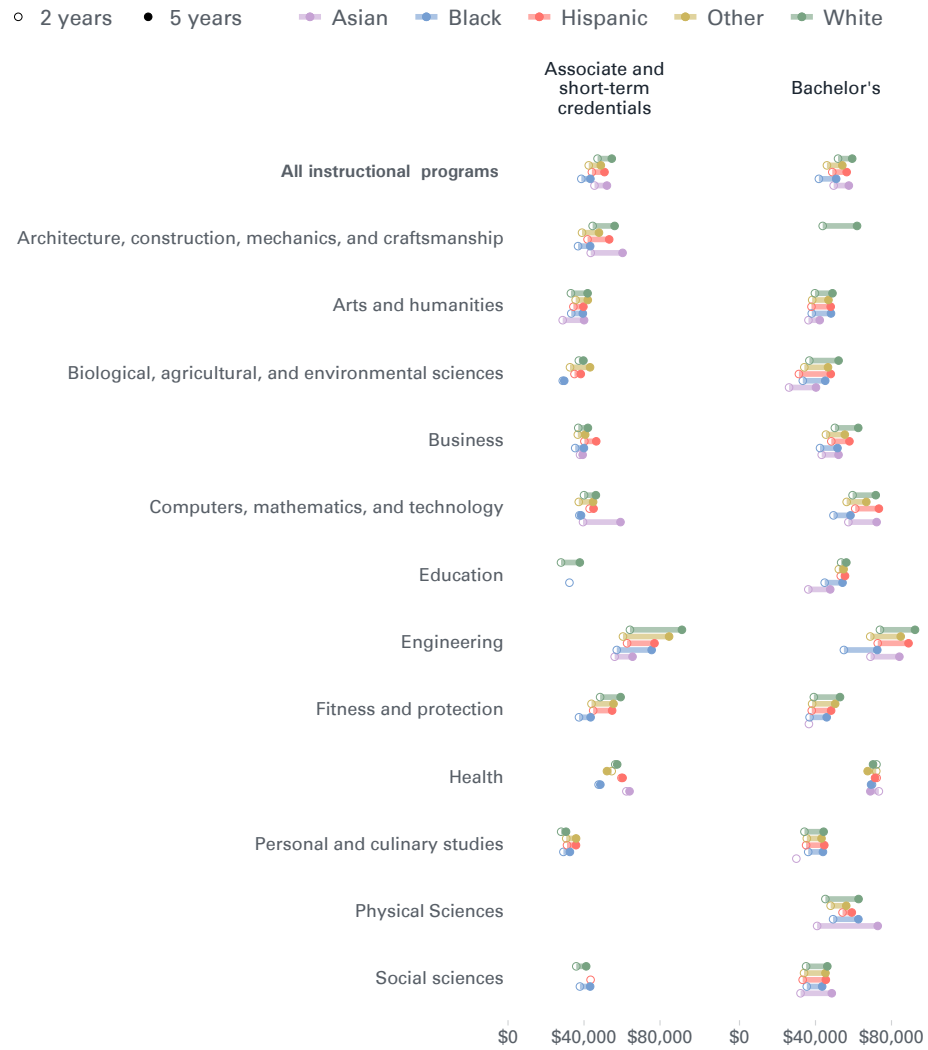
Figure A.12 Representation ratios of completers by race and ethnicity and program area



Source: Blanco Center analysis of LA FIRST data

Note: A ratio greater than 1 means the group is over-represented in the program area.

Figure A.13 Wage growth by race and ethnicity and program area



Source: Blanco Center analysis of LA FIRST data

Note: Wages are stable annual wages.